Document of
The World Bank

Report No: ICR0000977

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(TF-28385)

ON A

GRANT

IN THE AMOUNT OF SDR 6.5 MILLION
(US$ 8.35 MILLION EQUIVALENT)

TO THE

ARGENTINE REPUBLIC

FOR A

COASTAL CONTAMINATION PREVENTION AND MARINE MANAGEMENT

PROJECT

December 31, 2008

Sustainable Development Department
Argentina, Chile, Paraguay and Uruguay Country Office
Latin America and the Caribbean Department

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 22, 2008)

Currency Unit = Argentine Peso
AR$ 3.40 = US$ 1
US$ 0.2941 = AR$ 1

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

CAS	Country Assistance Strategy
CENPAT	National Patagonian Center (Centro Nacional Patagónico)
COFEMA	Federal Environmental Council (Consejo Federal de Medio Ambiente)
ESA	Environmental Sensitivity Atlas
FPN	Natural Patagonia Foundation (Fundación Patagonia Natural)
LME	Large Marine Ecosystem
GEF	Global Environment Facility
GEO	Global Economic Outcome
GOA	Government of Argentina
IDB	Inter-American Development Bank
IHO	International Hydrographic Organization
IMO	International Maritime Organization of the United Nations
INIDEP	National Research and Fisheries Development Institute (Instituto Nacional de Investigación y Desarrollo Pesquero)
ISR	Implementation Status Report
Team LIL	Learning and Innovation Loan
M&E	Monitoring and Evaluation
MARPOL	International Convention for the Prevention of Pollution from Ships
MSDEP	Ministry of Social Development and Environmental Policy
MTR	Mid-Term Review
NGOs	Non-Governmental Organizations
OP	Operational Policy
PAD	Project Appraisal Document
PEU	Project Execution Unit
PDO	Project Development Objective
PNA	Argentine Coast Guard (Prefectura Naval Argentina)
PME	Patagonia Marine Ecosystem
PIU	Project Implementation Unit
QMS	Quota Management System
SAyDS	Environmental and Sustainable Development Secretariat (Secretaría de Ambiente y Desarrollo Sustentable)|
SAP	Strategic Action Plan
SDR	Special Drawings Rights
SHN	Servicio de Hidrografía Naval, or the Naval Hydrographic Service
SICOM	Sistema de Información Costero Marino, or Coastal Marine

	Information System
SIMPO	Oceanographic and Marine Monitoring System (Sistema de Monitoreo Pesquero y Oceanográfico)
SOLAS	International Convention for the Safety of Life at Sea (1960, 1974)
UNDP	United Nations Development Program
UFI	Unidad de Financiamiento Internacional
UNPA	National University of Patagonia (Universidad Nacional de la Patagonia)
WWF	World Wildlife Fund

Vice President: Pamela Cox
Country Director: Pedro Alba
Sector Manager: Laura E. Tlaiye
Project Team Leader: Glenn S. Morgan
ICR Team Leader: Glenn S. Morgan

ARGENTINA
COASTAL CONTAMINATION PREVENTION AND MARINE MANAGEMENT

CONTENTS

A. Basic Information			
Country:	Argentina	Project Name:	Coastal Contamination Prevention & Marine Management Project (GEF)
Project ID:	P049012	L/C/TF Number(s):	TF-28385
ICR Date:	01/05/2009	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	REPUBLIC OF ARGENTINA
Original Total Commitment:	USD 8.4M	Disbursed Amount:	USD 7.8M
Environmental Category: C		**Global Focal Area: I**	
Implementing Agencies: Secretaria de Ambiente y Desarrollo Sustentable (SAyDS)			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	01/15/1998	Effectiveness:		08/15/2001
Appraisal:	04/10/2000	Restructuring(s):		
Approval:	04/17/2001	Mid-term Review:	06/30/2005	07/01/2005
		Closing:	12/31/2006	06/30/2008

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Satisfactory
Risk to Global Environment Outcome	Low or Negligible
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance			
Bank	**Ratings**	**Borrower**	**Ratings**
Quality at Entry:	Satisfactory	Government:	Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Satisfactory	**Overall Borrower Performance:**	Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	Yes	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Satisfactory		

D. Sector and Theme Codes

	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	30	30
General agriculture, fishing and forestry sector	4	4
Ports, waterways and shipping	26	26
Sub-national government administration	40	40
Theme Code (Primary/Secondary)		
Biodiversity	Primary	Primary
Environmental policies and institutions	Primary	Primary
Participation and civic engagement	Secondary	Secondary
Pollution management and environmental health	Primary	Primary
Water resource management	Primary	Primary

E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Pamela Cox	David De Ferranti
Country Director:	Pedro Alba	Myrna L. Alexander
Sector Manager:	Laura E. Tlaiye	John Redwood
Project Team Leader:	Glenn S. Morgan	Laura E. Tlaiye
ICR Team Leader:	Glenn S. Morgan	
ICR Primary Author:	Hernan M. Gonzalez Figueroa	
	Marcelo Hector Acerbi	

F. Results Framework Analysis

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

The Project's global objective is to support long-term protection of international waters and the conservation and sustainable use of marine resources. The objective will be achieved by financing incremental activities aimed at improving Argentina's capacity to protect marine biodiversity and safeguard Patagonia's marine ecosystem from coastal contamination.

Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

(a) 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 :	Improvement in capacity to prevent potential oil spills. Institutional capacity of Coast Guard to prevent navigational risks by introducing marine electronic infrastructure program			
Value (quantitative or Qualitative)	Effectiveness of surveillance system for fishing-ship positioning (by PNA): 25%	Effectiveness by 80%		Effectiveness 75% thanks to TA for replacing Sistema de Monitoreo Satelital de la Pesca (MONPESAT)
Date achieved	12/31/1999	06/30/2008		12/01/2006
Comments (incl. % achievement)				
Indicator 2 :	Upgrade capacity of Hydrographic Service to measure and manage data to generate and improve navigational charts and information system, by acquiring oceanographic equipment, software, and training			
Value (quantitative or Qualitative)	Uncertified electronic nautical charts (ENC)	Additional 4 ENC (certified)		ENCs with new technology for the ports of Rio de la Plata, Mar del Plata, Rio de Bahia Blanca, Comodoro Rivadavia and Caleta Paula; 2 ENCs have been certified by IHO; 2 more (Ushuaia, Puerto Deseado) were in the process

				of certification by end of proj.
Date achieved	12/31/2002	06/30/2008		12/01/2006
Comments (incl. % achievement)				
Indicator 3 :	Strengthening of Coast Guard's capacity to respond to potential oil spills			
Value (quantitative or Qualitative)	Training center with limited equipment for spillage contention and continuous training	All training activities completed for 130 people. 4 additional auxiliary ships purchased as well as 10 field laboratory kits for ballast analyses.		500 handbooks delivered for additional training for all 3 levels of training: operator, supervisor & instructor. 14 officers from PNA trained in France (CEDRES) & Spain (OSRL); Patagonian Training Center on Oil Spill Prevent. in P.Madryn, eq. installed
Date achieved	12/31/1999	06/30/2008		12/20/2007
Comments (incl. % achievement)				
Indicator 4 :	Increased capacity of Federal Secretariat of Environment and Patagonian provinces to manage protected marine biodiversity areas			
Value (quantitative or Qualitative)	Lack of effective tools and coordination procedures for identifying and setting marine protected areas	Toolkit and institutionalized procedures for effective management of MPA in accordance with standard international practices disclosed and distributed amongst the involved provinces.		Evaluation of management effectiveness of coastal and marine protected areas was completed based on consensus-building with local authorities.
Date achieved	12/31/1999	06/30/2008		07/04/2007
Comments (incl. % achievement)				
Indicator 5 :	Coast Guard able to model plume of potential spillage, hydropgraphic service			

	able to indicate environmental sensitivity areas, to help prioritize response actions			
Value (quantitative or Qualitative)	Coast guard without any capacity to predict spillage movements; and Hydrographic Service without capacity for hydrodynamic modeling and with scattered benthic information	Coast Guard capable of tracing contamination plumes; and Hydrographic Service handling info on environmental sensitivity areas for priority setting. OilMap software has been upgraded.		The Hydrographic Service generated a hydrodynamic model with WQmap software, which will provide input for the OilMap being operated by the Coast Guard.
Date achieved	12/31/1999	10/31/2006		12/01/2007
Comments (incl. % achievement)				

(b) 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 :	Reduction of navigational risks. Baseline: 3 non-IHO certified Electronic Nautical Charts (ENC) Current: 3 IHO-certified ENC; training of SHO officers			
Value (quantitative or Qualitative)	3 navigation charts in ports not certified by IHO	7 certified navigation charts, 4 of them including environmental and navigation risk sensitivity		2 charts for Patagonia certified. Two more charts for Ushuaia and Puerto Deseado submitted for certification. San Antonio chart canceled due to operational problems.
Date achieved	12/31/2002	06/30/2008		12/20/2007
Comments (incl. % achievement)				
Indicator 2 :	Improved environmental knowledge of the Patagonia ocean platform			
Value (quantitative or Qualitative)	Existing information disperse and not available at single source for decision makers	Environmental sensitivity atlas in place		Oceanographic equip. (buoys and beamers) procured & installed. Buoys

				intentionally damaged but now repaired. SHN will set them back to sea in Feb. '09. Oceanographic buoys in service & data collected by SHN in 5 diff. areas; ESA completed w/ info. on BA
Date achieved	12/31/2002	06/30/2008		12/20/2006
Comments (incl. % achievement)				
Indicator 3 :	Programs in place to reduce fish by-catch.			
Value (quantitative or Qualitative)	Non-existent programs or projects	A workshop on albatrosses and petrells by-catch was held. A specific study to make a diagnostic and evaluation of fisheries by-catch has been cancelled.		Preparation of workshop on affected species by incidental by-catch was to take place in fall 2008, following study on incidental fishing, which was to start in 1st quarter of 2008.
Date achieved	12/31/2002	06/30/2008		12/20/2007
Comments (incl. % achievement)				
Indicator 4 :	Increased applied research in the region in areas linking the project objectives			
Value (quantitative or Qualitative)	Scattered and relatively low resources for research in the region	At least an additional USD6 million in applied research in place, fully using the USD2 million funded by the project. Strengthened management of areas through Competitive Sub-projects (CSP) results.		47 subprojects implemented, including the continental platform and provincial coastal zones, amounting to USD2.45 million. 1 workshop conducted to evaluate progress of CSP conducted.
Date achieved	12/31/2002	06/30/2008		11/20/2008
Comments (incl. %				

achievement)				
Indicator 5 :	Strengthening of institutional capacity in environmental agencies in 4 provinces, cincluding the implementation of activities for sustainable management of fisheries			
Value (quantitative or Qualitative)	Lack of provincial capacity to measure current and potential environmental hazards	Priority programs executed according to tri-annual development plan, including activities to strengthen sustainable fisheries management.		Technical staff in 4 provinces trained on GIS, animal rescue, marine and coastal legislation, management of marine protected areas, environmental and waste management in ports, Strategic Environmental Assessment (SEA).
Date achieved	12/31/2002	06/30/2008		12/18/2006
Comments (incl. % achievement)				
Indicator 6 :	Identification of marine protected areas/management Effectiveness Evaluation			
Value (quantitative or Qualitative)	37 protected marine areas covering 0.59% of overall marine area.	A preliminary assessment of effective implementation available for the protected areas system.		44 marine protected areas (MPAs) identified for an assessment of effective implementation. 4 workshops conducted on 40 MPAs.
Date achieved	12/31/2002	12/31/2006		12/18/2006
Comments (incl. % achievement)				

G. Ratings of Project Performance in ISRs

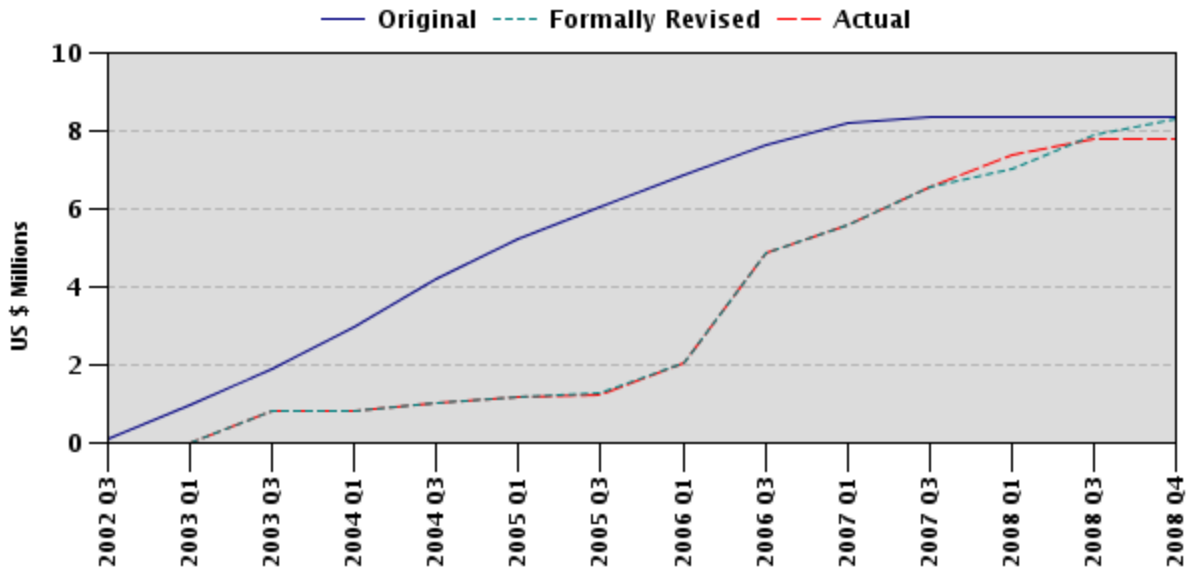
No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	10/29/2001	Satisfactory	Satisfactory	0.00
2	05/16/2002	Satisfactory	Satisfactory	0.00
3	12/06/2002	Satisfactory	Satisfactory	0.83
4	06/16/2003	Satisfactory	Unsatisfactory	0.83
5	12/23/2003	Satisfactory	Unsatisfactory	0.83
6	06/17/2004	Satisfactory	Unsatisfactory	1.02

7	12/09/2004	Satisfactory	Unsatisfactory	1.25
8	05/01/2005	Satisfactory	Moderately Unsatisfactory	1.25
9	06/29/2005	Moderately Unsatisfactory	Moderately Unsatisfactory	1.48
10	12/28/2005	Satisfactory	Satisfactory	4.38
11	05/01/2006	Satisfactory	Satisfactory	4.85
12	12/27/2006	Satisfactory	Satisfactory	6.54
13	06/13/2007	Moderately Satisfactory	Satisfactory	6.54
14	12/20/2007	Satisfactory	Satisfactory	7.80
15	06/23/2008	Satisfactory	Satisfactory	7.80

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. PROJECT CONTEXT, GLOBAL ENVIRONMENT OBJECTIVES AND DESIGN

1.1 Context at Appraisal

The Patagonia Marine Ecosystem (PME) is a highly productive area supporting a wide variety of marine life. The PME covers approximately 600,000 square kilometers along the coastal waters of the four Argentine provinces of Chubut, Rio Negro, Santa Cruz, and Tierra del Fuego. This ecosystem hosts a large number of marine species, including the endemic Magellan penguin, the Southern Elephant Seal, and the Southern Right Whale. The region includes at least 46 wetlands sites with conservation value, 40 of which have been included in the project. 52% of them have been declared as protected areas, including 6 provincial reserves, 2 Ramsar sites (Bahía Samborombón y Bahía San Sebastián) and the first and recently created coastal/marine national park in Argentina (Monte León).

