

## PROJECT BRIEF

### 1. IDENTIFIERS

**PROJECT NUMBER:**

**PROJECT NAME:**

**Regional - Environmental protection of the Rio de la Plata and its Maritime Front: Pollution Prevention and Control and Habitat Restoration**

**DURATION:**

3.5 years

**IMPLEMENTING AGENCY:**

United Nations Development Programme

**EXECUTING AGENCY:**

Consortium of the Comisión Técnica Mixta del Frente Marítimo<sup>1</sup> (CTMFM) and the Comisión Administradora del Río de la Plata<sup>2</sup> (CARP)

**REQUESTING COUNTRIES:**

Argentina and Uruguay

**ELIGIBILITY:**

Both countries are eligible for UNDP technical assistance. Eligible under para. 9(b) of GEF instrument

**GEF FOCAL AREA:**

International waters

**GEF PROGRAMMING**

**FRAMEWORK:**

OP. 8: Waterbody-based

### 2. SUMMARY.

The Project will establish a collaborative framework for addressing transboundary degradation in the Rio de la Plata and its Maritime Front, part of the Southeast South American Shelf Large Marine Ecosystem. Fed by the vast La Plata Basin, the system is also influenced by the Brazil - Malvinas currents which meet in the Maritime Front. The waterbody contains globally significant biodiversity, and supports a number of economic activities, including commercial fisheries, tourism, and transportation. It is increasingly being degraded by point and non-point source pollution, including from hydro-carbons, heavy metals and other industrial wastes, agro-chemicals, and solid wastes, and is also being affected by channelisation, sedimentation and habitat degradation. Many of the main fisheries are subject to an intense exploitation and have reached their maximum sustainable yields. Argentina and Uruguay, the riparian countries, are taking a number of steps to address these problems as part of their national sustainable development baselines. However, despite moves to develop a joint management framework for the waterbody, there is little complementarity between these respective efforts, which focus on coastal rather than deeper waters. This has a sizeable external cost, degrading the integrity of the waterbody, undermining economic sectors, affecting human health, and eroding global conservation benefits.

The Project will contribute to the mitigation of current and emergent transboundary threats to the waterbody by assisting Argentina and Uruguay to prepare a Strategic Action Programme as a framework for addressing the most imminent transboundary issues. Activities would defray the transactions costs of developing a joint management paradigm, by i) raising awareness of priority transboundary concerns, ii) the catalysing of enabling policy, institutional and financial reforms, iii) strengthening stakeholder communications, iv) identifying innovative management tools that may later be applied towards SAP implementation, including economic instruments, v) training resource managers to prepare and implement the SAP, vi) programming targeted investments and vii) supporting 'deal flows' by matching sources of capital with investment opportunities. Preparation of the SAP would be preceded by finalisation of a Transboundary Diagnostic Analysis (TDA), building on assessments already completed during the Block B stage, by prioritizing issues, filling data gaps, and performing an in depth systems analysis of cause/effect variables, including socio-economic and ecological factors.

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<sup>1</sup> Binational Technical Commission for the Maritime Front

<sup>2</sup> Administrative Commission for the Río de la Plata

### 3. COSTS AND FINANCING (MILLION US\$)

<b>GEF:</b>	- Project:	US\$ 5.68 million
	<i>[of which administrative cost is:</i>	<i>US\$ 0.40 million]</i>
	- PDF:	US\$ 0.33 million
	<b>Subtotal GEF:</b>	<b>US\$ 6.01 million</b>
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<b>Co-financing:</b>	- Governments of Argentina and Uruguay through CARP and CTMFM	US\$ 0.8 million
	- IDB, IDRC, ATAS-GTZ, University of Hamburg, local sponsors <sup>3</sup> and cofinancing under negotiation	US\$ 2.43 million
	- In kind contributions of local entities	US\$ 1.57 million
	<b>Subtotal:</b>	<b>US\$ 4.80 million</b>
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<b>Total project cost:</b>		<b>US\$ 10.81 million</b>
<b>Total project cost:</b>	(not including PDF-B and PDF-B co-financing)	<b>US\$ 10.44 million</b>

### 4. ASSOCIATED FINANCING (MILLION US\$)

N/A

### 5. OPERATIONAL FOCAL POINT ENDORSEMENT:

**Name:** Embajador Eduardo Perez      **Title:** Subsecretario de Cooperación Internacional.  
**Organization:** Ministerio de Relaciones Exteriores Comercio Internacional y Culto. (Argentina)      **Date:** 1 December 1998.

**Name:** Ingeniero Luis Santos      **Title:** Director Nacional de Medio Ambiente.  
**Organization:** Ministerio de Vivienda, Ordenamiento Territorial y Medio Ambiente. (Uruguay)      **Date:** 1 December 1998.

### 6. GEF IMPLEMENTING AGENCY CONTACT:

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<sup>3</sup> Local contribution (e.g., municipalities, NGOs, private sector) for US \$ 400.000 will be raised in year one of the project to sponsor communication and dissemination activities in years 2 to 4.

