

Document of
The World Bank

Report No: ICR2377

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-90534 IDA-39980 TF-54531 TF-24759)

ON A

CREDIT
IN THE AMOUNT OF SDR6.9 MILLION
(US\$10.0 MILLION EQUIVALENT)

AND A

GLOBAL ENVIRONMENTAL FACILITY GRANT
IN THE AMOUNT OF US\$5.0 MILLION

TO THE

REPUBLIC OF SENEGAL

FOR AN

INTEGRATED MARINE AND COASTAL RESOURCES MANAGEMENT PROJECT

October 30, 2012

Environment and Natural Resources Management Unit 3 (AFTN3)
Sustainable Development Department
Country Department 1 (AFCF1)
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 30, 2012)

Currency Unit = Franc CFA

CFAF500 = US\$1.00

US\$1.00 = SDR 0.66

FISCAL YEAR

[January 1 – December 31]

ABBREVIATIONS AND ACRONYMS

CAS	Country Assistance Strategy
CBD	Convention on Biodiversity
CCLME	Canary Current Large Marine Ecosystem Project
CFAF	CFA Francs
CRODT	<i>Centre de Recherches Océanographiques de Dakar-Thiaroye</i> / National Oceanographic Research Centre
DMF-IU	Department of Maritime Fisheries Implementation Unit
DNP-IU	Department of National Parks Implementation Unit
EIG	Economic Interest Groups
EMC	Ecosystem Management Committee
GDO	Global Development Objective
GEF	Global Environment Facility
GEO	Global Environment Objective
ICR	Implementation Completion Report
IMCRMP	Integrated Marine and Coastal Resources Management Project
ISRA	<i>Institut Sénégalais de Recherche Agricole</i> / Senegalese Agricultural Research Institute
IUCN	International Union for conservation of Nature
LAFC	Local Artisanal Fisheries Council
LFC	Local Fisher Committee
MAB	Man and Biosphere (UNESCO)
MFME	Ministry of Fisheries and Maritime Economy
MTR	Mid-term Review
NGO	Non-government organization
NRP	National Registration Program
PAD	Project Appraisal Document
PAME	Protected Areas Management Effectiveness
PCU	Project Coordination Unit
PDO	Project Development Objective
PFZ	Protected Fishing Zones

PPF	Project Preparation Facility
RAPPAM	Rapid Assessment and Prioritization of Protected Area Management
SMFRP	Sustainable Management of Fisheries Resources Project
UNEP	United Nations Environment Programme
WARFP	West Africa Regional Fisheries Program
WCPA	World Commission on Protected Areas
WWF	World Wildlife Fund

<p>Vice President: Makhtar Diop</p> <p>Country Director: Vera Songwe</p> <p>Sector Manager: Magdolna Lovei</p> <p>Project Team Leader: John Virdin</p> <p>ICR Team Leader: John Virdin</p>
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SENEGAL
INTEGRATED MARINE AND COASTAL RESOURCES MANAGEMENT PROJECT

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A. Basic Information			
Country:	Senegal	Project Name:	Integrated Marine and Coastal Resources Management Project
Project ID:	P086480,P058367	L/C/TF Number(s):	IDA-39980,TF-90534,TF-24759,TF-54531
ICR Date:	11/01/2012	ICR Type:	Core ICR
Lending Instrument:	SIL,SIL	Borrower:	GOVERNMENT OF SENEGAL
Original Total Commitment:	USD 10.00M,USD 5.34M	Disbursed Amount:	USD 9.07M,USD 3.85M
Environmental Category: B,B		Focal Area: B	
Implementing Agencies:			
Ministry of Marine Economy, Maritime Transports and Fisheries			
Ministry of Environment			
Cofinanciers and Other External Partners:			

B. Key Dates				
Integrated Marine and Coastal Resources Management Project - P086480				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	12/18/2003	Effectiveness:	04/15/2005	04/15/2005
Appraisal:	04/16/2004	Restructuring(s):		11/14/2008
Approval:	11/11/2004	Mid-term Review:	01/17/2008	01/17/2008
		Closing:	06/01/2010	05/01/2012
Integrated Marine and Coastal Resources Management Project - P058367				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	12/18/2003	Effectiveness:	02/11/2004	04/15/2005
Appraisal:	04/16/2004	Restructuring(s):		11/14/2008
Approval:	11/11/2004	Mid-term Review:	01/17/2008	01/17/2008
		Closing:	06/01/2010	12/01/2011

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes	Moderately Satisfactory
GEO Outcomes	Moderately Satisfactory
Risk to Development Outcome	High
Risk to GEO Outcome	High
Bank Performance	Moderately Unsatisfactory
Borrower Performance	Moderately Unsatisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry	Moderately Unsatisfactory	Government:	Moderately Unsatisfactory
Quality of Supervision:	Moderately Unsatisfactory	Implementing Agency/Agencies:	Moderately Unsatisfactory
Overall Bank Performance	Moderately Unsatisfactory	Overall Borrower Performance	Moderately Unsatisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Integrated Marine and Coastal Resources Management Project - P086480			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating:
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA)	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA)	None
DO rating before Closing/Inactive status	Satisfactory		

Integrated Marine and Coastal Resources Management Project - P058367			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating:
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA)	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA)	None
GEO rating before Closing/Inactive Status	Satisfactory		

D. Sector and Theme Codes		
Integrated Marine and Coastal Resources Management Project - P086480		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	25	25
General agriculture, fishing and forestry sector	70	70
Other social services	5	5
Theme Code (as % of total Bank financing)		
Biodiversity	25	25
Environmental policies and institutions	13	13
Other environment and natural resources management	25	25
Participation and civic engagement	13	13
Rural non-farm income generation	24	24

Integrated Marine and Coastal Resources Management Project - P058367		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	20	20
General agriculture, fishing and forestry sector	80	80
Theme Code (as % of total Bank financing)		
Biodiversity	40	40
Environmental policies and institutions	40	40
Rural non-farm income generation	20	20

E. Bank Staff		
Integrated Marine and Coastal Resources Management Project - P086480		
Positions	At ICR	At Approval
Vice President:	Makhtar Diop	Makhtar Diop
Country Director:	Vera Songwe	Vera Songwe
Sector Manager:	Magdolna Lovei	Magdolna Lovei
Project Team Leader:	John Virdin	John Virdin
ICR Team Leader:	John Virdin	
ICR Primary Author:	Huong-Giang Lucie Tran	

Integrated Marine and Coastal Resources Management Project - P058367		
Positions	At ICR	At Approval
Vice President:	Makhtar Diop	Makhtar Diop
Country Director:	Vera Songwe	Vera Songwe
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ICR Team Leader:	John Virdin	
ICR Primary Author:	Huong-Giang Lucie Tran	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

Increase sustainable management of coastal and marine resources in 3 pilot areas by communities and the Government of Senegal.

Revised Project Development Objectives (as approved by original approving authority)

PDO remains the same.

Global Environment Objectives (from Project Appraisal Document)

The global environmental objective of the Project is to secure the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the sustained livelihoods of coastal communities.

Revised Global Environment Objectives (as approved by original approving authority)

To strengthen the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the sustained livelihoods of coastal communities.

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Local fisheries management sub-projects are implemented in 4 pilot sites by End of Project (EOP).			
Value (quantitative or Qualitative)	0	4		4
Date achieved	01/03/2005	06/01/2010		06/01/2012
Comments (incl. % achievement)				
Indicator 2 :	National management plans for 2 key fisheries are prepared, and approved by the National Consultative Council for Maritime Fisheries.			

Value (quantitative or Qualitative)	0	2		0
Date achieved	11/11/2004	06/01/2010		06/01/2012
Comments (incl. % achievement)	This target was 80% achieved - the management plans are not approved, so the value is still given as zero, but the plans have almost been completed, and will be finalized and approved shortly with support from the West Africa Regional Fisheries Program.			
Indicator 3 :	Participatory assessment of local community involvement in the management of biodiversity in the three pilot areas rated as satisfactory at the end of the Project.			
Value (quantitative or Qualitative)	No	Yes - satisfactory		Not fully measured
Date achieved	11/11/2004	06/01/2010		06/01/2012
Comments (incl. % achievement)	Could not be measured fully since no beneficiary assessment was conducted at EOP. However, a participatory assessment carried out in 2006, and between 2009 to 2011, indicated mean score variation from 67% in 2006 to 75% in 2011, indicating satisfaction.			

(b) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Effective management of biodiversity in the three pilot areas increased by at least 50% by EOP.			
Value (quantitative or Qualitative)	0	50		61
Date achieved	01/03/2005	06/01/2010		11/01/2011
Comments (incl. % achievement)	The mean score improved from 46% in 2006 to 61% in 2011. Evaluation carried out by DNP from 2009-2011.			

(c) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	60 percent of Local Fisher Committees implementing sub-projects comply with sub-project performance targets by end of project.			
Value (quantitative or Qualitative)	0	60		75
Date achieved	01/03/2005	06/01/2010		06/01/2012

Comments (incl. % achievement)				
Indicator 2 :	Biodiversity and Protected Area framework law is prepared and submitted to Government before EOP			
Value (quantitative or Qualitative)	No	Yes		Yes
Date achieved	01/03/2005	06/01/2010		06/01/2012
Comments (incl. % achievement)				
Indicator 3 :	State of biodiversity update reports produced on an annual basis.			
Value (quantitative or Qualitative)	No - none produced	Yes - reports produced		Yes - partially
Date achieved	01/03/2005	06/01/2010		06/01/2012
Comments (incl. % achievement)	Reports were prepared and submitted for 2005, 2007, 2010. 2012 report pending.			

G. Ratings of Project Performance in ISRs

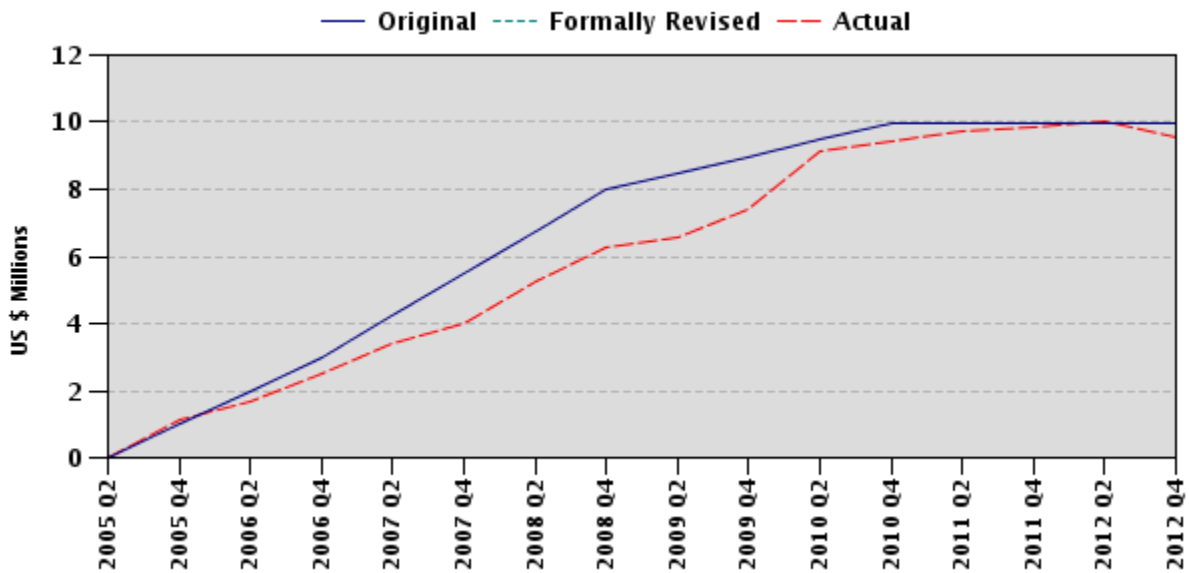
-						
No.	Date ISR Archived	DO	GEO	IP	Actual Disbursements (USD millions)	
					Project 1	Project 2
1	12/15/2004	S		S	0.00	0.00
2	06/21/2005	S		S	1.13	0.00
3	12/30/2005	S	S	S	1.66	0.30
4	06/30/2006	S	S	S	2.52	0.74
5	01/12/2007	S	S	S	3.42	1.30
6	06/06/2007	MS	MS	MS	3.91	1.43
7	12/20/2007	MS	MS	MS	5.18	2.08
8	04/12/2008	MU	MU	MU	5.44	2.25
9	12/03/2008	MS	MS	MS	6.40	2.51
10	05/30/2009	S	S	S	7.15	2.87
11	12/16/2009	S	S	S	8.64	3.13
12	05/25/2010	S	S	S	8.90	3.36
13	03/16/2011	S	S	S	9.24	3.80
14	08/17/2011	S	S	S	9.33	3.88
15	03/13/2012	S	S	S	9.52	3.85

H. Restructuring (if any)

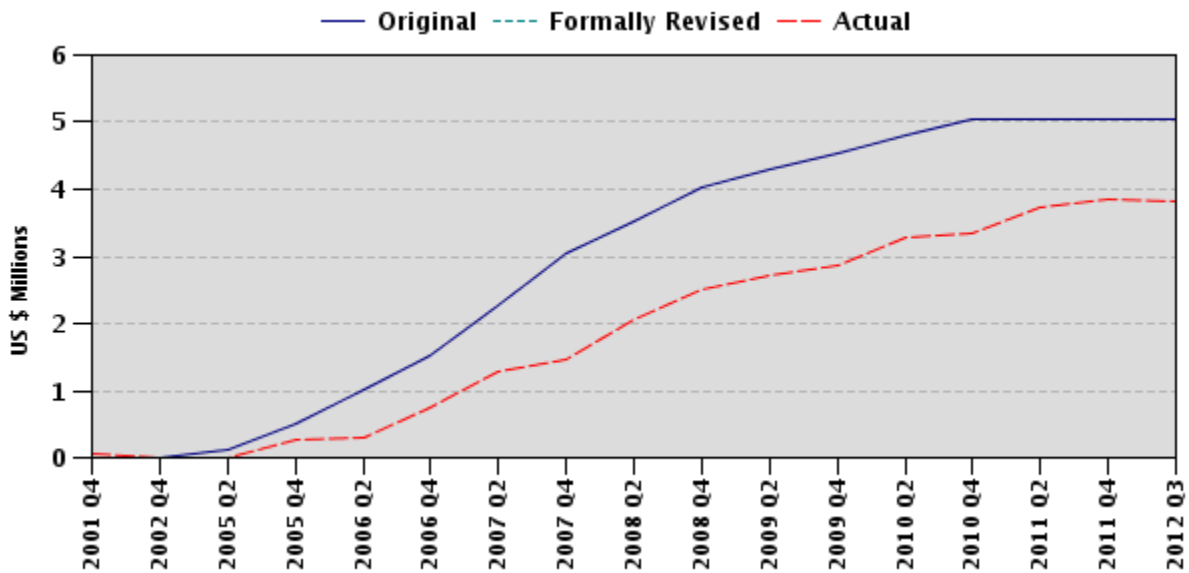
Restructuring Date(s)	Board Approved		ISR Ratings at Restructuring			Amount Disbursed at Restructuring in USD millions		Reason for Restructuring & Key Changes Made
	PDO Change	GEO Change	DO	GEO	IP	Project1	Project 2	
11/14/2008			MS		MS	6.40		
11/14/2008		Y		MU	MU		2.51	See main documents

I. Disbursement Profile

P086480



P058367



1. Project Context, Development and Global Environment Objectives (GEF) Design
(this section is descriptive, taken from other documents, e.g., PAD/ISR, not evaluative)

Context. Senegal's fisheries resources and related industries, which contributed to about 2.3 percent of the GDP in 2002 and employed about 17 percent of the active workforce, had been experiencing steep cycles of growth and decline over the last 30 years. The fishing sector was in crisis and the coastal demersal resources which represented the bulk of exports was particularly affected. Overfishing and unsustainable fishing practices at the artisanal and industrial levels and the management structure of the marine fisheries and environment sectors from the national to the local levels contributed to this crisis – essentially this was a tragedy of the commons, as the Government failed to address fundamental constraints of open access to the fish resources. In recognition of the threats to its declining natural resources, Senegal identified the conservation and sustainable use of coastal and marine ecosystems as priorities in its national biodiversity strategy and action plan.

In this context, the World Bank and the GEF agreed to co-finance the Integrated Marine and Coastal Resources Management Project in support of the Government of Senegal's implementation of two complementary agendas: (a) empowering coastal communities to take concrete actions to reduce conditions of open access and thus overfishing, and (b) protecting sensitive coastal environments and its biodiversity. The Project would thus contribute to alleviating the poverty found in the coastal areas where fishing communities were steadily losing their main source of income and environments of global significance.

The project's design was aligned with the objectives of Senegal's Poverty Reduction Strategy Paper of 2002 and the Country Assistance Strategy of 2003, which placed emphasis on rational management of natural resources and the environment for sustainable development while developing the country's natural capital, i.e., natural resources and biodiversity. It attempted to address the Government's concern that "rapid growth and lack of national management capacities subject Senegal's coastal and marine biodiversity to over-exploitation while posing a serious risk to the sustainability of marine exports."

With regards to the GEF areas of emphasis, Senegal had ratified the Convention on Biological Diversity in June 1994. The project was aligned with the GEF Biodiversity Operational Strategy, the Operational Program on Coastal and Marine Ecosystems, and the Conferences of the Parties to the Convention on Biological Diversity which stresses *in situ* conservation of coastal and marine ecosystems, and to the Jakarta Mandate endorsed at COP2, through conservation and sustainable use of vulnerable marine habitats and species.

The **Project's Development Objective (PDO)**, to increase sustainable management of coastal and marine resources in three pilot areas by communities and the Government, and the revised **Global Environment Objective (GEO)**, to strengthen the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the

sustained livelihood of coastal communities were formulated to closely align the project activities with these national priorities.

1.1 Context at Appraisal

(brief summary of country and sector background, rationale for Bank assistance)

Senegal's coastline constitutes one of the richest and most productive upwelling areas in the eastern tropical Atlantic Ocean. Fishing played a critical role in Senegal's economy with related activities such as processing and marketing amounting to a production gross value of about US\$550 million and a domestic value added approximately US\$370 million. Senegal's fisheries also employed some 600,000 people (17 percent of workforce), including over 52,000 full-time artisanal fishers. In 1999, Senegal exported roughly 124,000 tons of fish products (over 60 percent destined for the European market), with a commercial value of over US\$300 million and representing 25-30 percent of the country's exports. Between 1997 and 2002, catches of demersal species of fish, commercially valuable as an export product, fell by 50 percent, and left a major impact on the economic performance of Senegal's fisheries.

Artisanal fisheries, using an estimated 10-12,000 locally built *pirogues*, or small fishing vessels, operated by 50,000-75,000 fishermen, caught 85 percent of fish landed in Senegal, which equaled some 60 percent of the total marine fish catch value. They were among the most effective in Africa with value added per ton of product being double that of industrial vessels. At the time of appraisal, this level had dropped to only a third of the fish caught twenty years ago, and about 30-40 percent of such artisanal catch originated in the neighboring countries of Guinea-Bissau, The Gambia, and Mauritania.

Gaps and weaknesses in the management of the fisheries sector that failed to address the open access nature of the resources, including the governing and management structures, capacity of knowledge institutions, the knowledge base needed for policy decision making and the accompanying measures, contributed to the crisis. The Fisheries Law at that time allowed for open access fisheries which was unsustainable ecologically, economically, and socially. Historically, boat owners have resisted local fishing restrictions, government attempts to regulate artisanal fisheries have met with strong resistance and limited success. Consequently, the fisheries administration in Senegal had not been supportive of local initiatives to limit fishing. The management system in place at the time contributed to overfishing at both artisanal and industrial levels allowing for fishing capacity to increase beyond the level of available resources and without allowing for fish stocks to recover.

Senegal also had a limited capacity to conduct large research programs (stock assessments for industrial and artisanal fisheries, investigations on marine environments, assessment of life cycles of specific fish species). The *Centre de Recherches Océanographiques de Dakar-Thiaroye* (CRODT) was the primary source of information on Senegalese fish stocks. Once a premier marine fisheries research institution in West Africa, CRODT had lost many of its senior staff to private sector or international organizations resulting in its modest contribution to fisheries management. The knowledge base needed for the sustainable management of fisheries was either lacking or outdated, and knowledge of the social, cultural, and political context was limited. Little research had been carried out on local management strategies or on their

relationship to sound policy decision-making. Senegal also planned to implement a nationwide system of canoe/boat registration, based on the results of a Swiss-supported pilot project, as a means to generate revenue for the Government and to control fishing capacity. This was funded by multiple donors and by the Bank under the Project.

In the Conservation of Critical Habitats area, Senegal had established protected areas along its coast and by the late 1980s had developed an internationally recognized network of protected areas, including five National Parks and three Nature Reserves. However, by the 1990s, the model used for protected parks experienced problems due to: (i) the nature of the parks which were created initially for a tourism market which never grew, (ii) budget constraints affecting the staffing and maintenance of the parks, (iii) lower levels of international funding support than expected; and (iv) conflicts with the local population who were not consulted when the parks were established. Such conflicts (which often involved fishing communities) also undermined public support for protected areas.

Project Rationale

The Project was a first step in linking fisheries management to address open access with biodiversity conservation, in support of the Government's strategy to shift focus from sector development to sustainable management of fish resources. It integrated a project which had been identified in 1997 for GEF financing, the Marine and Coastal Biodiversity Management Project, with urgent initiatives proposed to address the crisis in the fisheries sector in Senegal. A study was subsequently commissioned in the context of an integrated diagnostic and commercial approach to resources management, which confirmed the urgent need for solutions. The fisheries sector became a part of the CAS.

The Project was a pilot for an ecosystem approach to the management of marine and coastal resources in targeted areas. It envisaged a 10-year programmatic approach in collaboration with other donor programs while building the base with pointed interventions in three project areas (Senegal River Delta, Cap-Vert Peninsula, and the Saloum River Delta) and testing co-management initiatives in several pilot sites. Fisheries sector management was to be tackled through a dual system - industrial fisheries, and highly commercial artisanal fisheries. These were to be reinforced by accompanying measures, policy revisions, and activities at the national level. The aim was to put in place measures to start to reduce fishing capacity to a sustainable level.

At the local level, the co-management system engaged the Local Artisanal Fisheries Councils (LAFC) and the Local Fisher Committees (LFC) for greater ownership of management decisions by communities, in partnership with the Government through its fisheries administration authorities. The system was relevant given the conflicts which have risen from insufficient or lack of community consultation by government institutions in the past. Co-management introduced to the communities a broader range of themes related to environmental, biological, economic issues, as well as social considerations while building support for their initiatives from the local level through local advisory councils to national level administration. It was designed to reduce inefficient competition among fishermen for depleting fish resources in the context of open access, and promote community decision-making and ownership of management

measures¹. Compensation for local fishermen who would be affected by reduced fishing was not built into the Project but would be provided through another Bank operation under preparation at the time, under the Senegal Social Investment Fund to ensure synergy between operations.

Ecosystem Approach. The Ministry of Environment and Nature Protection has since the early 1990s adopted co-management as its core policy, as demonstrated in the National Environment Action Plan (1997) and the National Biodiversity Strategy (2000). Most particularly, the Government wants to promote the establishment of community-based protected areas, to increase the protected area coverage from 8 to 12 percent of the country.

1.2 Original Project Development Objectives (PDO) and Key Indicators (as approved)

Increase sustainable management of coastal and marine resources in three pilot areas by communities and the Government of Senegal.

The associated Key Indicators were:

- Catch per fishing effort improved by 10-30 percent from baseline in most community-managed fisheries targeted by the Project, by end of Project.
- Measures to alleviate the impact of reduction in fishing capacity rated satisfactory by at least 75 percent of targeted communities.

1.3 Original Global Environment Objectives (GEO) and Key Indicators (as approved)

The global environmental objective of the Project is to secure the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the sustained livelihoods of coastal communities.

The associated Key Indicator was:

- Effectiveness of biodiversity-management improved in the three pilot areas by 20 percent at mid-term review and 50 percent at the end of Project, with the active participation of local stakeholders.

1.4 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

The PDO remained the same. However, the Key Indicators were revised in a first order restructuring approved by the Board in November 2008, to reflect more achievable targets in the remaining project timeframe. Both of the previous Key Indicators were dropped. The previous intermediate indicators were revised to become Key Indicators for the restructured Project as follows:

- Local fisheries management sub-projects are implemented in four pilot sites by end of Project.
- National management plans for two key fisheries are prepared, and approved by the National Consultative Council for Maritime Fisheries.

¹ This includes the numbers of boats, restrictions on gear, seasons and fishing areas, to protect spawning and juvenile fish, and specific limits on fish landings to optimize fish price and quality.

- Participatory assessment of local community involvement in the management of biodiversity in the three pilot areas rated as satisfactory at the end of the Project.

1.5 Revised GEO (as approved by original approving authority) and Key Indicators, and reasons/justification

To strengthen the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the sustained livelihoods of coastal communities.

The revised Key Indicator was:

- Effective management of biodiversity in the three pilot areas increased by at least 50 percent by end of Project.

1.6 Main Beneficiaries,

(original and revised briefly describe the "primary target group" identified in the PAD and as captured in the PDO/GEO, as well as any other individuals and organizations expected to benefit from the project)

At the local level

The primary beneficiaries are the members of fishing communities in the three project areas (the Senegal River Delta, the Cap-Vert Peninsula, and the Saloum River Delta). Within these areas, the fishing communities of four pilot sites (Ouakam, Ngaparou, Foundiougne, and Betenty) are the primary target groups for Component 1: Management of Sustainable Fisheries. Local Artisanal Fisheries Council members are also beneficiaries as the project seeks to build their mandate to advise and guide the Local Fisher Committees representing the fishing communities. Local Fisher Committees benefitted as private sector organizations supported and strengthened under the project. All the facilitators were direct beneficiaries of the project funding, having been trained and employed as consultants under the project.

Under the GEF-funded Component 2: Managing Ecosystems, the primary beneficiaries are members of the local communities in and surrounding the protected parks and reserves, commissioners of the protected areas and officers, local and regional council members, Department of Forestry personnel in the field.

At the regional level

The beneficiaries were the representatives of the Ecosystem Committees, regional development agencies, rural community councils, regional representatives from the Ministry of Fisheries and Maritime Economy (MFME), the Ministry of Agriculture, the Ministry of Environment (ME), and the Governor.

At the national level

The beneficiaries were the Ministry of Maritime Economy and personnel of the Department of Marine Fisheries - Implementation Unit (DMF-IU), the Ministry of Environment and personnel of the Department of National Parks - Implementation Unit (DNP-IU). National research institutions such as the *Institut Sénégalais de Recherche Agricole (ISRA)* and the *Centre de Recherches Océanographiques de Dakar-Thiaroye (CRODT)* benefitted from capacity building activities through contracts funded under the project for studies and participative research at the community level. Various national and international consulting firms including *BRLi* (fisheries

management plans), *CAES-Consult* (communications), *OAFIC* (fisheries, agro-processing), were recipients of consultant contracts under the project.

1.7 Original Components (as approved)

The Project originally had three components.

Component 1: Management of Sustainable Fisheries (US\$6.53 million, of which US\$6.0 million IDA). The objective was to increase the sustainability of fisheries through the use of area-based co management through three subcomponents:

- 1.1 National-level activities to improve fisheries management (US\$1.38 million), to enable the implementation of co management initiatives.
- 1.2 Promotion and coordination of local management initiatives (US\$4.67 million in three pilot areas, Senegal river Delta, the Cap-Vert Peninsula, and the Saloum River Delta.
- 1.3 Institutional strengthening and capacity building (US\$0.48 million) to oversee, support and monitor the implementation of co-management initiatives.

Component 2: Conservation of Critical Habitats and Species (US\$6.02 million, of which US\$0.5 million IDA and US\$5.0 million GEF). The objective was to improve the long-term management of Senegal's network of coastal protected areas by (a) developing and implementing management plans for these areas, according to an ecosystem approach, and (b) by restructuring the biodiversity management framework, through two sub-components:

- 2.1 Managing ecosystems (US\$4.45 million) in three pilot areas, Senegal River Delta, the Cap-Vert Peninsula, and the Saloum River Delta.
- 2.2 Strengthening the Biodiversity Conservation Framework (US\$1.57 million) by preparing a Biodiversity and Protected Area Act, strengthening institutions, and preparing the establishment of Trust Fund.

Component 3: Program Management, M&E and Communication (US\$3.94 million, of which US\$3.5 million IDA). The objective was to effectively manage the project through five sub-components:

- 3.1: Monitoring and Evaluation (US\$2.8 million). The Project Coordination Unit (PCU) was to manage aid from donors and partners, ensure efficient implementation and procurement, monitor implementation against indicators, and commission periodic independent evaluation.
- 3.2: Coordination (US\$0.1 million). The PCU was to ensure the operations of the Integrated Marine and Coastal Resources Management Steering Committee and the Advisory Scientific and Technical Committee. It was to also support the cross-sectoral structures necessary in the pilot intervention areas to ensure coordination

among various implementing agencies, including joint sessions between the CNCPM and the National Biodiversity Committee.

- 3.3: Communication (US\$0.3 million). The PCU was to develop and implement a communication plan to ensure the flow of necessary information to and from stakeholders on project activities.
- 3.4: Sub-regional coordination (US\$0.1 million). The PCU was to coordinate with sub-regional and regional structures involved in similar initiatives.
- 3.5: Activities funded under the PPF (US\$0.64 million).