The PME is an important region for Argentina's economy. Commercial fishing, oil exploration, tourism, and a past national policy promoting industrial development (mining and manufacturing) have shaped the process of human settlement along the coast. At appraisal, the impacts of these human activities on the overall health of the marine ecosystem were not fully known as monitoring and research was not sufficient to draw firm conclusions. However, continued growth and risks involved in oil exploration and transportation were considered as significant threats to ecological sustainability.

Main Sector Issues. At the time of project preparation, the main sector issues affecting the sustainability of Patagonia's marine ecosystem were: (i) oil spills from tankers and cargo ships; (ii) land based pollution, particularly during the tourism high season when population doubles; (iii) unsustainable exploitation of marine resources, especially fish; (iv) insufficient knowledge about the PME; and (v) weak institutional capacity. The issues of oil spills, insufficient knowledge about the PME and weak institutional capacity were explicitly addressed by the project.

The issue of unsustainable use of the marine fisheries resource was not originally addressed by the project because there was a Sustainable Fisheries Management Project under preparation (LIL). Though technical consultations were held and the LIL was approved on September 18, 2000, that project did not materialize mainly due to political considerations. With respect to the issue of land based pollution, investments in wastewater treatment and solid waste disposal were already taking place in the Patagonian provinces and therefore were not addressed under this project.

Rationale for World Bank Involvement. The proposed project complemented and built upon experiences and lessons learned from similar projects implemented by the World Bank, the Inter-American Development Bank (IDB), and the United Nations Development Program (UNDP). The Government of Argentina saw the World Bank as a natural partner for this project because of its wide range of practical experience from regional, coastal, and marine management programs. This includes projects such as the Mexico Marine Parks Programs, the Mesoamerican Biological Corridor, and other projects developed in the Baltic Sea, the Black Sea, the Red Sea, and the Gulf of Aden. Additionally, the Bank's reputation allowed it to serve as an honest broker among various project stakeholders. The Bank's participation in this project was possible because the project was consistent with the Bank's Country

Assistance Strategy, which supported the goal of promoting sustainable management of natural resources and protection of biodiversity.

1.2 Original Global Environment Objectives (GEO) and Key Indicators

The project's Global Environment Objective was to support long-term protection of international waters and the conservation and sustainable use of marine resources. The project financed incremental activities aimed at improving Argentina's capacity to protect marine biodiversity and safeguard Patagonia's marine ecosystem from coastal contamination.

The Project Development Objective was to strengthen Argentina's efforts to reduce pollution of the Patagonia marine environment and improve sustainable management of marine biodiversity by: (i) improving oil spill prevention and response capacity and preventing ship-based pollution; (ii) improving the knowledge base about the Patagonia marine environment and its biodiversity; and (iii) building capacity and promoting regional knowledge sharing for sustainable management of marine resources. The project's outcome and output indicators as defined in the Project Appraisal Document (PAD) are listed in Table 1 below.

Table 1. Project Development Objective, Outcome/Impact and Output Indicators as Identified in PAD

Project Development Objective	Outcome/Impact Indicators	Output Indicators
(i) Improving oil spill prevention and response capacity and preventing ship-based pollution	- Reduced ship-based pollution (oil/waste spilled or discharged per ton transported and percent of ballast water treated in ports) by reducing navigational risks; - Improving preparedness and response to oil spills; - Better monitoring of pollution from ships.	- All provinces capable of using integrated zonal contingency plans through drills - Reduced drill response time in PNA by 30%. - Volumes of ship waste (oil, garbage and chemical residues) measured and collection increased by 30%.
(ii) Improving the knowledge base about the Patagonia marine environment and its biodiversity	- Sensitive areas prioritized for protection based on dissemination of marine biology and oceanographic data of global and local relevance.	- Marine Biodiversity protection is integrated in Government policies

Table 1. Project Development Objective, Outcome/Impact and Output Indicators as Identified in PAD		
Project Development Objective	**Outcome/Impact Indicators**	**Output Indicators**
(iii) Building capacity and promoting regional knowledge sharing for sustainable management of marine resources	- Improved capacity in national and provincial governments to assess the effects of economic activity on the marine environment and ability to incorporate lessons from pilot projects in marine protection	- Training for provincial authorities. - Environmental Information System for the Patagonia Shelf Area with nodes in each Patagonian province. - Monitoring and Evaluation program measures health of LME (PME). - Sustainable policies adopted by Provincial environmental authorities.

1.3 Revised Global Environment Objective (GEO) and Key Indicators and Reasons/Justification

During the Mid-Term Review (MTR) carried out in June 2005, the Bank team evaluated the objectives of the project and revised the output indicators developed for the PAD. The evaluation was based on the country's priorities at that time and the existing CAS, where this project complemented the objective of rebuilding infrastructure ports and ensuring pollution control.

As a result of the MTR, the GEO, PDO and outcome indicators were not revised. However, the output indicators for each Component and Sub-component were modified. These indicators were modified so that the project could be monitored and evaluated in a more effective manner by reflecting project outputs more accurately. The monitoring framework developed by the MTR grouped output indicators into 3 categories: (i) indicators of state (i.e., at the biological resource level); (ii) process or management indicators (such as new regulations established); and (iii) indicators of stress reduction (for instance, number of fines). A table comparing the original and final indicators is provided in Annex 2.

1.4 Main Beneficiaries

The direct beneficiaries and the benefits defined in the Project Appraisal Document (PAD) were the following:

- The national and provincial governments.
- The national and global marine resources research community.
- Coastal communities and tourism interests.
- The research institutions and NGOs participating in the matching grant program.
- The maritime shipping industry.

In addition, a number of initiatives in other countries in Latin America and elsewhere have benefited from this Project. For example, officers from Uruguay, Chile, Colombia, and Brazil have been trained at the Oil Spill Response Center in Ushuaia. The Prefectura Naval

Argentina (PNA) and its local counterparts in Uruguay on the Rio de la Plata have been collaborating in the prevention and analysis of oil spills. As a result, PNA and Servicio de Hidrografía Naval (SHN) have provided technical support to their Uruguayan counterparts.

1.5 Original Components

The project, as approved by the Global Environment Facility (GEF), had 3 components: (i) Maritime Pollution Prevention; (ii) Marine Biodiversity Protection; and (iii) Capacity Building, Monitoring and Evaluation and Project Management.

Component 1: Maritime Pollution Prevention. This component aimed at mitigating some of the threats and impacts affecting the Patagonian marine environment originating from ship based pollution and oil spills. This component addressed the need to strengthen institutional capacity by (i) improving preparedness and response to oil spills and preventing ship-based pollution, and (ii) reducing navigational risks by introducing a marine electronic infrastructure program.

With regards to oil spill response and ship-based pollution prevention, the project focused on strengthening the PNA in the following areas: (i) improving organization and analysis of contingency plans using modern tools for data base organization, (ii) oil spill trajectory modeling, (iii) extensive training for effective oil spills response, and (iv) improving enforcement of International Convention for the Prevention of Pollution from Ships (MARPOL) regulations on waste discharges. Navigational risks were reduced by enhancing the PNA's vessel tracking system and by supporting SHN in its efforts to develop hydrographic maps of critical zones and by improving the electronic charts system.

Component 2: Marine Biodiversity Protection. This component aimed at improving the knowledge base about marine resources to inform decision makers concerned with marine protection and to build management capacity at the regional level. The component addressed the need to better understand and document the specific effects and extent of impacts of anthropogenic activities on the marine environment by: (i) improving the knowledge base on the Patagonia marine ecosystem and identifying ecologically sensitive areas; (ii) developing marine protection tools based on impact evaluations; and (iii) promoting capacity building and regional knowledge sharing on marine biodiversity protection.

Regarding improving the knowledge base of the PME, the project (i) developed targeted programs for understanding the dynamics of ocean circulation, production and environmental degradation of key areas of the Patagonia ecosystem; (ii) carried out a Trans-boundary Analysis of Patagonian Ecosystems, (iii) completed a sensitivity atlas; and (iv) supported the inter-calibration of marine laboratories.

With respect to marine protection tools, the project envisioned, first, setting priority areas for marine biodiversity and analysis of regulatory and technical aspects for piloting marine reserves, and second, an evaluation of the incidental catches of birds, mammals and reptiles, and the development of an action program based on the severity of impacts. The final activity of capacity building and knowledge sharing was implemented as a Matching Grant Program to support local pilot projects for innovation in resource use technologies and applied research.

Component 3: Capacity Building, M&E, and Project Management. With respect to Capacity Building and Dissemination, the project addressed the need to strengthen the marine resources management capacity of the local provincial and municipal governments and help disseminate the information on Patagonia's marine environment generated by the Project and available from other sources. Finally, the project supported the creation of a Project Execution Unit (PEU) within Secretaría de Ambiente y Desarrollo Sustentable (SAyDS) and selected UNDP as executing agency.

Table 2 lists the original components and their associated funding at the time of appraisal. The original Grant Agreement between the Government of Argentina (GOA) and the World Bank was signed for 6.5 million Special Drawing Rights (SDR), which was equivalent to USD 8.35 million at the time of signature.

Table 2. Original Components and Project Costs, in Million USD

Component	GEF Funding	Total Cost of Component
1. Maritime Pollution Prevention		
1.1. Improve preparedness and response to oil spills and prevent ship-based pollution	1.20	1.61
1.2 Reduce navigational risks by introducing a marine electronic infrastructure program	0.94	1.91
Total Component 1	**2.14**	**3.52**
2. Marine Biodiversity Protection		
2.1. Improve knowledge base and identify ecologically sensitive areas	1.43	3.31
2.2. Develop marine protection tools	0.31	0.49
2.3. Promote capacity building and knowledge sharing on marine biodiversity protection	2.55	8.66
Total Component 2	**4.29**	**12.46**
3. Capacity Building, M&E and Project Management		
Total Component 3	**1.92**	**2.78**
PROJECT TOTAL	**8.35**	**18.76**

1.6 Revised Components

During implementation, there were no formal revisions to the three project components. However, a new activity, fisheries (US$0.615 million), to be financed by savings from other activities and revaluation of the SDR, was proposed during the MTR (June 2005). However, because of administrative constraints, the fisheries activity was not implemented. Instead, during 2007, the activities originally proposed for the fisheries component were modified and the following activities were executed under Component 3:

- Diagnosis and evaluation of the sustainability of artisan fisheries of crabs (centollas) in the Beagle Channel.
- Analysis and diagnosis of effluent discharges from the fish industry in Puerto Deseado-Santa Cruz area.
- Strengthening of Fisheries Management through (i) support to the Fisheries and Oceanographic Monitoring System (SIMPO), procurement of computer

equipment, boats and kits to test ballast waters, and printing of informational flyers.

- Strengthening of the Fisheries Research System through a workshop on the use of predictive models for the sustainable management of fisheries.

1.7 Other Significant Changes

Extension of Grant Agreement (GA). The project closing date was extended once at the request of the GOA. The request for extension was received by the Bank on May 29, 2006. The extension requested was for a period of 18 months, from December 31, 2006 to June 30, 2008. This extension was requested because the project had a very slow start, resulting from delays associated with administration, and the conversion from SDR to USD.

Regarding the slow start, the Project was approved by the Board on June 26, 2001 and was declared effective on October 4, 2002. The launch workshop took place 6 months after the project became effective. The reasons for this delay are described in section 2.2. By the Mid-Term Review (MTR) carried out in June 2005, the project had disbursed only 15% of the total grant even though the pace of disbursements had accelerated. Other reasons for delays were related to problems with the execution of contracts and the procurement specialist in the PIU. Finally, by December 2005, disbursements had reached 51%.

With respect to the conversion from SDR to USD, the Bank informed the GOA that it would consider its request to extend the GA once it was converted from SDR to USD. Since it was not clear that the GOA would accept the conversion proposed by the Bank,[1] and since the GOA would have to finance any activities extending beyond December 2006, most of the activities in the 2006 Annual Operational Plan were not initiated. Once the GA was converted from SDR to USD, the Bank authorized the extension of the project. The Annual Operational Plan was updated once the project was extended.

Grace period. The 4-month grace period was also extended by two months from October to December, 2008. As reported by the PIU, this extension was requested because there were delays associated with management of funds which in turn caused delays to the PIU. These delays made it impossible for the PIU to document further disbursements from the grant in respect of eligible expenditures made before the closing date.

Institutional changes. During project preparation and the first years of execution, the SAyDS was located at the Ministry of Health. The SAyDS was subsequently moved to the Jefatura de Gabinete de Ministros. As a result of this change, the SAyDs obtained a higher institutional rank, which in turn had a positive impact on the project. The institutional changes did not affect the execution of the project. The project's national director was changed three times while the project coordinator changed twice.