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## Acronyms

ATAS	TRAINMAR Association for South America
CARP	Rio de la Plata Management Commission
CARU	Rio Uruguay Management Commission
CTMFM	Binational Technical Commission for the Maritime Front
DINAMA	National Directorate for the Environment, Uruguay
EIA	Environmental Impact Assessment
GEF	Global Environment Facility
IDB	Interamerican Development Bank
IDRC	International Development Research Center, Canadá
IFI	International Financial Institution
IMM	Municipality of Montevideo, Uruguay
IMO	International Maritime Organisation
INAPE	National Fisheries Institute, Uruguay
INIDEP	National Fisheries Research and Development Institute, Argentina
NGO	Non-Governmental Organization
MIS	Management Information System
SAP	Strategic Action Programme
SPABA	Secretary for Environmental Policy of the Province of Buenos Aires
SRNyDS	Secretary for Natural Resources and Sustainable Development, Argentina
TDA	Transboundary Diagnostic Analysis
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
VCI	Virtual Centre of Information
WB	World Bank

## PROJECT CONTEXT AND BASELINE COURSE OF ACTION

### Project context

1. General Context. The Rio de la Plata and its Maritime Front (Annex VII-1) receive the waters of the Rio de la Plata basin, the second largest river basin system in South America. The basin is formed by three main watercourses: the Parana, with its primary tributary the Paraguay River, and the Uruguay River (Annex VII-2). Over 97% of the total Rio de la Plata freshwater input is supplied by the Parana and Uruguay rivers. The Rio de la Plata is a very dynamic brackish and freshwater system, with considerable flow, scant depth, and a high load of sediments and particulate material from its many tributaries. The surface of the Rio de la Plata is 35.500 km<sup>2</sup> and at its mouth is 230 km wide. Approximately twenty small rivers and a hundred streams discharge their waters into the river. The river has a mean depth of 10 meters and an average discharge of 22.000 m<sup>3</sup>/s into the Atlantic Ocean. The boundaries of the Rio de la Plata (Annex VII(1)) were established under Article 1 of the Rio de la Plata and its Maritime Front Treaty (hereafter referred to as The Treaty).

2. The Rio de la Plata is a tidal environment with six zones distinguished based on morphological and hydrological characteristics. The upper region, characterised by the inflow of waters from the Paraná and Uruguay rivers is formed by (1) the Paraná delta zone, (2) the tidal river zone and (3) the middle Rio de la Plata (located between the limits of saline intrusion and a gradual river-tide delta; the extension of this zone mainly depends on river flow and wind variations). The external region is formed by (4) the marine zone, (5) the Bay of Samborombon and (6) the eastern channel, with their characteristic hydrodynamic and sedimentary processes.

3. The main geomorphologic features of the river are (i) the banks, channelling the river flow and trapping and dispersing sediments, (ii) the erosion basins, acting as temporary receptacles and sources of sediments and (iii) the channels, through which the river flows. Fine sediments are confined to the upper and middle parts of the Río de la Plata, whereas sands cover most of the outer Río de la Plata and the adjacent continental shelf.

4. The term Maritime Front is used to refer to the ocean space extending seawards from the outer limit of the Rio de la Plata, also known as "Common fishing zone" and delimited in article 73 of the Treaty. Partially overlapping the exclusive economic zones of the Parties, it is subject to a special legal regime under the Treaty. It encompasses a surface area of 215,900 km<sup>2</sup> with a "prohibition zone for polluting activities" (created by article 78 of The Treaty) situated seawards of the external limit of the Rio de la Plata (Annex VII-1). The depth of waters in the zone varies considerably, from an average of 10 meters at the mouth of the Rio de la Plata, to over three thousand meters in its deepest part.

5. The complex oceanographic dynamics of the Maritime Front are determined by (i) the confluence of the warm Brazil current and the cold Malvinas current (rich in nitrates), (ii) the considerable inflow from the Rio de la Plata, rich in phosphates and silica and (iii) the coastal waters of the platform. This is an area of high biological production, and is particularly rich in fisheries. However, knowledge of the characteristics and dynamics of the zone of confluence is still limited.

6. System boundary. The system boundary for the Project covers the Rio de la Plata and its Maritime Front including the adjacent exclusive jurisdiction areas and Territorial Sea (Annex VII-1). The system boundary will also encompass the main land-based sources of pollution and key coastal wetlands (inasmuch as they relate to transboundary issues of pollution or function as

nursing areas of living resources) identified in the TDA and agreed with the respective countries. The Rio de la Plata and its Maritime Front is particularly sensitive to external hydrometeorological forces. Due to thermo-saline gradients and to the convergence of waters from different sources, the area is considered a vast river-marine ecosystem. It is a transitional environment for which - in contrast to other regions of similar size and importance - there is scant information available. This is due to the highly dynamic nature and great expanse of the system, which cause hydrometeorological processes of different scales and magnitudes, making it technically and financially difficult to resolve the spatio-temporal variability of its processes. The transboundary nature of these processes precludes unilateral management of the waterbody by either one of the Parties.