1.8 Revised Components

As a result of a first-order project restructuring approved by the Board in October 2008, the GEO was modified and the PCU dissolved. Components 1 and 2 were retained, and Component 3 was removed and the remaining funds from the PCU's operation were reallocated to the technical Ministries' implementation units (DMF-IU and DNP-IU) for project management for each of the Sustainable Fisheries and the Ecosystems Management components.

Component 1: Management of Sustainable Fisheries (US\$6.53 million, of which US\$6.0 million IDA). The objective was to increase the sustainability of fisheries through the use of area-based co-management through three sub-components:

- 1.1: National-level activities to improve fisheries management, to enable the implementation of co-management initiatives.*
- 1.2: Promotion and coordination of local management initiatives in three pilot areas, Senegal river Delta, the Cap-Vert Peninsula, and the Saloum River Delta.*
- 1.3: Institutional strengthening and capacity building to oversee, support and monitor the implementation of co-management initiatives.*

Component 2: Conservation of Critical Habitats and Species (US\$6.02 million, of which US\$0.5 million IDA and US\$5.0 million GEF). The objective was to improve the long-term management of Senegal's network of coastal protected areas by: (i) developing and implementing management plans for these areas, according to an ecosystem approach, and (ii) restructuring the biodiversity management framework, through two sub-components:

- 2.1: Managing ecosystems in three pilot areas, Senegal River Delta, the Cap-Vert Peninsula, and the Saloum River Delta.*
- 2.2: Strengthening the Biodiversity Conservation Framework by preparing a Biodiversity and Protected Area Act, strengthening institutions, and preparing the establishment of Trust Fund.*

1.9 Other significant changes

(in design, scope and scale, implementation arrangements and schedule, and funding allocations)

Early in implementation, it was realized that the GEO was not attainable within the project timeframe. Some of the Key Indicators were not measurable and there was insufficient data to provide a viable baseline. The GEO was revised and the associated key indicator reformulated. Two of the PDO key indicators were dropped because they were either not measurable or were more appropriate as an intermediate indicator.

The number of pilot sites was reduced from 12 to four for this Project, and the eight others were transferred to the Sustainable Management of Fisheries Resources (SMFR) Project under preparation at the time.

Five fisheries management plans (including national level stock assessments and baseline assessments) planned at appraisal were reduced to two due to the shortage of experts and time caused by delays in project start-up.

The following activities were dropped: (a) the review of policy options, which was replaced with support to revisions to the Fisheries Code, finalization of the Letter of Sector Policy and related Action Plan; (b) study on coastal demersal species to be carried out with the CRODT; and (c) the Information, Education, and Communication (IEC) activities (including the international consultancy) was dropped from Component 3 as a result of the dissolution of the PCU.

Six indicators were dropped: three in Component 2 (the outcomes were no longer feasible), and three in Component 3 (the component was removed). Other indicators were moved to intermediate-level indicators and two were moved up to key project indicators for the Project as a whole (see Annex 5). These changes were reflected in the first-order Project Restructuring of October 2008 which resulted in the removal of Component 3 and the dissolution of the PCU.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

(including whether lessons of earlier operations were taken into account, risks and their mitigations identified, and adequacy of participatory processes, as applicable).

Lessons Learned. The Project drew lessons from best practices examples in the sector and from similar Bank-funded operations involving community-based management of fisheries resources²,

² In particular from the Indonesia Coral Reef Rehabilitation and Management Program I and II, the Ghana Fisheries Sub-sector Capacity-Building Project, and the Albania Pilot Fishery Development Project, for the design of the components on national level activities including: managing fisheries stock, not on a stock-by-stock basis but by managing and ensuring the health of the ecosystem which supports the stocks; focusing on the high-value artisanal fisheries sector important for generating employment in the rural sector; establishing partnerships between government and fisher communities to manage resources, i.e., area-based collaborative or co-management approaches; establishing marine protected areas to protect key fisheries habitat, and providing alternative livelihoods to fishers affected from controls on fishing efforts.

Lessons from Bank documents for the fisheries sector (Diagnostic Trade Integration Study for Senegal, Fisheries Approach Paper) and the ecosystems approach (endorsed by FAO and central to the Fisheries Approach Paper) were also built into the ecosystem approach and biodiversity conservation activities.

Quality at Entry. The Project was proposed as a result of sector studies, lessons learned in the sector from other countries mentioned above, and Government strategy in response to the fisheries crisis. It was the first operation of its type to pilot the integrated approach to coastal and marine resources management in Senegal to address the often conflicting priorities of conservation and fisheries exploitation (including tourism and land development). Its approach was to maximize impact by avoiding the more fragmented approach of a stand-alone fisheries project and a biodiversity conservation projects. In supporting revisions to policy and legal framework documents for both biodiversity and protected areas management and fisheries management, the Project envisioned a consolidation of dispersed mandates in these areas, and greater clarity in policy objectives. Its approach placed more emphasis on capacity development and less on infrastructure as with past aid projects in the fisheries sector, and established the links with macro-economic development policies (CAS and government strategies).

Internal reviews by Bank management endorsed the Project's strategic relevance, innovative approach, and technical analyses. It was viewed as a new operation in a risky sector and a difficult environment. The Bank prepared the project with highly qualified staff and consultants, with quality peer reviews, and appropriate management guidance. Bank inputs for preparation for the IDA component was low, but higher for the GEF component due to longer preparation time and merging of the earlier GEF-funded Marine and Coastal biodiversity Management Project with this Project. The processing time from appraisal to board approval and effectiveness took a month or two longer than average, typical for a complex operation. Safeguards documentation adequately addressed the triggers identified in the PAD with the required documentation prior to Board Approval. Procurement and financial management assessments carried out by Bank specialists on the capacity of the implementing agency rated procurement risk as medium and financial management capacity as satisfactory.

Government Ownership and Participatory Process. The Project was prepared with strong donor collaboration and Government support. It used a broad-based consultation process to coordinate projects among donors, within World Bank projects, and to seek agreement of fishing communities to promote the participation aspects. Agreements were reached with the Department of Marine Fisheries and the PCU to support the merging of the sustainable fisheries priorities with the biodiversity conservation priorities of the Department of National Parks, and both Ministers of Fisheries and Maritime Economy and Environment at the time fully supported the project. The Ministry of Maritime Economy (MME) demonstrated ownership by taking the lead role in mobilizing donors around a common agenda (January 2004) bringing together the projects of the World Bank, FAO, the European Union, the Agence française de Développement (Afd), and JICA. The donor coordination group which was established to ensure complementarity and synergies is still active to date.

The design for community-level fisheries activities was based on several successful consultation workshops to build partnership and ownership with different levels of actors from the local,

regional and national levels, and collaboration with other donors, civil society and NGOs was sought through consultations as well as through their participation in the Steering Committee and contracts (memoranda of understanding, World Wildlife Fund (WWF), International Union for Conservation of Nature). The Swiss Corporation funded the national boat registration program supported under the Project through a trust fund managed by the Bank.

At preparation, the PCU, which was at the Ministry of Environment, was a dynamic unit and actively involved in the preparation of the Project. It organized a national workshop in April 2003 to outline a management plan for fisheries and the selection of project activities. It held public hearings to consult stakeholders at the three project areas with regards to environmental safeguards. However, as project implementation progressed, the PCU's location within the Ministry of Environment exposed it to pressure and interference and seriously affected its ability to implement the project activities effectively.

Identification and Mitigation of Risks. The PAD correctly identified a number of the critical risks, particularly those involving community-based activities from components to outputs. The mitigation measures were appropriate for the community-level activities and were employed successfully in the project. The mitigating measures proposed for ensuring successful decision making and capacity-building at the national level were less successful. Risks to the sustainability of community-level activities were not identified, particularly with regards to the funding of operating costs of such activities as well as the provisions to alternative livelihood support, e.g., the collaboration with the Bank-funded Social Investment Fund which did not materialize. At the Outputs to Objectives level, the PAD correctly identified all the risks listed but did not identify the risk of ministerial interference in project activities as well as the risk of poor management at the PCU level which affected project implementation as a whole. The Project also did not identify the effects of insufficient capacity in employing and implementing an eco-system management approach over a relatively short-term timeframe.

Project Design. The Project's approach was innovative and technically sound. Project design for local co-management initiatives involving communities as partners with the Government in natural resources management were highly successful and formed the core of the project's successes. Facilitators selected were successfully trained and inserted into the pilot sites to assist in the preparation of sub-projects and co-management initiatives and were not rejected by the local communities. Supporting activities targeting training and capacity building of LFCs, and building partnership with fisheries administration and DNP representatives yielded good results and impact, but was less successful with building the partnership with research institutions.

The Project design, however, proved to be too ambitious and complex in certain areas for the project timeframe and the capacities of the agencies involved. The Project attempted to address a complex set of issues (changes in behavior and approach to natural resources management, social and environmental implications, coordination and collaboration across sectors and institutions, revisions to national policy legislation) in a relatively short timeframe more suited to an APL-type of operation. Key indicators reflected the high expectations and ambitious targets set at appraisal. The requirements for project activities required operating budgets and resources which the implementing agencies did not have and which the project's limited resources could

not provide (e.g., incentives to regional representatives, regional authorities, supervision of community activities launched and re-animation, coordination/oversight of committees).

The institutional arrangements to offset weak institutional capacity by establishing a well-staffed and well-paid PCU at the Ministry of Environment created dissension between ministries and absorbed much of the project's resources during early implementation until the project was restructured. Restructuring and the dissolution of the PCU improved ownership of the project by the line ministries but overall monitoring, reporting, and collaboration across ministries suffered somewhat as a result. This indicated that up-front institutional analysis may have been insufficient to ensure Government ownership and commitment at the highest levels. Building ownership for the ecosystem approach by establishing committees at different levels and pilot sites required a commitment of resources in terms of time, staffing, budget and skills which the implementing agencies did not have.

2.2 Implementation

(including any project changes/restructuring, mid-term review, Project at Risk status, and actions taken, as applicable)

The project was rated as “at risk” prior to the Mid-term review (MTR) of January 2008 where the Development Project Objective (DPO), Global Development Objective (GDO) and Implementation Progress (IP) were downgraded further from “Moderately Satisfactory (MS)” to “Moderately Unsatisfactory (MU)”. Project Management and Procurement were also similarly downgraded whereas M&E remained “Unsatisfactory (U)”. The ratings of the Bank supervision teams reflected realistically the situation on the ground. The main issues were: cases of non-compliance with project procedures with regards to use of project vehicle and fuel, the PCU impinging on the prerogatives of the MEM, derailing key consultancies, and ineligible expenditures to be reimbursed. Despite a high level of disbursements, the results on the ground were minimal, key indicators had not been reached, and PCU expenditures went over budget and consisted mostly of workshops and staff allowances. The Bank's management recommended restructuring the project to avoid downgrading the project to “U” and early closure.

During the MTR the Bank reviewed all project activities and institutional arrangements with a view to restructuring the project which was stalled due to poor management on the part of the PCU, and contentions to the institutional arrangement on the part of the Ministry of Fisheries. Following the MTR, a first-order restructuring was proposed and approved by the Board around October 2008. The changes included: (i) closing the PCU and integrating its remaining activities from Component 3 to Components 1 and 2, and establishing the financial management and procurement oversight at the Ministry of Economy and Finance; and (ii) establishing that the MFME would be responsible for implementing Component 1, and the Ministry of Environment and Natural Resources would be responsible for implementing Component 2 of the project. In addition to the above changes, Global Environment Objective (GEO) was modified and the results framework revised to better realistic outcomes for the remaining life of the Project. The decision to continue to support the Project was based on the technical aspects of the Project which the Government and the Bank's management considered to still be valid. The local initiatives, in particular, remained consistent with the priorities listed in the revised 2008 Letter of Sector Policy for fisheries to which the Bank provided substantial inputs, along with other donors.

Project management was also affected by a high turnover of key staff in the PCU and at the ministerial level. During the implementation period, the Project had three Project Coordinators, five Procurement Specialists, and three Ministers of Environment and two different Ministers of Fisheries and Maritime Economy. The high turnover of ministers added to the challenges already facing the Bank team and the implementing agencies as they had to re-engage different Ministers at each turnover and certain structures agreed with a preceding minister was not supported by a subsequent one. As a result, the Government's ownership and commitment obtained at preparation seemed to lack conviction as the project progressed. Towards the last year of the project, a newly elected Government promptly took action and removed the second Project Coordinator from the DMF-IU following allegations of misappropriation of project funds.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

The PCU prepared the original M&E plan included reporting and coordination system, impact and performance indicators during project preparation. The reporting system was based on the actual system used by the DNP, DMF, and the CRODT. However, following Project restructuring, the overall responsibility for maintaining the system was transferred to two separate agencies which were inadequately staffed with qualified personnel. Consequently, the oversight on M&E for the Project as a whole was lost and regrettably resulted in piecemeal follow-up, particularly at the community level where positive results on fish catch and rejuvenation of resources were observed, some local data collected under the Project were officially validated by the MFME at the regional and central levels, but still need continued support to maintain the effort.

Quarterly Financial Reports were received in a timely manner and were of good quality. However, they did not contain the qualitative evaluations that yearly progress reporting would have provided. Although yearly progress reports were stipulated in Project design as part of the M&E system, no such reports were submitted. Such reports would have provided the Government and the Bank with a useful means to track progress on the Project's capacity-building objectives, particularly at the national institutions level.

CRODT began the monitoring work for biological monitoring and left fishing communities it visited with data collection sheets. However, although this work was begun with the enthusiastic participation of the local fishing communities, it was insufficiently followed up by the implementing agencies to ensure that a participative approach was maintained and to validate data collected.

2.4 Safeguard and Fiduciary Compliance

(focusing on issues and their resolution, as applicable)

Environmental. The Project is rated as a Category B for which broad consultation with stakeholders was carried out through public hearings, workshops and assessments. An environmental and social assessment was carried out at preparation including an Environmental Management Plan and Resettlement and Process Framework. During implementation a pier in the Saloum River Delta was constructed without the Bank's approval and caused a blockage to the movement of shrimp fry. The Bank team moved quickly to resolve the issue by requesting

the DNP to modify the construction to allow the flow of the fish fry. Environmental compliance is rated as **moderately satisfactory**.

Social. The Project promoted community participation with success, particularly in support to women's groups by focusing on specific activities such as shrimp processing and marketing. Stakeholder workshops were held during preparation to ensure broad representation and social concerns are included in project design from the local level to the national level (local fisher councils and committees, Scientific and Technical Committees, Steering Committees) and involve local civil society and NGOs. The key project indicator related to the successful implementation of sub-projects was the measure for social development outcomes. However, the beneficiary assessments recommended at the MTR and end of project have not been carried out. As such, the compliance aspect is rated **moderately satisfactory**.

Procurement. Procurement performance throughout the implementation has been mixed. The project coordination units changed procurement specialists five times which affected the pace of important contracts (e.g., fisheries management plans, research contracts). The Bank's decision to collaborate with Senegal's Central Procurement Department in 2008 for eventual use of country systems for procurement, added to the delays caused by an already cumbersome process. Consequently, the pace of procurement was slow throughout implementation although the quality of documentation was judged acceptable by the Bank team, and a rating of **moderately satisfactory** was given towards the end of the project.

Financial Management is rated **unsatisfactory** for the following reasons.

(a) *Sustainable Fisheries Management (DMF-IU)*. Following supervision, the mission found that: (i) the accounting records are up-to-date, (ii) the Interim Financial Reports (IFRs) are received on time and are of satisfactory quality, and (iii) the rate of budget execution is acceptable and monitored properly. However, the overall performance of the financial management of the Project is rated as unsatisfactory because of: (1) the lack of adequate monitoring of financial activities at the Local Fishermen's Committee level which constitutes one of the most important activities of the Project, (2) ineligible expenditures in the amount of 9.13 million CFA, (3) incomplete documentation for payments from IDA funds for a total of 13 million CFA, (4) delay in the implementation of recommendations made by the external auditor dated June 2011, in particular sufficient justification for expenditures related to field supervision missions conducted by technical experts in the field, (5) recommendations concerning the adoption of the Procedures Manual, and (6) evidence that cast doubt on the authenticity of expenditure on a workshop expenses amounting to 8.433 million CFA.

(b) *Ecosystems Management (DPN-IU)*. The financial management system is assessed as adequate: (i) project accounts are current; (ii) the Financial Monitoring Reports are received on time and are considered satisfactory; and (iii) the rate of budget expenditure is acceptable and properly monitored. However, the overall performance of the financial management of the Project is rated unsatisfactory due to: (1) ineligible expenditures amounting to 72 million CFA paid for works which were unfinished or non-existent at project closure, contrary to the provisions of the financial agreement; and (2) the lack of

supporting documentation relating to the disposal of two vehicles amounting to 44 million CFAF which must be reimbursed.

In total the Bank has requested the reimbursement of 189 million CFA francs of ineligible expenses at the end of the Project.

2.5 Post-completion Operation/Next Phase

(including transition arrangement to post-completion operation of investments financed by present operation, Operation & Maintenance arrangements, sustaining reforms and institutional capacity, and next phase/follow-up operation, if applicable)

Even prior to the mid-term review of the Project, the pilots for local management of fisheries were showing strong community ownership and demand, to help reduce the open access nature of targeted coastal fisheries. On this basis, when additional GEF funds became available in early 2006, the Sustainable Management of Fisheries Resources Project (SMFRP),³ was designed in order to replicate and expand the number of these pilots, as a complement to the Project. More specifically, the SMFRP was a three-year project to build on the results of pilot activities of community fisheries co-management under the Integrated Marine and Coastal Resources Management Project and apply it to eight other sites (Sombédioune, Bargny, Yenne, Mballing, Nianing, Pointe Sarène, Mbodiène, and Fimela) along the central coastline of Senegal from the Cap-Vert Peninsula to the Saloum River Delta. It was designed to include activities for rehabilitating key coastal habitats essential for fisheries as part of the pilots, as well as additional community development aspects including alternative livelihoods and marketing of fisheries products. The SMFRP also provided funding for micro-projects and incentives (reconversion of fishermen) which could not be provided under the Integrated Marine and Coastal Resources Management Project. The SMFRP, which was financed with GEF resources from the Strategic Partnership for Fisheries in Africa, was approved in 2008. The project closed in June 30, 2012. The SMFRP recorded similar results as the IMCRP, in terms of strong local ownership and uptake of the pilots for local management of targeted fisheries, and continued to validate this model. However, the project also suffered from significant delays and mismanagement at the national level in late 2011, which led to its closure without an anticipated 18-month extension.

With the IMCRP under implementation and the SMFRP approved, the Bank moved to widen the support from a focus on addressing the constraints of open access in specific pilot sites for local management of fisheries, to addressing these constraints at the national and even regional level via the West Africa Regional Fisheries Program (WARFP).⁴ The WARFP is a nine-country regional program, that aims to support the countries to sustainably increase the economic returns to the region from marine fisheries, by strengthening governance arrangements to address the constraints posed by open access to the resources, to increase surveillance of the fisheries to reduce illegal fishing and enhance compliance with strengthened governance, and, once these

³ The SMFRP was approved on December 16, 2008 for US\$9.5 million, of which \$3.5 million IDA and \$6.0 million GEF.

⁴ The ongoing WARFP was approved in April 2008 and spans seven countries with US\$15.0 million allocated to Senegal. The WARFP has been effective in Senegal since June 2010.

two steps are completed, to support increased local value added to healthier fisheries, via infrastructure and skills investments. The WARFP investment in Senegal aims to expand the efforts of the local management pilots to the national level via nation-wide licensing for the country's fisheries and support for reduction of the industrial fleet, together with increased surveillance of the fisheries and infrastructure for greater value added. The aim of this combined support is to help the country deliver on the fundamental first objective of the 2008 Letter of Sector Policy, which is to rebuild the natural resource base underpinning the sector.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

(to current country and global priorities, and Bank assistance strategy)

The objectives of the Project remain relevant to the global concerns on sustainable fisheries and the growing crisis on world fisheries. In particular, its objectives are aligned with such global partnership initiatives as *Profish* and the more recent Global Partnership for Oceans supported by the Bank. The project also presented an opportunity for the Bank to re-engage with the Government of Senegal in the fisheries sector after long absence.

The Project's objectives remains relevant to the objectives of the CAS pillars of May 2007 and Senegal's Poverty Reduction Strategy which supports: (a) accelerated growth and wealth creation, including promoting a modern and diversified agricultural sector, and fostering sustainable development and management of natural resources; (b) human development and shared growth including increasing access to social services and creating opportunities for poor and vulnerable groups, and (c) rural and urban synergies including improving the quality of life of the population through better management of natural resources and improved access to water and sanitation.

In light of the strategies mentioned above, the design of local management initiatives remain particularly relevant since it focuses on the artisanal fisheries sector which plays a major role in poverty alleviation as a major contributor to employment for the rural sector but is risky and difficult to regulate. However, sustainability of operating costs for local initiatives and attention to alternative livelihood promotion to alleviate overfishing and poverty remains an issue.

Aspects of biodiversity management and ecosystems management are also relevant, although with a modified design with reduced complexity and realistic timeframe and associated targets. These would be accompanied by strong institutional capacity building and development measures.

3.2 Achievement of Project Development Objectives and Global Environment Objectives

(including brief discussion of causal linkages between outputs and outcomes, with details on outputs in Annex 2)

Achievement of PDO. The first key indicator: that local fisheries management sub-projects are implemented in four pilot sites by the end of the Project, has been substantially met. Sub-projects have been prepared by LFCs, submitted and approved by the MME, and implemented successfully at the four pilot sites, with most co-management activities completed at three out of

four sites. At the fourth project site at Ouakam, only one co-management activity (immersion of artificial reefs) is under preparation due to the late start of activities at this site. As such, it would imply that the capacity of LFCs as private sector organizations have been strengthened to better manage resources, in partnership with the Fisheries Administration of the MME. Furthermore, stakeholders at the local, regional and national levels collaborated on developing co-management initiatives which reflect a common perception towards management of resources and have tested an alternative decision-making structure which has yielded positive results.

The second key indicator: national management plans for two key fisheries are prepared, and approved by the National Consultative Council for Maritime Fisheries was not met, although the preparation work for the plans have been substantially completed under the Project. The plans will be finalized under the Bank's ongoing WARF program and expected to be submitted and approved by the National Consultative Council for Maritime Fisheries shortly. The remaining work involves conducting the last of the participatory workshops and finalizing the documentation for the management plans before submitting them to the Council for approval. More importantly, experience with this kind of activity has contributed to strengthening the capacity of the MME for preparing and managing the preparation of national fisheries management plans in the future.

The third indicator: participatory assessment of local community involvement in the management of biodiversity in the three pilot areas rated as satisfactory at the end of the Project, did not benefit from an end of project beneficiary assessment. However, a participatory assessment carried out in 2006 by the PCU, and between 2009 to 2011 by the DNP using the same tools, indicated a mean score variation from 67 percent in 2006 to 75 percent in 2011, as a measure of satisfaction at the level of communities. Also, popular demand by communities for some services provided under the project indicates that such activities have been successful in encouraging and strengthening local community involvement in biodiversity management.

Achievement of GEO. The key indicator: effective management of biodiversity in the three pilot areas increased by at least 50 percent by end of project was substantially met. It was measured using the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM)⁵ methodology developed by the World Wildlife Fund (WWF). Compared to the baselines for management effectiveness measured with WWF/World Bank Protected Areas

⁵ The Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM) methodology is based on the WCPA/Protected Areas Management Effectiveness (WCPA PAME) Framework. It was developed by the WWF between 1999 and 2002 and is designed to identify management strengths and weaknesses, analyse the scope, severity, prevalence and distribution of threats and pressures; identify areas of high ecological and social importance and vulnerability; indicate areas of urgency and conservation priority; and help develop appropriate policy interventions and follow-up actions to improve protected areas management. It is similar to the WWF/World Bank tool above but provides additional information on habitat and species evaluation. The methodology is best implemented through interactive workshops with policy makers, PA managers, and relevant stakeholders. RAPPAM has been implemented in some 40 countries and over 1,000 protected areas in Europe, Asia, Africa and Latin America.

Management Effectiveness Tool⁶ in 2006, the results at end of project (2011) indicates an improvement (see Results Framework Analysis in Annex 5). The mean score increased from 46 percent in 2006 to 61 percent in 2011, although the target set by the DPN for itself was actually 69 percent. For years 2009 – 2011, the RAPPAM methodology was used because it gives more information for habitat and species evaluation than the tool which was used in 2006. In addition, the development of local level ecosystem management plans for eight of the 10 sites contributed to effective management of biodiversity because of the active participation of the local communities in those areas.

3.3 Efficiency

(Net Present Value/Economic Rate of Return, cost effectiveness, e.g., unit rate norms, least cost, and comparisons; and Financial Rate of Return)

In the PAD, the economic analysis presents a description of the likely costs and benefits, and the likely fiscal impacts due to weaknesses of data collection in Senegal and the difficulty of measuring many of the effects involved, especially the likely off-site benefits (positive externalities) of the three proposed Biosphere reserves. In this ICR, the team will use the same approach (analysis of costs and benefits of the project) with the available data.

At project completion, the financial **costs** after project completion (amount of total disbursement) were \$13.25 million (80 percent of appraisal) (2005 - 2012) (with two extensions of the closing date occurring in 2008 and 2010). In terms of **benefits**, from the PAD, the three main benefits of the project are: (i) increased fisheries rent some years after the project implementation as a consequence of stock recovery and reduced fishing effort, (ii) increased recreational/ecotourism rent and, (iii) better preservation of marine and bird biodiversity, both in the short term and long term.

From the PAD, the **fisheries benefits** of the project are the rent of the coastal demersal fisheries, where the remaining fishers would see their catch-per-unit-effort (CPUE) increase due to the project. For the purpose of the ICR, the team could not calculate this rent for the targeted fisheries due to lack of data for small-scale vessels operations. Hence, the team has analyzed the CPUE for the targeted fisheries in each of the four pilot sites. From 2005 to 2011, the CPUE of green lobster fisheries in Ngaparou has increased from 7 kg through 40 kg per vessel, and in Ouakam, the same CPUE has increased from 10 kg to 34 kg between 2007 and 2011 and the CPUE of *Thiof* has reached 166 kg per vessel (against only 75 kg per vessel in 2007) during the implementation of co-management fisheries.

⁶ This tool is simple and basic, and is designed to measure management effectiveness over time, i.e., in line with project capacity-building objectives. The tool is used as a cost-effective proxy to determining impact and has been used in over 85 countries, primarily by donor agencies and NGOs, and is now mandatory for World Bank, GEF and WWF projects. The methodology uses a rapid, site level assessment based on a score-card questionnaire which includes all six elements of management effectiveness identified in the international Union for Conservation of Nature / World Commission on Protected Areas (IUCN/WCPA) Framework: context, planning, inputs, process, outputs and outcomes. It enables park managers and donors to identify needs, constraints and priority actions.

For the coastal white shrimp stocks in Foundiougne and Betenty, the implementation of fisheries management initiatives by the LFCs in these localities has allowed the stock of shrimp to begin to rejuvenate and to recover. As in Betenty for instance, the number of individual shrimp present per sample increased by 38 percent from 2005 through 2011 (it means that the body size of the shrimp has increased as an indicator of higher quality of the fisheries product).

In the PAD, **ecotourism benefits** depended on the additional number of visitors over time (compared to the scenario without the project) and on the economic rent from tourism captured by Senegal from the additional visitors. For the ICR, the team, given the availability of data, has calculated the additional benefits generated by the additional number of visitors at the parks and reserves concerned by the IMCRP through the project implementation. The additional number of ecotourists was about 44,172 which generated a total additional revenue of the ecotourism in these protected areas during the project implementation (between 2006 and 2010) is about US\$96,532.

The **benefits of biodiversity conservation** by the implementation of the project can be evaluated by the effectiveness rate of management of biodiversity in the three pilot areas (biosphere) and by the rate of participatory involvement of the local communities in the management of biodiversity in these three pilot areas through the project implementation. As results of such assessment of the effectiveness rate of management of biodiversity, all the three zones have reached the target fixed by the end of the project: Cap Vert 61 of 65 percent, Senegal Delta 62 percent of 70 percent and Saloum Delta 57 percent of 60 percent. As for the rate of participatory involvement of the local communities in the management of biodiversity, the participatory assessment was done using the same tools. According to the WWF/CATIE scale, and between 2006 and 2011, this score has increased from 76 percent to 79 percent for Cap-Vert zone, from 64 percent to 75 percent for Senegalese river Delta zone and from 65 percent to 73 percent for the Delta of Saloum zone.

3.4 Justification of Overall Outcome and Global Environment Outcome Rating

(combining relevance, achievement of PDO/GEOs, and efficiency)

Rating: Moderately Satisfactory.