[1] The project was originally signed for an amount equal to SDR6.5 million, equivalent to USD8.35 million at the time of signature of the Grant Agreement. At the time the project was converted from SDR to USD, the SDR6.5 million were valued at USD9.5 million, but the Bank proposed to use the exchange rate at the time of signing of the GA. On October 2, 2006, the GA was amended and the total grant amount was left at USD8.35 million.

2. KEY FACTORS AFFECTING IMPLEMENTATION AND OUTCOMES

2.1 Project Preparation, Design, and Quality at Entry

Lessons from previous environmental projects in Argentina were taken into account.[2] The design of the proposed project was developed in parallel with and complemented by the UNDP/GEF Argentina Coastal Zone Management Project (Phase II). In particular, the environmental projects in Argentina highlighted two important lessons: (i) that there is need for local ownership and expanded use of local or regional specialists; and (ii) that project success largely depends on implementation capacity in the executing agency (in this case, SAyDS). The project incorporated an extensive process of consultation and use of national experts and its matching grant program continued to support local participation during implementation.

Regarding project risks, it was expected that the incorporation of UNDP for procurement and financial management would improve SAyDS's capacity to implement the project. Throughout project implementation, the PIU informed the Bank about frequent delays associated with management system. Nonetheless, throughout the project, both the PIU and UNDP did everything possible to solve the issues that arose.

Participatory processes were an important aspect of the project both during project design and implementation. The thirteen meetings held by the Project's Consultative Commission documented in proceedings confirm the permanent involvement of provinces and co-executors in the project, its decision-making process, governance and priority setting.

2.2 Implementation

The project had a very slow start due to a late effectiveness and other issues including: (i) long negotiation period to reach an agreement with PNA and SHN to have counterpart funds assigned within these institutions; (ii) administrative delays related to procedures and changes in key staff, (iii) issues associated with a lack of knowledge of the Bank's/UNDP's procedures at the local government level, (iv) problems with identifying suitable local providers of goods and services in the Patagonian provinces which delayed the procurement processes. By the MTR, the project had picked up its pace of disbursements. By that time the status of the components was reviewed and new activities relating to fisheries were proposed. Ultimately, these proposed activities were carried out as part of Components 2 and 3, as they were compatible with both the biodiversity, and capacity building objectives.

Most of the components in the original agreement were carried out as planned—only the work on Incidental Catch (component 2.2.B-57/58/59) for a total of USD 15,000 was not carried out. This component focused on three types of animal groups frequently affected by commercial fishing: birds, mammals, and reptiles. Though researchers were selected to study each of these groups individually, it was not possible to reach an agreement between them to

[2] The projects taken into consideration during preparation were the World Bank's Argentina Pollution Management Project, the IDB's Argentina Port Modernization Program and two UNDP/GEF projects: Maritime Front Project and Argentina Coastal Zone Management Project Phase II.

develop a plan to mitigate incidental fishing that would make the 3 individual plans compatible. By the end of the project, common ground was reached that would have allowed the consultants to manage the development of this component. Unfortunately, the Terms of Reference (TORs) for the final consultancy were not developed on time and this activity was not completed.

At the time of project preparation, the GOA decided to include UNDP as financial manager since it was considered a neutral party to receive and deposit the GEF grant funds and the counterpart funds into a single project account (no Special Account was necessary) for timely payments for project purchases and consultant assignments. UNDP provided this assistance under a standard Cost-Sharing Agreement, which included, inter-alia, that the procurement and financial reporting activities for the GEF funded portion of the project would follow Bank guidelines. UNDP's administrative fee was covered as part of SAyDS's counterpart funds for the Project.

To address the delays in implementation in the initial 3 years of implementation, the project was extended for 18 months. As mentioned in Section 1.6, this allowed the GOA to complete the activities of the program. This was a low risk project with a strong focus on capacity building both at the local and federal level.

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

The ISR record indicates that the project faced considerable challenges and difficulty in developing meaningful and practical project outcome and output indicators. The indicators defined at appraisal were not reflected systematically in the ISR record during the initial years of the project. This is due in large part to project implementation delays. In addition, the system change over to ISR's in the Bank may have played a part.

The project's output indicators agreed at appraisal were modified based on the analysis carried out during the MTR. During the MTR, the Bank and the project counterparts agreed on the use of a more structured approach based on a new monitoring framework. It is important to note that while the output indicators were changed, there were no changes in the project's development or global environment objectives as a result of the MTR. New project output indicators were agreed and documented in the MTR report in June 2005.

The ISR record does show that new output indicators were introduced into the Bank's ISR system in June 2005 following the MTR mission and these indicators were updated periodically as part of Bank supervision. However, while new indicators were reflected and tracked, in the ISR record from June 2005 onwards, these indicators were not fully consistent with those agreed and documented during the MTR mission. There is no indication in the ISR record as to why the indicators proposed in the MTR were not officially adopted within the ISR system of the Bank at that time.

In addition, two consultancies were carried out during March 2007 and June 2008 to further improve the indicators originally defined for the project. Output indicators were established based on guidelines established by GEF and the World Bank. These indicators were revised during the Mid Term Review for the project (according to "Guidelines developed by the GEF Secretariat Monitoring and Evaluation Unit for use by the three GEF Implementing Agencies: UNDP, UNEP and the World Bank") and it was considered necessary to do an

outcome evaluation in terms of the project's advances and impacts in the region and globally. To that end, after five years of project implementation, a consultancy was undertaken to evaluate the Institutional Strengthening and Project Impacts with a vie to formulate a possible proposal for a follow-on operation. The consultancy was executed on 31 December, 2006 and the final report was analyzed by Bank experts during supervision missions, as recorded in the two Aide Memoires in 2007. Once the Technical Evaluation for Institutional Strengthening and Project Impacts was completed, and the closing date was extended to 30 June, 2008, there was a need to update work related to indicators by the new closing date.

2.4 Safeguard and Fiduciary Compliance

The project triggered two safeguard policies: Environmental Assessment (OP4.01) and Projects in Disputed Areas (OP 7.60). For Environmental Assessment purposes the Project was classified as "C" because it did not cause direct or induce indirect negative or adverse impacts on the environment. The information management equipment and training activities for oil spill management, reduction of navigational risks, and improvements to the knowledge base on marine biodiversity did not have an adverse environmental impact. No civil works or remediation activities were financed under the Project. This environmental classification and approach was endorsed by the Latin America and Caribbean Environment and Social Quality Assurance Team--LCSES QAT--(Memorandum dated February 8, 2001).

The Projects in Disputed Areas safeguard policy was also triggered because the project originally intended to cover fisheries management issues which raised concerns about potential project activities in the area of the Malvinas/Falklands Islands, as well as the appropriate sustainable sharing of fishing stocks between the U.K. and Argentina. However, as mentioned previously, a fisheries component was not included in the project but was included in a separate Sustainable Fisheries Management Project (LIL). Technical consultations were held with the U.K. and Argentina both of which requested certain adjustments to the scope of that project and the LIL was approved on September 18, 2000.

Regarding fiduciary compliance, an external audit of the project and two *ex post* reviews of contracts were done annually. These audits were done according to terms of reference acceptable to the Bank. In general, the GOA/UNDP met the conditions of the loan and the applicable regulations.

In terms of financial management, the PIU (Project Implementation Unit) had skilled and experienced staff. Although financial management procedures were missing in the Operational Manual; procedures existed and were satisfactory to the Bank. The information system applied did not provide information related to sub component execution and needed to be complemented with Excel worksheets. Financial management missions reported some complexity. Despite, the identified weaknesses, the FM arrangements provided reasonable assurance that the grant funds were used for the intended purpose.

In terms of procurement, the PIU demonstrated overall experience and knowledge to conduct procurement process. However, some of the *ex post* reviews concluded that filing systems in placed had some deficiencies. Files did not include all the contents to document the entire procurement process, including copies of payments, final reports, etc. The PIU addressed these issues during project implementation.

2.5 Post-completion Operation/Next Phase

Sustainability of the activities initiated under the project is encouraging, but mixed. As discussed in section 3.2, the Consultative Commission continues to meet semi-annually under the guidance of SAyDS. Additionally, a Strategic Action Plan was developed in line with GEF guidelines and there is political commitment both at the national and provincial level to implement most of the actions identified as part of this plan.

Regarding the PIU, there are only two individuals out of the original 12 closing the project. The remaining group of individuals that composed the PIU was absorbed by two different groups working on the RAMSAR Convention on Wetlands and other marine topics, such as International Whaling Commission, respectively. The SAyDS is expecting to get a budget of approximately USD 30,000 for year 2009 to continue promoting the sustainable management of marine resources and other activities initiated under the project (i.e., workshops).

Both PNA and SHN have obtained budget to carry out the activities that were started during the project. This includes, at the PNA, continuing with the training courses at the Ushuaia Oil Spill Prevention Training Center (currently offering 4 courses per year), funding to maintain the equipment received, and the construction of a new building to house the Patagonian training center. Similarly, the SHN has budget assigned to carry out the oceanographic campaigns, to carry out training on Q-Map, and to set the buoys back in the ocean again (this will happen during the February 2009 campaign). After the project closed in June 2008, there were no more resources available to fund the residual PIU that were left to close the project. The salaries of the remaining members were covered by UNDP.

3. ASSESSMENT OF OUTCOMES

3.1 Relevance of Objectives, Design and Implementation

The activities developed by the project are in line with Argentina's current national sustainable development priorities. The areas identified during project preparation and described in Section 1.1 are still critical to the sustainability of the Patagonian Marine Ecosystem. For example, pollution from oil tankers and cargo ships still pose a threat to marine and coastal life; land based pollution related to the tourism industry and other industries, as well as the lack of adequate facilities to treat sewage and dispose solid waste have localized impacts along the Patagonian coast; insufficient knowledge and capacity to manage Patagonia biodiversity are challenges which still affect the ability to manage the area sustainably.

The 2006-2008 CAS identifies the tourism industry as an important source of income for the country, but one that is increasing its pressure on natural resources (water quality and solid waste disposal). The Patagonian provinces have become important tourism and living destinations for both locals and foreigners. In both cases, the pristine nature of the Patagonian environment has been affected, and it is important that appropriate management strategies are developed. In this sense, the project has contributed to the appropriate management of this topic by developing and distributing a tool to measure the effectiveness of the management of National Protected Areas and ensure proper implementation.

The outcomes of the project contribute to help the country meets its international commitments. From the point of view of Argentina's international commitments, the country is a signatory of the following conventions and the project was carried out in the framework of these conventions including: Convention on Biological Diversity, ratified by the GOA on November 22, 1994; International Convention for the Prevention of Pollution from Ships (MARPOL); Ramsar Convention; and the ACAP Agreement

3.2 Achievement of Global Environmental Objectives and Sustainability

As described before, the project's global environmental objective was to support long-term protection of international waters and the conservation and sustainable use of marine resources. The project's development objective was to strengthen Argentina's efforts to reduce pollution of the Patagonia marine environment and improve sustainable management of marine biodiversity. These objectives were achieved by financing incremental activities aimed at improving Argentina's capacity to protect marine biodiversity and safeguard Patagonia's marine ecosystem from coastal contamination.

The PDO addressed three specific objectives of the pollution control and marine biodiversity management. The first objective aimed at improving oil spill prevention and response capacity and preventing ship-waste pollution. State of the art technology (software, hardware, buoys, multi-beam sonar, boats, emergency response equipment) was acquired for PNA, SHN, and local governments. Training for staff was also provided. These institutions have internalized the equipment and training they have received by assigning part of their budget to keep the activities going. Relatively recent incidents at "Caleta Cordova" and the Rio de la Plata are proof that the objectives of this project component were met (see accompanying text box). Regarding ship-waste pollution, a system to collect data on waste discharges at the port is now in place and is being continuously monitored by the PNA. Additionally, a waste treatment plant for port use was designed under the project and still awaits government funding for its construction.

The second objective under the PDO aimed to improve the knowledge base of Patagonia's marine environment and its biodiversity. Under this component, an Environmental Sensitivity Atlas[3] was developed and has been made available to the public. This Atlas provides information on key areas via interactive maps and a wealth of information on seven different topics.[4] Additionally, oceanographic data were collected in 5 different areas using both the coastal and the marine buoys. These data are also available from the SHN. Maps of the access channels to two ports were developed, as well as five electronic charts (two are IHO certified).[5] These maps and charts are also available for sale at the SHN. Their use reduces the risk of accidents. A technical center for biodiversity conservation, with a strong focus on animal rescue, was updated in Chubut. Finally, a methodology was developed to establish priority areas for protection.

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[3] http://atlas.ambiente.gov.ar/

[4] Physical characterization of the environment, survey and distribution of flora and fauna, exploitation of fish resources, toxicity and pollution, socio-economical aspects, navigation aides, and legal framework.

[5] See table 4 below for a list of ENCs available.

The final objective under the PDO aimed to build capacity and promote regional knowledge sharing about sustainable management of marine resources. There are four key activities that were developed in this context: the Sistema de Información Costero Marino (SICOM); the matching grants subproject; the inter-calibration of laboratories; and environmental training for school teachers. Additionally, the project invested an important amount of time and resources on training programs (both for government officials and the public in general) and seminars that served as meeting points to exchange the latest knowledge on biodiversity management.[6]

SICOM is a computer software platform to exchange information developed by the project and is available to the public.[7] Focal points were trained at the provincial level to upload information on marine biodiversity. The focal points continue uploading information even though the project has concluded, thus ensuring the sustainability of this component. The matching grants subcomponent was developed based on the needs of the local provinces. A total of 47 pilot projects were developed in the four Patagonian provinces (see Annex 10). Information on these projects was also uploaded into the SICOM and is available to the general public.

Regarding the building of analytical capacity, a total of 21 laboratories have been accredited and meet the highest international standards to analyze chemical composition and determine the existence of pesticides in water and soil samples, among others. Finally, the environmental training initiative was carried out in conjunction with the Ministry of Education.[8] More than 240 teachers were trained and given manuals on environmental education.