7. The Río de la Plata and its Maritime Front are part of the Southeast South American Shelf Large Marine Ecosystem (LME). The discharge of the Río de La Plata and the Brazil – Malvinas confluence (both included in the project area) are relevant factors in this LME. The Río de la Plata is the main contributor of fresh water to the LME and the mix of waters in the Brazil – Malvinas confluence has physical, meteorological and biological consequences that affect the entire Southeast South American Shelf LME. Biological productivity in the project area is very high.

8. Environmental context. The area is a transition zone where warm, cold and temperate waters mix. A great superposition of species from warm, temperate and cold waters is found in the area. From the available literature, the area has a high level of biodiversity and a low degree of endemic species. Endemic species include the mejillín, (*Brachidontes rodriguezzi*), clams (*Macoma uruguayensis* and *Mesodesma mactroides*), the navaja (*Taggelus gibbus*) and the Plata dolphin, also known as Franciscana (*Pontoporia blainvillei*). This dolphin, on the list of the *Convention on Migratory Species*, is captured by fishermen of Buenos Aires Province (Argentina) and Rocha Department (Uruguay) for subsistence consumption. Knowledge of the biodiversity of the area is limited.

9. River, coastal and high seas species develop all or part of their life cycle in the project area. Several of these species are of outstanding global importance, from an ecological, economic and social standpoint (i.e., tuna and marine mammals). In the upper Rio de la Plata, populations of migratory fish -- sábalo (*Prochilodus lineatus*), boga (*Leporinus obtusidens*), patí (*Luciopimelodus pati*) and dorado (*Salminus maxillosus*) – swim up river, along the lower and middle Parana river at the beginning of autumn and return in the spring. Marking and recapture studies have shown that the fish use this zone as a single space. It has been suggested that the delta of the river is a feeding area for the offspring of these species. Several populations of pinnipeds (*Arctocephalus australis* and *Otaria flavescens*) are found in this area. Annex VII-4 lists the marine mammals found in the project area. Several of these are migratory species of global significance.

10. Socio-economic context. The main economic activities, both in Argentina and Uruguay, are located on the coasts of the Rio de la Plata and its Maritime Front. The Rio de la Plata coastline contains several major urban and industrial centres and most of the port activity of both countries. The combined population of Montevideo and Buenos Aires is close to 16 million inhabitants. In the Maritime Front area, tourism and fisheries provide the main source of livelihood.

11. On the Argentine coast of the Rio de la Plata, the metropolitan axis extends 180 km from the localities of Zarate and Campana, on the Paraná de las Palmas river, to the city of La Plata. This axis concentrates 45% of all the industrial activity (basically chemical and petrochemical) and 35% of the population of Argentina. The city of Buenos Aires and its suburban hinterland concentrate 40% of the population of the metropolitan axis, on a coast some 20 km long.

12. On the Uruguayan coast, the major concentration of population and industry is found in the Department of Montevideo and, increasingly along the coast of the Department of Canelones. Around 50% of the population of the country – and most of its economic, industrial and port activities – is concentrated along a coastal strip about 50 km long, between the Santa Lucia and Pando rivers. During the tourist season, there is also a considerable concentration of population along the coast of the Department of Maldonado, mainly in Punta del Este.

13. The project area contains important fishing grounds for river and marine species. In the upper Rio de la Plata, five species – *i.e.*, sábalo, boga, pejerrey (*Odontesthes bonariensis*), patí and dorado -- are the basis of important commercial and sports fisheries in both countries. These same species are caught upriver in the Parana and Uruguay rivers, mainly by artisanal fishermen. In the outer Rio de la Plata and its Maritime Front the main species of commercial relevance are merluza (*Merluccius hubbsi*), corvina (*Micropogonias furnieri*), pescadilla (*Cynoscion striatus*), squid (*Illex argentinus*) and anchoíta (*Engraulis anchoita*). The exploitation of shared fishing resources is very significant for the economies of both countries. In 1997, catches in the lower Rio de la Plata and its Maritime Front totalled 323 thousand tons with an estimated value of 120 million dollars. A bi-national system has been established for the assessment and management of shared fishery resources in the Rio de la Plata and its Maritime Front and is implemented through CARP and CTMFM.

14. Institutional context. The Treaty of the Río de la Plata and its Maritime Front, signed in 1973 by Argentina and Uruguay, established the legal framework for the bi-national management of the waterbody. This framework includes two bi-national governmental Commissions responsible for the preservation, conservation and rational use of living resources and the prevention and elimination of pollution in these areas. The *Bi-national Technical Commission for the Maritime Front* (CTMFM) and the *Administrative Commission for the Río de la Plata* (CARP) were established in 1976. The Treaty has assigned both Commissions the task of adopting and co-ordinating plans and measures aimed at protecting the aquatic environments under their mandates (Annex VII(1)) and their fauna and the promotion of studies and research. Other relevant duties of the Commissions are:

- The prevention and elimination of pollution and other harmful effects deriving from the use, exploration and exploitation of resources. The Treaty established a “prohibition zone for polluting activities” situated seawards of the external limit of the Rio de la Plata (Annex VII(1)).
- The assessment, conservation and preservation of living resources and their rational exploitation.
- Establishment of catch volumes per species and assignment of quotas to each of the parties.
- Preparation of plans for the preservation, conservation and development of living resources in the zone of common interest.
- Promotion of studies and production of plans for harmonisation of the legislation of the parties, concerning matters falling within the responsibilities of the Commissions.
- Finally, the Treaty provides that the Parties may give the Commissions other functions by means of reversal notes or other forms of agreement.