The justification for the rating on the PDO is that, in terms of impact, important results on the ground were achieved compared to when the Project began, despite the shortcomings in management at the national level. It was a new operation piloting an innovative approach in a difficult environment (risky sector, difficult social, environmental, economic and political conditions). Overall, the Project has been successful in changing perceptions towards fisheries resources and biodiversity conservation, and introducing new approaches, even if not all physical targets have been met. Conflicts from users of the same resources still occur but are increasingly rare as the co-management approach gains ground. Awareness has been raised from local to national levels in various areas including resources use and management, resources monitoring and evaluation, partnership building and shared decision-making, conflict resolution, as well as technical skills in conservation methods. Harmful methods of fishing and gear has been reduced, and at the national level for the first time, the nationwide registration program for small fishing boats has put in place an important surveillance system for fisheries administration staff to monitor artisanal fisheries efforts. Revisions to major legislation in both sectors such as the Fisheries Law, Letter of Sector Policy and Biodiversity Framework Law has re-engaged the

Government in the sectors and provided an important opportunity for staff of the MME and MENP to demonstrate their strengthened technical capacities. The rating justifications are detailed below.

Gaps and weaknesses in the management of the fisheries sector, including governing and management structures, have been narrowed due to the institutional strengthening support to the government institutions⁷. The knowledge base for policy decision-making and accompanying measures has been strengthened through the revisions to major sector legislations⁸. The successful establishment of a nationwide system for registering small fishing vessels is an important step towards regulating artisanal fisheries for the Government⁹. The successful implementation of sub-projects by pilot communities whose members (LFCs) conduct their own MCS activities and basic data collection and M&E, indicates that the objective of strengthening capacity of local artisanal fisheries management has been met.

The successes of the co-management approach are now known and the approach is being applied in other donor interventions. The Government of Senegal is now fully supportive of local initiatives to manage and limit fishing and the co-management approach, moving from pilots to policy¹⁰. Communities and Government (through the legal agreements signed with the Minister of Fisheries and Maritime Economy) have successfully built partnerships in fisheries resources management and local development which contributes to the achieving the PDO. In a recent interview during a visit to a coastal fishing community (Mbour in July 2012), the newly appointed Minister of Fisheries and Maritime Economy was quoted as saying that he and the President would support co-management because he was reassured by its consultative approach which provides the fishing communities with a means to overcome challenges without waiting

⁷ These are due to: (a) the direct involvement of the MME and MENP staff at national, regional and local levels involved in the implementation of the Project; (b) the institutional strengthening of the DMF and the DPN through the implementation of Components 1 and 2, experience with project management, monitoring and control, (c) increased government interaction with local communities; and (d) direct involvement of ministry technical personnel providing input into the revisions of sector legislation in Senegal.

⁸ The revised Fisheries Law has been submitted to Parliament for approval, and the Letter of Sector Policy was revised in 2008. The revisions to the Fisheries Law is expected to address the difficult issues of open access to fishing. The legislations demonstrate Government engagement at the national level and is an important step linking improved fisheries management with the sectoral policy framework. These will also provide a channel for more effective aid and aid coordination in the fisheries sector.

⁹ Historically, government regulation of artisanal fisheries has had little success and has been met with strong resistance from boat owners. By end of project, however, boat owners are increasingly complying with the registration program and the number of boats registered have almost doubled (18,900 boats) over the number estimated at appraisal (10,000).

¹⁰ The co-management approach to fisheries resources management has contributed to the reduction in fishing efforts, elimination of unsustainable and harmful fishing gear and methods, and sustainable management of local resources through local enforcement and compliance with biological rest periods to allow fish stocks to recover, rehabilitation of reefs, and MCS activities. Data collected at the local level are indicating that fish stocks around the pilot sites are showing signs of improvement in terms of size and catch volume.

for the state to intervene.¹¹ This illustrates that the project's objectives for co-management has been fully accepted by the Government.

The justification for the GEO is that, the submission of the Biodiversity Framework Law to Parliament for approval established a base for future measures in conservation, and the establishment of Ecosystems Management Committees at two out three sites and the completion of eight out of 10 local level ecosystem management plans contributes to effective management of biodiversity because of the active participation of populations concerned. However, to maintain the momentum, the DPN would need support through additional funding.

3.5 Overarching Themes, Other Outcomes and Impacts

(if any, where not previously covered or to amplify discussion above)

(a) Poverty Impacts, Gender Aspects, and Social Development

The artisanal fisheries sector is an important source of employment for the rural sector where most of the fishing methods are traditional. Women's groups are involved mainly in the processing of fish products. The Project's objectives are focused on poverty reduction and the sustainability of local resources, by targeting small-scale, labor-intensive fisheries. This is carried out through support to the organization of fishers and the allocation of user rights, the promotion of alternative livelihoods, and the establishment of protected marine reserves. The protection of fisheries resources at the local, small-scale level remains important for providing food security for the poor fishing communities which depend on them for their livelihood. Through the Project, the co-management initiatives used to gain the support of communities have been successful in controlling unsustainable fishing methods and reducing overfishing at pilot sites while ecosystems management initiatives have raised awareness and increased capacity of communities to also manage the use of natural resources at the protected areas and reserves on which they depend. Relevant sector policies and regulations finalized under the Project provide support and strengthen the level of contribution of local fishing and harvesting activities to poverty alleviation and food security.

Although the participation of women in fisheries activities is limited, the provisions for identifying the impact of project initiatives on women were in the preparation of the fisheries management plans. Women's interest groups were well represented in Local Fisher Committees as well as the protected area management groups, including volunteer groups such as the Ecoguards. The Project provided support also for women's groups involved in fish processing and marketing in the form of project funding, technical advice and guidance, and procurement of goods and materials.

In terms of social development, the cohesion of groups targeted by the Project were strengthened through the co-management initiatives, and existing associations were supported with funding

¹¹ "Mboure est le capital de la pêche" (Ministre), <http://mbour.info/economie/economie-maritime>, jeudi, 12 juillet 2012.

and procurement of goods. The ecosystems and protected areas activities attracted volunteers to the Ecoguards groups which were mostly comprised of youth from the nearby communities.

(b) Institutional Change/Strengthening

(particularly with reference to impacts on longer-term capacity and institutional development)

The MFME was strengthened with technical assistance provided by national and international consultant services, training programs, workshops, office equipment and software, as well as vehicles and budget for operating costs during the life of the project. The Bank teams provided substantial support and inputs into national level strategic, legal and regulatory documents such as the Fisheries Law revisions and the Letter of Sector Policy, as well as sector studies and strategies for relevant sectors, and provided technical inputs into the preparation and implementation of fisheries programs. In this context, the MFME was strengthened to provide support and influence to changes in policy in the fisheries sector at the national level, and at the local level, changed the perception of local communities as partners and modified the traditional top-down approach. Local communities also changed their perception of Government as partners.

In other areas, the establishment of the National Registration Program for fishing vessels provided Senegal with an effective means to control fishing effort in country with the potential for further collaboration with neighboring countries. The Project also presented an opportunity to strengthen the capacity of a national level research institutions like ISRA and CRODT, despite reservations about its declining capacity. The CRODT was contracted to carry out research on demersal species; however, due to lengthy contract preparations, the research experienced important delays but was completed. Funding was also provided for the LFCs to collaborate with the CRODT to prepare co-management initiatives. Funding was also provided to ISRA, the national agricultural research agency, to conduct participatory research and for setting-up a monitoring system to support local co-management initiatives for artisanal fisheries. Such contracts exposed national research institutions to participatory research methods and offer alternatives to the top-down research and data collection approach.

With regards to the Ministry of Environment, Component 2 funded by GEF aimed at strengthening and restructuring units within the ministry to better manage and conserve Senegal's biodiversity through the restructuring of the DNP and supported its operations in implementing the Ecosystems management component, the revisions of the Biodiversity and Protected Area Law, the National Action Plan for iconic fauna, and strengthening the National Biodiversity Committee. Support and awareness raising activities strengthened local level associations (ecosystems management committees and Ecoguards) and was successful in building ownership of local populations in protected area management initiatives.

(c) Other Unintended Outcomes and Impacts (positive or negative)

The success of piloting local level initiatives in co-management provides a starting point for dialogue at a policy level with the government to support the sensitive and difficult discussions on open access.

Some Local Fisher Committees revolving funds established for operating costs have developed into a broader social fund /safety net type of community fund (e.g. , Ngaparou).

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

(optional for Core ICR, required for ILI, details in annexes)

Not available.

4. Assessment of Risk to Development Outcome and Global Environment Outcome

Rating: High

Senegal shares its fisheries resources with the neighboring countries of Mauritania, The Gambia and Guinea-Bissau. Therefore, a regional or wider approach to fisheries management is imperative if Senegal is to manage such resources sustainably. The Project did not focus on industrial fishing, which also plays a major role in the depletion of fisheries resources. This area was already being supported by other donors (EU, France, and Japan). While the Project's objectives focus on artisanal fishing communities in an attempt to raise awareness and improve the management of such resources, it does not address industrial deep sea fishing. Therefore, for the efforts to have a sustainable impact, the community level efforts must be accompanied by regional or international initiatives, including close coordination with other donors, to strengthen sustainable management of such resources.

The likelihood that the two ministries at the political level will continue to work in silos following the separation of the project into two themes is high, although their staff cooperate on the technical level. As such, the capacity-building aspects of the project strengthened the capacity of each technical ministry but failed on the collaboration at the national levels. As a result, the vision of managing resources across sectors, including the ecosystem approach, remains premature as long as political will is lacking. At the local level, communities seem to adjust better to the approach and vision but lack the capacity and need the reinforcement of accompanying measures at the national level measures.

Sustainability of certain Project activities such as local level initiatives, particularly with regards to alternative livelihood options, operating costs of community MCS initiatives, is unsure, unless it will be supported under follow-up operations which will explore these aspects.

5. Assessment of Bank and Borrower Performance

(relating to design, implementation and outcome issues)

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

(i.e., performance through lending phase)

Rating: Moderately Unsatisfactory.

Project preparation was carried out with an experienced team of experienced and consultants to address the technical aspects, with quality input and guidance from peer reviews and management. The Bank provided adequate resources to ensure quality preparation and appraisal work. The team ensured consistency with the CAS and Government priorities in the sector and compliance with the Bank's environmental protection and safeguards strategies. Lessons of

experience were drawn from best practice in the sector and similar projects in other countries, but piloted for the first time in Senegal the integrated, eco-system management approach to fisheries management. The project benefited from strong Government ownership having been prepared by the experts at the Ministries of Environment and Fisheries and Maritime Economy, with strong donor collaboration and participation from NGOs, civil society, and communities.

The Project was designed to coordinate efforts across ministries and sectors to manage a broad range of activities on sustainable fisheries management and biodiversity conservation along the coastline of Senegal stretching from Mauritania to the Gambia, but at strategic pilot sites spread along the coast. However, the design proved to be too complex and ambitious for the project timeframe and taxed the limited capacities of the implementing agencies in terms of manpower and resources. Insufficient validation of the ownership and mandate of the PCU within the Government before establishing the unit within the Ministry of Environment caused problems in implementation; and more attention could have been paid to establishing the monitoring and evaluation (M&E) system and setting realistic targets for the timeframe and capacity of implementing agencies. The Project could also have built in a stronger support for developing the capacity for research with such institutions as the CRODT which was already identified as weak.

(b) Quality of Supervision

(including of fiduciary and safeguards policies)

Rating: Moderately Unsatisfactory

Supervision was carried out on a regular basis for most of the project, with at least two missions a year. Resources allocated for supervision under IDA were modest for a complex operation and blended project. GEF resources allocated averaged \$17,000 - \$35,000 per year. Implementation of project activities were followed closely by Bank task teams from the start of the project and substantial efforts made to react to implementation problems in a timely manner (MTR, project restructuring). However, the skills mix for the site visits was adequate for fisheries management but inadequate for addressing ecosystems and biodiversity conservation. Consequently, results on essential aspects such as annual reporting, M&E, and the social dimensions were overlooked. In terms of safeguards, expertise was provided irregularly, particularly on environmental safeguards, and briefly for social safeguards (MTR). On fiduciary compliance and project management issues, the Bank issued firm recommendations for improvement as needed, with regular follow-up after formal supervision missions. However, fiduciary missions were not carried out at the same time as those of the Bank implementation missions and consequently, findings were sometimes lagging those of Bank implementation missions and create discrepancies in ratings in the given by the team.

Early in implementation the Bank was intent on getting the project started but was plagued by the institutional arrangement problems of the PCU. However, the mission teams could have received more guidance from management in handling some of the more difficult issues of coordination and collaboration between the ministries, particularly with regards to Government interference in project management as project performance rating began to decline early in implementation, and towards the end of the project as the two ministries began to operate two separate projects. Maintaining Government commitment through turnover in ministers would

require a higher level policy dialogue in the context of poverty alleviation strategies and sector reviews.

7.3 Overall

(c) Justification of Rating for Overall Bank Performance

Rating: Moderately Unsatisfactory

Although there were adequate resources and skills mix during the preparation phase, resources were seriously lacking for supervision to properly monitor progress after project restructuring, particularly in ecosystems management. Technical input for fisheries management was adequate and provided when needed. The Project was four years into implementation with little results on the ground before a decision was made to restructure the Project. It had underestimated the cooperation needed of the Ministries concerned on project arrangements. Following restructuring, the Bank made a serious attempt to save the Project by addressing some of the institutional arrangements issues of the PCU and resetting the targets to a more realistic level. However, supervision post-restructuring lacked attention to M&E, results on essential aspects, and their follow-up. Fiduciary supervision was effective when carried out, but was late in identifying the issues.

5.2 Borrower Performance

(a) Government Performance

Rating: Moderately Unsatisfactory

Although the Government prepared the project with ownership and enthusiasm, it implemented with mixed success a set of complex activities. The performance of the Government was satisfactory on the updated Letter of Sector Policy in 2008 and on the revision to the Fisheries Law which has been submitted to Parliament, an important development for the sector in Senegal and a significant development under the Project. The Biodiversity Framework Law was submitted to Parliament for approval ahead of the target date and is expected to pass in 2012. However, when the design of the project was too ambitious for the capacity of the DNP and DMF and for the timeframe involved, the Government tried to salvage the Project by requesting the dissolution of the original PCU and, despite the lack of capacity within its departments, proposed to mainstream the management of a complex operation into its ministry agencies. As a result, some of the essential activities of the project coordination was divided and not followed up, e.g., M&E, IEC, research, annual biodiversity reporting. Following restructuring, indications are that the Project lacked sustainable ownership on the part of the Government.

The Government's performance in project start-up was slow in establishing functional committees and declining commitment in maintaining the structures and supporting or strengthening their mandates (Special Commission, Steering Committee, Ecosystems management Committees). The National Biodiversity Committee (NBC), which had oversight of biodiversity monitoring and reporting to the U.N. Convention on Biological Diversity (CBD), was not effective and played a passive role in promoting biodiversity monitoring. The Operational Coordination Committee (OCC), however, played an important role in coordinating with the Ministry of Environment the transmission of the Biodiversity and Protected Areas Act and submitting the Act to Parliament for approval.

(b) Implementing Agency or Agencies Performance**Rating:** Moderately Unsatisfactory

The key PDO target for the national fisheries management plans was not met although substantial preparation for the plans have been completed and finalization funded under the Bank's ongoing WARFP. Targets for project activities at the local level, however, were met and the results from the co-management initiatives represent a **key success** of the Project. The implementing agencies successfully used the consultation and negotiations methods, recruiting qualified and experienced individuals to work with communities (e.g., facilitators, co-management experts, national parks personnel, technical consultants, etc.) to achieve objectives and reach targets. Data on fish catch, weight and size show an increase and co-management implementation has yielded positive reaction from the local communities. Participation rates from all pilot communities was high with strong ownership of measures undertaken on conservation and management of resources. With the DNP-IU, initiatives to raise conservation awareness in protected areas and schools with the younger generation was impressive. With the DMF-IU, co-management initiatives managed to change the perception and approach to traditional management at national, regional and local levels. Both IUs contributed to building partnerships between fisheries and parks administration and local communities, an important development for the Project.

The DMF's and DNP's performances suffered, however, from the disruption of project restructuring and from a complex project design. M&E lacks commitment and interest and the system is particularly weak. Annual reporting of progress has been overlooked. Key performance indicators and physical targets were partially met.

Project start-up experienced many problems due to the institutional arrangements, the restructuring improved performance to some extent (increasing the ownership of the components) but the capacity of each agency to manage the range of monitoring and follow-up activities across multiple project sites is limited. Management of the agencies has improved in terms of a common shared vision, but still lacks a cohesion between the two ministries. The Ministry of Environment lacked capacity to implement the project activities, the MFME fared better. A stronger political will is needed to bring the operational areas together. Instead, each is operating independently from the other. M&E was weak, as was supervision of the research contracts with CRODT probably due to the lack of clarity of M&E arrangements, and research objectives.

Regarding local level Monitoring Control and Surveillance (MCS), law enforcement and prosecution of offenders is weak and inconsistently applied across the country which weakens the resolve to conduct effective and legitimate MCS. The implementing agencies have a role to play in proposing an effective system nationally.

Compliance with Legal Covenants.

Most of the covenants were complied with but experienced the following shortfalls: (a) the long delay in getting the Fisheries Law revised and passed through Parliament; (b) the preparation of the two key fisheries management plans (substantially prepared but not finalized); (c) the

preparation of an incremental program of fisheries research and its implementation by CRODT (not carried out due to lack of capacity of CRODT); (c) CRODT evaluations of local fish stock programs prepared by DMF (not carried out due to lack of capacity); and (d) the preparation of management plans using an ecosystem approach (local ecosystem management plans were prepared), (e) timely submission of the UNESCO MAB Biosphere Reserve application for the Cap-Vert Peninsula (not carried out), and (f) annual updates to the State of Biodiversity Report during the life of the Project (not all received).

7.7 Overall

(c) Justification of Rating for Overall Borrower Performance

Rating: Moderately Unsatisfactory

Important legislations have been submitted to Parliament for approval and these are expected to have a positive impact on the perception and approach to natural resources management initiatives in the country. The national fishing vessels registration program has been implemented for the first time in Senegal and has put in place a surveillance successful tool for managing artisanal fisheries in the sector. However, although the Borrower prepared with project with strong ownership and reached many of the targets set, the complex operation seriously taxed the resources, time and skills of the implementing agencies which had difficulty maintaining the momentum. M&E was weak in both the DMF and DPN which lacked the skills and resources to implement the system.

6. Lessons Learned

(both project-specific and of wide general application)

- **The fundamental constraint of open access to the fisheries resources may remain the key obstacle to the sector achieving its potential.** However, the project did successfully pilot a model for local management of targeted fisheries that can help address this constraint in the coastal waters. In this model, the project supported communities to establish private associations of fishers that were legally recognized, and then these associations developed regulations and plans for the management of targeted fisheries. On the basis of these plans, the Government signed a legal agreement (i.e. the Minister of Maritime Economy) and passed an accompanying decree for the regulations developed by the association. In this way, the Government successfully delegated responsibility for resource management to these private user associations of fishers in each of the sites, and then provided monitoring support to enforce the regulations. These associations were supported to conduct a consultation and negotiation process for formulating co-management plans that was highly successful in soliciting the effective participation of relevant stakeholders. The successful method used was to introduce initiatives in a pilot community was to apply the rapid result method, i.e., obtain rapid results on a commonly agreed-upon measure to encourage the community to adopt other, stronger or more difficult measures. The result was that by the end of the project, fish catch volumes and prices had increased in all pilot sites, in many cases doubling.
- **For this model to become truly sustainable and fully address the fundamental constraint of open access to the resources, the legal and institutional framework**

will need to provide local users and associations not just the authority to manage (i.e. regulate) targeted fisheries, but also to limit access. Unless there is some scope for control of access to these fishing grounds that are locally managed, their success will also be their downfall – as improved fisheries and higher catch rates will only attract more fishers from neighboring waters, so that overall exploitation increase to the point that the stock sizes and catch rates decrease to pre-project levels. In fact, in a number of the pilot sites fishing activity has increased as a result of the success of local management measures, and this threat will become larger in the future. Essentially, creating and allocating the right to manage targeted fisheries has been a very successful first step, but the country will need to take the next step to create and allocate rights to access the fisheries, in order for this progress to be maintained.

- The issues of open access to fisheries and other sectoral reforms should be addressed in the context of a policy dialogue and partnership discussion with the highest level of Government, while building a constituency at the local level for reform.
- The Bank underestimated the cooperation needed of the ministries with regards to the institutional arrangements (establishment of the PCU within the Ministry of Environment). It could not have predicted the high turnover of ministers nor the level of interference in project activities. However, this could have been avoided through stronger institutional analysis during the preparation phase and commitment could have also been obtained up-front from higher levels in government.
- **Greater community involvement in identifying issues and solutions ensured greater ownership of initiatives, enhancing prospects for sustainability of new approaches.** Formalizing the co-management proposals through legal agreements between community associations and government gave communities a voice and shared accountability with decision-makers. However, the sustainability of certain activities launched under the Project such as operating costs for MCS activities, technical advice or assistance for marketing and market access, needs to be addressed in follow-up operations.
- **M&E was weak and lacked attention on the part of the implementing agencies. M&E arrangements and realism in setting targets are crucial in avoiding early problems in implementing project activities.** This is better achieved through obtaining agreements on clear, measurable indicators and targets through joint formulation of indicators (at project preparation workshops); implementation of the M&E system should followed up closely for early identification of constraints (e.g., institutional capacity, knowledge gaps, budget and time, technical); up-front/re-fresher M&E training should be given to project teams before implementation begins and repeated as necessary (in cases of staff turnover). Participatory M&E requires clear definition of the purpose and terms of the partnership accompanied by close follow-up on the part of donors and implementing agencies to ensure the involvement and momentum with local communities is not lost. The dissolution of the PCU meant that project coordination and monitoring activities, including IEC, reporting, following up on research and assessments, etc., needed to be continued at two separate implementing

agencies. However, these were carried out sporadically by the agencies and as a result, insufficient data made it difficult to assess consistently final results. Overall, the respective Ministries never conducted the work necessary to sufficiently monitor and evaluate project progress, despite multiple Aide Memoires recording agreement to do so.

- The **ecosystems approach** requires a long-term commitment over 10-15 years in a phased approach, particularly as it relates to biodiversity conservation. In the shorter term, modest gains are to be expected. In the longer term, donor assistance would need to build in appropriate incentives to keep communities engaged in conservation activities in the face of poverty placing pressure on the resources, and funding support for the cost of ecological works required for habitat and species conservation.
- The **establishment of biosphere reserves** requires broad and sustained consultation with stakeholders to engender a common vision. This would have worked better if it was managed by an entity associated with the biosphere reserves. The DPN was not well-suited to perform these functions, particularly in forming the EMCs which needed to cross administrative jurisdictions while the DPN's jurisdiction was limited to protected areas and national parks

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

(b) Co-financiers

(c) Other partners and stakeholders

(e.g. NGOs/private sector/civil society)

Annex 1. Project Costs and Financing (as of June 30, 2012)

(a) Project Cost by Component (in USD Million equivalent)

Integrated Marine and Coastal Resources Management Project - Total Project Cost			
Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal (%)
1. Management of sustainable fisheries	6.53	5.67	87
2. Conservation of critical habitats and species	6.02	4.35	72
3. Program management, M&E and communication	3.94	3.23	89
Total Baseline Cost	16.49	13.25	80
Physical Contingencies	0.00	0.00	
Price Contingencies	0.00	0.00	
Total Project Costs	16.49	13.25	80
PPF Refinancing	0.64	0.53	83
Front-end fee IBRD	n.a.	n.a.	
Total Financing Required	17.13	13.78	80

Integrated Marine and Coastal Resources Management Project – P086480 - IDA			
Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal (%)
1. Management of sustainable fisheries	6.00	5.59	110
2. Conservation of critical habitats and species	0.50	0.14	28
3. Program management, M&E and communication	3.50	3.08	88
Total Baseline Cost	10.00	8.81	88
Physical Contingencies	0.00	0.00	
Price Contingencies	0.00	0.00	
Total Project Costs	10.00	8.81	88
PPF Refinancing	0.64	0.53	83
Front-end fee IBRD	0.00	n.a.	
Total Financing Required	10.64	9.34	88

Integrated Marine and Coastal Resources Management Project - P058367 - GEF			
Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
1. Management of sustainable fisheries	0.00	0.00	0
2. Conservation of critical habitats and species	5.00	3.76	75
3. Program management, M&E and communication	0.00	0.00	0
Total Baseline Cost	5.00	3.76	75
Physical Contingencies	0.00		
Price Contingencies	0.00		
Total Project Costs	5.00	3.76	75
PPF Refinancing	0.00	0.00	0
Front-end fee IBRD	0.00	0.00	0
Total Financing Required	5.00	3.76	75

(b) Financing

IDA - P086480 - Integrated Marine and Coastal Resources Management Project				
Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal (%)
Borrower	Counterpart Funds	1.49	0.69	46
International Development Association (IDA)	Credit	10.00	8.81	88
GEF - P058367 - Integrated Marine and Coastal Resources Management Project				
Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal (%)
Borrower		2.00	0.69	35
GLOBAL ENVIRONMENT - Associated IDA Fund		10.00	8.81	88
Global Environment Facility (GEF)		5.00	3.76	75

(c) Other Financing

IDA - P086480 - Integrated Marine and Coastal Resources Management Project				
Source of Funds	Type of Financing	Appraisal Estimate (USD millions)	Actual/ Latest Estimate (USD millions)	Percentage of Appraisal (%)
PHRD (TF 53114)	Trust Fund	0.522	0.117	22
Swiss Corporation (TF 90534)	Trust Fund	0.526	0.468	89
PDF-B (TF 24759) (Cancelled)	Trust Fund	0.344	0.0	0
PDF-B (TF 516622)	Trust Fund	0.344	0.344	100

Annex 2. Outputs by Component

Component 1: Management of Sustainable Fisheries

The implementation of this component is rated as **moderately satisfactory**. The objective was to increase the sustainability of fisheries through actions at the national and local levels through the following three sub-components: (a) national-level activities to improve fisheries management, (b) promotion and coordination of local management initiatives, and (c) institutional strengthening and capacity building. The key performance indicators have been substantially met (successful implementation of sub-projects at the pilot sites, positive results for specific years that participatory assessments were conducted), and physical targets substantially achieved (good results on sub-project performance and catch volumes). Fisheries management plans were not completed.

Sub-Component 1.1: National-level activities to improve fisheries management

The preparation of two selected **fisheries management plans** by COMO in cooperation with the CRODT were not completed. This was a key performance indicator for the project. The two target species, i.e., white shrimp (*Penaeus notialis*) and *Yeet* (*Cymbium spp.*), were selected early in implementation but the procurement and formulation of the plans experienced significant delays from the start. An international consulting firm, BRL Ingénierie (BRLi) was selected from the short-list of qualified firms. However, the time from advertising for Expressions of Interests (January 26, 2005) to Bank approval and contract award (June 9, 2008) took about 3.5 years whereas the usual procurement processing time for this type of contract, from advertising for expressions of interest (EOI) to consultant selection normally takes about 6-7 months. Preparation for the management plans began a year later. However, a substantial amount of preparation work has been carried out on the management plans under the Project which will now be completed under the ongoing West Africa Regional Fisheries Program approved by the Board in 2009.

During the preparation of the plans, BRLi's team of fisheries experts changed three times. Finding qualified replacements in a highly specialized technical fields, e.g., socio-economics modeling of tropical fisheries, was made more difficult by the requirement to have the approval of the Government and of the Bank to such changes. These requirements further delayed the process by eight months. Consequently, in August 2010, BRLi proposed a new timetable for activities which extended past the Project closing date of December 1, 2011. A fisheries expert then fell ill and by the time the replacement arrived, it was too late to complete the assignment. The Bank extended the closing date to May 1, 2012 to allow for the completion of the fisheries management plans, however, delays in approving the amendment to BRLi's contract by the Government's Central Procurement Department prompted the firm to officially notify the Bank on March 20, 2012 that it was suspending all remaining activities and cancelling the contract, citing insufficient time to complete the work before the Project closing date.

The management studies planned at appraisal to evaluate **fisheries sector policy options** were removed from project activities by 2008 because they were overtaken by national policy discussions dealing with similar concerns and ongoing at the time. These included: (a) revisions

to the 1998 Fisheries Law which were a result of broad consultations between donors and the Government of Senegal; (b) revisions to the 2004 Letter of Sector Policy, and (c) the results of the 2007 Public Expenditure Review of the Fisheries Sector which was being conducted to identify the key policy options in the sector. However, a consensus on the key policy options could not be reached and the Public Expenditure Review report was not finalized because of the diverse interests which were at stake.

Important policy decisions which did take place were: (a) revisions to the **Fisheries Law** which has been submitted to Parliament for approval and at the time of the ICR is still pending; (b) the revisions to the **Letter of Sector Policy** in 2008. Although the policy revisions were completed towards the latter part of the Project, they represented key achievements under the Project. The Bank team provided substantial inputs into the revisions of both documents. The revised Fisheries Law provides for important innovations including the right of access and ecosystem management. It provides the legal backing for the establishment of the LFCs, the linkages between the LAFCs, LFCs, and local fishermen, allows provisions for co-management, deals with artisanal fisheries permits, and sports fishing permits, among others. Once the Fisheries Law is approved by Parliament, it will provide the basis for the strategic fisheries management framework.

The **Special Commission** which was established by the Government to determine the nature of any major reforms proposed by changes in fisheries sector policies did not function. Its statute was not renewed after 2006 because the Government changed its mind regarding the usefulness of its mandate. Although it may indicate a shifting priority on the part of the government, it also indicates the flexibility of the Bank in accommodating the priorities of the Borrower.