Table 3. Summary of Direct Project Beneficiaries and Benefits

Target Group	Benefits from the project
National government	The National Government benefitted from the project in that (i) an inter-institutional (with SHN and PNA) and inter-jurisdictional dialogue was started, (ii) the GoA gained experience in the management of complex projects, (iii) key topics related to the coastal-marine environment are now part of the SAyDS agenda, and (iv) the country now has a Strategic Action Plan to deal with the new priorities of the Patagonian Marine Ecosystem.
Governments in the 4 Patagonian Provinces	The provincial governments received both equipment and training that allows them to better manage their natural resources. The matching grants component was developed based on the Provincial government's needs, therefore these research projects improved the local government's decision making process. As with the national government, provinces also benefited from the inter-institutional (with SHN and PNA) and inter-jurisdictional dialogue promoted by the project.

[6] A total of 54 workshops with more than 1600 participants were carried out during the life of the project.
[7] http://http://sicom.ambiente.gov.ar/
[8] http://gef-educacion.ambiente.gov.ar

Table 3. Summary of Direct Project Beneficiaries and Benefits	
Target Group	**Benefits from the project**
Executing agencies (SHN; PNA)	Both the SHN and PNA had their capacity strengthened. These institutions benefited from the project by receiving state of the art technology to reduce pollution from oil spills and to improve the sustainable management of marine biodiversity. These institutions also benefitted in that their ties were strengthened and they now work together in order to model oil spills. The SHN received software that allows them to model tidal waves used in the simulation of oil spill trajectories. It also received 2 buoys that allow them to collect data on water quality, and a multi-beam (sonar) used to conduct oceanographic measurements. The PNA had 14 of its officers trained internationally on oil spill emergency response. These officers became trainers upon their return to Argentina. It also received state of the art equipment that was used in the establishment of a regional training center on oil spill response (in Ushuaia). It received specialized software to model oil spill trajectories. A database on contingency plans was also developed. The PNA also received new hardware and software to track ships more accurately.
Municipalities and Non-target Provinces	The Puerto Deseado municipality benefited from a Clean Production Consultancy that developed a strategic plan to deal with the pollution from the fish factories located on the coast. Buenos Aires province benefited from the project as it managed to increase the coverage of the Environmental Sensitivity Atlas thanks to an agreement with the Fundación Vida Silvestre Argentina/WWF.
Conservation Agents	National and provincial institutions responsible for protected areas benefited from the preparation, training, and application of tools designed to measure the effectiveness in the management of protected areas.
Research Iinstitutions and NGOs	Research institutions benefitted directly from the project with the development of the SICOM and the Competitive Subprojects (Matching Grants) component. They received partial funding for their research and were given access to a tool used to disseminate information and enhance the knowledge of the PME.
Educators	School teachers benefited from the project as an agreement was reached with the Ministry of Education to accredit them after taking the training courses on Environmental Management.
Maritime shipping industry	This industry benefited from better navigational aids such as improved charts and maps. These instruments and the new vessel tracking system help improve traffic safety.

Performance monitoring indicators

As mentioned in section 2.3, project performance indicators were modified during the MTR but the PDO, GEO remained unchanged. In order to evaluate compliance with the PDO, the outcome indicators in Table 4 below were monitored by project counterparts throughout the project. Though this was a very complex operation that required the interaction of many different actors[9], and one that took place in a region of the country that is relatively isolated (i.e., with little experience working with international organizations, with restrictions in

[9] PNA, SHN, Federal government, local governments, UNDP, private individuals.

terms of the availability of high quality local consultants, and with strong restrictions in the number of technology suppliers).

It is important to note that while the project ended with a substantial unused balance of approximately USD $550,000, the majority of activities originally planned were completed by the project. Only one of the more than 80 activities[10] was not completed as planned. Annex 2 provides a list of the output indicators by project component and their status of implementation by the end of the project. The unused balance is in part a reflection of the already-mentioned delays. In addition, the Bank's request to the government to convert the project from SDRs to USD caused delays in execution. The combined effect of both requests meant that an incidental catch study was not carried out as planned; a workshop was cancelled; and a report on impacts as well as a national strategy was not completed.

[10] See section 2.2

Table 4. Status of Outcome Indicators - End of Project	
Outcome Indicator	**Status at the end of the project**
Reduced ship based pollution (oil/waste spilled or discharged per ton transported and percent of ballast water treated in ports) by reducing navigational risks	Regarding the reduction of navigational risks, by June, 2008, certified ENCs with new technology were developed for the following 5 ports: Rio de la Plata; Mar del Plata; Ria de Bahia Blanca; Comodoro Rivadavia; Caleta Paula Additionally, the SHN generated a hydrodynamic model using Qmap software, which provides input for the OilMap being operated by the PNA. By project end, the PNA was capable of tracing contamination plumes; and the Hydrographic Service was handling information on environmental sensitivity areas for priority setting. OilMap software has been upgraded.
Improving preparedness and response to oil spills	By the end of the project, 14 officials of the Prefectura Naval Argentina were trained at leading world centers. A training program, including handbooks, was developed at three different levels (operator 1, operator 2, and instructor). The equipment described in Annex 2 was purchased and is in place and installed. Training was completed for 130 people, including participants from four different South American nations. Four additional auxiliary ships were purchased, as well as 10 field laboratory kits for ballast analyses. Five hundred handbooks (first ever in Spanish) were printed and delivered for additional training. Contingency Plans are now in a geo-referenced database. The regional training center on oil spill prevention established in Puerto Madryn is a leading regional institution. The PNA has internalized all the training, hardware, and software received by dedicating some of its budget to keep the training courses going, and currently has budget assigned to improve the infrastructure of the training center (a new center is expected to be built). The oil spills of Caleta Cordova and the Rio de la Plata in Uruguay, and the response by the stakeholders involved (see text box below) are a clear indication that this outcome indicator was achieved satisfactorily.

Table 4. Status of Outcome Indicators - End of Project	
Outcome Indicator	**Status at the end of the project**
Better monitoring of pollution from ships	There was no baseline information on oil/waste spilled per ton transported and ballast water is not treated in ports. In some specific areas with protection status or special use, ships are not allowed to enter the port without replacing the ballast waters. In order to monitor pollution from ships, the project developed an electronic system (database) to collect data on waste discharges at local ports. This database is being continuously monitored and updated by the PNA. The above information is complemented by a surveillance system. By the end of the project, effectiveness of surveillance was estimated at 75%. This was achieved by implementing new software as described in Annex 2.
Sensitive areas prioritized for protection based on dissemination of marine biology and oceanographic data of global and local relevance.	At the time of implementation, Fundación Patagonia Natural was working on the prioritization of areas for protection under the UNDP/GEF project. Therefore, the current operation focused on establishing a methodology to evaluate the management not only for those areas but also for the whole system and coastal and marine protected areas in Patagonia. By the end of the project, four regional workshops had been conducted on methodologies and tools for effective management of coastal and marine protected areas. A toolkit was developed and institutionalized procedures for effective management of MPA in accordance with standard international practices. This work complemented the UNDP/GEF project managed by Fundación Patagonia Natural and Fundación Vida Silvestre which aims at establishing natural areas under effective management schemes.
Improved capacity in national and provincial governments to assess the effects of economic activity on the marine environment and ability to incorporate lessons from pilot projects in marine protection policies	Software described in Annex 2 was purchased and installed. Hydrographic Service generated a hydrodynamic model with WQmap software, which will provide input for the OilMap being operated by the Coast Guard. The Coast Guard is now capable of tracing contamination plumes. Hydrographic Service is handling information on environmental sensitivity areas for priority setting. OilMap software has been upgraded and is operational.

The project allowed the GOA to break a situation of static inertia, generating a virtuous circle of inter-institutional actions. The project has also achieved collective awareness about the importance of preventing marine pollution and preserving biodiversity, as well as enhancing inter-institutional cooperation, as shown in box 1:

Box 1. Oil Spill and Government Response at Caleta Cordova

On December 27, 2007, an oil spill occurred at Caleta Cordova. After the oil was spotted reaching the coast, an "Emergency Commission" was formed. This Commission was chaired by the mayor (Intendente) of Comodoro Rivadavia. Its members included representatives of the Ministry of Environment and Sustainable Development of the province of Chubut, the Secretariat of Hidrocarbons of the Province of Chubut, the PNA, and private oil companies (YPF, CAPSA, Tecpetrol, Pan-American Energy, Termap, OXY and Sipetrol). The personnel that were trained at the Puerto Madryn "Patagonian Training Center" funded by the project also participated in the clean up.

The SHN and PNA used the software purchased under the project to identify the point of origin of the oil spill in the sea. Additionally, the GIS database funded under the project with the oil spill action plans and location of equipment was also used to help with clean up and containment. Given that the oil spill affected several birds and mammals, a rehabilitation center including specialists and volunteers from NGOs was established at Caleta Cordova. The response to this accident suggests that the project met at least 3 of the outcome indicators described in the table above.

Additional impacts. An important impact of the project is the strengthening of local governments, PNA and SHN. This strengthening should not be measured only based on training and equipment provided, but also on the synergies that were developed among the above-mentioned institutions. The synergies can be better understood using the case of Caleta Cordova (See Box 1), where all institutions joined forces to deal with a crisis. This level of cooperation might have been achieved without the project, but it would have taken longer and might have occurred in a less effective manner. The project brought about a harmonized development of all actors.

An additional impact of the project was the involvement of different NGOs and academia in the project area of influence. Whether this involvement was achieved directly through the competitive projects or indirectly through analysis of emergency plans prepared by PNA, a process has started in which both public and private actors are sharing the responsibility to care for the environment. Both sides now have a much better understanding of the needs and objectives of the other.

A third important impact of the project is the development of institutional links, not only between the key actors (PNA, SHN, and provincial governments), but also with the scientific community and the information that the project has generated. There is also a great appreciation and interest among from the scientific community regarding the possibility of having all information in one central place that the beneficiaries can access online (i.e., the SICOM). Availability of information improves quality and makes decision-making more transparent.

Regarding the component on Protection of Biodiversity, the Sensitivity Atlas establishes an important baseline for the different areas of investigation that have started to be developed on the Patagonian coast and sea platform. This product was also important because it is linked to other projects carried out by NGOs, and it allowed the local governments to establish clear objectives regarding Natural Protected Areas and to set bases to manage these areas more effectively. In particular, the extension of this Atlas towards the coast of Buenos Aires province (not originally envisaged) was an unintended but very positive impact which ensured the coverage of the entire maritime Argentina coast with this product.

Finally, more than 240 teachers were trained and given manuals on environmental education by the dissemination of booklets, brochures and books prepared by the project.

3.3 Efficiency

The economic loss associated with a deterioration of the marine environment in Patagonia is difficult to ascertain because of the lack of data on the highly complex processes and linkages involved. The only exception is the direct loss caused by overfishing: at the time of project preparation, the sustained collapse of the hake catch was valued at US$1.67 billion on a net present value basis (1997). Excessive extraction of marine resources causes reductions in primary and secondary productivity of the oceans, which leads to alteration in the food chain. Pollution impacts materialize over the long term with increased mortality or morbidity and transport of toxic compounds across species. These impacts undermine the health conditions of marine species on which the tourism and fisheries industries depend; however, the specific economic losses are very difficult to predict.

The results of the GEF incremental cost analyses (see Annex 3) indicate that the “baseline” activities represent the course of action chosen by Argentina without explicit consideration of global benefits. By complementing these baseline activities with incremental resources for prevention of maritime pollution and enhanced capacity for protection of marine biodiversity, additional global benefits would materialize.

3.4 Justification of Overall Outcome Rating

Rating: Satisfactory

The project was rated unsatisfactory during its first two years of execution because of delays in its startup. These delays were caused by a series of factors discussed in section 2.2. After the MTR, the pace of execution increased substantially and activities were carried out satisfactorily. Given the government’s commitment to turn outputs into outcomes, the project was rated satisfactory over its final two years of implementation. Given that the project is still relevant (see section 3.1), that it met its GEOs (see section 3.2), and that the participating institutions have adequately internalized the equipment, training, and processes/methods designed to prevent pollution and improve the knowledge base, it is considered that this was a satisfactory project.

3.5 Overarching Themes, Other Outcomes and Impacts

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

One of the outputs of the project was to prepare, in collaboration with the Ministry of Education learning material (books and CD-Roms) and provide training on environmental education. An important outcome of this activity was that teachers received credit for taking this training thereby allowing for improvement of their pay-grade.

(b) Institutional Change/Strengthening

As discussed in section 3.2, both the SHN and PNA have taken full advantage of the training and equipment received from the project. Both institutions have responded appropriately to the Caleta Cordova and the Rio de la Plata incidents described in Box 1, suggesting that strong cooperation ties have been built that will ensure the success of the project in the long run. The Consultative Commissions are also a key space that was created by the project to bring together policy makers from all sectors of society. This is one of the activities that is actively being supported by SAyDS after the project concluded.

(c) Other Unintended Outcomes and Impacts

A very important unintended outcome of the project was that it leveraged important resources from an NGO (Fundación Vida Silvestre) to extend the Environmental Sensitivity Atlas (ESA) to cover the Province of Buenos Aires. By including this province, the ESA now covers the entire marine coast of Argentina, and not only the coast of the four Patagonian provinces. A second unintended outcome is the certification of teachers taking the courses on Environmental Education prepared by the project in conjunction with the Ministry of Education. This certification has a positive impact on the teachers and raises their level of qualification.

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

Annex 6 includes the minutes of the 12th meeting of the Consultative Commission. This meeting took place on August 21, 2008. An additional meeting (Number 13) was carried out in September, 2008.

4. ASSESSMENT OF RISK TO DEVELOPMENT OUTCOME (DO)

Rating: Low Risk

Three types of risk that could negatively affect the PDO were identified during project preparation and are discussed below. These risks were mitigated, and as a result, the risk to the DO is considered low.

Poor/Inefficient Project Administration. This risk was mitigated by selecting an institution (UNDP) that was independent of the government to do the financial management of the project. Though there were some issues that caused delays in the operation, these were solved and achievement of the PDO was not compromised. Additionally, there was a clear division of responsibilities established in the Operational Manual, all procurement decisions and project clearances on behalf of the GOA were taken by the SAyDS, training on Bank procurement guidelines and financial management was provided to the PEU before project launch, and supervision missions were carried out periodically.