15. The Commissions are practical and effective mechanisms for bi-national co-operation, co-ordination and management, which have operated for more than 20 years. Delegates to the Commissions have full powers to represent their countries. The Resolutions of the Commissions are published in the Official Papers of both countries with no further governmental processing required for them becoming binding. The resolutions are implemented by the competent national

authorities and the control of its application is exercised by the Maritime Authorities of both countries.

16. Since their installation, the Commissions have actively worked towards the goal of improving management of resources in the area. As such, the Commissions have established bi-national working groups, formed by specialists from institutions of both countries, who analyse and recommend actions to address the issues under their mandates. Particular emphasis has been given to the management of living resources. For example, CTMFM sets catch quotas, maximum catch limits, mesh sizes and other regulations for the fisheries in the Maritime Front. The Commissions have also issued joint resolutions for resources that are distributed in both areas. A recent example is the “Joint Resolution for the determination of distribution quotas by country of the Corvina for the period 1997 to 1999”, issued on 28 May 1997.

17. Binational infrastructure works have also been important. CARP manages the dredging of the Martín García channel in the Río de la Plata and periodically prepare studies of the area’s dynamics. During the last decade both CARP and CTMFM have accorded a growing importance to environmental issues, particularly pollution, in their agendas. One example is the “Co-operation agreement for the prevention of pollution incidents in the aquatic environment produced by oil and other noxious substances”. This agreement entered into force in 1993. To strengthen joint co-ordination and co-operation, the Commissions established, on 19 June 1998, the CARP - CTMFM Consortium establishing the institutional framework for the execution of this project.

18. At the national level both countries have national and local environmental authorities with powers to legislate and exercise control. Key authorities for this project in Argentina are the Secretary for Natural Resources and Sustainable Development (SRNyDS, in particular the Undersecretary for environmental planning), Secretary for Urban Planning and Environment of the City of Buenos Aires, Secretary for Environmental Policy of the Province of Buenos Aires, Navy, Coastguard and Ministry of Economy. Key authorities in Uruguay are the Ministry of Housing, Land Planning and Environment (National Directorate for the Environment, DINAMA), Municipality of Montevideo, other municipalities on the Río de la Plata and its Maritime Front, Navy (includes the Coastguard) and the Planning and Budget Office (OPP).

19. Policy context. At the national level, both countries have developed national policies and programmes aimed at the protection and management of the natural environment and are in the process of strengthening the regulatory capacity of their national environmental authorities, with funding from the InterAmerican Development Bank (IDB). The environmental action plans of Argentina and Uruguay have set as goals the conservation and rehabilitation of the coastal ecosystems of the Río de la Plata and Atlantic Ocean and the strengthening of the management of common resources and boundary areas by means of the existing bi-national Commissions.

20. Environmental authorities (municipal, departmental, provincial and national) in both countries are working on the protection of the aquatic environment. The Port Constructions and Waterway Directorate and the SRNyDS of Argentina passed legislation requiring environmental impact assessments (EIA) before the development of coastal infrastructure. In Uruguay the Municipality of Montevideo introduced regulations on discharges and environmental quality lead values applicable to the waterbodies within its jurisdiction.

21. At the regional level, both countries are signatories of the La Plata Basin Treaty and members of MERCOSUR. At the international level Argentina and Uruguay are parties to a number of international protocols related to the conservation of international waters, including the United Nations Convention on the Law of the Sea. They have also subscribed the Ocean Charter, the Río Declaration on the Environment and Development and ratified the Convention

on Biological Diversity. Both countries are Parties to the Convention on Migratory Species, the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Ramsar Convention on Wetlands of International Importance.

### **Preparation of the project**

22. This project was formulated between October 1997 and June 1998, with the support of GEF Project Development Facility (PDF), and additional funding from the International Development Research Centre (IDRC) and counterpart contributions by both Commissions. Key issues affecting the environmental quality of the Rio de la Plata and its Maritime Front were identified and prioritised during a bi-national workshop held in Piriapolis (Uruguay) from 24 to 27 November 1997. Fifty-four people participated in the workshop as representatives of institutions and organizations from both countries.

23. Following the Piriapolis workshop, four studies were prepared by *ad hoc* groups of specialists from both countries: (i) Institutional analysis and proposals for institutional strengthening, (ii) Review of legislation and proposals for harmonisation, (iii) Environmental Assessment and (iv) Stakeholder Identification and Analysis. These documents were used to provide technical background for the follow-on binational workshop in Mar del Plata, from 18 to 20 March 1998. During this workshop, forty-nine people participated in the identification of objectives, outputs and activities. The results of both workshops were compiled in documents that were distributed to the participants, key institutions of both countries and GEF Implementing Agencies.