An **Information, Education and Communications (IEC)** plan was drafted and included in project documentation. It was to be attached as an Annex to the Project Implementation Manual but was not finalized. The IEC plan analyzes the country context in light of the new initiatives introduced by the Project, weaknesses in communication, needs and constraints, and lays out the vision, objective, and roll-out strategy, including timetable and budget requirements. However, its dissemination and implementation was delayed well past the mid-term review. The Bank supervision missions of 2006 reminded the Government executing agencies of the importance of disseminating project documents to those involved in implementation. The supervision mission of February 2010, it was noted that the IEC plans along with other participatory research activities, were still not disseminated whereas they were meant to be launched at the same time as the co-management activities. Following the Project restructuring, the IEC plan was not updated and following project restructuring on Component 3, funding for IEC activities were transferred to other components. At the pilot sites, planned IEC activities were carried out with the assistance of a local firm, CAES-Consult, which included sensitization and awareness-raising activities with villages and CLPAs, printed materials (flyers, posters, etc.) for distribution, exchange visits with neighboring villages, door-to-door communication with relevant establishments, radio spots and public information sessions with local stakeholders. Although the local communities were aware and were actively participating in IEC events, an evaluation conducted as part of a beneficiary assessment would be needed to validate the effectiveness of the IEC campaign for the local level.

The preparation of an **incremental program of fisheries research** targeting the life cycles of key demersal species by the COMO was dropped following the MTR and restructuring. It was to be implemented in collaboration with the national fisheries research institution, CRODT (*Centre de Recherche Océanographique de Dakar-Thiaroye*) as part of the Project's institutional capacity-building activities, but although a contract was signed between COMO and CRODT in 2005, in 2006 it became evident that CRODT was not capable of providing the needed services, its capacity having been weakened by departures of researchers towards other international organizations. Subsequently, the Bank recommended exploring other institutions outside of Senegal but no replacement was identified.

The nationwide system of small fishing vessel registration (*Programme national d'immatriculation (PNI)*). The objective of establishing a functional nationwide registration system for small fishing vessels was to provide a system for the government to control fishing efforts and reduce fishing over time, by location, for the long-term management and sustainability of fisheries resources.

At the time of appraisal, all industrial vessels in Senegal were locally registered and licensed, but not the artisanal pirogues and their fishermen owners. To date, about 18,900 small vessels have been registered. The PNI in Senegal began as a two-year program from 2006-2008 with the objective of registering an estimated 10,000 artisanal fishing boats (pirogues). Over the years since the PNI began, the number of fishing boats seemed to grow, partly because no census had been taken since the one conducted by CRODT in 1986; therefore, the beginning estimate was not accurate. In addition, the number of boats fluctuated as new boats were being constructed and as fishermen moved from one neighboring country to another while the registration was being carried out.

The PNI received funding totaling CFAF1,948 million from various sources:

Source of Funds	(CFAF million)
Swiss Corporation	239
EU	132
World Bank	489
Spanish Corporation	260
Government of Senegal	420
Total	1,948

Funding from the Swiss Corporation in the form of a Trust Fund (TF90534) of \$526,829 (of which \$468,516 was disbursed) from 2005-2010 was managed by the World Bank. The Bank supported the program through three projects in various amounts: the Integrated Marine and Coastal Resources Management Project (IMCRM) (2004-2012), the Sustainable Management of Fish Resources Project (SMFR), and the West Africa Regional Fisheries Project (WARFP) (ongoing – 2014).

The PNI has been in implementation for six years and its closing date was extended four times from 2006 to January 2011. It experienced technical difficulties and resource constraints resulting in considerable delay to its completion.

The technical constraints were:

- Locating itinerant fishermen (migration to the interior of the country and to neighboring countries), reaching areas with limited access such as Fatick and Ziguinchor;
- fading or disappearance of registration markings (lettering and numbering) through voluntary removal by the fishermen, normal wear and tear, or use of poor quality paint;
- difficulty reaching fishing areas bordering another country, e.g., St. Louis region, near Mauritania; limited means for personnel to travel to remote areas to follow-up on registration;
- certain types of boats (*senne tournante*, *Moudjass*) which navigate in deep seas are more difficult to mark because of high water levels;
- registration data issues such as equipment malfunctions and data entry management affecting reporting quality, shortage of registration number templates and materials; faulty placement of registration numbers on the boat; and
- refusal by some fishermen to use certain assigned acronyms.

Administrative constraints were:

- the lack of familiarity with the fishing boat sites/*parc piroguier* (inaccurate statistical data),
- wrong application of registration procedures, non-compliance with administrative procedures for building new boats, and
- lack of procedures and standardized sheet to delete non operating vessels from the database.

Financial constraints were:

- insufficient compensation and delays in payments to the Economic Interest Groups responsible for marking the boats; and
- frequent shortage of materials and supplies for printing the plastic registration cards.

Human resources constraints were: staffing personnel involved in the registration program include one Coordinator, 15 information technology professionals initially (five resigned since 2006), 58 Economic Interest Groups, and 60 technical field visit teams (including the DMF station chief, fishermen representatives, carpenter) spread across Senegal and one team per fishing port.

Some fishermen's groups who were concerned about the administrative and fiscal implications initially rejected any form of registration. However, this has improved in most fishing sites where fishing communities have been organized into co-management units under the Project. At such sites as the Senegal River Delta where the fishing population is more mobile (moving between Mauritania and Senegal) and groups diverse and less cohesive, registration has been more difficult.

Other Issues. The PNI changed coordinators in 2010. Under the Swiss TF, the cost of the contract for the national consulting firm consumed half of the fund's resources, the quality of its data reporting was judged to be unsatisfactory by the PNI coordinator, and as result of the disagreements, the firm has not been paid. The TF closed in December 2010. In terms of donor funds, some were consumed quickly because of the ease of access to the funding. Among the easiest donor accounts to access was the Spanish Corporation funds which was held at a commercial bank (CNCS). Withdrawals required the signatures of the Director and the Project Coordinator, whereas access to the other donor funds were managed by the financial management unit of the COMO. By late 2009, most of the CFAF1,948 million had been spent, whereas the CFAF420 million in counterpart funding never materialized.

Another factor causing delays in the program's implementation was the management problems at the COMO-Fisheries in July 2011 which stopped all project activities. As a result, no field work or follow-up was carried out just as the program was about to move into its data consolidation phase.

Since August 2010, the PNI has been receiving funding support from the World Bank's West Africa Regional Fisheries Program (WARFP) until 2014 when it is expected to complete the registration and transfer the process from the COMO to the MFME's administrative services. The next steps include completing the registration for the remaining boats, nationally and sub-regionally (Mauritania), consolidating the results of the program, ensuring the sustainability of the program, and progressively transferring the activities of the PNI to the local administration services by end 2014.

To date, about 18,900 fishing boats covering the seven maritime regions of Senegal have been registered electronically (registration numbers distributed to owners). Of these, 16,207 have been manually embossed. The cost of marking a boat is estimated at CFAF3,000/boat. The fishing boats of the continental fishing areas have not been included. A data base for the registration program has been established by the MFME at (www.bdpni.gouv.sn) as well as a website (www.dpm-pni.com) containing details on program. The following is the list of registrations by region as of July 2012:

Name of Region	Total No. of canoes	No. of canoes registered electronically	No. of canoes embossed manually	No. of canoes to be embossed	% of Canoes embossed
Dakar	4,119	4,119	3,619	500	87.86
Thies	5,876	5,876	4,895	911	84.50
St. Louis	3,210	3,210	2,186	1,024	68.10
Louga	223	223	163	60	73.09
Fatick	2,105	2,105	2,051	54	97.43
Kaolack	201	201	137	64	68.16
Zinguichor	3,166	3,166	3,086	80	97.47
TOTAL	18,900	18,900	16,207	2,693	85.75

Sub-component 1.2: Promotion and coordination of local management initiatives.

The key project performance indicator: that local fisheries management sub-projects are implemented in four pilot sites by the end of the project has been substantially met. Building sustainable resources management through local management initiatives was the core of the project. The formulation of sub-projects and co-management initiatives were well-received by the local population and the sub-projects have been implemented successfully in three pilot sites, while in the fourth site, Ouakam, delays in project start-up resulted in one incomplete conservation activity (placement of artificial reefs) by the end of the Project. The selection and placement of facilitators into local communities worked particularly well; none were rejected by the communities and all remained until the end of their contracts. Although there were delays in implementing some of the activities with some improvements needed in terms of quality of outputs, the co-management approach has been successful in building the ownership and participation of local communities in national conservation efforts in the pilot sites and in building the partnership with Government authorities in decision-making and accountability for the decisions. It has also improved local governance of coastal and fisheries resources in the co-management areas resulting in encouraging data gathered by LFCs at the pilot sites and validated by the MFME. Communities demonstrated at all pilot sites strong ownership and accountability for the initiatives they selected and managed with the help of facilitators and fisheries administration representatives. These are key successes of the Project.

The main objective of this sub-component was to test in four pilot sites (Ouakam and Ngaparou around the Cap-Vert project area, and Foundiougne and Betenty around the Saloum Delta area), the empowerment of artisanal fishing communities to manage their marine and coastal resources while enhancing their livelihoods and building the capacity of local institutions to manage, monitor and evaluate together their resources. The aim was to arrest the unsustainable use of natural resources and the decline in fisheries resources and related income for the fishing communities. This was to be carried out through sub-projects formulated with the local communities with the assistance of a facilitator, a co-management expert, and fisheries administration representatives. Sub-projects, containing proposed local-level initiatives, were subsequently endorsed and approved by the Government (through the signed agreement with the Ministry of Maritime Economy) and implemented through the Local Fisher Committees (LFCs) under the guidance of the DPM-IU.

The pilot sites were identified early before project effectiveness and the **recruitment, training, and posting of facilitators** at the pilot sites were carried out soon after effectiveness. This ensured against a loss in momentum of project launch activities and that the main stakeholders, the targeted fishing communities and their associations, would stay engaged after the facilitators promoted the co-management initiatives. As a result, preparation for fisheries sub-projects for the four pilot sites began one year after implementation. However, they did not get finalized until well into 2007 because of the delayed arrival of an international co-management specialist who was to advise and guide the process, assist in building capacity of local experts, and oversee the formulation of local initiatives as well as the drafting of co-management manuals.

Together, the facilitator and the co-management specialist assisted the local fishing communities to form Local Fisher Committees (LFC) for each site. Each LFC has several sub-committees

responsible for specific themes, e.g., administration and finance; monitoring, control and surveillance (MCS); information, education and communication (IEC); technical and scientific matters; a council of sages and conflict management. The Project funded training in fabrication and management of artificial reefs, administrative and financial management, community awareness, participatory monitoring and surveillance, diving, conflict management, and basic data gathering skills needed for efficient implementation of the co-management activities.

Support to Local Fisher Committees (LFC) by the Project was successful in that as part of the co-management approach, the activities gave local communities a voice in decision making and for the first time in Senegal, the co-management approach was formalized through the legal agreement signed between LFCs and the Minister of Fisheries and Maritime Economy. Although co-management did exist before the Project began, it was not successful; the Senegalese court ruled against it on a couple of occasions because the local community members took the law into their own hands to settle issues. With the building of partnerships through participatory approaches, these incidents have decreased significantly.

The Project was also successful in changing the perception of some of the fishing population where the fishermen met the proposals with skepticism, fearful that the initiatives would limit access to fishing grounds, lead to loss of land territory, or lead to additional taxation. Where cohesion was already present, either through prior experience with similar initiatives in capacity-building or through pre-existing group cohesion due to existing associations, e.g., in Betenty and Ngarparou, the Project built on such base, reinforced the existing capacity, strengthened the cohesion and improved on its management and structure. By the end of the Project, all pilot sites managed to successfully implement most sub-project activities except for Ouakam.

The Project also provided an organizational structure and forum which managed to represent all stakeholders, particularly, in those communities previously divided by different fishing interests. It provided a means to defuse tensions between fishing community members and local administration services by reversing top-down decision-making. In the past, fishing seasons were determined by the authorities without sufficient consultation with fishing communities. This resulted in confrontations and challenges to local authority decisions. Another achievement under the Project is that unsustainable use of fishing gear and methods (small –size fishnets, over fishing, or wastage, e.g., fish caught which could not be sold were often discarded), have been reduced.

The process of engaging fishing communities in co-management was based on broad consultations with regional administration authorities (*préfet*), the PCU, COMO-DMF, Artisanal Fisheries Division of MEM, local fisheries administration and stakeholders. Decisions to restructure existing community committees which were no longer effective and replace them with the Local Fisher Committees which had a larger representation base was based on such consultation to guarantee success. Participatory diagnostic sessions were conducted with focus groups, parties concerned were interviewed to identify all those who may be impacted by the initiatives proposed, and the problems identified, e.g., the challenges of applying the Fisheries Law at the local level, provided useful feedback to higher levels of authority to consider.

Among the more successful activities supported by the Project was the construction of the **Fishermen's Houses** or "*Maison de Pêcheurs*" for local communities. These contributed to building cohesion and community support for co-management at all pilot sites. It was greatly appreciated by the communities at all sites because they provided working premises for Fisher Committee members and the facilitators, as well as a general meeting hall for gatherings and functions for the local population where previously none had existed. The Project funded their construction and the purchase of office equipment and basic furniture, and provided technical assistance through effective facilitators and consulting services (construction of artificial reefs, fishing conservation techniques, communication, monitoring, etc.). On a less positive note, two of the four Fishermen's Houses (Foundiougne and Betenty) are in bad need of repair after only two years of being constructed, a result of poor quality materials and workmanship. Furthermore, the local fisher communities have not been able to fund such repairs pending successes of income-generating activities.

Sub-projects and Co-management initiatives. The implementation of co-management initiatives was one of the key successes of the Project. The process is that for each pilot site, the selected fisheries management initiatives targeting rehabilitation of resources or income-generation are compiled into one document and becomes a sub-project of that site. A co-management agreement is then signed with the Minister of Fisheries and Maritime Economy and the process is formalized into a legal agreement.

The most common initiatives selected by the fishing communities were the conservation of resources through imposed rest periods for fishing, and eliminating the use of unsustainable fishing methods and equipment. Co-management activities often included the creation of restricted fishing zones and of no-fishing zones, the cleaning of sea beds, the placement of artificial reefs to encourage regeneration, and measures to improve the livelihoods of community members impacted by reduced fishing. Accompanying measures included surveillance, monitoring, participation in research, and awareness-raising. The conservation measures introduced in combination with the participatory community management approach was met with enthusiasm by all of the targeted communities because the measures dealt with their direct concerns. In all pilot sites, there is strong support and enforcement of replacement of unsustainable fishnets and, in Foundiougne in particular, there was strong endorsement and compliance with the imposed biological rest periods for shrimp fishing. Sub-projects for each pilot site have been submitted and approved by authorities for all pilot sites and initiatives are being successfully implemented (see tables below).

Initiatives under Implementation at the Co-management Pilot Sites

Ouakam : 3 initiatives

N°	Initiatives	Objective	Targeted fisheries
1	Cleaning of sea bed	Rehabilitation of marine and coastal areas for demersal species.	Coastal demersal fish, mainly grouper, green crayfish, and the <i>cigale de mer</i> lobster.
2	Creation of no-fishing zone	Restoration of coastal demersal resources and rehabilitation of degraded marine habitat.	
3	Creation of controlled fishing zones	Reduce conflict between fishermen using lines those using nets. Reduction in fishing efforts Improve quality and price of catches.	

N.B.: The placement of artificial reefs for Ouakam are under preparation and therefore do not appear in the table above.

Ngaparou : 3 initiatives

N°	Initiatives	Objectives	Targeted fisheries
1	Put in place measures for the management of the green crayfish	Protect juvenile crayfish and restore resources.	Green crayfish and other coastal demersal species linked to the crayfish
1	Alternate closures to fishing in coastal zones	Reduce pressure on coastal zone fishing.	
2	Placement of artificial reefs and other devices to attract fish	Resource replenishment.	

Foundiougne : 2 initiatives

N°	Initiatives	Objectives	Targeted Fisheries
1	Replacement of illegal fishnets (<i>bombardiers</i>)	Reduce juvenile shrimp catch by improving means.	Coastal white shrimp (<i>Penaeus notialis</i>)
2	Impose biological rest period (August) for coastal shrimp fishing	Protect immature shrimp and weak market prices related to small size.	

Bétenty : 2 initiatives

N°	Initiatives	Objectives	Targeted Fisheries
1	Impose biological rest periods (<i>Niokoc</i>) for coastal shrimp fishing in the Bétenty area	Replenish resources for large size shrimp. Improve quality of shrimp landings.	Coastal White shrimp (<i>Penaeus notialis</i>)
2	Replace illegal, small-size fishnets (<i>killi</i>) with approved fishnets of legal size (24 mm)	Protect immature shrimp and weak market prices related to small size.	

Status of Sub-Project Activities in Pilot Sites

Pilot Site	Sub-Projects Established	Co-mgt Agreement Signed with MMF	Status at End of Project
Betenty	February 2006	March 7, 2008	Completed December 2011 Monitoring of co-mgt activities are ongoing
Foundiougne	June 2006	March 7, 2008	Completed December 2011 Monitoring of co-mgt activities are ongoing
Ngaparou	June 2006	March 7, 2008	Completed December 2011 Monitoring of co-mgt activities are ongoing
Ouakam	February 2006	March 7, 2008	Placement of artificial reefs under preparation. Monitoring of other co-mgt activities are ongoing.

N.B.: At project closing, co-management initiatives at the LAFC level were being expanded and scaled up around the pilot sites.

Legal endorsements of co-management initiatives. The legal co-management agreements signed with the MFME provides important legal endorsements and legitimacy to co-management initiatives and increases the communities' ownership of their proposals. They are sometimes backed up at times by decrees issued by the ministers or by local authorities in the form of Codes of Conduct. Such support from Government administration provides positive prospects for longer-term Government commitment to new approaches and for sustainability. The process is as follows: the president of the LFCs signs a legal agreement on co-management with the Minister of Fisheries and Maritime Economy who then issues a Ministerial Decree acknowledging the co-management initiatives. The local government authorities then sign a decree defining the terms of implementation of the initiatives. In Ouakam, for example, the initiatives were discussed more widely with neighboring villages before being signed. In the Dakar region, several meetings were held with stakeholders to share and seek consensus on how to implement the initiatives proposed, particularly concerning restricted fishing zones. This, for example, would define sanctions defined in the area's code of conduct. Following the endorsements the LFCs formulate their annual work programs around the initiatives.

For the Government the legal agreements also provides a means to negotiate and gain community support for related government initiatives and helps to decrease tensions. In Foundiougne, a good example of such cooperation is that the local authorities (*préfecture*) renews the local decree on biological rest periods annually with the community.

Monitoring, Control and Surveillance (MCS). Communities participated actively in MCS activities and managed them with regular patrols by LFC members, initially with Project funds but at times with LFC funds. The Project provided a surveillance boat for each of the sites to carry out control and surveillance activities. In the past, fishermen imposed their own methods of deterrence which were at times violent. Since the promotion of co-management initiatives, however, these have been conducted with minimal conflict. Surveillance teams or patrols are usually made up of local fishermen and some were conducted with the collaboration of the DPSP. When infractions occur, warnings are given and sanctions are escalated through the council of sages and local prefectures although fines do not go over the limit allowed by the Fisheries Law. However, the inconsistency between the low level of fines permitted under the Law compared to the commercial value of the catch is often a weak deterrent for the offender. The communities have often cited this as a challenge in sanctioning repeat offenders. At most of the pilot sites, the surveillance patrols are funded out of LFCs funds, this includes not only cost for fuel but also for work time, food for those on patrol. Fines collected are not kept by the communities but go back to the Treasury at the Ministry of Finance. Thus, generating sufficient funds to run the surveillance patrols as well as funding the operations of the fishermen lodges can be costly and is a sustainability issue. At project closure, most of the pilot sites, except for Ngaparou, have not generated sufficient operating funds to maintain such operations over the long term, and have not sufficiently explored alternative arrangements, e.g., partnerships, fees and contributions, to address the sustainability issue. In addition, such surveillance activities should not be administered on a community-by-community basis but, to be sustainable in the long run, be built into local government administration, and be consistent with national laws which dictate terms and conditions for fishing activities to take place. Conversely, national laws should support the local level if the measures and methods imposed do not deter repeat offenders.

Information Education and Communication (IEC). The IEC activities were important in building collaboration and cohesion in the local fishing communities and should be continued. However, its implementation by the consulting firm CAES-Consult, was less successful in soliciting the involvement of the migrant population.

Advisory Fisheries Councils. Support to the Advisory Fisheries Councils generated mixed results. At the national level, the **National Council for Consultation on Fisheries (NCCF)** (*Conseil National Consultatif des Pêches Maritimes*) which were established through the 1998 Fisheries Law to provide a framework for consultation at the national level on fisheries did provide effective support to the fisheries management proposals of the LFCs. However, the contribution of the **Local Artisanal Fisheries Councils (LAFC)** (*Conseils Locaux de Pêche Artisanale*) were variable. The LAFCs were part of the framework structure for fisheries consultation at the local level. They were being established nationally at the same time as the Project was being prepared and not as part of the Project. Some were established as a result of

decentralization of several sectors in Senegal in 1996 while others were established later. However, as the fisheries sector was not decentralized, LAFCs were used as part of the framework for fisheries consultation at the local level. Some of the LAFCs were not effective in supporting LFCs in the management of fish resources and in approving sub-project proposals because they were either not yet functional (regulations governing their mandate and operation were not finalized), did not have the right representation, or did not cover the same jurisdictions as those of the fishing communities. The LAFCs were public administrative structures whereas LFCs were private associations. On one occasion, some LFCs by-passed the LAFCs by submitting their fisheries management proposals directly to the national level for approval by the NCCF.

Production and Catch Volume. Support from the Project for improving this area received strong support and solicited active involvement from communities, particularly the women. Throughout the Project, a good standard of consultation and animation was maintained for decision-making process by the facilitators and central and regional staff of the fisheries administration. As a result, awareness and accountability has increased among local communities and news of positive results are spreading into surrounding communities. Activities which have had a positive impact are: (a) fishing and processing of small shrimp has ceased; (b) use of small-size fishnets has decreased; (c) the capacity of actors strengthened (administrative and financial skills, control and surveillance, monitoring and evaluation), and (d) demonstrated greater ownership and accountability for initiatives selected by the communities through the LFCs. Co-management initiatives have yielded visible results which local fisher communities have confirmed through visual observation and data collected: (a) catches have increased (although they vary with rain levels); (b) the average catch size has increased, (c) there has been a small rise in producer price, (d) there is a better redistribution of fish resources, and (e) there are impressive results from participatory surveillance program and reduction in conflict despite the drop in the level of interventions by the authorities.

In Ngaparou, co-management pilot site for the green crayfish, the average weight for the crayfish increased from 1.5 kg in 2005 to 3.5 kg in 2011. In Bétenty, co-management pilot site for shrimp, the average count of shrimp decreased from 226/kg to 141/kg. In Foundiougne, the average catch has increased for shrimp, mullets, tilapia and barracuda, from 2007 to 2011, with accompanying doubling of the number of fishers and small boats, indicating a regeneration of fish resources. Commercial prices for various catch also show a rise. At the pilot sites of Bétenty, Ngaparou, and Ouakam, the data collected locally also show a relatively stable number of small fishing boats which could indicate that the communities have been able to monitor the number of registered boats at their sites. Selected data for pilot sites are shown in the tables below.

**Change in Catch Volume and Market Price over time in co-management pilot sites
(2005-2007)**

Ouakam		Year						
Targeted species		2005	2006	2007	2008	2009	2010	2011
“Thiof” Epinephelus aenus	Quantity of catches (Kg)	N/A	N/A	10,100	13,960	22,200	17,200	23,300
	Commercial value (FCFA)	N/A	N/A	38,020,000	52,431,000	76,250	55,540,000	85,511,000
	Average price/unit (FCFA/Kg)	N/A	N/A	3,670	3,980	3,380	3,620	4,500
Ngaparou		Year						
Targeted species		2005	2006	2007	2008	2009	2010	2011
Green Lobster	Quantity of catches (Kg)	770	700	1,575	1,561	1,645	2,835	4,095
	Commercial value (FCFA)	5,075,000	4,515,000	11,200,000	11,161,500	11,322,500	13,272,000	28,962,500
	Average price/unit (FCFA/Kg)	4,900	6,000	6,270	6,850	5,727	5,700	6,725
Betenty		Year						
Targeted species		2005	2006	2007	2008	2009	2010	2011
Coastal shrimp	Quantity of catches (Kg)	365,700	336,200	340,700	328,900	296,900	237,200	229,400
	Commercial value (FCFA 12)	146,280,000	184,910,000	204,420,000	197,340,000	207,830,000	213,480,000	183,520,000
	Average price/unit (FCFA/Kg)	400	550	600	600	700	900	800

Source: Data collected at the pilot co-management sites by the fishing communities in partnership with the local fisheries administration, and data validated by the Fisheries Authorities at regional or central level.

¹² The total commercial value of coastal shrimp caught in Betenty has declined by a small amount from 2010 and 2011 due to the drop in the number of active fishermen targeting this species (from 693 fishermen in 2010 to only 649 in 2011).

Bétenty: Detailed Catch Data for Shrimp and fishing vessels (2005-2011)

Year	Catch ('000 kg)	No. of Fishermen	Price (FCFA)	Market Price (CFAF)	Shrimp count/kg	No. of fishing vessels
2005	365.7	831	400	146,280,000	226	65
2006	336.2	768	550	184,910,000	179	59
2007	340.7	784	600	204,420,000	184	62
2008	328.9	672	600	197,340,000	175	53
2009	296.9	727	700	207,830,000	144	57
2010	237.2	693	900	213,480,000	138	51
2011	229.4	649	800	183,520,000	141	59

N.B.: A majority of shrimp harvesters work on foot; those on boats normally are two to a boat. Prices quoted are landing price/kg for fresh shrimp.

Ngaparou: Fishing vessels (2005-2011)

Year	2005	2006	2007	2008	2009	2010	2011
Local fishing vessels	103	140	83	90	103	105	103
Seasonal fishing vessels	88	46	34	35	29	43	40
TOTAL	190	186	117	125	131	148	143

Year	2005	2006	2007	2008	2009	2010	2011
Local fishermen	410	558	330	360	410	418	410
Foreign fishermen	350	184	136	140	114	172	160
TOTAL	760	742	466	500	524	590	570

Foundiougne: Catch Volume Data for Various Species (2007-2011)

	Shrimp	Ethmalose	Mullet	Tilapia	Barracuda	Total
2007	343,370	770,650	212,050	193,500	10,250	1,529,820
2008	287,190	742,400	292,550	275,250	10,700	1,608,090
2009	362,835	630,300	180,450	171,350	22,600	1,367,535
2010	274,232	815,660	252,521	307,336	44,622	1,694,371
2011	431,625	631,940	416,780	709,530	140,830	2,330,705

Market Prices

	2007	2008	2009	2010	2011
Landing Price (CFAF)	473,341,600	486,081,000	449,300,836	476,866,035	982,549,250

Fishing Vessels

No. of fishermen	1,600	1,700	1,710	1,750	2,650
No. of vessels	127	120	142	160	300

Average Shrimp Count/kg

	2007	2008	2009	2010	2011
Number of shrimp (count) / kg	178	96	92	88	115

Change in Average Market Price (CFAF) at landing for Various Species

	Shrimp	Ethmalose	Mullet	Tilapia	Barracuda
2007	600	100	300	350	900
2008	600	100	300	350	950
2009	550	100	250	300	1,000
2010	500	100	300	200	1,750
2011	750	150	300	200	2,000

On the negative side, the project's successes were hampered by the slow endorsement of co-management initiatives once sub-projects have been identified; this took about two years to be approved through the administrative procedures of the Government and of the Bank. While all the pilot sites had finalized their sub-projects February 2006, the legal agreements on co-management were signed much later in August 2008 which was demotivating for the main actors and posed a risk to maintaining the momentum of a new initiative. Furthermore, the procurement procedures were not well understood by the communities and perceived to be slow and cumbersome. Combined with the administrative and financial procedures, these requirements slowed down further the implementation of activities between 2008 and 2010. The consulting contracts with essential institutions such CRODT for demersal research, ISRA for participatory research, and CAES-Consult for communication campaign (IEC) experienced problems and yielded weak results having used what the communities perceived to be traditional top-down approaches not in line with the approaches promoted under the Project.

The poverty level of the communities also limited the greater success of such activities as the biological rest initiatives which deprived an already poor community of a source of income. Although all initiatives were implemented successfully, in the case of Foundiougne, the diverse population of certain communities made cohesion more difficult, the topography of the area (nine out of 10 are islands) also posed a challenge for implementing sub-projects where the budget was under-estimated for the area to be covered. A similar constraint affected the MCS program. Efforts to involve migrant fishermen in co-management activities have been less successful.

Reconversion Fund. During preparation, the Bank team had provided for funding to offset the impact of reduced fishing on fishing communities' level of income and livelihood. This was removed on recommendations from Bank management to ensure synergy across operations with another project under preparation, the Senegal Social Investment Fund. A cash fund type of

facility was proposed to offset the negative impact to support alternative livelihood activities for fishermen to alleviate overfishing under the second phase of the Bank-funded Social Investment Fund, which was managed by the *Agence de Financement pour le Développement Social* (AFDS). However, even though the PCU had signed a Memorandum of Understanding with AFDS management to incorporate a fisheries window in the follow-up project to support the “reconversion” of the fishermen, the arrangement did not materialize because the Social Investment Fund was later merged with the National Infrastructure Project into a new operation – the National Local Development Project. With the merger, the fisheries reconversion fund window no longer fit into the priorities of the new operation. Subsequently, previously anticipated funds for this activity became unavailable early in implementation.