Inadequate Institutional Absorption of Project Outputs. During project preparation, the team worried that projects with a high technological and informational content may be insufficiently absorbed into the normal functioning of the institutions they are intended to strengthen. In order to mitigate this risk, specialized training on oil spill contingency was conducted at world-class centers in Spain and France. Additional training and equipment was purchased to ensure that the technological improvements proposed for navigational aids for the maritime shipping industry operating in Patagonia was also provided. The project included a highly participatory design where beneficiaries provided input about the scope and level of sophistication desired for each tool. Therefore, the detailed training programs and specifications for equipment and systems supported under the project took into consideration the beneficiaries' needs.

Counterpart Funds May not Materialize. In order to mitigate the risk of not having counterpart funds for the project, the following measures were taken: (i) the implementation agreements with PNA and SHN required a *pari passu* disbursement schedule with the counterpart funds so that project funds were not drawn down when counterpart funds were cut, and, (ii) an up-front deposit of each year's counterpart was required as part of the Agreement with UNDP. Since deposits are made to a third party, subsequent budget cuts during the year did not affect Project implementation.

5. ASSESSMENT OF BANK AND BORROWER PERFORMANCE

5.1 Bank

(a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

During the preparation phase, Bank staff worked closely with SAyDS to ensure proper identification, preparation and implementation of the project. The Bank's team conducted

missions and field trips to the project area. Missions were well - staffed with specialists covering the following disciplines: marine biodiversity and pollution, natural resources economy, financial management, procurement and operations. Project preparation was completed in time. During preparation, risks associated with the proposed were identified by the Bank's team. Three types of risks required special attention during implementation: (i) Poor/ inefficient project administration; (ii) Inadequate institutional absorption of project outputs (training programs and specifications of equipment and systems were key to ensure the absorption); (iii) Counterpart funds may not materialize (allocations made at the beginning of the project were constrained due to the national economic crisis, causing delays until the counterpart funds were made available).

(b) Quality of Supervision

Rating: Moderately Satisfactory

Bank staff worked closely with SAyDS to conduct periodic supervision missions during the project. The Bank frequently visited the different provinces where the project was being implemented to ensure execution was advancing adequately and to conduct on the ground checks. At the same time, the PIU supervised and assisted project participants throughout implementation. Ten supervision missions were held during project implementation. Extensive aide memoires were prepared after each mission and ISRs were continuously updated to ensure the most pressing issues were under control by the task team management.

This project had five task managers, each of them with different backgrounds and experiences which brought benefits to the project.. Even though the technical qualifications of the Bank's task managers helped the project to substantially achieve its DO, the large number of task managers that worked on the project affected the pace of project implementation.

The Bank team and the counterparts did recognize the challenges and difficulties inherent in the project's performance indicators and made strong efforts to develop a more systematic and structured approach during the MTR. However, there was not a strong link made between the indicators which were being monitored by project counterparts and the indicators used within the Bank's ISR record keeping. Though largely compatible with agreed indicators, the indicators entered into the Bank's ISR record in June 2005 were not entirely consistent in the wording agreed in the MTR. For this reason and the rotation of task managers cited above, Bank performance in supervision is rated as Moderately Satisfactory.

During the last two years of project implementation, the project benefited from WB staff working in the Buenos Aires country office and specifically assigned to the grant. This was vital to ensure the follow-up of several activities and project needs during a period when the project implemented quickly.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

The project helped Argentina improve its capacity to prevent and respond to oil spills, including the establishment of a training center in Puerto Madryn that sets standards at the regional level. Given the high quality of technical preparation as well as the frequency of well staffed supervision mission along with the continuous support from a Buenos Aires based environmental staff, overall Bank performance is rated Satisfactory.

5.2 Borrower

(a) Government Performance (SAyDS)

Rating: Satisfactory

Secretaria de Ambiente y Desarrollo Sustentable de la Nacion was the main counterpart during project preparation and implementation. Throughout the project life-cycle, the SAyDS showed commitment, availability of in-kind counterpart funds, and the capacity to take decisions quickly. In particular, it was fully demonstrated that, by means of the National Director, SAyDS was capable of leading the federal dialogue involving four participating provinces in the Consultative Commission. This achievement was essential to support the project implementation on a participatory basis, addressing the needs at the provincial level. For this reason, Government performance is rated as Satisfactory.

(b) Implementing Agency or Agencies Performance (PIU, SHN and PNA)

Rating: Moderately Satisfactory

After a slow start in project execution, the PIU worked hard to complete the project activities and ensure that objectives were met. This was a complex operation with many subcomponents and many different actors (SHN, PNA, local governments). Each of these institutions was in charge of executing a portion of the grant under PIU supervision. The PIU did a good job at bringing them together through the Consultative Commission to establish priorities and to supervise the adequate execution of the program. However, the project presented several issues associated with financial management and procurement discussed elsewhere in the ICR that caused delays to the project. For this reason, PIU performance is rated as Moderately Satisfactory.

The PNA and SHN were very active counterparts of the project, participating in decision meetings and ensuring that the equipment they received was appropriately internalized by the institution. The activities under their responsibility were met, though an extension of the project was needed for the reasons described before. For this reason, PNA and SHN performance is rated as Satisfactory.

(c) Justification of Rating for Overall Borrower Performance

Rating: Satisfactory

As outlined above, Borrower performance was Satisfactory except for the administration. Nonetheless, the project objectives were completed largely achieved and only one extension of the project grant was needed. The example of Caleta Cordova (section 3.2) shows that the project met its intended outcome.

6. KEY LESSONS LEARNED

General Comments on Implementation

Participatory and consultation process are vital in countries with federal administrations. The "Consultative Commission" (composed of SAyDS, PNA, SHA, Rio Negro, Chubut, Santa Cruz and Tierra del Fuego provinces) provided an institutional framework that was both "organic and dynamic", and that helped achieve the objectives of the project. This Commission is still active after project closing, and is expected to provide institutional leverage that may give long term sustainability to the project. The creation of this institutional space is important because political changes associated with periodic elections tend to change the key actors in public institutions, particularly at the decision-making level. The Consultative Commission is somewhat independent of these political changes. The SAyDS has requested budget from the central government to maintain the Commission during 2009.

Federal states involve complex relationships and governance issues in terms of sub-national collaboration. Therefore, projects require greater supervision and coordination for successful implementation. Federal countries such as Argentina add a dimension to project management by including various levels of governments and institutions. If these levels are not well coordinated, projects can quickly become uncoordinated or transparency may be questioned if participation is not full. This process requires leadership and clearly defined roles as well as rules that are accepted and managed by consensus among the stakeholders. The Consultative Commission has been a good example to mitigate these risks.

Projects with external financing need to be better internalized within counterpart agencies. The long term incorporation of the technologies and training provided by the project was assured at the local level within the SHN and PNA. At the SAyDS level, an important lesson for the future is that an important part of its PIU was paid by the project. This implied that when the project closed, the project team was disbanded and only two of the members remained at SAyDS, though it must be stressed that they are still working on topics related to marine pollution and biodiversity. The capacity building that was done within the Secretariat of Environment was limited. It is preferable that the government create the capacity within its institutions by covering the costs of the PIU so that there can be continuity when the projects conclude.

Complex projects with scientific components, covering vast geographic areas and dealing with specific issues require detailed procurement planning in advance. The complexity associated with procurement processes for goods and services differed significantly between the provinces and the capital of the country. The distance between the provinces and the capital is a significant factor that must be considered before procurement processes are started. This project faced many problems because the more remote areas in the provinces lack equipment providers, therefore equipment purchases had to be done in Buenos Aires. This presented difficulties to the selection process and caused delays, many times for basic reasons such as incomplete documentation. It is also worth noting that consultants needed more time than originally expected to monitor and manage selection processes. This affected the project's implementation speed. This problem was exacerbated by the lack of a consultant database in the provinces. Identification of consultants/providers was very difficult.

In order to avoid unnecessary delays and to promote institutional strengthening, projects should create financial and procurement capacities in their own agencies. As reported by the PIU, the management of financial and procurement process were not very efficient. Some institutional changes that occurred during project implementation caused delays that were not expected from an institution that was brought into the program to ease its execution.

Monitoring and evaluation processes cannot be a "paper" process overlooked during the project's design stage. They should be utilized primarily as a means to provide feedback and understanding to project participants during the entire project cycle. Monitoring and evaluation can be used for several purposes related to project development, management, and oversight. Defining the M&E and how data will be gathered and used is important not only at the design stage, but also during implementation.

Specific Comments on Components

Public-Private partnerships added value to project implementation. Even though multidisciplinary work many times implies more difficulties due to the large amount of collaborators, the establishment of clear rules and directives allowed this component to be completed in a satisfactory manner and within the established time limits. In the particular case of the Atlas of Ecological Sensitivity, more than 40 actors from the public scientific sector participated in the project. The Atlas brought about an unexpected gain, as it leveraged funds from the non-governmental sector to cover the coastal area of Buenos Aires Province. This addition implies that the Atlas now covers the entire coastal area of the country, instead of only the four Patagonian provinces.

Involving sector actors without a clear diagnostic from the very beginning could be an obstacle to project success. One of the conclusions of this exercise was that there were some problems because some laboratories were not able to carry out the inter-calibration exercises. This was due mainly to lack of experience of the participants. The big differences in capacity shown by the laboratories to execute an inter-calibration was not due to professional capacity, but mainly to lack of funding. A possible activity for a next phase would be to increase institutional capacity, guided by additional funding for leveling, recovery of capacity and continuous improvement of all analytical processes within laboratories.

Cooperation between agencies has been successful after establishing a common ground during project implementation (oil spill modeling). This was one of the most important components in terms of success, and was very much in evidence during the oil spill that occurred at Caleta Cordova.

Management models with sub-national participation are difficult to implement in the short-term, of strengthening is not provided from the very beginning. The lack of these management skill and capacities in provinces may not permit rapid disbursement and advance in project activities. However, the active participation of provinces in the project added legitimacy, transparency, as well as quality.

Scientific technical assistance in GEF funded projects continues to be a key contribution for environmental management in Argentina. The project provided for many research projects (matching grants) that were developed to address real knowledge needs. Beyond the

dissemination of these very useful projects, they represent a vital contribution to coastal and marine management.

7. COMMENTS ON ISSUES RAISED BY BORROWER/IMPLEMENTING AGENCIES/PARTNERS

(a) Borrower/Implementing Agencies

From José Maria Musmeci, SubSecretary of Planning and Environmental Policy

The Bank's ICR contents have been reviewed and there are no comments to provide. Annex 10 includes a copy of the Letter No. 546/08 sent to the Bank on Tuesday 9 December, 2008.

Annex 7 includes a summary of the Borrower's ICR. The following achievements are reported: PNA as well as participating provinces institutional strengthening. This strengthening was based on equipment purchases and training financed by the project. In addition, information provided by the Competitive Sub-projects on Technology Innovation was an in important input to support environmental management decisions along the Patagonian coast in Argentina. Tools such as the Environmental Sensitivity Atlas were extremely useful for users demanding information regarding biodiversity in the Patagonian Marine Ecosystem. In particular, on December 27, 2007, an oil spill occurred at Caleta Cordova. After the oil was spotted reaching the coast, an "Emergency Commission" was formed involving all the parties participating in this GEF project. The SHN and PNA used the software purchased under the project to identify the point of origin of the oil spill in the sea. Additionally, the GIS database funded under the project, together with the oil spill action plans and location of equipment, was also used to help with clean - up and containment. As lessons learned, the Recipient's ICR stresses the good interaction between the Project, scientific community, PNA and SHN). Regarding administrative issues, the ICR highlights the need to improve the overall system not only at PIU level but also in provinces.. Finally, the Recipient's ICR highlights the importance to continue with activities started by this operation under a second - phase project.

(b) Co-financiers

Not applicable.

(c) Other Partners and Stakeholders

Not applicable.

ANNEX 1. PROJECT COSTS AND FINANCING

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

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
(1) MARITIME POLLUTION PREVENTION	3.38	3.8	112
(2) MARINE BIODIVERSITY PROTECTION	12.16	12.0	98.6
(3) CAPACITY BUILDING, M&E AND PROJECT MANAGEMENT	2.71	3.0	110
Total Baseline Cost	**18.25**	**18.8**	**100**
Physical Contingencies	0.14		
Price Contingencies	0.37		
Total Project Costs	18.76		
Project Preparation Facility (PPF)	0.33		
Front-end fee IBRD			
Total Financing Required			

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower	Cash/In kind	4.35	2.59*	59
Global Environment Facility (GEF)	Cash	8.35	7.80	93
Local Sources of Recipient Country	Cash/In kind	6.06	13,21**	.217

** It could not include co-financing originally assigned to marine surveys.*
*** It includes co-financing provided by 47 competitive sub-projects.*

ANNEX 2. OUTPUTS BY COMPONENT

As a result of the MTR that took place in June 2005, the output indicators were modified, though the activities and objectives remained the same. This annex describes each of the project's components, their objectives, the original indicators and revised indicators, and the status of each component at project closing. At the end of the chapter, a table with the project budget and funds disbursed is included.

Component 1. Marine Pollution Prevention. The objective of Component 1 was to prevent marine pollution by: (i) improving the preparedness and response to oil spills and preventing ship-waste pollution, and by (ii) reducing navigational risks by introducing a marine electronic infrastructure program. The expected outputs from Component 1.1 were the creation of a database containing oil spill contingency plans, training of high ranking officials for oil spill response in international facilities, and developing oil spill modeling capabilities. The status of each component is described below.

Sub-component 1.1: Improve Preparedness and Response to Oil Spills and Prevent Ship-base Pollution			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output indicator (from MTR)**	**Output at the end of Project**
(a) Improved organization and analysis of contingency plans using modern tools for data base organization	- Reduction of the processing time by PNA of private sector contingency plans.	-Acquire GIS tools for emergency plan management -Geo-referencing and analysis of contingency plans -Training on emergency and contingency plan management	- Computers, equipment and GIS software was purchased and installed; - A geo-referenced database was built and is continuously updated by PNA. - Processing time of contingency plans has been reduced from 12 days (baseline) to 3 working days.