### **Baseline situation**

24. Threats and causes. The Rio de la Plata and its Maritime Front are threatened by a multitude of anthropogenic factors within the Plata River Basin, the coastal areas and the waters of the river and the south-west Atlantic Ocean. A key transboundary issue identified during the PDF execution was pollution of the water and sediments of the Rio de la Plata and its Maritime Front from land-based and aquatic activities. The following information has been distilled from the information compiled during PDF implementation and the workshops with representatives from different institutions and organisations.

25. The La Plata basin contains important urban centres and agricultural and industrial activities, and the project area, as such, is a sink for substantial urban, agricultural and industrial wastes. Pesticides, hydrocarbons and heavy metals have been identified in water, sediments and organisms in the lower river with pollution distributions reflecting proximity to urban and industrialized areas. Productivity measurements in the river indicate that the system is of medium to high productivity, with attendant risk of moving into eutrophic conditions. The area is also affected by the alteration of hydrological processes caused by construction of numerous dams in the basin. In the near future, transboundary environmental threats are expected to grow owing to the integration process resulting from the La<sub>2</sub>Plata Basin Treaty and MERCOSUR – a common market covering more than 13 million km<sup>2</sup> and serving a population of about 200 million inhabitants in four countries.

26. The development and operation of the Parana-Paraguay Hidrovia (Puerto Caceres - Nueva Palmira) will increase the transport of goods (mostly soybeans, grains, iron and manganese, oil and other hydrocarbons, and timber) within the region and would have significant environmental impacts on the basin. A total of 47.2 million tons of cargo was shipped in 1996, and the area is subject to heavy oil tanker traffic. There are no traffic segregation systems nor obligatory shipping routes in the outer Rio de la Plata and Maritime Front. In the middle and



upper Rio de la Plata, ships use a system of channels passing near or through important habitats or spawning, feeding and nursery grounds of fisheries resources. In 1997 the oil tanker San Jorge collided with an un-reported rock, with the resulting oil slick contaminating the coast of Punta del Este (Uruguay) and affecting an important colony of sea lions. Argentina and Uruguay are in the process of improving their port operations with funding from the IDB. Demand for port services is likely to increase substantially over the coming years leading to an expansion of the use of existing terminals and the development of new facilities.

27. The coastal areas of the Rio de la Plata and its Maritime Front concentrate the largest urban, tourist and industrial centres and ports of both countries and face accelerating development pressures. The coastal urban centres discharge effluents and industrial wastes into the Rio de la Plata, Maritime Front and small tributaries. Some of these tributaries suffer chronic pollution, for example, the mouth of the Santa Lucia river, Montevideo Bay and the Pantanoso and Miguelete streams in Uruguay and the Matanzas - Riachuelo and Reconquista streams in Argentina. Chronic oil pollution is also a problem in the vicinity of ports and oil terminals. The use of submarine pipes to discharge urban wastes off the coast is common. Exotic bivalves may have been introduced through the discharge of ballast waters. These species have colonised structures in the upper Rio de la Plata and are moving into the Parana River. Toxic red tides are more and more frequent and longer lasting in the outer Rio de la Plata and Maritime Front.

28. Both countries are making important investments in the construction of sanitation systems, restoration of polluted areas, eradication of pollution in territorial waters, development of coastal management initiatives and establishment of environmental management systems. However, the regional dimensions of waterbody degradation – both causes and effects - have not been incorporated into local and national planning and management efforts.

29. The scant depth of the Rio de la Plata makes it necessary to continuously dredge the access channels to the ports. Some 15 million tons of sediments are removed annually. Major works are currently being undertaken to enable deep draught ships to navigate the Parana and Uruguay rivers. Dredging alters river and marine and benthic communities and re-suspend sediments and pollutants. The impact of continuous dredging on the environment of the area is unknown.

30. Freshwater fisheries in the upper Rio de Plata have declined probably due to a combination of pollution, construction of dams along the Parana and Uruguay rivers and fishing activities. Despite management interventions by both countries, fisheries yields in the outer Rio de la Plata and Maritime Front have also declined. The fisheries institutes of both countries maintain programmes for the study and assessment of fisheries resources, and the bi-national Commissions, in co-operation with the Prefecturas Navales (Coast Guards) and fisheries authorities of the Parties, take management measures. Nevertheless the effects of other factors such as pollution and habitat alteration have not been adequately considered in the management of the fisheries.

31. The following barriers face joint management of the waterbody:

- a) Knowledge of the system and the causes and effects of transboundary degradation is both limited and fragmented. The Environmental Assessment conducted during PDF implementation found that information is scattered among several institutions, is limited in scope (focused mostly on fisheries biology) and has a poor spatial and temporal coverage. And integrated analysis of the issues affecting the area is also lacking, including the effects of pollution on ecosystems, and understanding of the import of pollutants from the La Plata basin and export to international waters is perfunctory. A further problem is that there is inadequate co-ordination among the

institutions that generate and store information about pollution and other imminent international waters concerns at the national and regional levels.