At the MTR the establishment of the reconversion fund was discussed and broadly redefined to accompany the co-management initiatives and provide a safety net for members of communities affected by the reduction in fishing, or who wish to leave fishing to explore alternative livelihoods. The Fund was to be financed through project cost savings from the institutional streamlining proposed for project restructuring (the dissolution of the PCU). However, feedback from the fishing community representatives indicated resistance: that restricting access to fishing was not accepted to date and that reducing the capacity for fishing even less so; reconversion was not seen as plausible, particularly among the older generation (insufficient time to begin a new trade); however, among the younger generation, particularly the marginalized (divers) they welcomed the idea. Although the detailed preparation for the fund was outlined at the MTR, the timeframe did not allow sufficient time for the reconversion fund to be implemented and it was transferred under the Sustainable Management of Fisheries Resources (SMFR) Project approved in 2008.

Sub-component 1.3: Strengthening institutional capacity of the Ministry of Marine Economy and the National Research Institute (CRODT)

Participatory Research and CRODT. Participatory research yielded mixed results. It succeeded in raising awareness of local communities on research needs and introducing its members to basic data collection and monitoring but was inconsistently applied and perceived as top-down. CRODT, a department of the *Institut Sénégalais de Recherche Agricole (ISRA)* was contracted to carry out demersal species research, but because of lengthy contract preparation and lack of capacity (available personnel) the study was not completed. It will be funded under the Bank’s ongoing West Africa Regional Fisheries Program. Under the Project, funding was provided for the LFCs to collaborate with the CRODT to finalize the co-management initiatives. A contract on participatory research was signed between the DMF and CRODT. Activities included the study of baseline estimates for artificial reefs and placement zones, how to add value to products with weak commercial value, and participatory/community data collection. Following the results of the study, Ouakam was found to be a major fishing site and, consequently, CRODT has placed a researcher on site to carry out further work with the fishing community. CRODT also funded a contract with a local fisherman, selected by the LFC, as part of the participatory research activities. In Foundiougne, there was disagreements between the community and the research institution on the research results regarding when the biological rest period for shrimp was to begin. Consequently, the results were not unanimously accepted by the

local community, which also perceived the research to be a classic, top-down approach rather than a participatory one.

Capacity-building of the Ministry of Fisheries and Maritime Economy (MFME). The Project supported capacity-building for the MFME through the provision of technical experts and advice through international and national consultant services. The Project funded training programs, workshops, office equipment and software, specialized equipment for the national boat registration program, vehicles, and a budget for operating costs during the life of the project. The Bank teams provided substantial inputs into national level strategic, legal and regulatory documents such as the Fisheries Law revisions and the Letter of Sector Policy, as well as sector studies and strategies for relevant sectors, and provided technical inputs into the preparation and implementation of fisheries programs.

Impact

Overall, significant results have been obtained in the sector through the contributions of the Project. Although the design reflected higher expectations than could be accomplished in the time span of the Project, progress has been made in the sector and in Senegal compared to when the Project began. The pilots were an opportunity to test new approaches in Senegal in order to provide viable options to fisheries resources management and biodiversity conservation and build sustainable strategies for the future.

The gaps and weaknesses in the management of the fisheries sector, including governing and management structures has been narrowed due to: (a) the direct involvement of the MFME and MENP staff at national, regional and local levels involved in the implementation of the Project; (b) the institutional strengthening of the DMF and the DPN through the implementation of Components 1 and 2, experience with project management, monitoring and control, (c) increased government interaction with local communities; and (d) direct involvement of ministry technical personnel providing input into the revisions of sector legislation in Senegal.

The knowledge base for policy decision making and accompanying measures has been strengthened through the revisions to the Fisheries Law which has been submitted to Parliament for approval, and the Letter of Sector Policy revisions in 2008. The revisions to the Fisheries Law is expected to address the difficult issues of open access to fishing. The legislations demonstrate Government engagement at the national level and is an important step linking improved fisheries management with the sectoral policy framework. These will also provide a channel for more effective aid and aid coordination in the fisheries sector.

The successful establishment of a nationwide system for registering small fishing vessels is an important step towards regulating artisanal fisheries for the government; historically, government regulation of artisanal fisheries has had little success and has been met with strong resistance from boat owners. By end of project, however, boat owners are increasingly complying with the registration program and the number of boats registered have almost doubled over the number estimated at appraisal.

Opportunities were also provided for strengthening national research institutions (ISRA/CRODT) through partnerships with local communities in participatory research, data collection and monitoring, and through research contracts for national studies which were to provide input to policy decisions. However, the institutions did not have the capacity to carry out the contracts fully and results did not meet expectations under the Project.

At the community level, successful interventions in co-management have already begun to gain a reputation and is being replicated across the country in other donor interventions. Communities at all pilot sites have demonstrated ownership and commitment in carrying out sub-project initiatives and conduct surveillance and basic monitoring of such resources. The Government of Senegal is now fully supportive of local initiatives to manage and limit fishing and the co-management approach. The system which has been successfully pilot at the local level is now contributing to the reduction in fishing efforts, elimination of unsustainable and harmful fishing gear and methods, and sustainable management of local resources through local enforcement and compliance with biological rest periods to allow fish stocks to recover, rehabilitation of reefs, and MCS activities. Data collected at the local level are indicating that fish stocks around the pilot sites are showing signs of improvement in terms of size and catch volume.

Communities and Government (through the legal agreements signed with the Minister of Fisheries and Maritime Economy) have successfully built partnerships in fisheries resources management and local development. In a recent interview during a visit to a coastal fishing community (Mbour July 2012), the new Minister of Fisheries and Maritime Economy was quoted as saying that he and the President would support co-management because he was reassured by its consultative approach which provides the fishing communities with a means to overcome challenges without waiting for the state to intervene.¹³ This illustrates that the project's objectives for co-management has been fully accepted by the Government.

¹³ “Mbour est le capital de la pêche” (Ministre), <http://mbour.info/economie/economie-maritime>, jeudi, 12 juillet 2012.

Component 2: Conservation of Critical Habitats and Species

The implementation of this Component is rated **moderately satisfactory**. The Borrower met most of the physical targets: establishment of biosphere reserves in two out of three project areas, eight out of 10 local management plans have been formulated, and the Biodiversity Conservation Framework Law submitted for approval by the Government (earlier than the target date). Performance on the IEC, outreach to communities, and results on community participation were strong, while the establishment of Ecosystem Management Committees, and compliance with biodiversity reporting was weak. Overall capacity for biodiversity management, a key performance indicator for the Project, has improved over the baseline.

The purpose of this component was to improve the long-term management of ecosystems in the three designated pilot areas: the Senegal River Delta, the Cap-Vert Peninsula, and the Saloum River Delta to be carried out through: (i) supporting ecosystem management in each of the pilot areas, according to an ecosystem approach, and (ii) restructuring the biodiversity management framework, to overcome the constraints that have limited the effective management and protection of ecosystems nationwide.

The effective management of biodiversity in three pilot areas to be increased by at least 50 percent by end of project was a key performance indicator for the Revised Global Environment Objective. Compared to the baselines for management effectiveness measured with WWF/World Bank Protected Areas Management Effectiveness Tool¹⁴ in 2006, the results at end of project (2011) indicates an improvement (see table below and Results Framework Analysis in Annex 5). The mean score increased from 46 percent in 2006 to 61 percent in 2011, although the target set by the DPN itself was actually 69 percent. For 2009 – 2011, the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM)¹⁵ methodology developed by the WWF was used because it gives more information for habitat and species evaluation than the tool used in 2006.

¹⁴ This tool is simple and basic, and is designed to measure management effectiveness over time, i.e., in line with project capacity-building objectives. The tool is used as a cost-effective proxy to determining impact and has been used in over 85 countries, primarily by donor agencies and NGOs, and is now mandatory for World Bank, GEF and WWF projects. The methodology uses a rapid, site level assessment based on a score-card questionnaire which includes all six elements of management effectiveness identified in the international Union for Conservation of Nature / World Commission on Protected Areas (IUCN/WCPA) Framework: context, planning, inputs, process, outputs and outcomes. It enables park managers and donors to identify needs, constraints and priority actions.

¹⁵ The Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM) methodology is based on the WCPA/Protected Areas Management Effectiveness (WCPA PAME) Framework. It was developed by the WWF between 1999 and 2002 and is designed to identify management strengths and weaknesses, analyse the scope, severity, prevalence and distribution of threats and pressures; identify areas of high ecological and social importance and vulnerability; indicate areas of urgency and conservation priority; and help develop appropriate policy interventions and follow-up actions to improve protected areas management. It is similar to the WWF/World Bank tool above but provides additional information on habitat and species evaluation. The methodology is best implemented through interactive workshops with policy makers, PA managers, and relevant stakeholders. RAPPAM has been implemented in some 40 countries and over 1,000 protected areas in Europe, Asia, Africa and Latin America.

Key indicator results from the Rapid Assessment and Prioritization of Protected Areas Management (RAPPAM)¹⁶ Tracking Tool for IMCRP Protected Area Sites.

Area/Reserve Name	Q9 (2006)	Q9 (2011)	Q12 (2006)	Q12 (2011)	Q13 (2006)	Q13 (2011)	Q15 (2006)	Q15 (2011)	Total (2006)	Total (2011)
le Parc National des Oiseaux du Djoudj (PNOD)	6	11	15	17	13	17	9	17	56%	75%
le Parc National de la Langue de Barbarie (PNLB)	3	11	15	15	8	15	1	6	42%	63%
la Réserve Spéciale de Faune de Gueumbeul (RSFG)	3	11	11	11	8	14	5	5	43%	60%
le Parc National des Iles de la Madeleine (PNIM)	6	11	7	9	10	23	10	13	41%	58%
la Réserve Naturelle de Popeningue (RNP)	7	11	11	11	8	17	13	15	54%	64%
la Réserve Naturelle d'Intérêt Communautaire de Somone (RNICS)	3	11	7	11	8	21	9	11	38%	61%
Réserve Communautaire de Palmarin (RCP)	9	13	9	11	6	13	3	3	42%	57%
le Parc National du Delta du Saloum (PNDS)	11	13	15	11	9	10	7	7	52%	55%

The above table presents aggregate scores (out of 25 points for the best score) of five sub-questions related to Q9: Staffing; Q12: Funding; Q13: Management planning; Q15: Research, monitoring, and planning. Overall RAPPAM effectiveness score for all protected areas increased from 46% IN 2006 to 61% in 2011.

Sub-component 1: Managing Ecosystems Managing ecosystems in three pilot areas, Senegal River Delta, the Cap-Vert Peninsula, and the Saloum River Delta.

The management of Senegal's ecosystems through national parks and reserves has been a responsibility of the Department of National Parks (DNP) (*Direction des Parcs Nationaux: DPN*) within the Ministry of Environment for over fifty years. Currently, about ten percent of Senegal's terrestrial territory and eight percent of Senegal's marine territory is now protected.

¹⁶ For further information on RAPPAM, please refer to: Ervin, J. 2003. WWF: Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology. World Wildlife Fund. Gland, Switzerland.

This coverage brings Senegal close to its commitment to Aichi Target 11 of the Convention on Biological Diversity which aims for at least 17 percent of terrestrial and ten percent of marine territory under protection by 2020. To strengthen the management of Senegal's protected areas, the Project was to update and coordinate the management plans under DNP's authority using UNESCO's Man and Biosphere (MAB) Reserve model.

In total, the Project identified ten coastal pilot sites already under DNP's management. Existing sites consisted of four national parks, four national reserves, and two community reserves. The sites were selected instead of establishing new reserves because it was envisioned that the Project would be able to maximize synergies between sustainable fisheries objectives and biodiversity conservation objectives through an ecosystem approach. Furthermore, each of identified Project sites had draft management plans and varying degrees of community participation in place.

Biosphere Reserves. The establishment of Biosphere Reserves was designed as the key instrument for managing ecosystems in the three designated pilot areas. Of the three biosphere reserves planned under the Project, only the Cap-Vert Peninsula reserve was not established. The Project's COMO-Ecosystem acted as the national MAB committee and is the unit responsible for preparing the UNESCO MAB Biosphere Reserve application for the Cap-Vert Peninsula. At MTR, it was decided that the establishment of the Cap-Vert Biosphere Reserve was not feasible before the end of the Project and it was removed from Project activities. The processes for submitting the necessary documentation to UNESCO for the Biosphere Reserve program took longer than expected for the Cap-Vert Peninsula because of the numerous stakeholders involved. In 2006, COMO-Ecosystem recruited a consultant to lead the preparation of the biosphere reserve. The Cap-Vert Biosphere was partitioned into four sub-regions (Îles de la Madeleine, Rufisque, Popenguine/Somone, and Dakar) due to the different types of ecosystems that comprise the reserve. Two workshops were held within each zone to let all the stakeholders discuss and then agree on management priorities. Two additional workshops were held to bring the four sub-regions together to discuss and agree on the management of the biosphere reserve. The process was also delayed by an incident that occurred in 2010 on Îles de la Madeleine, one of the four sub-regions of the reserve, which resulted in a poor relationship between DNP and the local fishing community of Soumbédioune, a key stakeholder. Because the MAB Biosphere Reserve program only accepts applications for new reserves in April of each year, DNP plans to submit the application for the Cap-Vert Peninsula in April of 2013.

The *Senegal River Delta Biosphere Reserve* is the second of kind in Africa and was a model in the management of natural resources. It was formally recognized by the UNESCO Man and Biosphere Programme in 2005. The reserve consists of 641,768 hectares of which 26,198 hectares are marine. The Project assisted development of the UNESCO proposal, including workshops with authorities in Mauritania who are part of the Senegal River Delta Biosphere Reserve because of the inclusion of the Diawaling National Park and the Chat TBoul Reserve, both of which are also recognized Ramsar Wetlands.

The Saloum River Delta Biosphere Reserve was established in 1980 and consists of 72,000 hectares marine areas, 23,000 hectares of flooded areas, and 85,000 hectares of terrestrial islands. Prior to the project, no local management plans existed within the parks. The Project assisted revising the regional management plan for the Biosphere Reserve and established local

management plans of the respective Project sites within the reserve, including the *Parc National du Delta du Saloum (PNDS)* and the *Réserve Naturelle Communautaire de Palmarin (RNCP)*. This Biosphere Reserve is also transboundary because it shares with the Gambia a rich ecological complex composed of the Niimi National Park.

Ecosystem Management Committees (EMC). The Project assisted in the establishment and operation of Ecosystem Management Committees (EMC) which were designed to bring together representatives of local management committees, including management committees for protected areas. The EMC would oversee the preparation and implementation of **ecosystem management plans** for each of the pilot areas. Such a structure was to reflect a model of sustainable economic use of natural resources, and biodiversity conservation.

The establishment of ecosystem management committees, as designed under the Project, yielded mixed results and functioned better at the local level than at the national level. Originally, the purpose of establishing the three UNESCO Biosphere Reserves was to consolidate existing protected areas and serve as anchor sites for ecosystem management activities and contribute to the preparation of ecosystem management plans. In each of the anchors, EMCs were to be established to foster co-management from the multiple protected areas and their respective stakeholders. EMCs had difficulty managing at the regional scale. Because DNP was the point of entry for the EMCs, they lacked legal jurisdiction outside the park's boundaries. The biggest challenge was faced by the Cap-Vert Peninsula EMC which spanned two legal regions. For this EMC to function properly, its management plans needed to be approved by contiguous local government bodies. However, not all communities within the planned biosphere reserve agreed to the EMC's management plan. The EMC for the Senegal River Biosphere Reserve was established in 2006 - one year after the Biosphere Reserve was recognized by UNESCO – but is also no longer functioning by the time the Project closed. It was decided at MTR that the Project would no longer support the EMCs. Instead, ecosystem management was to be managed locally at the of the Project sites without regional committee oversight.

A common problem encountered in the design of the EMCs was its size. Memberships frequently exceeded 50 stakeholders and resulted in conflicting interests. Many of the stakeholders had little or no experience with the concept of natural resource management and, as a result, participated in the EMCS with personal interests in mind. The Senegal River Biosphere Reserve tested sub-committees to manage the various interests at stake and attempted to reduce the size of EMCs in 2008, but with limited success due to the lack of funding needed for conduction needed workshops.

The three EMCs that were established and then dropped by the Project were, for the most part, the first time all the various stakeholders had an opportunity to discuss co-management of the natural resources within the Biosphere Reserves. The workshops that provided this forum for discussion were well received by the community. The DNP staff noted that in recent years many of the key community stakeholders, including local governments, showed a great interest in EMCs, inquiring about their status of the EMCs, and requesting additional fora and workshops. Most importantly, EMC workshops provided a new way for stakeholders to think about natural resources co-management. Thus, while the EMCs did not succeed in forming a new means of ecosystem-based co-management, they nevertheless had a positive impact

Community participation. Local community participation was strong and efforts to integrate parks and reserves with local communities were successful. In many cases, community members were actively involved in park management. The two most common means of community participation were as nationally recognized “**Ecoguards**” and as active members of local management committees. In both cases, communities involved lived within or near to the protected areas. Although no beneficiary assessment was conducted and the monitoring and evaluation data is lacking, the ICR mission took note that discussions with local Ecoguard volunteers reflected the enthusiastic participation and ownership in protected areas management activities which would contribute to meeting the key indicator for the GEO: effective management of biodiversity in the project areas.

Ecoguards are local volunteers responsible for a variety of duties associated with national parks. The Ecoguard program started in 2001 as a DNP pilot program in the Poponguine Community Reserve and has since expanded to all national parks and community reserves in Senegal. Their activities range from park surveillance and biological monitoring, to tour guide and ecolodge operations and restauration. Through the Project, many of the Ecoguard groups at the pilot sites have obtained legal status which provides them with access to bank accounts and loans, and the ability to receive payments for services. All profits earned by Ecoguard operations are returned to cover operating costs of the program to better manage the parks.

In many communities, Ecoguards are usually selected by the village chief and are often young adults from their communities. About half of the Ecoguards are women. The Ecoguard service is well organized with a local president for each park, and affiliation with a regional and national level organization. Since the service is voluntary, communities have at times found it difficult to keep the volunteers engaged. As part of the strengthening of DNP, the Project funded training for biodiversity monitoring for Ecoguards, including SCUBA diving training, biodiversity monitoring and collection.

The sustainability of the Ecoguard service was highlighted as an issue in the MTR and requested that the COMO-Ecosystems discuss within the ministry solutions for more permanent financing opportunities. No permanent solution was found but there are plans to assist the Ecoguards in finding international funding (GEF SGPs for example). It should be noted that all parks visited on the final mission had active Ecoguards who were typically dynamic individuals. It is within DNPs best interest to promote this service to: (a) nurture the mindset of younger generations towards environmental conservation; (b) strengthen monitoring and management of parks, and; c) strengthen community co-management and relationship with parks.

Lastly, the Project also built capacity for local management of biodiversity conservation and protected areas through the rehabilitation of infrastructure, construction of work stations and office space for park rangers, as well as parks operation equipment, observation towers and other structures. The Project enabled local management committees to purchase equipment such as binoculars and GPS units to aid in monitoring and park surveillance.

Unfortunately, management issues which surfaced during the latter half of Project implementation detracted from achievements. A Financial Management report issued shortly

before Project closure identified instances of financial mismanagement. At four of the Project sites for Component 2, construction of buildings were either incomplete or never started. Furthermore, the poor relationship with the fishing community of Soumbédioune and the local staff of PNIM due to an incident in 2010 resulted in the local fishermen destroying a concrete pier, an observation tower, and a DNP patrol boat, which were funded under the Project.

Ecosystem Management Plans. An important achievement under the Project is that local ecosystem management plans have been prepared for eight out of the ten pilot sites. This an intermediate outcome indicator under this Component. The preparation of such plans was an important input to the preparation of the Biodiversity and Protected Area Framework Law. The eight locations are the:

- *Parc National des Iles de la Madeleine (PNIM)*
- *Parc National des Oiseaux du Djoudj (PNOD),*
- *Parc National de la Langue de Barbarie (PNLB),*
- *Réserve Spéciale de Faune de Gueumbeul (RSFG),*
- *Réserve Naturelle de Popenguine (RNP)*
- *Réserve Naturelle d'Intérêt Communautaire de Somone (RNICS),*
- *Parc National du Delta du Saloum (PNDS), and*
- *Réserve Naturelle Communautaire de Palmarin (RNCP).*

The Marine Protected Area of Bamboung and the *Réserve Spéciale de Faune du Ndiaël* obtained the assistance of other donors in developing or revising their management plans.

Most of the management plans were already under preparation before the Project intervened; but since the project supported the strengthening of the DNP, it facilitated this preparation process. Where the Project fell short was in the coordination of the local management plans into the larger UNESCO Biosphere Reserve model. EMCs were established as sectoral associations to facilitate coordination of the ecosystem management plans; however, since the point of entry for establishing the EMCs was the DNP whose authority did not reach beyond the parks, obtaining collaboration across administrative boundaries or jurisdictions was challenging and did not work well. However, with the co-management approach and collaboration with fishing communities the EMCs may have found a more conducive environment within which they can operate.

The preparation process for the local ecosystem management plans was slow and cumbersome, and would have been better staged in two, five-year phases: a first phase for negotiations and consensus building with the key stakeholders, and a second phase for establishing the foundations for the rehabilitation of the ecological functions of the nature reserves and empowering local communities to have active and adaptive management of the natural resources. Allowing communities to manage their own procurement and disburse their own funds would have accelerated procurement and avoided the delays from cumbersome processes required by the Central Procurement Department of Senegal and by the Bank's own procedures.

Sub-component 2.2. Strengthening of the biodiversity conservation framework

The Biodiversity Conservation Framework Law has been drafted and submitted to the Government for approval. This was an intermediate indicator under this component and has been completed satisfactorily. The Law was prepared and submitted to Parliament in September 2011, ahead of the target date of “end of project” set for this indicator.

The Project played an essential role in facilitating the preparation and timely submission of the law, and funded consultants for the preparation and national stakeholder workshops. The DNP-IU (COMO-Ecosystème) and parent Operational Coordination Committee (OCC) also played a lead role in working with the parliamentary-level committee on environment to promote the law among lawmakers, and to organize three intra-ministerial meetings to discuss the framework.

Preparation of the Biodiversity and Protected Area framework law began in late 2006 with the establishment of a steering committee within the Ministry of Environment. In early 2007, a consultant was hired to do a comparative analysis of similar framework laws in Cameroon, Côte d’Ivoire, Guinea Bissau, and South Africa. The results of the comparative analysis led to the drafting of the framework law for Senegal in December of 2008. At the 2008 Project restructuring, the key performance indicator monitoring the framework law was modified to read “Biodiversity and Protected Area framework law is prepared and submitted to Government before end of project” - allowing the Project more time to prepare the bill. In March 2009, the drafting of the bill began and circulated to all stakeholders for comments in October of 2010. The review process concluded with a national workshop held in February 2011 for all interested stakeholders where a consensus was reached on the text of the framework law. In May of 2011, the framework law was submitted to the Government of Senegal for review, all comments incorporated, and the law was resubmitted for consideration by Parliament in September 2011. A new parliament has since been in place (July of 2012) causing some delay, but is expected to pass the law shortly.

Strengthening the Department of National Parks (DNP). The conservation of biodiversity in Senegal is the responsibility of the Ministry of Environment. The second subcomponent is aimed at strengthening and restructuring units within the ministry to better manage and conserve Senegal’s biodiversity. Within the Ministry, the DNP handles the day-to-day operations. Because the DNP staff were for the most part armed park rangers responsible for enforcing anti-poaching laws, the concept of biodiversity and ecosystem-based management were not well understood. The capacity of DNP needed to be strengthened to manage the expanding network of parks, reserves, and marine protected areas while employing a collaborative process with the local population. The strengthening of DNP was addressed through: (a) modernizing the legal and regulatory framework of biodiversity conservation; (b) institutional restructuring of DNP, and; (c) establishing and operationalizing the management, monitoring, evaluation, and public awareness of the state of biodiversity. The Biodiversity and Protected Area Law if it was already in effect, would have provided the DNP with a national mandate and directed the capacity-building efforts towards that mandate. However, under the Project, DNP’s capacity was strengthened through its role with the OCC in contributing to the formulation of the Framework Law; the OCC organized three workshops to highlight the importance of biodiversity and ecosystem management to other units within DNP; the process of revising and submitting the

Framework Law provided the DNP with an opportunity to dialogue with Senegal's lawmakers including new members of parliament who entered into office in July 2012.

The Project also funded advisory and technical services for the DPN-IU, and training and workshops as follows: (a) ten DNP staff obtained an advanced degree in marine and coastal ecosystem management from a local university in Dakar; (b) four DNP staff were trained in Project management, human resources, forestry, and natural resource management and (c) ten workshops were conducted for DNP field staff on various thematic topics including waterbird and wetland management, preparation of local co-management plans, and Geographic Information System (GIS) software. The workshops were well attended with over one hundred participants from the DNP's staff.

At each of the ten Project sites, the Project financed goods and equipment including: a vehicle, a boat for transport for DNP staff and Ecoguards to carry out their monitoring and surveillance responsibilities, and each project site received a computer, GPS, and binoculars to aid monitoring and surveillance. At DNP headquarters, the Project provided the M&E unit with several computers, a network server, office equipment (desks, chairs, etc), as well as a full-time secretary.

National Biodiversity Committee (NBC). The NBC was established in 2006 with Project funds. The NBC typically met before and after every CBD COP. The Project funded four workshops of the NBC before and after the 2008 and 2010 COPs and travel for the president of the NBC and one DNP staff to the 2008 COP in Bonn, Germany. However, the NBC is not well suited for monitoring and evaluating the state of biodiversity in Senegal. It suffered from poor management and has not met since 2010; the Committee consisted of too many stakeholders to function efficiently. While DNP serves as the permanent secretary for the NBC, the committee is headed by the Agriculture and Environment advisor to the prime minister who was often too busy to lead and had limited incentives to promote biodiversity conservation. It is unlikely the NBC will be sustainable now that the Project has closed, particularly since the Government has not allocated funding for the NBC secretariat in the DNP's budget.

Biodiversity Monitoring. The submission of annual Biodiversity update reports, an intermediate outcome indicator for the Component was partially met. Biodiversity update reports were produced in 2005, 2007, and 2010. A fourth report is expected to be completed by the end of 2012. Delays in annual reporting is due to several factors. The unit within the DNP in charge of monitoring was not sufficiently resourced to carry out the yearly reporting. The unit only has a staff of three for the entire country, and from 2010 until 2012, two of the three staff members were not permanently located in Senegal (one was in the United States and the other was in France). Furthermore, approximately only 25 percent of their time was dedicated to the Project and updating the State of Biodiversity reports. Because the unit was not well staffed, the DNP was unable to complete a national biodiversity monitoring plan with indicators defined by the CBD that would produce consistent data for the annual State of Biodiversity report. Although the Project provided funding to build the capacity of this unit, (office equipment, a secretary staff position placed within DNP, training for staff in biodiversity monitoring and collection), with only one to three staff in charge of a national campaign, it was unlikely that the DNP could maintain the collection, processing, and compiling of such annual updates.

National Action Plans. National action plans serve as internal strategy documents within DNP to achieve a coordinated effort in conservation and monitoring of specific species. An important achievement under Component 2 was the establishment of National Action Plans for several iconic fauna: (a) in 2008, the DNP completed a national action plan for African manatees (*Trichechus senegalensis*), and (b) in 2012, a national action plan was completed for marine turtles. In both cases, the Project provided the funds for consultants to prepare the national action plans.

IEC. The DNP had modest success with increasing the awareness of biodiversity and integrated ecosystem management nationally. As part of the International Waterbird Census held every January 15th, the Project funded the Training of trainers programs from 2006 until 2011 to spread awareness of the importance of Senegal's migratory waterbird population. The annual event is a success with increasing participation from the general public and tourists as well as from the DNP staff and local Ecoguards. A similar program is done on May 22 of each year for the International Day of Biodiversity. In 2010, DNP used the opportunity to use Project funds to spread awareness of the importance of biodiversity.

From 2008 through 2012, the DNP tested a pilot community education program to teach students basic environmental concepts with Project funding. Four pilot schools in the communities of Yoff, Ngor, Ouakam, and Soumbédioune were targeted because of the large concentration of fishing families and were received enthusiastically by the students as well as the teachers. Outreach was launched by dynamic and committed parks personnel (mainly women rangers and officers). The goal of the community education program was to mainstream environmental concepts and stewardship into future generations. The curriculum was not specifically focused on coastal and marine issues, but rather provided an overview of more broad environmental concepts (e.g. biodiversity, water management, pollution, recycling). However, school masters and teachers tried to adjust the curriculum to address local issues. The target age range for the program was nine to 11 years old as it was felt by DNP that is the most receptive age for children to be introduced to these concepts. The result of the program led to a more environmentally-conscious young population in one of the most populated areas of Senegal. In some cases, DNP noted that the children now have a better understanding of how their actions can affect the environment than their parents.