Sub-component 1.1: Improve Preparedness and Response to Oil Spills and Prevent Ship-base Pollution			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output indicator (from MTR)**	**Output at the end of Project**
(b) Extensive training for effective oil spill response	- Number of national personnel trained abroad in oil spill emergency response.	-Training of PNA officers on oil spill response -Purchase of equipment for Patagonia training center	-14 officers from PNA were trained in France (CEDRES) and Spain (OSRL). - The Patagonian Training Center on Oil Spill Prevention was established in Puerto Madryn, including complementary equipment. -A total of 109 PNA officers and 10 guest officers from abroad have been trained at the Patagonian Training Center . - A database of people that participated in training courses was built
(c) Oil spill trajectory modeling	- Demonstrated accuracy of oil spill trajectory models in field tests.	-Procurement and training on tools to predict oil spills -Procurement of hardware dedicated to oil spill modeling -Establishment of a protocol between PNA and SHN to respond to spills -Integration of oil spill modeling tools to traffic control system	- Hardware and software (GIS, OILMAP, prediction of floating objects, spill analysis) were purchased and training carried out. PNA built a “situation room” to install equipment and locate team; -Protocol linking SHN, PNA, SAyDS ans SMN was developed; - Traffic control and oil spill modeling tools were integrated; -The models were evaluated in national and international simulations, and they were also tested in two real-life cases (Caleta Cordova and Rio de la Plata).

Sub-component 1.1: Improve Preparedness and Response to Oil Spills and Prevent Ship-base Pollution			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output indicator (from MTR)**	**Output at the end of Project**
(d) Improved enforcement of MARPOL regulations on ship waste discharges	- Percentage of ships calling on Patagonian ports inspected by PNA to control waste discharges. - Percentage of boats convicted of violation of MARPOL of ships that have been prosecuted. - Design of waste reception facilities for ports in Patagonia done to international standards.	-Strengthening of MARPOL rule on waste discharges. -Electronic database of boat registration forms. -Training on control of waste discharges from boats at the port.	- Currently, 100% of the boats are inspected by PNA when they reach a port; - 100% of the solid waste and slop residuals are collected and transferred to treatment plants outside of the ports. There are no treatment plants in any of the ports; -Every exchange is documented electronically and submitted to SAyDS; - Regarding monitoring of MARPOL commitments, the original target when the project was designed was to increase volumes of ship waste measured and collected by 30%; - By the end of the project, the PNA was inspecting and collecting waste residuals from 100% of the boats that reach a Patagonian port. Since there are no waste treatment plants located inside any of the ports, the waste is transferred to outside plants. Every waste exchange is documented electronically and submitted to SAyDS.

The expected outputs from Component 1.2 were the establishment of a ship tracking system, mapping of critical areas to reduce navigational risks, and acquisition of buoys to collect data on water parameters. The status of each component is described below.

Sub-component 1.2: Reduce Navigational Risks by Introducing a Marine Electronic Infrastructure Program.			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output Indicator (from MTR)**	**Output at the end of Project**
(a) Enhanced vessel tracking system	- Number of ships caught in violation of MARPOL. - Number of tar balls in coastal surveys from baseline levels; - Number of oil spills detected by satellites and air patrols.	-Acquisition of multi-beam sonar	-Phonetic control every 4 hours with each ship still is used. - The use of OILMAP and technology developed by PNA allows for satellite monitoring of the fleet.
(b) Hydrographic mapping of critical zones and improvement of the electronic charts system	- Three access channels to ports and maritime passages mapped hydrographically. - Presence of accidentally spilled chemicals mostly eliminated in water quality surveys. - Quantity and quality of navigation charts improved according to international standards.	-Establishment of critical areas for shipping -Increase in the number of ENC in high risk areas	-Survey of critical areas was completed, paying attention to transit corridors, access to ports and channels. -Two (Puerto Deseado/San Sebastian, Beagle Canal) of the three areas were mapped. The third area (San Antonio) could not be mapped because the boat used broke down. Mapping capacity is now installed on the Comodoro Rivadavia ship, and will continue when boat becomes available. - Two ENC have been certified by IHO, and two more (Ushuaia, Puerto Deseado) were in the process of development by the end of the project.
(c) Pilot ocean buoys as sources of real time data on navigation conditions	- Performance of buoys and their usage by oil tankers	- (After MTR, this indicator was evaluated together with component 2.1)	- Buoys were in service and data was collected by SHN in 5 different areas. After a period of time, the buoys were intentionally destroyed but have repaired. SHN will set them back to sea in February 2009.

Component 2. Marine Biodiversity Protection. The objective of the second component was to improve the knowledge base about marine resources to inform decision makers about marine protection and to build management capacity at the regional level by: (i) improving the knowledge base on the Patagonia marine ecosystem and complete identification of ecologically sensitive areas; (ii) developing marine protection tools; and (iii) promoting capacity building and knowledge sharing on marine biodiversity protection. With respect to sub-component 2.1, the key outputs are the development of the Environmental Sensitivity Atlas, the establishment of the SICOM which allows provinces and interested parties to have access to environmental information online, and the inter-calibration of laboratories to improve the quality of the analysis. The outputs of each of these components are summarized below:

Sub-component 2.1: Improve the Knowledge Base on the Patagonia Shelf and Complete Identification of Ecologically Sensitive Areas			
Output from Sub-component	**Original output indicator (from PAD)**	**Revised output indicator (from MTR)**	**Output at the end of project**
(i) Patagonia tidal wave model for simulating oil spill trajectory (ii) Pilot ocean and coastal monitoring by two oceanographic buoys (iii) Extensive ocean monitoring by ship using conventional methodologies	- Tidal wave model and selected areas data loaded and ready for use by SHN and PNA -End-users with better access to useful and relevant information - Capacity to conduct oceanographic measurements in ten areas in Patagonia established	- Development of tidal wave/marine currents model. -Generation of data using buoys -Carrying out oceanographic campaigns -Collection of information via remote sensing	-Consultancy carried out to develop numerical model; - Equipment and software for hydrographic circulation model acquired and associated training completed; - Equipment for ocean stations acquired; - Equipment for satellite image processing and associated training complete; - Model is up and running at SHN. Tested with 59 simulations and two real-life events in Caleta Cordova and Rio de la Plata; - Information from buoys and campaigns is available at the SHN. Ocean measures were done in 5 areas.

Sub-component 2.1: Improve the Knowledge Base on the Patagonia Shelf and Complete Identification of Ecologically Sensitive Areas			
Output from Sub-component	**Original output indicator (from PAD)**	**Revised output indicator (from MTR)**	**Output at the end of project**
(i) Transboundary Analysis (TBA) of Patagonian Ecosystems	- Analysis permitting actors to make informed decisions - Agreement with neighbors exists on actions to be taken during the next 15 years.		- TBA completed and used in the development of Strategic Action Plan (SAP)
(ii) Develop maritime sensitivity atlas to improve knowledge base on the Patagonia shelf and complete identification of ecologically sensitive areas	- Establishment of a system for continuous updating of the Atlas		- Maritime atlas is available online and in DVD for from the SAyDS. - Updates to the maritime atlas coordinated with SHN.
(iii) Inter-calibration of key laboratories of marine institutions	- Percentage of institutions reaching international standards of data requirements - Sustainability of the program at the end of the implementation phase		-A total of 12 laboratories participated during the first phase, and 9 laboratories participated in the second phase. - Sustainability was not established as part of a general framework. Each laboratory develops its own strategy.

With respect to sub-component 2.2, the expected outputs were originally the identification of priority protected areas and a study on incidental fishing of birds, mammals and reptiles. The study on incidental catch was not completed.

Sub-component 2.2: Develop Marine Protection Tools Based on Impact Evaluation			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output indicator (from MTR)**	**Output at the end of Project**
(a) Priority setting of areas for marine biodiversity and preparation of legal and technical aspects for piloting marine reserves.	- All key ecosystems included in the prioritized areas for marine reserves. - Lessons from pilot projects to protect marine biodiversity from the Matching Grant Program. -Analysis of legal and management aspects for establishing reserves in federal and provincial waters	-Identification of areas for protection or conservation -Training and strengthening of protected areas	-The UNDP/GEF project carried out by Fundacion Patagonia Natural as part of the prioritization of protected areas. -The project developed a methodology to evaluate effective management of protected areas. - Training was provided and a guide was developed and published.
(b) Evaluate the incidental catch of birds and mammals and develop a strategy based on the severity of the impacts	- Extent and severity of incidental catches of key populations assessed and demonstrated techniques to reduce impacts	- Evaluation of incidental fishing and strategic action plans	- Incidental catch study was not carried out as planned. - A workshop was completed and a report prepared on the impacts. - A national strategy was not completed.

The main outputs expected from sub-component 2.3 were the development of research projects in topics related to marine biodiversity.

Sub-Component 2.3: Promote Capacity Building and Regional Knowledge Sharing on Marine Biodiversity Protection			
Output from Sub-component	**Original Output Indicator (from PAD)**	**Revised Output Indicator (from MTR)**	**Output at the end of Project**
Promote capacity building and regional knowledge sharing on marine biodiversity protection	- Five pilot conservation and pollution prevention tools of an innovative nature developed. - Cooperative research project implemented and results disseminated		- 47 Competitive sub-projects completed. Financing for beneficiaries provided. - Ex-post analysis of the projects done by the PIU.

<u>Component 3. Capacity Building, M&E and Project Management.</u> The objectives of the third component were to address the need to strengthen the marine resources management capacity of the provincial governments and help disseminate the information on Patagonia's marine environment generated by the Project and that available from other sources and to conduct project management as well as monitoring and evaluation.

Component 3: Capacity Building, M&E and Project Management			
Output from Component	**Original Output Indicator (from PAD)**	**Revised Output Indicator (from MTR)**	**Output at the end of Project**
(a) Capacity Building, M&E and Project Management	- Training for provincial authorities - Environmental information system for the Patagonia shelf area with nodes in each Patagonia province - Monitoring and Evaluation program measures health of the LME - Sustainable policies adopted by provincial environmental authorities	-Training of key personnel. -Strengthening of provincial authorities. -Improvement of information for decision making. - Execution of actions on environmental education. -Systematization of existing information. -Procurement of computing equipment for SICOM.	- Focal points in the 4 Patagonian provinces were trained. - Software for SICOM developed and collection of information carried out (to be done continuously). - Four studies on fisheries were completed.

Disbursements. The table below shows the final budget by component and the amounts disbursed.

Component	Revised Budget by end of Project	Funds Disbursed by end of Project	Funds not disbursed
1. Maritime Pollution Prevention			
1.1. Improve preparedness and response to oil spills and prevent ship-based pollution	1,218,780	1,178,814	39,966
1.2 Reduce navigational risks by introducing a marine electronic infrastructure program	807,375	787,885	19,489
Total Component 1	**2,026,155**	**1,966,699**	**59,455**
2. Marine Biodiversity Protection			
2.1. Improve knowledge base and identify ecologically sensitive areas	1,371,421	1,327,456	43,965
2.2. Develop marine protection tools	191,637	143,597	48,040
2.3. Promote capacity building and knowledge sharing on marine biodiversity protection	2,459,106	2,325,506	133,599
Total Component 2	**4,022,163**	**3,796,559**	**225,604**
3. Capacity Building, M&E and Project Management			
3.1. Capacity building	1,328,554	1,217,428	111,476
3.2. Monitoring and Evaluation	748,243	600,262	147,981
3.3. Project Management	224,885	211,388	13,497
Total Component 3	**2,301,682**	**2,029,078**	**272,954**
PROJECT TOTAL	**8,350,000**	**7,792,336**	**558,014**

ANNEX 3. ECONOMIC AND FINANCIAL ANALYSIS

This annex re- examines Incremental Cost Analysis prepared during project design. This scenario was presented in the PAD, following the criteria to determine the value added of co-financed GEF operations.

Incremental cost

The difference in cost between the Baseline Scenario and the proposed GEF alternative was estimated at US$ 18.74 million. Of this amount, it was estimated that about US$ 4.33 million would be contributions from the GOA, US$ 6.06 million would be contributions from the beneficiaries of the matching grant programs. It was estimated that an Incremental Cost of US$ 8.35 million would be incurred to achieve global environmental benefits through the improved management of international waters. This amount would therefore be eligible for GEF support

Baseline scenario during project preparation

At the project preparation stage it was assumed that the international waters of the Patagonia marine ecosystems were subject to a number of pressures from human activities. In the absence of GEF assistance, Argentina would continue to support the development of the productive sectors of the economy with limited consideration for the environment. Unsustainable practices were common in industries characterized by a "frontier mentality" such as oil and mining.

For the purpose of this project, the baseline was originally calculated at **US$ 18 million** and consisted of the following investments:

- In the field of sustainable fisheries management the Secretariat for Agriculture, Livestock, Fisheries and Food, SAGPyA would be implementing a Learning and Invocation Loan (LIL) of **US$ 8.5 million**, including a US$ 5 million IBRD loan that did not materialize.
- Regarding Land Based Sources of Marine Pollution the main public investment is the IDB financed Port Modernization Project. The environment component of this project would purchase equipment and improve management in some of the bigger ports in Argentina. The value of the environmental investments was **US$ 6.6 million**.
- A number of provincial programs valued at **$2.9 million** were under way during project preparation to build the knowledge base of the marine ecosystems in Argentina. This included the Institutional Development Fund Grant to a local NGO and a Bank supported program on public involvement in municipal environmental management. The IDB-funded Environment Institution Strengthening Project also provided support for information management through a national network of environmental information.
- Monitoring and evaluation of project management was largely a project specific activity, as a result there is no baseline available for this component.

GEF Alternative

With the GEF assistance for addressing the international waters objectives, the GOA was able to undertake an ambitious program that generated both national and global benefits. The GEF alternative comprised the baseline scenario, described above (fisheries management, basic oil spill equipment and limited information sharing), enhanced by expanded marine pollution prevention capacity and establishment of a marine electronic highway structure and the implementation of pilot activities in fisheries management and marine conservation. The total amount for the GEF alternative is calculated at **US$ 36.76 million** (US$ 18 million, baseline scenario + US$ 18.76 million, GEF project including other co-financing contributions).