- b) Decision makers, in both the private and public sectors are inadequately informed of the causal factors responsible for degradation, nor the solutions and technologies available to mitigate problems. The lack of key data and weak integration of information into decision making hampers efforts to develop targeted collaborative management measures. The mechanisms for joint management are weak, despite existing protocols and institutional arrangements. Current efforts are focused mostly on the management of fisheries resources. The causes and effects of transboundary problems are not internalised into national and binational policies and decision-making processes. The regulatory frameworks of the two countries are weakly integrated and different waterbody quality standards are used.
- c) There is a sizeable baseline of environmental management initiatives and sanitation and environment restoration projects that have a bearing on the waterbodies. However, planning and implementation is weakly integrated. The lack of joint bi-national programming leaves critical environmental management gaps, particularly related to transboundary issues.
- d) There is a lack of bi-national management tools and strategies for transboundary resources other than fisheries. Despite the existing bi-national framework, common tools and strategies for transboundary pollution control and mitigation or biodiversity protection and management have not been developed.
- e) There are different institutional frameworks for environmental management in the two countries. Argentina has a complex framework with overlapping and sometimes conflicting jurisdictions between national, provincial and municipal levels. Uruguay has a single national environmental authority and municipalities have only recently become more involved and active in the management arena. Institutional capacities to address the root causes of transboundary degradation are weak.
- f) Awareness of the transboundary environmental problems afflicting the area is inadequate. Studies during the PDF found that while organised social actors in both countries have some knowledge of priority environmental issues and civil society at large perceives there is a pollution problem in the river and coastal waters (interviewees made no mention of pollution in offshore waters), there is little understanding of its genesis. This in turn serves to handicap grassroots actions to address imminent concerns. Several institutions and projects carry out communication and dissemination activities, though these tend to be diffuse, thereby reducing their efficacy. There are no co-ordinated national or bi-national activities for awareness on transboundary river and marine pollution .

## THE ALTERNATIVE COURSE OF ACTION

32. The sustainable management of the La Plata Basin and South West Atlantic LME requires a significant measure of international assistance. GEF is currently collaborating with a number of initiatives in these areas:

- i) The UNDP/GEF project *Consolidation of the Bañados del Este Biosphere Reserve (PROBIDES)*;
- ii) The UNDP/GEF Project *Consolidation and Implementation of the Patagonia Coastal Zone Management Programme for Biodiversity Conservation*;
- iii) The World Bank/GEF project for *Coastal Contamination Prevention and Sustainable Fisheries Management* in Patagonia;
- iv) The UNEP/GEF Project *integrated watershed management project for the Pantanal and Upper Paraguay River Basin*;
- v) The UNEP/GEF Project *Strategic Action Program for the bi-national basin of the*

*Bermejo River*; and

- vi) The *International Waters Distance Learning and Training Project*, which includes a component executed by TRAIN-SEA-COAST that will establish a regional training centre in Uruguay and develop a course for the management of special marine and coastal zones.

33. The present project will be an important element of this international effort by covering the terminal end of the La Plata basin and the rich oceanic area of the Malvinas - Brazil confluence. A three-step strategy is proposed to achieve the long-term objective of mitigating transboundary threats to the Rio de la Plata and its Maritime Front.

**Step 1.** Transboundary Diagnostic Analysis: Complete identification and analysis of the sources, impacts and root causes of the priority transboundary environmental problems with special reference to river and marine pollution, as well as the identification of barriers to effective waterbody management including economic factors.

**Step 2.** Development of a Strategic Action Program (SAP) of policy, legal, and institutional reforms and priority investments to prevent and mitigate the priority transboundary environmental concerns identified in step 1. Develop jurisdictional, national and bi-national mechanisms and financial commitments for implementation of expected baseline and additional SAP actions. Strengthen the capacity of CARP, CTMFM and key national and local authorities of both countries to prepare and operationalise joint management endeavours and action plans for transboundary pollution reduction and control. Raise public recognition of key local and transboundary causes of pollution in the Rio de la Plata and Maritime Front.

**Step 3.** Development of regional co-operation and co-ordination mechanisms to deal with complex transboundary problems, e.g. pollution loads from sources internal and external to the Rio de la Plata and its Maritime Front.

34. Project preparation activities contributed to the first step of this long-term strategy with (i) the identification of information availability, sources and gaps, (ii) the compilation and analysis of environmental, legal, institutional and stakeholder information and (iii) bolstering of the commitment of municipal, departmental, provincial and national institutions of both countries to cooperate in the resolution of the priority transboundary environmental problems affecting the waterbodies, thereby preparing the ground for SAP preparation and ultimate implementation.