Sustainable Financing for Biodiversity Conservation. The feasibility study and consultations regarding the establishment of a trust fund for biodiversity conservation in Senegal was completed in April of 2007. The study suggested it follow similar approaches of other African francophone countries, like Madagascar, and establish a foundation to manage a trust fund. The study outlined a number of next steps, but no significant action was taken and no trust fund for biodiversity conservation had been established by the end of the Project.

Sub-Regional Coordination Efforts. The building of sub-regional partnerships and linkages under the Project with other projects in the region was weak. This was an intermediate outcome indicator for the Component. Of the three partnerships that were to be established with other GEF-funded projects, one was established while no others provided any meaningful partnership support.

The sub-committee for the Senegal River Basin Project held two workshops in 2007. However, closure of the IMCRM Project also brought closure to the sub-committee. Other than some sharing of Project information no significant results were attained from the workshops.

The sub-committee for the GEF-funded Canary Current Large Marine Ecosystem (CCLME) Project (funded by the Food and Agriculture Organization (FAO) and UNEP) met but was never established. The preparation of the IMCRM Project began in 2007 while the CCLME Project was not implemented until April of 2010, by which time, the IMCRM Project was close to completion. However, the technical staff of the DNP and DMF were involved in the preparation of the CCLME project.

The sub-committee for the Project to enhance the conservation of the critical network of sites required by migratory waterbirds on the African/Eurasian Flyways was not established; however, Component 2 includes activities which promote the protection of migrating bird reserves in the Saloum River Delta and the Senegal River Delta Biospheres.

Impact

Prior to the project, there was little in the way of formal collaboration between DNP and DMF, although the two departments often worked in the same locations and shared information. Although the original vision under the Project was the coordination of efforts between the Ministry of Maritime Economy and the Ministry of Environment resulting in an ecosystem-based fisheries and coastal management approach, the restructuring divided the implementation of the Project into two separate sectors and removed the opportunity for long-term integrated ecosystem-based management between the two ministries.

Coordination of activities between the DNP and DMF at project sites was also a challenge. Under Component 2, the pilot sites for reserves were identified during Project preparation with stakeholders by 2005, whereas the identification of fishing community pilot sites under Component 1 were not completed until 2007 due to a lengthier selection process. This left only one year - from 2007 until the restructuring in 2008 - for the DNP to work with fishing communities to integrate an ecosystem-based management plan. When the restructuring divided the responsibilities of the two components under the respective Ministries, the integration stopped and Project collaboration effectively ended.

The restructuring also ended the EMC approach to regional ecosystem-based co-management. While the EMCs were not operating as originally planned, they were making modest progress and provided a forum for many stakeholders to discuss conservation of shared resources and an opportunity to learn about ecosystem-based management of resources. As a result, EMCs were quite popular at the community level, to the extent that communities and local government officials have asked the DNP to continue holding workshops. The DNP has been unable to comply due to lack of funds.

The annual State of Biodiversity reports were not provided regularly because the DNP did not have sufficient staff or capacity in its monitoring unit. When the DNP was restructured in 2000,

a monitoring and evaluation unit was created but was given no strategy. It was not until the establishment of the NBC in 2006 that a monitoring strategy was formulated, and another four years in 2010 before a Biodiversity Monitoring Plan was established. In terms of capacity, only three DNP employees were responsible for coordinating the monitoring of Senegal's biodiversity. Of these three, two were pursuing higher education in Europe and North America during the most of the Project implementation period. Funds allocated for strengthening the monitoring unit was used for a secretarial position, office equipment, and monitoring equipment for park staff at the ten pilot sites, while there was a lack of DNP technical staff at headquarters. With only one full time staff member and a secretary in the unit, much of the analysis and report writing was given to a local university. With a shortage of staff, it is unlikely that biodiversity monitoring will become an important aspect of DNP or the Ministry of Environment.

Through the Project, however, the DNP was strengthened to provide and explore different methods for training and raising the awareness of stakeholders in eco-system management and conservation of natural resources. Local communities, students, ministries and politicians have been sensitized about integrated natural resource management through Project activities such as the establishment of EMCS, the process of drafting the Biodiversity and Protected Areas Framework Law, school education programs and outreach activities, and younger and older generations are beginning to think more about their impact on the local environment. Communities are actively participating in local management of the parks, and schoolchildren from fishing families are explaining to their parents about the effects of overfishing and depleting resources. As such, the Project has helped to establish an active community as a base to implement further reforms.

In April 2012, a new Government was elected into office in Senegal. The new Minister of Environment was the president of a dynamic national NGO focused on environmental conservation known as "Oceanium", a member of Senegal's Green Party, and a well-respected environmentalist acclaimed for his conservation efforts. In the area of environmental management and conservation, a committed leadership and political will are essential for bringing the vision and the reforms to reality.

Annex 3. Economic and Financial Analysis

(including assumptions in the analysis)

The Project implemented, from 2005 to 2012, two separate but complementary groups of activities: (i) activities aiming to empower coastal communities and fishers to sustainably manage the coastal demersal fisheries resources through an area-based co-management system, and (ii) activities aiming to strengthen the protection of coastal ecosystems that support these resources through strengthened or created network of coastal protected areas.

In the PAD at Project appraisal, the annex on summary economic analysis presents only a description of the likely costs and benefits, and the likely fiscal impacts due to weakness of data collection in Senegal and the difficulty of measuring and valuing many of the effects involved, especially the likely off-site benefits (positive externalities) of the three proposed Biosphere reserves. In this ICR, the team will use the same approach (analysis of costs and benefits of the project) with the available data collected through the local Posts of control of fisheries and the Local Fisher's Committees in the four co-management pilot sites, which have been subsequently validated by the Fisheries Administration at central/national level, and through the units of management of the parks/reserves in the area of implementation of the project (under the Authority of the Directorate of National Parks).

Costs

The PAD evaluated the costs of implementing the project and the opportunity costs from use of areas concerned by the project (for the area-based co-management of demersal fisheries and for the enhancement of the management of the network of coastal protected areas). For the ICR, the financial costs after project completion (amount of total disbursement) were \$13.25 million (80 percent of appraisal) (2005 - 2012) (with two extensions of the closing date occurring in 2008 and 2010).

Regarding the opportunity costs, no data could be gathered for them at project completion. As mentioned in the PAD, the coastal demersal fisheries are currently overexploited; the rent from the fishery has already been dissipated. Consequently, the opportunity cost for other alternative use of the same areas should be very low.

Benefits

From the PAD, the three main benefits of the project are: (i) increased fisheries rent some years after the project implementation as a consequence of stock recovery and reduced fishing effort, (ii) increased recreational/ecotourism rent and, (iii) better preservation of marine and bird biodiversity, both in the short term and long term. All these benefit can either give a qualitative analysis (no available data) or a quantitative one (with available data).

(i) Fisheries benefits

From the PAD, the fisheries benefits of the project are the rent of the coastal demersal fisheries, where the remaining fishers would see their Catch Per Unit Effort (CPUE) increase due to the

project. In fact, for the overexploited fisheries stocks, the area-based co-management activities aimed to reduce the fishing effort in the short term and consequently to allow the stocks to rejuvenate and be replenished. So, the fish yield and production will increase in the medium and long term through the increased CPUE of the remaining fishing vessels and finally to lower costs and greater revenues per vessel (which means an increase of the artisanal fishery rent). For the purpose of the ICR, the team could not calculate this rent for the targeted fisheries due to lack of data related to the operational small-scale vessels for them. Hence, the team has analyzed the CPUE for the targeted fisheries in each of the four pilot sites and has calculated the total revenue per year and per vessel as an indicator of more healthy stock and better management through the project intervention. Table 3.1 summarizes the results of this analysis.

From 2005 to 2011, the CPUE of green lobster fisheries in Ngaparou has increased from 7 kg through 40 kg per vessel, and in Ouakam, the same CPUE has increased from 10 kg to 34 kg between 2007 and 2011 and the CPUE of *Thiof* has reached 166 kg per vessel (against only 75 kg per vessel in 2007) during the implementation of co-management fisheries measures for the declining stock of these species in these areas. Consequently, the total revenue per vessel per year for the two species has increased also in these two pilot sites through the project implementation.

For the coastal white shrimp stocks in Foundiougne and Betenty, the activities to implement area-based co-management for the fishery, especially the reduction of the fishing effort, has not resulted in the immediate increase of the CPUE. The pluviometry also has its influence on the fluctuation of the coastal shrimp stock. As for the fisheries co-management measures/initiatives undertaken by the LFCs in the four pilot sites, there was no specific target to reduce the fishing capacity yet; however, the reduction of fishing effort has been carried out through area restriction and fishing time restriction measures and also limitation and selection of fishing engines (mesh size). The sudden increase of number of vessel observed in Foundiougne would be due to the fact that the seasonal vessels would not be taken into consideration for some of the years of the evaluation. But the implementation of fisheries management initiatives by the LFCs in these localities has allowed the stock of shrimp to begin to rejuvenate and to recover. In Betenty, for example, the number of individual shrimp per sample increased by 38 percent from 2005 through 2011, i.e., the average size of individual shrimp has increased, an indicator of higher quality fisheries product).

(ii) *Ecotourism benefits*

In the PAD, ecotourism benefits of the project depend on the additional number of visitors that would come with the project over time (compared to the scenario without the project) and on the economic rent from tourism captured by Senegal from the additional visitors. Rents can be captured in a variety of ways, including through park entrance fees, airport and visa fees, and hotel taxes.

For the ICR, the team, given the availability of data, has calculated the additional benefits generated by the additional number of visitors at the parks and reserves concerned by the IMCRP through the project implementation. Table 3.2 summarizes the results of this analysis by

comparing the situation with and without the project. The team has then made the comparison of the evolution of

Table 3.1.: CPUE and the revenue per vessel in the four area-based co-management pilot sites (2005-2011)

	Sites	Targeted, high- commercial value demersal species	2005	2006	2007	2008	2009	2010	2011
Total harvest per year (Kg)	Ouakam	Thiof	n/a	n/a	10,100	13,960	22,200	17,200	23,300
		Green lobster	n/a	n/a	1,300	1,500	1,850	5,050	4,800
	Ngaparou	Green lobster	770	700	1,575	1,561	1,645	2,835	4,095
	Foundiougne	coastal white shrimp	n/a	n/a	343,370	287,190	362,835	274,232	431,625
	Betenty	coastal white shrimp	365,700	336,200	340,700	328,900	296,900	237,200	229,400
Number of operating small- scale vessels	Ouakam	Thiof	n/a	n/a	135	133	142	140	140
		Green lobster	n/a	n/a	135	133	142	140	140
	Ngaparou	Green lobster	103	140	83	90	103	105	103
	Foundiougne	coastal white shrimp	n/a	n/a	127	120	142	160	300
	Betenty	coastal white shrimp	65	59	62	53	57	51	59
Total harvest per vessel and year (Kg/small- scale vessel)(CP UE)	Ouakam	Thiof	n/a	n/a	75	105	156	123	166
		Green lobster	n/a	n/a	10	11	13	36	34
	Ngaparou	Green lobster	7	5	19	17	16	27	40
	Foundiougne	coastal white shrimp	n/a	n/a	2,704	2,393	2,555	1,714	1,439
	Betenty	coastal white shrimp	5,626	5,698	5,495	6,206	5,209	4,651	3,888
Average landed prices (XOF/Kg)	Ouakam	Thiof	n/a	n/a	3,670	3,980	3,380	3,620	4,500
		Green lobster	n/a	n/a	8,500	8,340	5,000	5,000	5,500
	Ngaparou	Green lobster	4,900	6,000	6,270	6,850	5,730	5,700	6,730
	Foundiougne	coastal white shrimp	n/a	n/a	600	600	550	500	750
	Betenty	coastal white shrimp	400	550	600	600	700	900	800

Total revenue per year (XOF)	Ouakam	Thiof	n/a	n/a	37,067,000	55,560,800	75,036,000	62,264,000	104,850,000
		Green lobster	n/a	n/a	11,050,000	12,510,000	9,250,000	25,250,000	26,400,000
	Ngaparou	Green lobster	3,773,000	4,200,000	9,875,250	10,692,850	9,425,850	16,159,500	27,559,350
	Foundiougne	coastal white shrimp	n/a	n/a	206,022,000	172,314,000	199,559,250	137,116,000	323,718,750
	Betenty	coastal white shrimp	146,280,000	184,910,000	204,420,000	197,340,000	207,830,000	213,480,000	183,520,000
Total revenue per small-scale vessel per year (XOF/vessel)	Ouakam	Thiof	n/a	n/a	274,570	417,750	528,423	444,743	748,929
		Green lobster	n/a	n/a	81,852	94,060	65,141	180,357	188,571
	Ngaparou	Green lobster	36,631	30,000	118,979	118,809	91,513	153,900	267,567
	Foundiougne	coastal white shrimp	n/a	n/a	1,622,220	1,435,950	1,405,347	856,975	1,079,063
	Betenty	coastal white shrimp	2,250,462	3,134,068	3,297,097	3,723,396	3,646,140	4,185,882	3,110,508

Source: Local offices of Department of Fisheries Control and the LFCs.

It was assumed that the number of ecotourists without project would be the lowest. The additional number of ecotourists was about 44,172 which generated a total additional revenue of the ecotourism in these protected areas during the project implementation (between 2006 and 2010) is about US\$96,532.

Table 3.2: Benefits generated by the ecotourism and would be made by the project implementation

Group of sites		2006	2007	2008	2009	2010	Total (2006-2010)
PNOD/PNLB/RSFG	Difference of the number of ecotourists with and without project	369	470	920	-46	-595	1,118
	Difference of ecotourism revenues with and without project (US\$)	8,152	9,394	-182	-5,430	-684	11,250
PNIM/RNP/RNICS	Difference of the number of ecotourists with and without project	846	7,478	9,834	9,898	12,927	40,983
	Difference of ecotourism revenues with and without project (US\$)	846	14,469	17,749	17,203	24,593	74,860
PNDS/RNCP	Difference of the number of ecotourists with and without project	8	31	2,037	-78	73	2,071
	Difference of ecotourism revenues with and without project (US\$)	16	62	3,842	2,894	3,608	10,422

Source: Department of National Parks.

(iii) *Biodiversity preservation benefits*

The Biodiversity preservation benefits by the implementation of the project can be evaluated by the effectiveness rate of management of biodiversity in the three pilot areas (biosphere) and by the rate of participatory involvement of the local communities in the management of biodiversity in these three pilot areas through the project implementation. So, regarding the effectiveness rate of management of biodiversity has been measured with the World Bank/WWF Protected areas Management effectiveness Tool improved in 2008. This tool has been improved with the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology also developed by WWF and it gave more information for habitats and species evaluation. As results of such assessment, all the three zones have reached the target fixed by the end of the project: Cap Vert 61% (if the target at appraisal was 65%), Senegal Delta 62% (if the target at appraisal was 70%) and Saloum Delta 57% (if the target at appraisal was 60%). The difference of rate between the achievements and the targets is due to the lack of financial resources to implement the activities identified in the established management plans for these protected areas. As for the rate of participatory involvement of the local communities in the management of biodiversity, the participatory assessment was done using the same tools. According to the WWF/CATIE scale, and between 2006 and 2011, this score has increased from 76% to 79% for Cap Vert zone, from 64% to 75% for Senegalese river Delta zone and from 65% to 73% for the Delta of Saloum zone.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Team Members

Names	Titles	Unit	IDA P086480	GEF P058367
Lending				
Alliali, Solange A	Senior Counsel	LEGES	✓	✓
Browning, Brantley	Consultant, Policy		✓	
Burbridge, Peter R.	Consultant, Coastal Zone Mgt		✓	✓
Carret, Jean-Christophe	Natural Resources Economist	AFTA1	✓	✓
Crepin, Christophe	Sector Leader, GEF	EASER	✓	✓
Diaite, Bourama	Senior Procurement Specialist	AFTPC	✓	✓
Diarra, Dieneba	Social Development Specialist		✓	✓
Doetinchem, Nina	Carbon Finance Specialist	ENVCF		✓
Guazzo, Caroline	Language Program Assistant	AFTCS		✓
Kotschoubey, Nicolas	Consultant, Environmental Safeguards	MNSHD	✓	✓
Ndiaye Lixi, Marie	Program Assistant	FGIDB		✓
Poirier, Lucie	Procurement Specialist	AFTPC	✓	✓
Prevost, Yves André	TTL, Environmental Advisor	PA9SS	✓	✓
Seck, Aissatou	Programs Assistant	AFTCS	✓	✓
Sissoko, Fily	Lead financial Mgmt. Specialist	AFTMW	✓	
Strengerowski-Feldblyum, Liba C.	Operations Analyst	AFTN3	✓	✓
Toure, El Hadj Adama	Senior Agricultural Economist	AFTA1	✓	
Van Santen, Gert	Consultant		✓	✓
Viridin, John	Sr Natural Resources Mgmt. Spec	ENV		✓
Wilson, Wendy	Operations Analyst	AFTA1	✓	
Supervision				
Agwe, Jonathan	Operations Officer	ARD	✓	✓
Balde, Demba	Senior Social Development Spec.	AFTCS	✓	✓
Boisrobert, Cedric	Consultant, Fisheries	AFTEN	✓	✓
Brito, Laurent Mehdi	Procurement Specialist	AFTPC	✓	✓
Cipriani, René	Consultant, Operations		✓	✓
Chu, Jingjie	Natural Resources Economist	AFTN3	✓	✓
Diaite, Bourama	Sr. Procurement Specialist	AFTPW	✓	✓
Diop, Sidy	Sr. Procurement Specialist	AFTPW	✓	✓
Faye, Mbaye Mbengue	Consultant, Env./Social Safeguards		✓	
Follea, Salimata D.	Operations Analyst	AFTN1	✓	
Hume, Andrew	JPA, Environment	GEF		✓
Ioniari lala, Radonirina	Consultant, Fisheries Specialist	AFTN3	✓	
Kanungo, Gayatri	Environmental Specialist	AFTN3		✓
Keita, Abdoulaye	Senior Procurement Specialist	MNAPC	✓	
Kristensen, Peter	Lead Environmental Specialist	ENV		✓
Lee, Marcus John Jin Sarn	Urban Economist	FEUUR		✓
Ndiaye, Mademba	Senior Communications Officer	AFRSC	✓	
Page, Hawanty	Language Program Assistant		✓	✓
Prevost, Yves André	Environmental Advisor	PA9SS	✓	✓

Romao, Osval Rocha And.	Financial Management Specialist	AFTMW	✓	
Samba, Fatou	Financial Management Specialist	AFTFM	✓	✓
Sanoussi, Ibrah Rahamane	Sr Procurement Specialist	AFTPW	✓	
Santley, David John	Sr. Petroleum Specialist	SEGEI	✓	
Sarno, Francesco	Consultant, Procurement Specialist		✓	✓
Sene, Manievel	Sr. Rural Development	AFTA2	✓	
Strengerowski-Feldblyum, Liba C.	Operations Analyst	AFTN3	✓	✓
Talla,Takoukam, Patrice	Counsel		✓	✓
Tran, Huong-Giang Lucie	Consultant, ICR	AFTN1	✓	
Tynan, Ellen J.	Sr. Environmental Specialist			✓
Vaselopoulos, Virginie	Language Program Assistant	AFTN1	✓	
Vincent, Xavier F.P	Senior Fisheries Specialist	AFTN1	✓	✓
Virdin, John	TTL, Sr. Natural Resources Mgt. Specialist	ENV	✓	✓
Winter, Carolyn	Sr Social development Specialist	MNSSO	✓	✓
Yoboue, Eric Jean	Sr. Procurement Specialist		✓	

b) Staff Time and Cost

❖ **IDA P086480**

Stage	Staff Time and Cost (Bank Budget Only)	
	# Staff weeks	(\$'000)(includes labor, travel and consultant costs)
Lending		
FY04	14.24	87,485
FY05	7.48	28,330
Subtotal:	21.72	115,815
Supervision/ICR		
FY05	13.82	44,823
FY06	14.59	58,835
FY07	34.43	133,900
FY08	38.63	191,884
FY09	65.40	177,037
FY10	56.51	94,484
FY11	27.40	79,102
FY12	44.92	61,062
FY13	0	6,263
Subtotal	295.70	847,388
Grand Total	317.42	963.203

❖ GEF P058367

Stage	Staff time and Cost (Bank Budget Only)	
	# Staff Weeks	(\$'000)(Includes labor, travel and consultant costs)
Lending		
FY00	5.25	25,241
FY01	4.24	30,674
FY02	4.86	22,931
FY03	6.90	38,231
FY04	35.42	171,475
FY05	7.59	56,409
Subtotal:	64.26	344,961
Supervision/ICR		
FY05	0.00	1,297
FY06	7.03	55,270
FY07	6.60	31,922
FY08	2.28	35,090
FY09	16.39	79,243
FY10	11.50	53,391
FY11	4.21	30,282
FY12	0.00	0
Subtotal	48.01	286,495
Grand Total	112.27	631,456

Annex 5. Results Framework

SENEGAL: Integrated Marine and Coastal Resources Management Project Results Framework (EOP)

Original Project Development Objective:	Revised Performance Indicators	Comments at ICR
To increase the sustainable management of marine and coastal resources in 3 pilot areas by communities and the Government.	Local fisheries management sub-projects are implemented in 4 pilot sites by End of Project (EOP).	Completed satisfactorily by LFCs. Sub-projects have been approved and substantially implemented satisfactorily in 4 pilot sites. Delays in completion for 1 co-management initiative in Ouakam due to late start in project activities. Capacity of LFCs as private sector organizations strengthened as a result with changed perception towards resources management, decision-making structure alternatives. Positive results in co-management of green lobster, mussels and shrimp in terms of increased average weight and size.
	National management plans for 2 key fisheries are prepared, and approved by the National Consultative Council for Maritime Fisheries.	Almost completed. Most of the work on the plans completed, and the remaining consultative workshops and document finalization to be funded under the Bank-funded West Africa Regional Fisheries Program (2009-2014)(US\$46.30 million).
	Participatory assessment of local community involvement in the management of biodiversity in the three pilot areas rated as satisfactory at the end of the Project.	Could not be measured fully since no beneficiary assessment was conducted at EOP. However, a participatory assessment carried out in 2006 by the PCU, and between 2009 to 2011 by the DNP using the same tools, indicated a mean score variation from 67% in 2006 to 75% in 2011 which indicates satisfaction. Popular demand by communities with regards to some services provided under the project indicate that such activities have been successful in encouraging and strengthening local community involvement in biodiversity management.
Revised Global Environment Objective:	Revised Global Environment Objective	
To strengthen the conservation and management of Senegal's marine and coastal ecosystems, which are globally significant and vital to the sustained livelihoods of coastal communities.	Effective management of biodiversity in the three pilot areas increased by at least 50% by EOP.	At appraisal, this was measured using the World Bank/WWF Protected Areas Management Effectiveness Tool which was upgraded in 2009 with the Rapid Assessment and Prioritization of Protected Area Management methodology developed by the WWF to improve habitats and species evaluation. The mean score improved from 46% in 2006 to 61% in 2011. Evaluation carried out by DNP from 2009-2011. The completion of 8 local level ecosystem management plans will contribute further to effective management of biodiversity because of the active participation of populations concerned.

Intermediate Outcomes:	Revised Intermediate Outcome Indicators	
Component 1: Local communities sustainably manage coastal and marine fisheries.	60 percent of Local Fisher Committees implementing sub-projects comply with sub-project performance targets by end of project.	Beneficiary assessment needed. However, all sub-projects submitted have been approved by the national level fisheries advisory councils and local level councils and are completed in 3 out of 4 sites satisfactorily. Positive catch volume results in co-management of green lobster, mussels and shrimp in terms of increased average weight and size.
Component 2: Local communities participate in the conservation of critical coastal and marine habitats and species.	Biodiversity and Protected Area framework law is prepared and submitted to Government before EOP.	Met satisfactorily. The framework law was submitted to Parliament for approval in September 2011 before EOP.
	State of biodiversity update reports produced on an annual basis.	Partially met. Reports were prepared and submitted for 2005, 2007, 2010, and pending for end 2012, due to lack of capacity in DPN to carry out a national biodiversity monitoring plan, and the procedures and slow approval process required to establish national biodiversity indicators to be included in the report.
	Coordination sub-committees established with the Senegal River Basin Project, the Protection of the Canary Current Large Marine Ecosystem (LME) Project, and the Project to enhance the conservation of the critical network of sites required by migratory waterbirds on the African/Eurasian Flyways.	<p>Met with adjustments to changing circumstances. Protocol signed with Senegal Basin River Project signed in May 2006. The EMC (COGEM) of the Senegal River Delta Transboundary Biosphere Reserve designated as a sub-committee to participate in sustainable biodiversity conservation and development of water resources efforts.</p> <p>Meetings and discussions held with the Large Marine Ecosystem of Canary Current Project (CCLME) to explore synergies. An MOU signed in May 2006 established a framework for collaboration, but was negated by delays in the preparation of the CCLME. Subsequently, it was replaced by a protocol signed with Wetlands International as implementing agency of the Project Wings Over Wetlands in October 2006, which focuses on conservation of the critical network of sites required by migratory waterbirds on the African/Eurasian Flyways. Wetlands International reinforced the capacities of DPN and projects staff through training on migratory birds and wetlands monitoring.</p>

Project Outcome Indicators	Baseline (2005)	Baseline (2008)	End of Project Target	End of Project Actual
Local fisheries management sub-projects are implemented in 4 pilot sites by End of Project (EOP).	No sub-projects implemented	4 pilot sites selected and sub-projects implementation underway in 4 sites; 4 local co-management plans and initiatives prepared, and signed into legal agreement between communities and Government.	sub-project implementation completed in 4 sites	Sub-project implementation completed in 3 pilot sites (Bétenty, Foundiougne, Ngaparou), partially completed in 1 project site (Ouakam).
National management plans for 2 key fisheries are prepared, and approved by the National Consultative Council for Maritime Fisheries.	No national fisheries management plans prepared	Contracts for national fisheries management plans under finalization	National fisheries management plans approved by Council.	Two national fisheries management plans substantially prepared. They will be completed under the Bank-funded WARFP.
Participatory assessment of local community involvement in the management of biodiversity in the three pilot areas rated as satisfactory at the end of the Project.	Cap Vert 38%, Senegal Delta 49%, Saloum delta 44%	75%	100%	Unable to be measured fully since no beneficiary assessment was conducted at EOP. However, a participatory assessment carried out in 2006 by the PCU, and between 2009 to 2011 by the DNP using the same tools, indicated a mean score variation from 67% in 2006 to 75% in 2011 which indicates satisfaction. Lack of M&E data for EOP comparison to baseline estimates for the fisheries component. However, popular demand by communities with regards to some services provided under the project indicate that such activities have been successful in encouraging and strengthening local community involvement in biodiversity management.
Effective management of biodiversity in the three pilot areas increased by at least 50% by EOP.	0	20%	50%	At appraisal, this was measured using the World Bank/WWF Protected Areas Management Effectiveness Tool which was upgraded in 2009 with the Rapid Assessment and Prioritization of Protected Area Management methodology developed by the WWF to improve habitats and species

				<p>evaluation. The mean score improved from 46% in 2006 to 61% in 2011. Evaluation carried out by DNP from 2009-2011.</p> <p>The completion of 8 local level ecosystem management plans will contribute further to effective management of biodiversity because of the active participation of populations concerned.</p>
Intermediate Outcome Indicators				
60 percent of Local Fisher Committees implementing sub-projects comply with sub-project performance targets by end of project.	0	N/A	60%	75%
Biodiversity and Protected Area framework law is prepared and submitted to Government before EOP	0	BPAF currently in progress.	BPAF law submitted to GVT	BPAF law submitted to GVT before EOP.
State of biodiversity update reports produced on an annual basis.	0	1 st report not yet produced.	All update reports completed.	Reports were prepared and submitted for 2005, 2007, 2010. 2012 report pending.

Annex 6. Summary of Borrower's ICR

REPUBLIQUE DU SENEGAL

Un Peuple – Un But – Une Foi



MINISTRE DE LA PECHE ET DES AFFAIRES MARITIMES

DIRECTION DES PECHEES MARITIMES

**RAPPORT D'ACHEVEMENT
DU
PROJET DE GESTION INTEGREE DES RESSOURCES MARINES ET COTIERES
(GIRMaC)**

PREFACE: Identification du projet

1. Contexte du projet, conception de l'objectif de développement et de l'objectif global environnemental

Le programme de Gestion Intégrée des Ressources Marines et Côtières (GIRMaC) est né de la volonté du Sénégal d'asseoir les principes d'une gestion durable des ressources marines et côtières comme éléments de base du développement et principalement de la lutte contre la pauvreté des communautés littorales. Il vise ainsi à matérialiser l'intégration entre les objectifs de développement, d'utilisation durable et de conservation de la biodiversité marine et côtière.

Pour la pêche maritime, le contexte est marqué par l'avènement de projets et programmes axés sur gestion durable des pêcheries et portant sur la gestion paritaire du secteur de la pêche maritime, l'évaluation et la gestion des ressources halieutiques du Sénégal, l'immersion et la surveillance de récifs artificiels, la création et la mise en place des Conseils Locaux de Pêche Artisanale (CLPA), etc.