The GEF alternative catalyzed additional development resources, beyond the baseline scenario, totaling US$ 18.76 million including the GEF contribution of US$ 8.35 million and an additional US$ 10.40 million, primarily for various aspects of the establishment of the marine electronic highway, improvements in maritime safety and piloting various programs to reduce marine pollution and improve marine resource management. These resources were only available under the GEF scenario. Due to limitations in the administration of funds by UNDP, the GEF alternative could not finance some pilot studies of how to reduce the biodiversity impacts from the fishing sector, and set the stage for policy changes that would include biodiversity considerations in the fishing sector.

The GEF alternative had a significant effect on reducing maritime traffic risks and the associated damage that can affect the marine environment. The improvements under the GEF alternative provided practical management experiences to the key government agencies (SAyDS, PNA and SHN) responsible for managing cutting edge technology and international collaboration. The GEF alternative cost US$ 11.03 million.

To improve sustainable management of resources in Patagonian waters and enhance the knowledge base there were significant global benefits including the testing of a methodology to evaluate the effective management of coastal and marine protected areas and the enhancement of the global knowledge base of the resources and calibration of the Argentine institutional laboratories with the international standards, on a continuous basis. There were also some domestic benefits from the GEF alternative including the strengthening of Patagonia - based institutions and the human capacity to manage the marine resources. As was demonstrated in this report, the project also fostered a better climate for collaboration between the key actors.

Finally the monitoring and evaluation activities and project management generated some global benefits including the lessons from project implementation, a good baseline for future work and design experiences for future projects.

Based in the accomplishments described above, the Incremental cost Analysis prepared during project preparation stage was sound. The impediments to implement a fisheries component as well as the changes made in the biodiversity component did not affect the project contributions towards the development objective as well as its contribution to the global environmental objective.

ANNEX 4. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION PROCESSES

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Laura Tlaiye	Sector Manager, Environment and Water Resources*	LCSEN	Task Team Leader
Carl Lundin	Marine Biodiversity Specialist	-	Marine Biodiversity and Pollution Issues
Susana Cirigliano	Financial Management Specialist	-	Financial Management Specialist
Andres Mac Gaul	Senior Procurement Specialist*	LCSPT	Procurement
Angela Armstrong	Senior Operations Officer*	LCSEN	Operations
Beatriz Iraheta	Language Program Assistant*	LCSEN	Task team admin./operational support
Fernando Manibog	Consultant	IEGSE	Former Task Team Leader
John Kellenberg	Sector Manager, Environment*	ECSSD	Natural Resources Economist
Luis Vila	Consultant	-	Maritime Pollution
Renan Poveda	Senior Environmental Specialist*	LCSEN	
Rocio Sarmiento	Language Program Assistant	-	Task team admin./operational support

** Shows current title and unit.*

Names	Title	Unit	Responsibility/ Specialty
Supervision/ICR			
Marcelo Acerbi	Environmental Specialist (ETC)	LCSEN	Project operations assistance and, environmental performance
Roberto Aiello	Senior Energy Specialist	LCSEG	
Antonio Blasco	Financial Management Specialist	LCSFM	Financial aspects
Milen F. Dyoulgerov	Operations Officer	SDNSO	Operations assistance
Hernan M. Gonzalez Figueroa	Consultant	LCSEN	ICR consultant
Lidvard Gronnevet	Consultant	ARD	Fisheries and marine resources management
Nelvia H. Diaz	Language Program Assistant	LCSEN	Task team admin./operational support
Ana B. Iraheta	Language Program Assistant	LCSEN	Task team admin./operational support

Juan Lopez-Silva	Consultant	LCSUW	Task Team Leader, coastal management, industrial pollution abatement
Juan D. Quintero	Senior Environmental Engineer	EASRE	Environmental impacts and safeguards
Samuel Taffesse	Operations Officer	LCSAR	Monitoring and Evaluation
Ellen J. Tynan	Senior Environmental Specialist	ENVGC	Environmental planning and operations
Yewande Awe	Senior Environmental Specialist	ENVGC	Task Team Leader , coastal management, industrial pollution abatement
Glenn S. Morgan	Lead Environmental Specialist	LCSEN	Task Team Leader

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY97		75.44
FY98		159.72
FY99		74.30
FY00		95.20
FY01		77.02
FY02		35.30
FY03		2.97
FY04		0.00
FY05		0.00
FY06		0.00
FY07		0.00
FY08		0.00
Total:		519.95
Supervision/ICR		
FY97		0.00
FY98		0.00
FY99		0.00
FY00		0.00
FY01		0.00
FY02		14.49
FY03		48.71
FY04		62.24
FY05		63.47
FY06		63.31
FY07		52.89
FY08		87.26
Total:		392.37

ANNEX 5. BENEFICIARY SURVEY RESULTS

Not applicable.

ANNEX 6. STAKEHOLDER WORKSHOP REPORT AND RESULTS

COMISION CONSULTIVA DE LA SECRETARIA DE AMBIENTE y DESARROLLO SUSTENTABLE PARA EL PROYECTO FMAM/BIRF 28.385-AR "PREVENCIÓN DE LA CONTAMINACIÓN COSTERA Y GESTIÓN DE LA DIVERSIDAD BIOLÓGICA MARINA"

ACTA N° 12

En la ciudad de Buenos Aires, a los 21 días del mes de Agosto de 2008, se reúnen los representantes de la Secretaría de Ambiente y Desarrollo Sustentable, de la Prefectura Naval Argentina, del Servicio de Hidrografía Naval, de las provincias de Río Negro, Chubut, Santa Cruz y Tierra del Fuego, Antártida e Islas del Atlántico Sur y de la Unidad Ejecutora del Proyecto Marino Patagónico.

En ese contexto, se realizan las siguientes acciones:

1. Los representantes de la SAyDS y de la UEP agradecen a la PNA, SHN y los Puntos Focales Provinciales el trabajo realizado en base a los lineamientos para la elaboración del Informe Final.
2. La Agenda de Trabajo estuvo basada fundamentalmente en continuar con el armado y discusión de la información aportada por los Puntos Focales Provinciales y elementos a incluir.
3. El Director Nacional del Proyecto informó acerca del desarrollo global del mismo haciendo especial mención a las fortalezas adquiridas como resultado de la interacción que existió entre los distintos actores participantes en este Proyecto.
4. El Coordinador General expuso los avances del documento preliminar que servirá de base al Informe Final y que se está elaborando con la información existente en la UEP generada por las diferentes consultorías, Misiones de Supervisión, Actas de Comisión Consultiva entre otros, mas los insumos provistos por los Puntos Focales Provinciales y los coejecutores, según los lineamientos aportados por el Banco Mundial.
5. Se trabajó durante los tres días de Comisión Consultiva, en la integración y unificación de criterios e información que la SAyDS, coejecutores, y las provincias, aportaron entre el mes de junio y julio pasados para la confección del informe final.
6. El Coordinador General enviará a los puntos focales y coejecutores, por correo electrónico, los avances realizados hasta la fecha, con el fin de realizar una revisión final del documento, cuya respuesta deberá ser remitida a la UEP antes del día miércoles 27 de Agosto.

ING. ADRIANA G. GILLEN
Punto Focal Provincial
Proyecto PNUD - ARG. 02/019
S.R.N. TIERRA DEL FUEGO

Viviana Marcela Fernández
Coordinadora de
Ciencia y Tecnología - A.C.T.A.

7. Las Provincias solicitan a la Coordinación General, el envío de los informes finales correspondientes a los Subproyectos Competitivos y los de las consultorías sobre indicadores realizados por los Consultores Morandi y Gracia. Asimismo, requieren el envío de la publicación "Fauna costero-marina de la Argentina y su conservación", la contribución técnica sobre algas nocivas, realizado por el Grupo de Trabajo de Recursos Acuáticos de la SAyDS, como también el Atlas de Sensibilidad Ambiental en formato digital.

8. Respecto de la línea de trabajo de Educación Ambiental, las provincias consideran significativo continuar la serie de Aportes para el Aula y las contribuciones técnicas y se comprometen a avanzar en ese sentido.

9. Se prevé la presentación del Informe Final ante la Misión de Supervisión del Banco Mundial para el 20, 21 y 22 del mes de octubre próximo, comprometiendo los Puntos Focales Provinciales su presencia, como así también los coejecutores.

10. Los Puntos Focales Provinciales y los coejecutores informan que ya han recibido los equipos que constituyen los nodos del SICOM, encontrándose en vías de entrega el correspondiente a la provincia de Tierra del Fuego.

11. Asimismo los beneficiarios solicitan se concrete la visita de la Lic. Vargas para dar la asistencia comprometida por la UEP para su instalación y puesta en marcha, agradeciendo asimismo el apoyo brindado hasta el presente por la citada profesional.

12. Se incorpora el detalle de los temas tratados en la reunión temática del área de Educación, conjuntamente con los profesionales del Grupo de Trabajo de Recursos Acuáticos de la SAYDS.

    - De acuerdo a lo acordado por las provincias de Río Negro, Chubut, Santa Cruz y Tierra del Fuego se definieron las potencialidades de las provincias:
    - Se solicita la posibilidad de continuar la actualización permanente de capacitadores.
    - Las cuatro provincias definirán un cronograma propio de actividades en otras localidades (de acuerdo a la distribución de material).
    - En cuanto a las provincias de Santa Cruz está realizando en el marco del convenio con Educación (buscar posibilidades en la concreción de tecnicaturas sobre ambiente y actividades antrópicas propias de la región: minería / hidrocarburos.
    - En el caso de Río Negro se inició el proceso con el Ministerio de Educación para la implementación de carreras terciarias de ambiente.

ING. ADRIANA B. QUILLEN
Punto Focal Provincial
Proyecto PNUD - ARG. 02/018
S.P.U. TIERRA DEL FUEGO

Coordinadora de
Ciencia y Tecnología - A.C.T.-

- En cuanto al desarrollo de todas las actividades de Aportes para el Aula

- Se lograron como producto
  - 16 talleres en las 4 provincias
  - 460 docentes capacitados
  - 8000 laminas temáticas
  - 10 capacitadores provinciales

- En el proceso se definieron 4 ejes de educación

  - Capacitación y formación: Diversidad de Estilos en las 4 provincias, en la que detectamos potencialidades y debilidades.

  - Curricular, vinculación con los núcleos de aprendizaje prioritario, dificultad en la incorporación en la currícula como eje transversal.

  - Gestión: Roles en el proceso de capacitación: directivos, supervisores y docentes. Se destaca el trabajo realizado con los supervisores en Río Negro.

  - Evaluación: En cuanto a la evaluación del proceso, en los alumnos, docentes y en las tareas de concientización.

- Con la finalidad de continuar con las actividades de cierre, se acordó lo siguiente:

  - Se creó un grupo virtual para facilitar el trabajo y la comunicación entre los representantes de las cuatro provincias y técnicas del Grupo de Trabajo de Recursos Acuáticos, quienes participarán en calidad de observadoras.

  - Se construyó un borrador de trabajo con acuerdos mínimos con vista a la concreción de la escritura de un libro destinado a profesores y alumnos de profesorado de Formación Docente.

  - Se prevé la presentación de un borrador preliminar para el 15 de octubre de 2008.

13. Se incorpora como ANEXO 1 el listado de participantes e invitados que han asistido a esta reunión de Comisión Consultiva.

14. Se incorpora como ANEXO 2 la Agenda de trabajo de la XII Reunión de la Comisión Consultiva del Proyecto.

15. Debido a que se está trabajando a través del PAE, del informe final de Cierre entatizando la sustentabilidad de las actividades encaradas en el marco de este Proyecto los miembros de la Comisión Consultiva sugieren prever en una potencial Fase 2 la modalidad de ejecución plena.

Coordinadora de Ciencia y Tecnología - A.C.T.J. M.E.C.C. y T.

Puesto Fiscal Provincial
Proyecto PNUD - ARG. 03/018
S.R.N. TIERRA DEL FUEGO

16. El Coordinador General del Proyecto agradeció a los presentes su asistencia, participación y colaboración en los temas planteados en el marco de esta Reunión de Comisión Consultiva.

MTE. ADRIANA S. QUILLÉN
Punto Focal Provincial
Proyecto PNUD - ARG. 02/018
S.R.N. TIERRA DEL FUEGO

MARIA L. DESTANI

LIC. OSCAR HORACIO PINEDA
DIRECTOR NACIONAL

Mónica Mercedes Fernández
Coordinadora de
Ciencia y Tecnología - A.C.T.J.
M.E.C.C. y T.

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ANNEX 7. SUMMARY OF BORROWER'S ICR AND/OR COMMENTS ON DRAFT ICR

El Proyecto “Prevención de la Contaminación Costera y Gestión de la Diversidad Biológica Marina” se sustenta en una donación del GEF Bloque B Nº 28491 aprobada en diciembre de 1997 que tenía por objeto la preparación del citado Proyecto.

La información aportada en los Talleres de preparación y recabada a través de diagnósticos preliminares realizados por consultores nacionales e internacionales y los aportes realizados por la Prefectura Naval Argentina, el Servicio de Hidrografía Naval y los consultores de la Unidad de Preparación, constituyeron la base sobre la que se preparó el Manual Operativo (MOP) y su correspondiente Plan Operativo Anual (POA).

El ámbito geográfico del Proyecto es la zona costera y la plataforma continental patagónica argentina, abarcando la costa y aguas jurisdiccionales de las provincias de Chubut, Río Negro, Santa Cruz y Tierra del Fuego, Antártida e Islas del Atlántico Sur y aguas bajo jurisdicción del Estado Argentino.

La donación provista por el Fondo para el Medio Ambiente Mundial (GEF), ha sido destinado a lograr beneficios ambientales globales que ponen en marcha medidas de precaución para la protección de las aguas internacionales, así como al apoyo prioritario para el mejoramiento de la seguridad en la navegación en la región y un programa efectivo orientado a la prevención. Además, la financiación del GEF es usada para catalizar inversiones iniciales del Gobierno y empresas privadas.

Los objetivos fundamentales de este Proyecto fueron: “*Contribuir a la conservación de la diversidad biológica y a la prevención y mitigación de la contaminación costera, con el fin de mejorar la calidad de vida de los habitantes de la región*”.