35. The Project is consistent with the GEF Waterbody-based operational program (OP8), as it is focussed on the identification and resolution of transboundary environmental problems affecting an area of regional and global significance. The project will provide the groundwork required to enable both countries to engage in initiatives aimed at reaching agreements to mitigate priority transboundary degradation issues. The preparation of a Strategic Action Programme will make it possible to (i) internalise the external costs of transboundary pollution into domestic and binational policy, (ii) facilitate regional co-operation, (iii) direct national efforts towards filling the gaps that may exist, (iv) promote harmonisation of the respective national legislation and (v) promote necessary investments. The project will benefit from the existence of a bi-national Argentine-Uruguayan legal framework, established under the Treaty of the Rio de la Plata and its Maritime Front.

## **PROJECT COMPONENTS, OUTPUTS, ACTIVITIES AND EXPECTED RESULTS**

36. The four main project outputs and a brief summary of activities are presented below:

### **Output 1: Complete Transboundary Diagnostic Analysis**

37. Information sources, needs, gaps and barriers were identified during the PDF phase. Further effort is required to obtain priority information needed to understand the functioning of the system, the key causes and effects of transboundary degradation (particularly pollution) as well as to integrate it into preparation of the SAP. Most of the information available on the area (i) is scattered, (ii) is limited to a few topics, especially fisheries biology and (iii) has a limited spatial and temporal coverage. There are practically no interdisciplinary studies. A robust TDA is necessary in order to define the baseline resource condition and trends, prioritise transboundary problems, and specify jurisdictional and national interventions to address them under the SAP. Co-financing for TDA preparation has been leveraged from the Commissions, the IDB and the University of Hamburg. Some of these moneys will be used to obtain oceanographic and meteorological information to understand the circulation of currents within the system.

38. The **Transboundary Diagnostic Analysis** will be finalised in three stages:

1) In **Stage 1**, the mechanisms for coordination and cooperation among participating entities will be agreed upon, additional sources of information will be identified and the methodology to be followed for TDA finalization will be agreed upon among the participating entities. An agreement will be signed between the cooperating entities and the project to define the obligations and contributions of each party and the constitution of the Working Groups that will develop and finalize the components of the TDA. Since activities both upstream and downstream of the Plata/MF project system boundary may impact or be impacted by activities in the Plata/MF, arrangements will be made for the coordination of the TDA with similar analyses underway in other projects in the region with transboundary relevance to this project; in particular with the WB/GEF and UNDP/GEF projects in Patagonia, the UNEP/GEF projects in the Pantanal and Upper Paraguay River Basin and Bermejo River, the UNDP/GEF project in the Bañados del Este biosphere reserve (PROBIDES) and the BIOPLATA and ECOPLATA projects.

2) In **Stage 2**, assessments will be made simultaneously, covering transboundary elements of the following subjects: (a) circulation in the Rio de la Plata and Maritime Front, (b) water pollution, (c) sediment pollution, (d) pollution by hazardous residues, (e) biodiversity, (f) fisheries resources, (g) introduction of exotic species, (h) red tides and (i) accumulation of pollutants in the trophic chain. Each of these diagnostics will be developed by a Working Group formed by specialists from both countries including law, economics and the social sciences in order to identify legal, economic and social root causes. The assessments will be effected for the most part through compilation, systematisation and analysis of existing information. In selected areas, specific studies – needed to fill priority information gaps -- will be executed as part of the assessments of water and sediment pollution, pollution effects on biodiversity, biology of key species and accumulation of pollutants in the trophic chain. Also an in depth institutional assessment will be prepared.

The TDA will include a pollution source analysis, including estimated pollutant loadings related to eutrophication, oxygen depletion and toxics in sediments, plus the amount of treatment currently occurring for each identified transboundary pollutant.

The survey of river and marine biodiversity is of particular relevance to perceive the effects of environmental changes and transboundary pollution on the biological diversity of the area. It will make it possible to (i) integrate existing information, (ii) identify areas requiring special attention, (iii) identify key species and indicators and (iv) define priority research and monitoring activities in the project area. Short, specific studies will be carried out, where necessary, to fill knowledge gaps. Activities would be co-ordinated with on-going initiatives in both countries, including formulation of national biodiversity strategies, the UNDP/GEF project for the consolidation of the Bañados del Este Biosphere Reserve (PROBIDES), the BIOPLATA and ECOPLATA projects.

The population biology assessment of fisheries resources is also of particular importance since it will enable the integration and systematisation of existing information aimed at identifying the location of important feeding, breeding and nursery grounds and perceive the effects of exploitation, habitat modification and transboundary pollution on living marine resources in the Plata/Maritime Front. Specific targeted studies will be carried out, as necessary, to define such areas. This diagnostic assessment would be implemented by the fisheries institutes of both countries (INAPE and INIDEP), with support from the Universities. Activities will be fully co-ordinated with the ECOPLATA project.

The institutional assessment will be used to identify needed institutional reform and strengthening activities under the SAP and to prepare the mechanisms and agreements for joint management and control of transboundary threats, including pollution, in the project area.