Dans le secteur de la conservation de la biodiversité, les bailleurs de fonds se sont focalisés sur la préparation de plans de gestion de sites communautaires et des principales aires protégées.

L'adoption d'une vision ou d'une stratégie globale de gestion durable des ressources marines et côtières du Sénégal était devenue indispensable pour arriver à une synergie entre la pêche et la biodiversité. Pour optimiser la valeur ajoutée du Projet, il a été ainsi retenu de limiter le nombre de composantes et de rechercher une synergie entre elles afin d'augmenter la contribution de la conservation de la biodiversité à la pêche durable et vice versa. Les ressources du projet ont ainsi été mobilisées autour de deux composantes opérationnelles : (i) la composante « *Gestion durable des Pêcheries* » financée par un accord de crédit de l'IDA pour lequel un objectif de développement a été formulé, et (ii) la composante « *Conservation des habitats critiques et des espèces* » financée par un accord de don du FEM qui a justifié l'objectif global environnemental.

1.1. Contexte à la phase de conception et d'évaluation préalable

Les ressources halieutiques et l'industrie de la pêche sont en phase de déclin à cause de la surexploitation des principaux stocks due pour l'essentiel au libre accès aux ressources. Au

même moment, la Stratégie de Croissance Accélérée (SCA) du Gouvernement considère la pêche et l'aquaculture comme un des piliers de la croissance accélérée.

La phase de conception et d'évaluation préalable de ce projet a été ainsi une période où plusieurs chantiers stratégiques ont été finalisés ou en cours de lancement : (i) les concertations nationales sur la pêche et l'aquaculture, (ii) les travaux sur le Cadre intégré pour l'Assistance au Commerce extérieur, (iii) la mise en vigueur du programme de Gestion de la Biodiversité Marine et Côtière (PBMC), (iv) le processus d'élaboration des documents de politique sur la Stratégie de Croissance Accélérée et le DSRP, et (v) l'Etude économique sectorielle sur la pêche (ESW) réalisée par la Banque Mondiale pour le Sénégal.

Parallèlement, les secteurs de la Pêche et de l'Environnement devaient faire face, pour le moyen et le long terme, (i) à une crise environnementale, sociale et économique grave qui frappe la Pêche et qui compromet la survie des communautés littorales en accentuant la pauvreté dans les zones côtières où se concentrent plus de la moitié des populations et l'essentiel des activités économiques du pays; et (ii) à une augmentation des risques bioécologiques, sociaux et environnementaux qui font craindre un appauvrissement des écosystèmes marins et côtier à un niveau tel qu'ils ne puissent plus supporter une exploitation durable des ressources.

Les problématiques auxquelles devait s'attaquer en priorité le projet correspondent aux facteurs qui sont à la base de cette crise de la Pêche et de l'Environnement et qui risquent de saper les bases de la viabilité et de durabilité des activités socio-économiques de la zone marine et côtière.

Le Gouvernement du Sénégal et la Banque Mondiale ont en conséquence décidé de renforcer le programme de Gestion de la Biodiversité Marine et Côtière (PBMC) en 2003, par l'introduction d'un volet « *Gestion durable des pêcheries* », donnant ainsi naissance au projet GIRMaC.

Celui-ci serait donc en phase avec les orientations stratégiques du Document de Stratégie de Réduction de la Pauvreté (DSRP-Sénégal) et recoupe les préoccupations exprimées dans le Country Assistance Strategy (CAS Sénégal) selon lesquelles « la croissance rapide et le manque de capacités nationales de gestion exposent la biodiversité marine et côtière du Sénégal à la fois à une surexploitation des ressources et à une menace sérieuse sur la durabilité des exportations des produits de la mer ».

1.2. Objectif de développement originel du projet et les indicateurs clés de performance

L'objectif de développement du Programme est d'améliorer la gestion durable des ressources marines et côtières par les communautés et le Gouvernement du Sénégal, dans trois zones pilotes. La gestion durable implique à la fois l'exploitation responsable des ressources et la protection des écosystèmes et des processus écologiques critiques pour leur régénération.

Les indicateurs de performance des résultats/d'impact du programme sont définis comme suit :

- Les captures par unité d'effort de pêche (CPUE) augmentent de 10 à 30% dans la plupart des pêcheries gérées par les communautés, à la fin du Projet.
- les mesures d'atténuation de l'impact de la réduction de la capacité de pêche sont jugées satisfaisantes par au moins 75% des communautés ciblées.

Les indicateurs de performance pour la composante 1 sont définis comme suit :

- Nombre de sous projets de cogestion locale des pêcheries mis en oeuvre dans les 4 sites pilotes initiaux au cours des 18 mois suivant le démarrage du Projet, et le nombre de sous projets dans les 8 sites pilotes additionnels pendant les 18 mois suivants.
- 60% de Comités Locaux de Pêcheurs ont mis en oeuvre leurs sous projets, à la fin du Projet, conformément aux performances ciblées par lesdits sous projets ;
- Plans d'aménagement nationaux préparés pour au moins deux (2) pêcheries clés et approuvés par le Conseil National Consultatif des Pêches Maritimes (CNCMP).

1.3. Objectif global originel en matière d'environnement et les indicateurs clés de performance

L'Objectif global en matière d'environnement est de renforcer la conservation et la gestion des écosystèmes côtiers et marins du Sénégal, qui sont globalement significatifs et vitaux pour les moyens d'existence durables des communautés côtières.

Les indicateurs des performances attendues à la fin du projet sont :

- Une évaluation participative indique que l'implication de la communauté locale dans la gestion de la biodiversité dans les 3 zones pilotes est jugée satisfaisante à la fin du Projet;
- L'efficacité de la gestion d'espèces menacées clés (tortues marines, lamantins et 5 espèces oiseaux d'eau) est améliorée de 50% à la fin du Projet;
- La Réserve de Biosphère de la Presqu'île du Cap-Vert est créée avant la fin du Projet;
- La Loi- Cadre sur la Biodiversité et des Aires Protégées est promulguée avant la fin du Projet, et est en phase avec les engagements pris dans les conventions internationales.

1.4. Objectif de développement révisé du projet et les indicateurs clés de performance

L'objectif de développement du Projet a été maintenu pendant la restructuration du programme GIRMaC. Par contre, les indicateurs de performance retenus pour la composante « Gestion durable des pêcheries » sont les suivants :

- 60% des Comités Locaux de Pêcheurs ont mis en œuvre leurs sous projets de cogestion locale avant la fin du Projet, conformément aux performances ciblées par ces sous projets;
- Les plans d'aménagement pour les deux pêcheries sont préparés puis approuvés par le Conseil National Consultatif des Pêches Maritimes (CNCMP) avant la fin du Projet.

1.5. Objectif global révisé en matière d'environnement et les indicateurs clés de performance

L'objectif global n'a pas été modifié dans l'accord de don amendé du 26 février 2009. Les indicateurs de performances ont été révisés et réduits à deux :

- L'efficacité de la gestion de la biodiversité dans les trois zones d'intervention prioritaire est améliorée de 50%, au moins, à la fin du Projet;
- La Loi- Cadre sur la Biodiversité et des Aires Protégées est préparée et soumise au gouvernement avant la fin du Projet.

1.6. Principaux bénéficiaires

Pour la composante 1 du Projet : (i) les pêcheurs et autres usagers des ressources halieutiques des sites d'intervention (mareyeurs, transformateurs ...), des agents des pêches et ou de surveillance, etc. Pour ce qui concerne spécifiquement la pêche industrielle, les bénéficiaires sont principalement les marins et équipages des navires de pêche, les gestionnaires et personnels des établissements de transformation et ou d'exportation des produits de la mer.

Les bénéficiaires peuvent également être impliqués ou impactés à travers leurs organisations professionnelles (GIE, Groupement, associations, comités, fédérations, etc.) ou leurs structures administratives (DPM, DPSP, CRODT, etc)

Pour la gestion des écosystèmes (Composante 2) : (i) les volontaires du réseau des parcs nationaux qui proviennent de la périphérie des aires protégées, (ii) les écogardes qui sont volontaires qui appuient régulièrement les agents des gestionnaires des aires protégées dans leurs activités régaliennes. Ils sont organisés en GIE et mènent des AGRs, (iii) les écoguides qui sont des écogardes qui ont acquis une expertise au fil du temps. Ils servent de guides aux visiteurs des aires protégées, (iv) les GIE de femmes pour la protection de la nature. Elles sont issues de la

périphérie des aires protégées et mènent des AGRs, (v) les élèves de la périphérie des aires protégées qui bénéficient d'un programme d'éducation et de sensibilisation relative à l'environnement, (vi) les gestionnaires des aires protégées dont les sites sont équipés et aménagés, en plus d'être formés ;

Pour le renforcement du cadre de conservation de la biodiversité (Composante 2) : (i) la DPN et les autres directions du Ministère chargé de l'environnement, (ii) le Comité National sur la Biodiversité, et (iii) le Comité National MAB (Man and Biosphere).

1.7. Composantes originelles du projet (comme approuvé)

Le programme GIRMaC est structuré en 3 composantes comme suit :

La Composante 1 « Gestion Durable de la Pêche » qui a pour objectif d'améliorer la durabilité de la pêche à travers l'application de la cogestion locale, notamment territoriale. Cette composante est constituée de trois sous-composantes :

- La mise en œuvre d'activités au niveau national pour améliorer la gestion des pêcheries en facilitant l'application des initiatives de cogestion ;
- La promotion et la coordination des initiatives locales de cogestion dans les sites pilotes situés dans la Presqu'île du Cap Vert et le Delta du Saloum ;
- L'appui institutionnel et le renforcement des capacités pour superviser, appuyer et suivre la mise en œuvre notamment des initiatives de cogestion.

La Composante 2 « Conservation des Habitats et des Espèces Critiques » qui a pour objectif d'améliorer d'une façon durable, la gestion des réserves de biosphère et du réseau des aires protégées côtières par :

1. La gestion des écosystèmes des zones prioritaires d'intervention

- La préparation des plans de gestion selon l'approche par écosystème et leur mise en œuvre dans les zones d'intervention prioritaires sélectionnées : (i) la réserve de biosphère du delta du Saloum, (ii) la presqu'île du Cap Vert, et (iii) la réserve de biosphère du delta du fleuve Sénégal ; et
- L'installation de comités de gestion des écosystèmes opérationnels dans les processus de prise de décision concernant la préparation et la mise en œuvre des plans de de gestion des sites d'ancrage ;

2. Le renforcement du cadre de conservation de la biodiversité

- La révision du cadre juridique et réglementaire ;
- L'appui institutionnel à la Direction des Parcs Nationaux, incluant : (i) le renforcement des capacités de certaines catégories d'agents dans les techniques de gestion de la biodiversité, les stratégies de communication et de planification participative, (ii) l'acquisition d'équipements, (iii) des conseils techniques pour la gestion fiduciaire, un système de suivi et d'évaluation de la mise en œuvre de la composante 2 ;
- L'appui à la mise en place et au fonctionnement : (i) du Comité National Biodiversité, (ii) du processus de révision du cadre juridique et réglementaire, pour assurer le suivi, l'évaluation et la diffusion des informations sur l'état de la biodiversité au Sénégal, (iii) d'un système d'information et d'une base de données pour le suivi et l'évaluation de l'état de la biodiversité.

La Composante 3 « Gestion du Programme, Suivi et Evaluation et Communication » a pour objectif la gestion efficace du programme par les activités suivantes:

- Assurer le Suivi et évaluation. L'Unité de coordination du projet gère les contributions des donateurs et des partenaires, assure la passation de marchés et suit la performance du projet à l'aide d'indicateurs et réalise des évaluations périodiques ;

- Assurer le fonctionnement du Comité de Pilotage du Programme GIRMaC (CP-GIRMaC) et du Comité Scientifique et Technique (CST-GIRMaC) ;
- Assurer la Communication. L'UCP développe et met en oeuvre un plan de communication pour une bonne circulation de l'information entre les acteurs sur les activités du projet ;
- Assurer la coordination avec les structures sous régionales et régionales impliquées dans des initiatives similaires ;
- Assurer le suivi des activités financées par le PPF (Project Preparation Facility).

La fermeture de l'UCP-GIRMaC a eu comme conséquences (i) la suppression de la composante 3 « Gestion du Programme, Suivi et Evaluation et Communication », (ii) la réforme du Comité de Pilotage et la mise en veilleuse du CST-GIRMaC, et (iii) la prise en charge des fonctions fiduciaires (suivi-évaluation, gestion financière, passation des marchés) par les COMOs.

1.8. Composantes révisées du projet

Les objectifs initiaux de la **composante 1** n'ont pas fondamentalement changé. Toutefois, seuls deux indicateurs de performance plus réalistes ont été adoptés, respectivement pour la cogestion et pour les plans d'aménagement. L'indicateur lié à l'augmentation de 10 à 30% de la CPUE a été jugée peu réaliste en raison notamment des délais restants pour la mise en oeuvre des initiatives de cogestion et des plans d'aménagement, ces deux activités ayant enregistré des retards très importants.

Le contenu de la **composante 2**, notamment la sous composante gestion des écosystèmes, a connu une évolution à la suite de la revue à mi-parcours. Face au constat que les aires protégées et la conservation de la biodiversité au Sénégal étaient dans une situation précaire, l'option a été prise de considérer les aires protégées comme partie intégrale d'un écosystème, afin que les décisions sur l'utilisation des terres soient prises à une plus grande échelle. Ainsi, bien que l'approche écosystème telle que proposée dans le PAD demeure valide, sa mise en oeuvre dans le cadre de réserves de biosphère, en consultation avec les COGEMs, a rencontré des difficultés, liées surtout à l'incompétence de la DPN, hors du domaine classé. Il a été convenu que le projet se focalise en priorité dans les zones de conservation, pour avoir des résultats tangibles. C'est la préparation du plan de gestion de l'écosystème a été abandonnée au profit de celle de niveau site d'ancrage.

1.9. Autres changements significatifs

A l'issue de la revue à mi-parcours et surtout de la restructuration du GIRMaC, des changements significatifs ont pu être opérés au niveau des activités et de l'ampleur du projet (sites d'intervention). Il s'agit particulièrement :

- De la réduction du nombre de sites pilotes, de 12 à 4 par le transfert des 8 sites additionnels au projet GDRH en cours de préparation ;
- De la suppression du volet « information et communication » de la composante 3 du Projet ainsi que du poste d'expert correspondant ;
- De la suppression de certaines activités au cours de la mise en oeuvre (i) l'Evaluation des Options de Politique Sectorielle, activité remplacée par la révision du Code de la Pêche Maritime et la finalisation de la Lettre de politique sectorielle et de son Plan d'action, (ii) le programme de recherches sur les démersaux côtiers négocié avec le CRODT;
- La prorogation du chronogramme de mise en oeuvre du Projet GIRMaC jusqu'au 1er décembre 2011 (avant la revue à mi-parcours) et jusqu'au 1er mai 2012 (après une demande de prolongation de 5 mois introduite en 2011 par le Gouvernement).
- Le passage d'une tutelle administrative unique et d'une double tutelle technique à une autonomisation des deux directions techniques (DPM et DPN) et leurs COMOs.

2. Facteurs clés affectant la mise en oeuvre et les résultats

2.1. Préparation du projet, Conception et Qualité de la préparation

La préparation de la composante « Gestion durable des pêcheries » a tiré toutes les leçons positives et négatives des expériences de gestion locale enregistrées par les communautés de Kayar. Il en est de même des expériences des projets financés par l'Agence Française de Développement (AFD) sur les concessions de droits d'accès (Kayar, Mbour). Les leçons de la surveillance du récif de Bargny, enregistrées par OFCA/JICA, ont été notées. Des concertations avec les communautés de pêche des sites concernés par ces initiatives et avec les leaders des organisations professionnelles (GAIPES, FENAGIE-Pêche, CNPS, etc) ont accompagné la préparation du projet.

Beaucoup d'études de base ont également été conduites afin d'établir une bonne situation de référence mais surtout pour capitaliser d'autres expériences au niveau national et international en vue d'une définition appropriée des activités du Projet.

Tirant des leçons d'autres projets de la Banque, une partie du personnel-clé a été recrutée depuis la phase de préparation du Projet afin d'atténuer les risques de déviation durant la mise en œuvre des activités du Projet.

2.2. Mise en œuvre

La revue à mi-parcours, tenue du 17 au 31 janvier 2008, s'est surtout focalisée sur les problèmes institutionnels qui ont perturbé le fonctionnement du projet GIRMaC et gangréné les relations entre les deux ministères de tutelle du Projet mais aussi entre les COMOs et l'UCP-GIRMaC. L'option d'une tutelle administrative unique assurée par le ministère chargé de l'Environnement et une co-tutelle technique assurée par les ministères chargés de l'Environnement et de la Pêche a nettement montré ses limites avec la création de nombreux dysfonctionnements. Par ailleurs, à partir de 2008, la majorité des fonds décaissés ont été utilisés pour financer la seule Unité de Coordination (UCP) au détriment des activités à conduire dans les sites pilotes.

L'UCP malgré les pouvoirs fiduciaires et techniques jugés exorbitants par l'Administration n'a pu mettre en place des passerelles entre la Pêche et l'Environnement pour faciliter une gestion intégrée des ressources marines et côtières au Sénégal.

La revue à mi-parcours du GIRMaC a ainsi recommandé la restructuration du projet, option nettement préférable à une fermeture du projet.

La restructuration, a permis aux deux parties prenantes de s'accorder sur les mesures suivantes : (1) la fermeture de l'Unité de Coordination du Projet (UCP) dont l'existence n'a pas été jugée nécessaire pour que le Projet atteigne ses objectifs, (2) le transfert des missions fiduciaires de l'UCP-GIRMaC aux services de l'Etat (DPM, DPN) ainsi que la conduite des opérations des composantes pour faciliter l'appropriation du Projet et la pérennisation des acquis, (3) le transfert de la gestion du crédit IDA à la COMO-Pêche (DPM) et de la gestion du don FEM à la COMO-Ecosystème (DPN), (4) la réallocation des ressources libérées par catégorie de dépenses, (5) un inventaire et une réaffectation dans les COMOs des ressources matérielles (véhicules, matériels et mobilier de bureau, fournitures de bureau).

D'autres mesures ont également été prises :

- Le suivi et évaluation (S&E) de la composante 2 a été transféré à la division concernée de la DPN alors que la COMO-Pêche a recruté un nouveau spécialiste en S&E.
- Le spécialiste en Gestion Financière et celui en Passation des Marchés, nouvellement recruté, sont chargés d'appuyer les deux COMOs.

La réallocation budgétaire effectuée n'a pas eu les effets escomptés au niveau de la COMO-Ecosystème du fait d'un déséquilibre de provisions entre les catégories de dépenses. La structure via son ministère de tutelle, a sollicité sans suite, des mesures correctives.

Il faut rappeler qu'avant la restructuration, l'Expert en Conservation de la Biodiversité, le Spécialiste en Participation Communautaire et le Spécialiste en Aménagement des Pêcheries ont été mis à la disposition des COMOs, par arrêtés ministériels, pour renforcer leurs capacités.

2.3. Conception, mise en œuvre et utilisation du système de suivi-évaluation (S&E)

Dans le cadre de la préparation du Projet GIRMaC, un Manuel de suivi-évaluation (S&E) a été produit par un Consultant spécialisé. Par la suite, un Cabinet international fut chargé de concevoir, développer et mettre en œuvre un système de suivi évaluation opérationnel (bases de données et rapports) pour l'ensemble du Projet GIRMaC.

Malgré tout, la mise en œuvre du système global de S&E du Projet GIRMaC, y compris le suivi-évaluation de la cogestion locale, n'a jamais été effective avant la revue à mi-parcours.

A la date de clôture du projet GIRMaC, malgré le recrutement d'un nouveau spécialiste en S&E en 2010, le manque voire l'absence de données fiables pour mesurer les résultats enregistrés par le Projet, de la base (sites de cogestion) jusqu'au niveau central (DPM, COMO-Pêche), a beaucoup handicapé le Projet dont les indicateurs de performances sont difficilement mesurables avec la fiabilité requise.

2.4. Conformité et respect des procédures fiduciaires et de sauvegarde.

2.4.1. Problèmes rencontrés dans les procédures fiduciaires

La passation des marchés du projet GIRMaC a connu des difficultés liées à l'instabilité du poste de spécialiste en passation des marchés, d'une part, et à des lourdeurs et lenteurs de la passation des marchés particulièrement avec la double application des procédures nationales et de la Banque, d'autre part. Ces problèmes ont gravement perturbé la bonne mise en œuvre du Projet.

Le Projet a connu cinq (5) spécialistes en passation des marchés (SPM) en 7 ans d'existence. Leurs délais de sélection et de remplacement se sont traduits par des ralentissements voire des arrêts d'activités. De même, la lourdeur et la longueur des procédures de passation des marchés ont été une cause importante de retard des activités au regard du chronogramme originel.

Les activités qui ont le plus souffert de cette situation ont été: (i) le recrutement de la firme en charge des plans d'aménagement, (ii) le recrutement du consultant chargé de l'étude de base des sites pilotes, (iii) la sélection de CAES Consult pour la sensibilisation (IEC) et le renforcement des capacités en cogestion et en recherches participatives, (iv) le recrutement et le démarrage de la mission du spécialiste international en cogestion (SICOPE), et (v) la contractualisation avec le CRODT par entente directe (recherches participatives).

L'arrêté n° 02884 portant reconnaissance des initiatives de cogestion locale a été signé et enregistré le 31 mars 2008 alors que cette approbation du Ministre chargé de la Pêche maritime était inscrite pour le 15 avril 2006 dans le chronogramme originel du Projet. De même, la construction des « *Maisons du Pêcheur* » a connu des retards dus aux procédures administratives nationales en matière d'acquisition du foncier dans le domaine public maritime.

L'avènement du Code des marchés publics et les cadres institutionnels chargés de sa mise en œuvre (DCMP, ARMP, Commissions et Cellules de passation des marchés, etc) s'est traduit par la mise en vigueur de procédures nationales de passation des marchés avec l'intervention de cellules de passation qui ne maîtrisaient pas les procédures applicables. Le respect des procédures nationales et l'exigence de conformité avec les procédures de la Banque Mondiale rallongent encore les délais de contractualisation, notamment dans le cas des firmes.

Les procédures de gestion financière, y compris les DRF, ont occasionné moins de contraintes et sont plus régulièrement améliorées que la passation des marchés.

2.4.2. Problèmes rencontrés dans les procédures de sauvegarde environnementale et sociale

Lors du montage du projet GIRMaC, il avait été retenu de mettre en place un Fonds d'Investissement Social pour la prise en charge des pertes de revenus et d'emplois que les initiatives locales de cogestion de la composante « Gestion durable des pêcheries » vont entraîner chez les communautés de pêcheurs. Ce Fonds Social devait être confié à l'Agence du Fonds de Développement Social (AFDS). Un protocole d'accord n° 001/2004 a ainsi été signé conjointement par l'AFDS et l'UCP-GIRMaC dès 2004. La décision de la Banque Mondiale et du Gouvernement de fusionner l'AFDS et le PNIR a signé la disparition de l'AFDS et l'avènement du Programme National de Développement Local (PNDL) dont le mode de fonctionnement n'a pas permis la prise en charge d'un tel fonds dédié à la pêche. En définitive, un Fonds d'Investissement Social (FRAP) a été mis en place par le projet GDRH.

Dans le cadre de la gestion des Ecosystèmes, des ouvrages de franchissements (radiers) ont été réalisés au niveau de Fatala et Salanding dans le Parc National du Delta du Saloum avec l'appui du projet. Ces ouvrages ont soulevé des inquiétudes au niveau de certains acteurs. Les mesures correctives ont été apportées par la COMO-Ecosystèmes pour assurer la pérennité de l'écoulement des eaux basses permettant ainsi à la faune aquatique (alevins, crevettes) de migrer aisément en période de marée basse.

2.5. Opération post-achèvement/Phase suivante.

La Banque Mondiale a accordé un avis favorable à la composante 2, pour le financement d'un service de consultants pour la préparation d'un document de projet pour une nouvelle phase. Un montant d'un million de dollars US a été alloué au projet dans le cadre du programme STAR du FEM-V. Il reste à trouver une nouvelle agence d'exécution.

Il faut également noter la prorogation de cinq mois de la clôture du projet GIRMaC, accordée par la Banque Mondiale au Gouvernement afin de permettre au consultant recruté de finaliser le processus de préparation des plans d'aménagement des pêcheries de crevette blanche et de volute (*Cymbium spp.*). Cet arrangement n'ayant pas permis la finalisation des plans d'aménagement, l'activité a été transférée dans le projet PRAO restructuré.

3. Evaluation des résultats.

3.1. Pertinence des Objectifs, de la Conception et de la Mise en Œuvre

- **Cohérence du Programme avec les politiques nationales de Pêche et d'Environnement et celles de la Banque mondiale**

L'analyse des composantes 1 et 2 du Projet GIRMaC et de leurs sous-composantes montre qu'elles s'inscrivent toutes dans l'une ou l'autre des objectifs stratégiques de développement de la pêche. Par ailleurs, le projet GIRMaC contribue aux axes stratégiques du DSRP II relatifs à la « création de richesse » et à la « bonne gouvernance et développement décentralisé et participatif ». Il est en conséquence en accord avec la Stratégie d'Assistance au Sénégal (CAS) de la Banque Mondiale. Les activités du projet demeurent encore cohérentes avec les priorités actuelles de la Pêche et de l'Environnement.

- **Pertinence des objectifs et des orientations stratégiques du Programme**

Au regard de la situation actuelle de crise du secteur de la pêche et d'érosion de la biodiversité marine et côtière, les objectifs du Projet GIRMaC (objectif de développement et objectif global en matière d'environnement) sont encore très pertinents. Tous le monde continue à s'accorder sur la pertinence et l'importance des objectifs du Projet GIRMaC.

Toutefois, beaucoup de contraintes n'ont pas permis au projet d'atteindre l'objectif de développement et certains des indicateurs de performance et de résultats dans les délais restants pour la mise en œuvre des activités clés. Malgré les avancées obtenues dans certaines réformes

sectorielles, des efforts restent à être déployés dans la gouvernance de la Pêche et de l'Environnement.

3.2. Réalisation des Objectifs de développement du projet et des Objectifs Globaux environnementaux

La mise en œuvre d'une approche de gestion intégrée des ressources marines et côtières n'a pu être opérationnalisée, les deux composantes ayant fonctionné comme deux projets distincts alors que le GIRMaC avait pour vocation la promotion de la politique de gestion intégrée telle qu'approuvée par les Ministres chargés respectivement de la Pêche et de l'Environnement.

Pour la **composante 1**, la mise en œuvre des initiatives de cogestion dans les 4 sites pilotes initiaux a changé positivement la perception et la prise de conscience des bénéficiaires dans la gestion durable des ressources halieutiques. Ces changements ont permis d'améliorer, selon les sites, la gestion des ressources ciblées au niveau local : réduction même limitée de l'effort de pêche (repos biologique), augmentation ou maintien des quantités débarquées, augmentation de la taille moyenne des espèces-clés capturées, participation effective des communautés dans l'identification des mesures de gestion, dans les opérations de surveillance et dans la conduite de recherches participatives, etc. Toutefois, les impacts réels des initiatives sur l'abondance de la ressource restent difficilement mesurables en l'absence d'un dispositif opérationnel de S&E.

Les capacités d'organisation des communautés ont été renforcées avec le regroupement des populations au sein d'une seule instance, le Comité Local des Pêcheurs (CLP). Certaines communautés ont amélioré leurs relations, autrefois conflictuelles, dans le sens d'une meilleure cohésion sociale (pêcheurs de poisson et pêcheurs de crevette à Foundiougne, pêcheurs et mareyeurs à Foundiougne, plongeurs et pêcheurs à Ouakam, par exemple).

Certaines communautés se sont fortement engagées dans la cogestion en participant financièrement à la surveillance participative (cas de Ngaparou). Les résultats obtenus dans ce site ont fortement contribué à la sensibilisation des communautés des sites voisins sur les bénéfices d'une gestion durable des ressources adjacentes à leurs terroirs.

D'une manière générale, les communautés se sont appropriées les concepts et les processus prônés par le projet en matière de cogestion locale. Il en est de même des membres des Comités Techniques Régionaux (CTRs), du Comité Technique National (CTN) et du CNCPM en ce qui concerne l'aménagement des pêcheries de crevette blanche et de volutes (ou yeet).

En outre, le Projet a contribué à faire évoluer les mentalités des populations en matière de gestion des ressources halieutiques et surtout leurs rapports avec l'administration des pêches dans ce domaine (cas de Bétenty). Les membres des Comités Locaux de Pêcheurs (CLP) sont ainsi devenus plus influents auprès des autorités administratives locales des régions concernées.

Au niveau politique, le Projet GIRMaC a impulsé des réformes à travers la lettre de politique sectorielle, le Code de la Pêche maritime, la redynamisation du CNCPM et des CLPA. L'analyse du secteur a été améliorée avec les résultats de la revue des dépenses publiques et l'analyse économique de la filière halieutique.

Globalement, pour la **composante 2**, la préparation et le début de mise en œuvre de huit plans de gestion de sites d'ancrage a permis d'en améliorer l'efficacité de plus de 50% par rapport à la situation de référence. Par rapport au suivi des espèces menacées, la préparation et la mise œuvre d'un plan d'action pour la conservation des tortues marines a permis d'identifier et de suivre plusieurs sites de ponte sur la côte.