Los desafíos principales del Proyecto eran: 1) Resolver el déficit de capacidad institucional en las administraciones provinciales a fin de posibilitar la fijación de objetivos realistas y la determinación de actividades que coadyuven a superar problemáticas concretas, que resulten fácticamente evaluables y sean susceptibles de seguimiento técnico y contable. 2) Fortalecer a las instituciones responsables del control de la contaminación, formando y capacitando personal relacionado con este tipo de incidente y 3) Proveer del equipo y equipamiento necesario para tales tareas, ya que las actividades antrópicas pueden originar impactos ambientales negativos tales como: la contaminación proveniente de embarcaciones, del continente (turismo, efluentes, desechos, lixiviados, etc.) y de actividades "off Shore", la sobrepesca y las prácticas pesqueras con métodos no selectivos, entre otras.

Se trabajó en tres componentes siendo estos 1) Prevención de la Contaminación 2) Componente de Conservación de la Diversidad Biológica. 3) Implementación del Proyecto y Fortalecimiento Institucional.

Las Instituciones participantes como beneficiarias fueron la Secretaría de Ambiente y Desarrollo Sustentable (SAYDS) y las Provincias Patagónicas, mientras los Coejecutores eran el Servicio de Hidrografía Naval (SHN) y la Prefectura Naval Argentina (PNA).

Los logros del Proyecto pueden resumirse en haber logrado el Fortalecimiento Institucional tanto de los actores que tienen responsabilidad en la Prevención de la Contaminación Marina como es el caso de Prefectura Naval Argentina, como de las Provincias Patagónicas beneficiarias del Proyecto. Dicho Fortalecimiento se ha basado en equipamiento y capacitación. Asimismo entre los desafíos que han sido cumplidos acabadamente pueden mencionarse la información generada por los Subproyectos Competitivos de Innovación Tecnológica e investigación aplicada, a través de los cuales se ha generado la información necesaria para que los decisores puedan respaldar sus decisiones en cuanto al cuidado ambiental.

Herramientas tales como el Atlas de Sensibilidad y el SICOM, son de gran utilidad para todo usuario interesado en la información existente en cuanto a lo relacionado con la biodiversidad, y con el ambiente marino patagónico.

Un hecho destacable es la puesta en acción de lo realizado por el proyecto ante un evento real como fue el siniestro de derrame de hidrocarburos ocurrido en Caleta Cordova en el año 2007. No sólo se puso en práctica lo aprendido en los cursos de capacitación realizados por este Programa sino que se ubicó en terreno el sistema de control de derrames y el de simulación de este que permitió tener información anticipada de lo que eventualmente ocurriría ante el incidente petrolero.

Finalmente pueden extraerse las Lecciones Aprendidas, en las que se destacan como principales: La buena interacción generada entre las partes tanto ambientales (SAyDS, Provincias, PNA y SHN), como la científica y las áreas de decisión. La necesidad de mejorar el sistema administrativo tanto de la totalidad del Proyecto como el sistema administrativo de las Provincias en cuanto al Proyecto se refiere. La necesidad de darle continuidad en el marco de la Etapa II de este Proyecto, a las actividades generadas.

ANNEX 8. COMMENTS OF COFINANCIERS AND OTHER PARTNERS/STAKEHOLDERS

ANNEX 9. LIST OF COMPETITIVE SUB-PROJECTS

	Subproyecto	Director
01	Accidentes del pasado, decisiones del futuro: monitoreo y educación para prevenir la introducción de especies invasivas a través de puertos patagónicos	José María Orensanz
02	Caracterización espacio-temporal de zonas frontales costeras en la Plataforma Patagónica.	Patricia Martos
03	Desarrollo de reactores de biofilm para tratamiento continuo de aguas contaminadas con hidrocarburos provenientes de residuos de sentina de buques.	JoséLuis Esteves
04	Diversidad y producción de comunidades bentónicas de importancia comercial en sistemas frontales de Argentina.	Claudia Bremec
05	Estudio de la circulación de las aguas del Golfo San Matías mediante la aplicación de modelos numéricos hidrodinámicos forzados con marea y viento.	Walter César Dragani
06	Geografía bio-acústica de la región marina de Patagonia: nuestros recursos marinos en tres dimensiones.	Adrián Madirolas
07	Uso turístico y conservación de las aves marinas del Canal Beagle, Tierra del Fuego.	Adrian Schiavini
08	Marismas Patagónicas: caracterización y evaluación de su integridad ambiental dirigidas a mejorar la conservación de la biodiversidad costera austral y la educación ambiental en la región.	Alejandro Bortolus
09	Estudios de la dinámica poblacional con un enfoque regional para el manejo y conservación de gaviotas patagónicas.	Pablo Borboroglu
10	Introducción de especies exóticas en Patagonia: La reciente invasión del cangrejo verde europeo Carcinus maenas como modelo para el estudio del impacto ecológico y la planificación de estrategias de control.	Pedro Barón
11	Bases biológicas para la conservación de crustáceos marinos con importancia comercial	Gustavo Lovrich
12	Determinación del efecto de la calidad de la dieta en la producción gonadal del erizo comestible Loxechinus albus.	Jorge Calvo
13	Factibilidad del cultivo y la explotación de la ostra puelche, Ostrea puelchana, en el Golfo San José (provincia de Chubut) en función de la presencia-ausencia del patógeno de declaración obligatoria Bonamia sp.	Florencia Cremonte
14	Sistematización y difusión de alternativas de manejo participativo de pesquerías: el caso del co-manejo de las pesquerías del Golfo San José (Zona 1, provincia de Chubut).	Inés Elías
15	Biodiversidad de comunidades meiofaunísticas en playas areno-limosas de las provincias de Río Negro y Chubut.	Catalina Teresa Pastor
16	Monitoreo planctónico y ambiental para el desarrollo sustentable del cultivo comercial de mejillón (Mytilus edulis chilensis) en la zona de Almanza, en el Canal Beagle (Tierra del Fuego).	Nemesio A. San Román
17	Biodiversidad bacteriana marina de agua costera y potencial de depuración de la contaminación por hidrocarburos del área central del Golfo San Jorge	Oscar Pucci
18	Las comunidades bentónicas costeras como indicadores de contaminación ambiental en la Ría Deseado (Santa Cruz).	Ricardo Bastida
19	Monitoreo de contaminación por Tributilestaño (TBT) en puertos Patagónicos utilizando el fenómeno de IMPOSEX en moluscos como bioindicador.	Pablo E. Penchaszadeh
20	Estudio del comportamiento de ataque de gaviotas a ballenas: búsqueda de soluciones y desarrollo de una estrategia de comunicación.	Marcelo Bertellotti
21	Control de la contaminación marítima costera de Tierra del Fuego por efecto de la actividad industrial, urbana y petrolera off-shore	Fernando Miguel Galbán
22	Dinámica del asentamiento de poblaciones bentónicas en fondos duros del Golfo San	Julio H. Vinuesa

	Jorge	
23	Planificación Participativa de Políticas Públicas para la Gestión Sustentable de los Recursos Marinos de la región del Canal Beagle y costa atlántica de Tierra del Fuego utilizando valoración económica en una plataforma SIG.	Mariano Jager
24	Recuperación, aprovechamiento y transformación química de Quitina/Quitosán extraído de los restos de crustáceos de las costas patagónicas.	Miriam Strumia
25	Moluscos Opistobranquios de Patagonia. Diversidad biológica, bioindicadores de contaminación y fuente de productos naturales	Claudia Muniain
26	Conservación de aves migratorias transcontinentales y patagónicas: bases para el ordenamiento territorial y planificación del estuario del río Gallegos y río Chico (Santa Cruz, Patagonia Austral).	Enrique Bucher
27	Importancia de los ecosistemas de borde en el control de la biodiversidad y producción biológica de la región marina patagónica.	Eduardo Marcelo Acha
28	Condiciones de base en la superficie del Mar Patagónico.	Alejandro Bianchi
29	Producción Primaria del Frente de Talud y Plataforma Patagónica Sur: primera estimación conjunta a partir de datos de campo y satelitales	Vivian Lutz
30	Las comunidades planctónicas de la plataforma patagónica austral: biodiversidad, relaciones tróficas y variabilidad ambiental.	Marina Elena Sabatini
31	Elaboración de un Atlas hidrográfico digital de la Plataforma Continental Patagónica (PCP, 40-56ºS): Climatología de parámetros oceanográficos y análisis objetivo de las masas de aguas	Raul Guerrero
32	Ecología trofica de aves marinas: implicancias para su conservación y la planificación de áreas marinas protegidas.	Pablo Yorio
33	Dinámica de especies de microalgas nocivas en aguas costeras de Chubut. Identificación y cuantificación de toxinas utilizando métodos modernos de detección.	José Carreto
34	Bases para el monitoreo y herramientas de gestión para el manejo de las poblaciones de mamíferos marinos afectadas por las actividades turísticas y recreativas en el litoral Patagónico.	Enrique Crespo
35	Evaluación de áreas costeras de la provincia del Chubut para su uso en acuicultura	Héctor Zaixo
36	Potencial de Bioremediación Intrínseca de Hidrocarburos Aromáticos Policíclicos en Sedimentos Marinos de la Costa Patagónica	Hebe Mónica Dionisi
37	Relevamiento de especies infaunales en los Golfos Nordpatagónicos (Río Negro – Chubut) y evaluación de su explotación bajo pautas experimentales.	Enrique Morsan
38	Evaluación de riesgo por especies acuáticas invasoras: monitoreo del agua de lastre en puertos patagónicos de ultramar	Demetrio Boltovskoy
39	Indicadores de contaminación por TBTs (disruptores endocrinos) y por la explotación petrolera en costas patagónicas. Efectos sobre organismos marinos de la zona y estudios de estrategias alternativas de desarrollo sustentable.	Norma Sbarbati Nudelman
40	Características ambientales de los golfos San Matías y San José mediante datos de campañas oceanográficas e imágenes satelitales: identificación de áreas claves en el desarrollo de procesos biológicos	Andrés L.Rivas
41	Estudios ambientales en ecosistemas costeros perturbados (Bahías de Ushuaia).	Oscar Amin
42	Estudio de la contaminación del Río Chubut y su influencia en la costa Chubutense: Impacto en la biodiversidad del bacterioplancton y fitoplancton	Walter Helbling
43	Contaminación marina patagónica	Federico Isla
44	Biodiversidad y dinámica estacional del fitoplancton en la Patagonia: el área del talud	Martha Ferrario

	y la plataforma adyacente.	
45	La comunidad microbiana marina y la materia orgánica del Ecosistema Patagónico Austral en la columna de agua y en los sedimentos de fondo: su utilidad como indicadores ambientales para el monitoreo de la calidad y productividad de las aguas.	Viviana Alder
46	Estudio de base para una gestión integrada de la bahía de San Julián.	Héctor Zaixo
47	Biodiversidad algal de las costas patagónicas argentinas: estudio integral químico - biofarmacológico destinado a revalorizar los recursos a través de un potencial aprovechamiento industrial.	María Luján Flores
48	Zonificación del Ecosistema Marino Patagónico a partir del uso complementario del hábitat por parte de dos depredadores tope.	Claudio Campagna
49	Fortalecimiento del Programa de Monitoreo de Floraciones Algales Nocivas (FANs), Calidad de Agua y Biotoxinas en aguas costeras de la provincia de Chubut	Norma Santinelli

ANNEX 10. LETTER FROM THE IMPLEMENTING AGENCY REGARDING THE ICR

Jefatura de Gabinete de Ministros
Secretaría de Ambiente y Desarrollo Sustentable

"2008 – Año de la Enseñanza de las Ciencias"

BUENOS AIRES, 5 de Diciembre de 2008.-

NOTA N° 0546/08 SsPyPA

SEÑOR OFICIAL DE PROYECTO:

Tengo el agrado de dirigirme a Usted con motivo de la presentación del ICR – Informe de cierre y resultados del Proyecto Prevención de la Contaminación Costera y Gestión de la Diversidad Biológica Marina, donación GEf 28385-AR, recibido en la Dirección Nacional del Proyecto el 1 de diciembre del corriente.

Sobre el particular, y habiéndose revisado el contenido del mismo, se deja constancia que no se formulan observaciones al respecto.

Sin otro particular, saludo a Usted atentamente.

BANCO MUNDIAL

RECIBIDO 13 : 00 Hs.

AL SEÑOR
OFICIAL DE PROYECTO
DEPARTAMENTO SECTORIAL DE DESARROLLO SUSTENTABLE
OFICINA REGIONAL AMERICA LATINA Y CARIBE
Glenn MORGAN
S / D

IBRD 30418

SOUTHERN ARGENTINA
COASTAL TOURISM AND BIODIVERSITY IN PATAGONIA

MAIN TOURISM AREAS
SOUTHERN RIGHT WHALE CALVING GROUNDS
SEA LION COLONIES
PENGUIN COLONIES
CORMORANTS AND WADERS

200 m. ISOBATH
HARD BOTTOM AREAS
VERY HARD BOTTOM AREAS
MAJOR FISHING PORTS
RIVERS
SELECTED CITIES
PROVINCE CAPITALS
NATIONAL CAPITAL
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES

SOUTHERN ARGENTINA
POLLUTION OF THE COASTAL WATERS

SEWAGE POLLUTION
SENSITIVE AREAS AFFECTED BY OIL SPILLS
HEAVY METAL CONTAMINATION
OIL PLATFORMS
MAIN CRUDE OIL CHARGE/DISCHARGE TERMINALS
200 m. ISOBATH
HARD BOTTOM AREAS
VERY HARD BOTTOM AREAS
MAJOR FISHING PORTS
PAVED ROADS
UNPAVED ROADS
LOCAL ROADS
SELECTED CITIES
PROVINCE CAPITALS
NATIONAL CAPITAL
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES

Area of map

A DISPUTE CONCERNING SOVEREIGNTY OVER THE ISLANDS EXISTS BETWEEN ARGENTINA, WHICH CLAIMS THIS SOVEREIGNTY, AND THE U.K. WHICH ADMINISTERS THE ISLANDS.

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MAY 2001