D'une manière spécifique, les activités de recherche participative ou collaborative sur les habitats et/ou espèces, de décomptes mensuels ou annuels de l'avifaune, de surveillance participative et de suivi écologique dans les sites d'ancrage ont permis une amélioration des connaissances sur l'état de la ressource. Les aménagements participatifs ont permis de réduire les

pertes de biodiversité. Le renforcement des capacités techniques et institutionnelles a amélioré les performances des parties prenantes dans la gestion de la biodiversité (formations individuelles ou collectives, mise en place et fonctionnement de comités de gestion de sites, visites d'échanges inter-sites, éducation et sensibilisation relatives à l'environnement, etc). Enfin, la mise en œuvre de sous projets d'AGRs a permis de valoriser certains produits des aires protégées pour le bien-être des communautés locales de leur périphérie.

3.3. Thèmes généraux, Autres résultats et Impacts

(a) Impacts sur la pauvreté, Aspects genre, et Développement social

- Le développement d'AGRs dans les 4 sites a impulsé une nouvelle dynamique sociale avec le développement des capacités d'autofinancement de la communauté, facilitant ainsi des actions sociales envers les familles les plus vulnérables à la pauvreté.
- Dans certains sites comme Ngaparou, l'appui à la commercialisation par le Fonds de Reconversion du Projet a solutionné les problèmes d'écoulement des produits.

(b) Changement Institutionnel/renforcement (particulièrement avec référence aux impacts sur la capacité à long-terme et le développement institutionnel)

- Renforcement des capacités techniques et opérationnelles des agents des pêches, des facilitateurs et des acteurs de la pêche artisanale ;
- Renforcement des capacités institutionnelles et juridiques à moyen et long termes du secteur notamment par (i) la finalisation de la Lettre de politique sectorielle de la Pêche et de l'Aquaculture et de son Plan d'action, (ii) la révision du Code de la Pêche maritime, (iii) la revue des dépenses publiques du secteur et à l'analyse économique de la filière, (iv) les capacitations du CNCPM et des CLPA, (v) la mise en place de CLPA (Dakar Ouest, Missirah, Toubacouta, Sokone) pour améliorer la gouvernance des pêches artisanales, (vi) l'appui institutionnel à la DPM et aux organisations professionnelles (CONIPAS) par la mise en place d'un portail et d'un site Web, et (vii) l'impulsion donnée au programme national d'immatriculation (PNI) ;
- Préparation et mise à disposition du Ministère chargé de l'Environnement d'un projet de Loi Cadre sur la Biodiversité et les Aires Protégées, avec l'implication des principales parties prenantes.

(c) Autres résultats et Impacts inattendus (positifs ou négatifs)

- Un des résultats majeurs du Projet, en termes de réorientation politique, était d'obtenir une approche coordonnée de la gestion des ressources marines et côtières, qui intègre la pêche durable et la conservation de la biodiversité. L'adoption d'une Lettre de Politique de Gestion Intégrée des Ressources Marines et Côtières fut pour cela une avancée appréciable. Mais les résultats subséquents pour une gestion de la ressource qui accroît d'une part la durabilité de la pêche sénégalaise et la contribution des aires protégées au maintien des stocks, d'autre part, n'ont pas été obtenus ;
- Le projet n'a pas pu proposer un mécanisme de financement durable. La revue des dépenses publiques du secteur de la conservation qui était la première étape, n'a pu être finalisée. L'analyse de la valeur ajoutée de la biodiversité devait être complétée afin de prendre davantage en compte d'autres modes de valorisation que le tourisme, en particulier la pêche. Les orientations stratégiques en termes de financement de la conservation devaient être approfondies par le développement d'options alternatives à la création d'une fondation. Le mandat initial des consultants n'a pas permis d'apporter de réponses suffisantes aux attentes du projet. Un financement additionnel de 68 000 Euros était requis pour finaliser l'étude qui a été abandonnée avec la restructuration.

4. Evaluation de Risques aux Résultats de Développement et Résultats Globaux environnementaux

L'évaluation des risques est indiquée à l'Annexe 1.1.

5. Evaluation de la Performance de la Banque et de l'Emprunteur

5.1. Performance de la Banque

La Performance globale de la Banque Mondiale a été jugée modérément satisfaisante (Détails à l'Annexe 1.2.).

5.2. Performance de l'Emprunteur

La Performance globale de l'Emprunteur a été jugée modérément satisfaisante (Détails à l'Annexe 1.3.).

6. Leçons tirées

Les leçons tirées du projet GIRMaC (composantes 1 et 2) et sur les performances de la Banque et de l'Emprunteur sont indiquées à l'Annexe 1.14. /-

Annexe 1.1. - Evaluation de Risques aux Résultats de Développement et Résultats Globaux environnementaux

Risques	Notation du Risque adopté dans le PAD	Mesures d'Atténuation du Risques et commentaires à la fin du projet.
Des résultats aux objectifs de développement et environnemental		
Les acteurs dans les pêcheries ciblées ne peuvent s'accorder sur les mesures de gestion durable des ressources marines et côtières.	H	L'engouement suscité au sein des communautés de pêche par le modèle de cogestion locale du Projet a facilité les consensus enregistrés dans les sites pilotes autour des mesures de gestion durable des ressources marines et côtières.
Lenteurs dans la mise en œuvre des sous-projets (pêche et environnement) du fait de retards occasionnés par la bureaucratie.	H	Il était prévu que le projet appuie directement les institutions clés impliquées pour atténuer les lenteurs administratives. Pour la composante « Ecosystèmes » les risques sont relatifs aux lenteurs provoquées par les procédures de passations de marchés. Il faut prévoir à l'avenir, pour des projets de ce type, des procédures communautaires de passation de marchés. En ce qui concerne la composante 1, l'approbation des sous projets de cogestion locale par le Ministre chargé de la Pêche maritime n'est intervenue qu'en mars 2008 alors qu'elle était planifiée pour avril 2006 dans le chronogramme originel du Projet.
La gestion de la biodiversité ne génère pas les	S	La principale mesure d'atténuation était de fixer des attentes réalistes en début de projet. Malgré ces précautions, la durée relativement courte du projet n'a pas permis d'atteindre un niveau de résilience des écosystèmes qui permette de générer des bénéfices. Cinq ans, c'est

bénéfices attendus.		encore trop court pour l'espérer.
Les acteurs locaux ne s'engagent pas à gérer durablement la biodiversité.	S	Pour éviter le risque, les acteurs locaux devaient être impliqués dans les processus de définition et de mise en œuvre des mesures de gestion durable. Des accords ont été trouvés avec les GIE de bénéficiaires, sous forme de contrat. Le score de l'implication des communautés dans la gestion est satisfaisant. Le risque a été globalement contrôlé partout sauf au PNIM. Les activités ont été pratiquement gelées dans ce site au cours des quatorze derniers mois, suite à des incidents.
Les procédures bureaucratiques Retardent l'établissement de la Réserve de Biosphère du Cap Vert.	M	Il a été décidé de sensibiliser les décideurs pour faciliter le processus de création. Le projet s'est appuyé sur le Comité MAB. Cependant c'est le processus de consultation publique qui a pris du temps. Enfin les incidents intervenus au PNIM, pilier central du dispositif de concertation et d'animation, ont bloqué le processus de validation qui était presque à son terme.
L'UCP peut engager un personnel compétent pendant la durée du projet.	M	Les changements récurrents de spécialistes de passation de marchés, très demandés sur le marché, ont accentué les lenteurs dans les procédures de passation. D'une manière générale, l'UCP a pu maintenir un noyau d'experts compétents dans leurs domaines.

Niveaux de risque - H (Haut Risque), S (Risque Important), M (Risque Modéré), N (Risque Négligeable ou Faible)

Annexe 1.2. Evaluation de la Performance de la Banque

Classement de l'action	Notation de l'action	Commentaires à la fin du projet.
Qualité de la phase de préparation	S	Très bonne collaboration entre le management du projet à la Banque et les équipes nationales chargées de la préparation.
Diligence des avis de non objection (ANO)	MS	Il y a eu des lenteurs qui ont parfois ralenti les opérations (services de consultants).
Mission de supervision technique	MS	La composante « Ecosystèmes » a souffert d'un manque de supervision technique au cours des 18 derniers mois. Les changements de responsables chargés du suivi de la composante ont constitué un handicap dans le suivi des dossiers notamment des réallocations budgétaires.
Mission de supervision de la gestion financière	S	Les missions de supervision de la gestion financière par la Banque Mondiale se sont bien déroulées durant la mise en œuvre du projet. Elles ont permis de déceler des dépenses inéligibles qui résultent du manque de respect des Directives et du Manuel de procédures par la Coordination du Projet. Le seul reproche qu'on peut faire à la Banque c'est le manque de suivi des recommandations issues des missions de supervision.
Politiques de sauvegarde environnementale et sociale	S	Elles ont permis de rectifier certains travaux dans les sites conformément aux directives édictées. Pour la composante 1, la Banque malgré les efforts déployés n'a pu mettre en place à temps et exploiter les financements appropriés pour

		le Fonds Social.
Politiques fiduciaires.	MS	<p>Le premier handicap est lié à la non prise en charge des procédures communautaires dans la passation de marchés.</p> <p>Le second est l'option d'utiliser à la fois les procédures nationales de passation des marchés et celles de la Banque est également source de lenteurs et donc de retards dans les activités à conduire.</p>
Performance globale de la Banque Mondiale	MS	

Insatisfaisant (IS), Modérément Satisfaisant (MS), Satisfaisant (S), Très Satisfaisant (TS)

Annexe 1.3. Evaluation de la Performance de l’Emprunteur

Classement de l'action	Notation de l'action	Commentaires à la fin du projet.
Qualité de la phase de préparation	S	Très bonne collaboration entre les différents services et Directions techniques au niveau central ou déconcentré des ministères concernés.
Mise à disposition des fonds de contrepartie nationale	MS	Hormis quelques retards au début tout s'est bien passé durant le projet. Toutefois le niveau des indemnités allouées aux fonctionnaires impliquées dans la mise en œuvre des activités du Projet est faible et mal réparti selon les charges de travail (Décret n° 90.600 obsolète depuis longtemps).
Gestion de la tutelle administrative	IS	Il y a eu un conflit de compétences et d'objectifs qui a été préjudiciable à l'intégration des deux secteurs « pêche » et « environnement ».
Gestion de la tutelle technique des composantes	MS	<p>Les COMOs ont fonctionné sous la tutelle technique des directions. Cependant le niveau d'appropriation du projet reste insuffisant. Pour la pêche, les effectifs des agents réellement en charge de la gestion, au quotidien, des pêcheries sont encore très faibles. Pour l'essentiel, les tâches des agents sont administratives.</p> <p>De même, de nombreux changements sont intervenus au plan institutionnel (Ministres de la Pêche, Directeurs, coordonnateurs de la COMO-Pêche, etc) qui ont entravé le suivi efficace du projet.</p> <p>Le management du portefeuille « pêche » par la COMO-Pêche a été déficient au cours de ces 12 derniers mois, tant au plan technique que fiduciaire.</p>
Performances globales de l'Emprunteur	MS	

Insatisfaisant (IS), Modérément Satisfaisant (MS) Satisfaisant (S), Très Satisfaisant (TS)

Annexe 1.4. Leçons tirées

COMO-ECOSYSTEMES :

- L'approche écosystème telle que proposée dans le document de projet demeure pertinente. Toutefois, sa mise en œuvre dans le cadre de réserves de biosphère, nécessite de larges et longues concertations ainsi qu'une vision partagée. Ce processus doit être porté par un socle institutionnel rattaché à ces réserves de biosphère. En effet, les COGEMs ont pêché parce la DPN en constituait la porte d'entrée alors qu'elle n'était compétente que dans le domaine classé.
- Cinq (05) années sont insuffisantes pour atteindre l'objectif global défini dans le cadre de ce projet. Il faut au moins le double et prendre en compte, les grands travaux de génie écologique pour améliorer l'état de conservation des habitats et des espèces.
- Le caractère durable de la gestion de la biodiversité ne peut être garanti que par une autonomisation financière des structures communautaires impliquées dans la cogestion des ressources. Autrement dit, la pauvreté engendre et accroît la pression sur la ressource.
- Le financement durable de la conservation nécessite des réformes pour un cadre institutionnel, législatif et réglementaire approprié. Le statu quo actuel n'est pas viable./

COMO-PECHE :

- La motivation des fonctionnaires de l'Administration locale impliqués, dans la cogestion locale, est une nécessité. Les fonds de contrepartie doivent prendre en charge cette question en priorité..
- Les expériences de cogestion locale conduites dans les 4 sites pilotes démontrent l'urgence de mettre en place un mécanisme de contrôle et de limitation de l'accès aux ressources cogérées.
- L'introduction des recherches participatives dans le système de cogestion locale n'a pas connu l'appropriation souhaitée par la DPM, le CRODT et les acteurs locaux.
- Le cadre organisationnel de concertation et de négociation, mis en place pour la préparation des plans d'aménagement, a permis une participation effective et efficace des divers acteurs aux échelles les plus pertinentes (locales, régionales et nationales)
- Les mesures sociales de lutte contre la pauvreté (AGR, appuis à la commercialisation) initiées suite à la mobilisation du FRAP dans le cadre du projet complémentaire (GDRH) ont encouragé les communautés et renforcé leur participation à l'effort de gestion durable des ressources halieutiques
- Les communautés, organisées en CLP, sont capables de s'investir pleinement dans la gestion responsable des ressources halieutiques si l'Etat leur fait confiance et met à disposition l'appui technique et financier nécessaire
- L'impact des initiatives est optimal dans le cas d'application d'amende communautaire dissuasive, nonobstant leur non-conformité avec les dispositions des textes réglementaires.
- La cogestion des pêcheries par concession de droits d'accès, inscrite dans la Lettre de Politique Sectorielle (LPS), est souhaitée par certaines communautés mais non encore prise en compte par les textes légaux en vigueur.
- Les surveillants-pêcheurs issus du CLP (commission surveillance) semblent plus engagés et plus efficaces que les agents de l'administration dans la recherche de renseignements sur les infractions et dans la surveillance des aires de mise en œuvre de la cogestion.
- L'identification des initiatives locales de cogestion met en évidence la très bonne connaissance que les communautés ont de leurs pêcheries tant du point de vue bioécologique que socioéconomique.
- Une garantie du succès de la cogestion locale des pêcheries est de démarrer par l'application de mesures consensuelles qui puissent donner des résultats rapides et visibles afin d'encourager les communautés de pêche à être plus engagées dans l'application de mesures de gestion encore plus courageuses.

- Une nette augmentation de la cohésion sociale des communautés est notée dans tous les sites de mise en œuvre de la cogestion suite à la création des CLP, cadre adéquat de concertation et d'échange de toutes les parties prenantes./

SUR LA PERFORMANCE DE LA BANQUE

- La Banque Mondiale a joué un rôle important dans le montage du Projet GIRMaC dont il est le principal bailleur avec un prêt IDA et un don du FEM.
- Le sentiment globalement partagé est que le retard dans la mise en œuvre effective des activités est dû en grande partie à des lenteurs observées dans les procédures de passation de marchés de la Banque (situation d'avant restructuration) mais également, et en plus, dans celles à dérouler au niveau national (situation d'après restructuration).
- Le financement par le Crédit IDA de la Revue des Dépenses Publiques, initialement prévu sur les fonds PHRD, a été de nature à réduire substantiellement les fonds du Projet.
- Il en est de même du Fonds Social qui n'a pu être pris en charge par un organisme approprié de même nature que l'AFDS. Les procédures internes de la Banque n'ont pas permis le financement par le Fonds Japonais de Développement Social (JSDF)./

SUR LA PERFORMANCE DE L'EMPRUNTEUR

- Les questions institutionnelles qui sont à la base de la restructuration du GIRMaC sont de la responsabilité de l'Emprunteur (Ministères de tutelle et Coordination du Projet).
- Les nombreux changements de responsables opérés dans les Départements ministériels de tutelle (Ministres, Directeurs, Coordonnateurs de la COMO, Administration déconcentrée) ont retardé par moment la bonne conduite du Projet.
- Le taux élevé de décaissements réalisés pour le compte de l'UCP-GIRMaC, avant la restructuration, au détriment des activités de terrain.
- Le volume des dépenses inéligibles de l'année 2011, dont le remboursement a été exigé par la Banque Mondiale, témoigne du manque de contrôle de nos administrations compétentes. .
- Les communautés des sites pilotes considèrent depuis le démarrage du GIRMaC que les équipements et infrastructures que leur fournit le Projet sont onéreux et de mauvaise qualité. En tant que bénéficiaires, elles ont toujours souhaité être impliquées dans le processus de passation des marchés.
La mauvaise qualité des travaux et le coût élevé des « Maisons du Pêcheur », notamment à Bétenty et à Foundiougne, sont de l'entière responsabilité de la COMO-Pêche et donc de la Direction des Pêches maritimes.
- L'insuffisance des effectifs des agents de l'administration déconcentrée pour accompagner, d'une manière générale les processus d'aménagement et de cogestion des pêcheries côtières./

Annexe 2. - Coûts et Financement du Programme (30 juin 2012)

(b) Composante par Bailleur de Fonds (en Millions Francs CFA)

Integrated Marine and Coastal Resources Management Project - Total Project Cost			
Composantes	Document d'évaluation Coût du projet (CFA millions)	Cumul Décaissements à la cloture du Projet (CFA millions)	Pourcentage de décaissement (%)
4. Gestion Durable des Pêcheries	3.100,26	2.832,12	91
5. Conservation des Habitats et des Espèces critiques	3.022,47	2.177,22	72
6. Gestion du Programme, Suivi Evaluation et Communication	2.170,66	1.616,29	74
Total Coût Composantes	7.930,40	6.307,32	80
Divers et imprévus physiques	0.00		
Divers et imprévus en monnaie	0.00		
Total Coût du Projet	7.930,40	6.307,32	80
PPF	363,00	318,32	88
Non Alloué IBRD & FEM	776,10		
Total Financement demandé	9.069,50	6.625,64	73

Programme de Gestion Intégrée des Ressources Marines et Côtères Projet – P086480			
Composantes	Document d'évaluation Coût du projet (CFA millions)	Cumul Décaissements à la cloture du Projet (CFA millions)	Pourcentage de décaissement (%)
4. Gestion Durable des Pêcheries	2.798,90	2.793,87	99
5. Conservation des Habitats et des Espèces critiques	275.00	69,52	25
6. Gestion du Programme, Suivi Evaluation et Communication	1595.00	1.220,37	77
Total Coût Composantes	4.668,90	4.083,76	87
Divers et imprévus physiques	0.00		
Divers et imprévus en monnaie	0.00		
Total Coût du Projet	4.668,90	4.083,76	87
PPF	330.00	318,32	96
Non Alloué IBRD	501,10		
Total Financement demandé	5.500,00	4.402,08	80

Programme de Gestion Intégrée des Ressources Marines et Côtières Projet - P058367			
Components	Document d'évaluation Coût du projet (CFA millions)	Cumul Décaissements à la cloture du Projet (CFA millions)	Pourcentage de décaissement (%)
4. Gestion Durable des Pêcheries	0.00	0.00	0
5. Conservation des Habitats et des Espèces critiques	2.475,00	1.879,00	75
6. Gestion du Programme, Suivi Evaluation et Communication	2.475,00	1.879,00	75
Total Coût Composantes	2.475,00	1.879,00	75
Divers et imprévus physiques	0.00		
Divers et imprévus en monnaie	0.00		
Total Project Costs	2.475,00	1.879,00	75
PPF	0.00	0.00	0
Non Alloué	275,00		
Total Financement demandé	2750.00	1.879,00	68

(b) Financement

P086480 - Programme de Gestion Intégrée des Ressources Marines et Côtières				
Source des fonds	Type de financement	Document d'évaluation Coût du projet (CFA millions)	Cumul Décaissements à la cloture du Projet (CFA millions)	Pourcentage de décaissement (%)
Bailleur		819,50	344,54	42
International Development Association (IDA)		5.500,00	4.402,08	80
P058367 - Programme de Gestion Intégrée des Ressources Marines et Côtières				
Source des fonds	Type of Financing	Document d'évaluation Coût du projet (CFA millions)	A Cumul Décaissements à la cloture du Projet (CFA millions)	Pourcentage de décaissement (%)
Bailleur		819,50	344,54	42
GLOBAL ENVIRONMENT - Associated IDA Fund		5.500,00	4.402,08	80
Global Environment Facility (GEF)		2750.00	1.879,00	68

Annexe 3. Résultats par composante (KPIs) - SENEGAL: Cadre des résultats (Projet et Composantes)

Objectif de Développement du Projet (originel)	Indicateurs de performance révisés	Commentaires (Equipe Gouvernement)	Commentaires (Equipe de la Banque)
L'objectif de développement du Projet est d'améliorer la gestion durable des ressources marines et côtières par les communautés et le Gouvernement du Sénégal, dans trois zones pilotes.	Les sous projets de cogestion locale sont mis en oeuvre dans les 4 sites pilotes avant la fin du Projet.	Les sous projets de cogestion locale ont été préparés par les Comités Locaux de Pêcheurs (CLP) des 4 sites pilotes, avec l'appui des facilitateurs et d'un consultant recruté comme spécialiste national en cogestion. Ces sous projets ont ensuite été validés puis finalisés par le spécialiste international en cogestion, avant d'être soumis à l'appréciation du Conseil National Consultatif des Pêches Maritimes (CNCMP). Les sous projets ont finalement fait l'objet d'Accords de cogestion signés entre les Présidents des CLP et le Ministre chargé de la Pêche maritime. Un arrêté ministériel reconnaissant les initiatives de cogestion a été en définitive pris par le Ministre de tutelle.	
	Les plans d'aménagement nationaux de deux pêcheries clés sont préparés et approuvés par le Conseil National Consultatif des Pêches Maritimes (CNCMP).	Plus des 2/3 des tâches nécessaires à la finalisation des plans nationaux d'aménagement des deux pêcheries clés ont été réalisées et les livrables correspondants ont été approuvés par le Conseil National Consultatif des Pêches Maritimes (CNCMP). Le Consultant BRLi a unilatéralement arrêté ses activités contractuelles du fait de la non approbation par la Direction Centrale des Marchés Publics (DCMP) de l'Avenant convenu avec la DPM et ayant un Avis de non objection de la Banque Mondiale. Objectif non atteint dans le GIRMaC mais la finalisation des plans est inscrite dans le PRAO-Restructuré.	
Objectif global en matière d'environnement révisé	Indicateurs de performance révisés		
Renforcer la conservation et la	Efficacité de la gestion de la	Le score est mesuré avec l'outil de l'efficacité de la	

gestion des écosystèmes marins et côtiers qui sont globalement significatifs et vitaux aux moyens d'existence durable des communautés côtières du Sénégal.	biodiversité dans les trois zones pilotes augmentée d'au moins 50% à la fin du Projet	gestion des aires protégées de l'alliance WWF/Banque Mondiale. Cet outil a été combiné en 2008 avec la méthodologie d'évaluation rapide et de priorisation de la gestion des aires protégées (RAPPAM) développée aussi par le WWF. Cette combinaison donne plus d'information pour la description des habitats et des espèces. La préparation des plans de gestion des sites a contribué à accroître l'efficacité de leur gestion et leur score. Cependant aucune zone n'a atteint la cible fixée pour la fin du projet: Cap Vert 61 sur 65%, Delta du Sénégal 62 sur 70% et Delta du Saloum 57 sur 60%. Cela s'explique par le manque de fonds alloués à la mise en œuvre des plans de gestion.	
Résultats intermédiaires	Indicateurs de résultats intermédiaires révisés		
Composante 1: Les communautés locales gèrent de manière durable les ressources marines et côtières.	60% des Comités Locaux de Pêcheurs (CLP) ont mis en œuvre leurs sous projets de cogestion locale avant la fin du Projet, conformément aux objectifs performances ciblées par lesdits sous projets.	Trois des quatre CLP ont mis en œuvre leurs sous projets de cogestion de manière satisfaisante : - Site de cogestion de la langouste verte : la CPUE de langouste verte est passée de 1,5Kg par sortie en 2005 à 3,5 Kg par sortie à Ngaparou en 2011 soit une augmentation de +133% - Sites de cogestion de la crevette : Le moule moyen de la crevette à Bétenty est passé de 226 individus au kilo en 2005 à 141 individus au kilo en 2011 soit une amélioration de 38%.	
Composante 2: Les communautés locales participant à la conservation des habitats et des espèces marines et côtières.	La Loi Cadre sur la Biodiversité et les Aires Protégées est préparée et soumise au Gouvernement avant la fin du Projet.	La Loi Cadre sur la Biodiversité et les Aires Protégées est préparée et soumise au Gouvernement en fin 2010.	
	La mise à jour des rapports sur l'état de la biodiversité est faite chaque année.	Le projet a tenté de combler l'absence d'un système de suivi en initiant la mise en place d'un programme national de surveillance des indicateurs de la biodiversité, tel que recommandé par le secrétariat de	

		la Convention sur la Diversité Biologique. Ce processus a pris du temps mais devra contribuer à favoriser la production régulière du rapport sur l'état de la biodiversité.	
	Des sous-comités de coordination sont établis entre le Projet GIRMaC et le Projet du Bassin du Fleuve Sénégal, le Projet des « Grands Ecosystèmes Marins du Courant des Canaries » (CCLME), pour renforcer la conservation des réseaux de sites critiques pour les oiseaux d'eau migrateurs dans les couloirs de migration Afrique/Eurasie.	<p>Le protocole entre GIRMaC et le Projet du Bassin du Fleuve Sénégal a été validé et signé par le MEPN et le Haut Commissaire de l'OMVS le 12 mai 2006. Le COGEM du Delta du Sénégal a été désigné comme sous-comité de coopération pour la gestion intégrée des ressources en eau et l'utilisation durable de la biodiversité.</p> <p>Le GIRMaC et le CCLME ont eu une série de rencontres et de discussions autour des synergies possibles. Le GIRMaC a participé à la préparation du Projet CCLME. Un memorandum d'entente a été rédigé en mai 2006 pour mettre en place un cadre commun de collaboration et de partenariat. Sa mise en œuvre a été retardée par la longueur du processus de préparation du Projet CCLME dont l'Unité de Coordination ne sera mise en place qu'en fin 2010.</p> <p>Le Protocole entre GIRMaC et Wetlands international comme Agence d'exécution du Projet WoW (Wings Over Wetlands) a été signé le 26 octobre 2006. Avec cette convention, Wetlands a renforcé les capacités du staff de la DPN et du projet dans le suivi des oiseaux d'eau et des zones humides à travers un programme de formation.</p>	

Annex 7. Comments of Cofinanciers and Other Partners/Stakeholders

No comments received.

Annex 8. List of Supporting Documents

Accord de Cogestion, signed, Comité Local des Pêcheurs de Bétenty, Ministère de l'Economie Maritime des Transports Maritimes de la Pêche et de la Pisciculture, Dakar, Sénégal, 7 mars 2008.

Accord de Cogestion, signed, Comité Local des Pêcheurs de Foundiougne, Ministère de l'Economie Maritime des Transports Maritimes de la Pêche et de la Pisciculture, Dakar, Sénégal, 7 mars 2008.

Accord de Cogestion, signed, Comité Local des Pêcheurs de Ngaparou, Ministère de l'Economie Maritime des Transports Maritimes de la Pêche et de la Pisciculture, Dakar, Sénégal, 7 mars 2008.

Accord de Cogestion, signed, Comité Local des Pêcheurs de Ouakam, Ministère de l'Economie Maritime des Transports Maritimes de la Pêche et de la Pisciculture, Dakar, Sénégal, 7 mars 2008.

Aide-Memoire, ICR Mission of July 2012.

Rapport d'Achèvement du Projet de Gestion Intégrée des Ressources Marine et Côtières (GIRMaC), Direction des Pêches Maritimes, Ministère de la Pêche et des Affaires Maritimes; Direction des Parcs Nationaux, Ministère de l'Environnement, République du Sénégal, 24 septembre 2012.

Recherches participatives et suivi-évaluation en appui aux initiatives locales de co-gestion des pêcheries artisanales, Rapport final de recherches, Centre de Recherches Océanographiques de Dakar Thiaroye, Ministère de l'Agriculture, Institut Sénégalais de Recherches Agricoles, Dakar, Sénégal, novembre 2011.

Sous-projet portant sur l'Institution d'Arrêts Périodiques de la Pêche Crevettière et Utilisation de Filets Killy à Grandres Mailles à Bétenty, Comité Local des Pêcheurs de Bétenty, Bétenty, Sénégal, février 2006.

Sous-projet portant sur la Réglementation de la Pêche Crevettière dans les Eaux du Saloum, Comité Local des Pêcheurs de Saloum, Saloum, Sénégal, juin 2006.

Sous-projet Réglementation ds Activités de Pêche et Reconstitution des Ressources en langouste Verte et Espèces associées dans les Eaux Adjacentes au Village de Ngaparou, Comité Local des Pêcheurs de Ngaparou, Ngaparou, Sénégal, juin 2006.

Réglementation de l'Exploitation des Zones Traditionnelles de Pêche de Ouakam, Nettoyage des fonds marins, Comité Local des Pêcheurs de Ouakam, Ouakam, Sénégal, février 2006.