- 3) Finally, in **Stage 3**, the results of the previous stages will be consolidated, analysed and presented to independent specialists for evaluation. Specialists from the other upstream and adjacent GEF projects in the region will participate in this analysis to ensure the integration of information and a holistic analysis of the priority transboundary problems in a basin-wide context so that SAP actions proposed under each project are coordinated and complementary. The results of the TDA will be presented in a seminar involving both scientists and decision makers, to be held at the beginning of year 3.

39. Integrated information system. A set of management tools will be developed to facilitate the application of the results of the TDA to the preparation and implementation of the SAP. These will allow the compilation, systematisation and processing of information about the area and present or display it in accessible formats for the Consortium and key national and local institutions and stakeholders. These tools will provide an information system and decision-making tool for the area. Three tools will be developed: (i) geographic information system (GIS), (ii) management information system (MIS) and (iii) virtual centre of information (VCI).

A GIS will be developed, on a pilot scale, and made compatible with other GIS in the area, to integrate available knowledge (TDA results and other sources) and facilitate the identification of zones that require special management (e.g., feeding or spawning grounds affected by transboundary pollutants) and to help prioritize and plan SAP interventions.

A MIS will be developed and implemented to produce processed information on an appropriate spatial and temporal scale for use in decision making. This management tool will facilitate effective formulation of the SAP and joint plans for transboundary pollution reduction and their subsequent implementation. The system will be designed on the basis of users' needs, capacity of the Consortium to sustain it over the long term and accessible sources of information.

Finally, the VCI will be developed to compile, integrate, systematise and make accessible information on the area through the World Wide Web. This will make it possible to integrate, in a single site, all the information of the area that is presently dispersed. An element of the VCI will be an electronic forum on pollution in the Plata basin. It will be created and maintained for the discussion and analysis of information on pollution sources, causes and effects among specialists and interested individuals of the region and will include input from the GEF and other projects upstream and downstream of the Plata/Maritime Front with transboundary relevance to this project.

## **Output 2: Strategic Action Program (SAP)**

40. A Strategic Action Program of policy, legal and institutional reforms and priority investments for the Rio de la Plata and its Maritime Front will be prepared and adopted. As a result of the PDF phase it is foreseen that the SAP will concentrate on the priority transboundary issues of (i) reduction and control of pollution from land-based sources and aquatic activities and (ii) protection and conservation of biodiversity and key areas in the lifecycle of important living resources. Other elements would be incorporated during project execution as a result of

finalization of the TDA and other project activities. The SAP will contain (i) a binational strategy for pollution reduction, control and monitoring for the Rio de la Plata and its Maritime Front; (ii) pollution reduction action plans for each of the principal jurisdictions and key pollution sources through which the overall pollution reduction strategy will be implemented; (iii) regional, national and local plans for biodiversity conservation; (iv) a budget and priority investment plan, involving IFI's such as IDB and/or the World Bank, to guide future investments (public or private; national, regional or international) in the area; and (v) an institutional structure for coordination, monitoring and follow up of SAP implementation.

41. The Commissions are fully empowered to address any issue relating to the joint management of the binational water bodies. The Commissions are not fully empowered to address land-based sources of pollution beyond the areas under their jurisdiction (Annex VII(1)), since this would imply an extension of bi-national authority to sovereign territory. However, as bodies under the respective countries' Ministries of Foreign Affairs, the two Commissions have government representation at the highest level. In order to overcome the possibility of insufficient attention being paid to land-based sources of pollution affecting the Plata/MF system, the project is structured such that the principal jurisdictions containing significant pollution sources are represented by the appropriate pollution control bodies of those jurisdictions. These institutions are represented on the Project Coordination Committee, Intersectoral Working Groups and Technical Working Groups (see "Implementation Arrangements", para. 57-59) and their commitment to SAP implementation is to be expressly obtained as part of the project.

42. Based on the initial analyses conducted in the PDF-B, the SAP and its associated jurisdictional annexes is anticipated to include five or more key elements related to prevention and mitigation of transboundary problems in the Plata/Maritime Front:

1) Targets for Plata/MF water and sediments quality and pollution reduction. As part of the SAP, water and sediments quality and pollution reduction targets for high priority pollutants will be developed based on the results of the TDA and through participatory consensus-building processes involving key authorities charged with emissions reductions and stakeholders from both countries. In the process of defining the targets, the following issues will be considered: (i) the regulations in force in both countries, (ii) the capacity of key national and local authorities and stakeholders to achieve the targets, (iii) the economic and social options and implications of the activities for target achievement and (iv) the bio-physical characteristics of the environments of the Río de la Plata and its Maritime Front. A set of economic and financial instruments will be prepared to promote and facilitate actions for pollution reduction.

2) National and Jurisdictional Pollution Control Programs: A strategy will be prepared to facilitate co-ordination and co-operation between both countries for pollution control in the project area in support of achieving the pollution reduction targets. The strategy will be prepared through a process of analysis and consensus-building involving key local, provincial and national authorities charged with emissions reductions and stakeholders from both countries. Economic and financial instruments will be developed to support pollution control in the long term.

3) Bi-national Environmental impact assessment protocols. Another element of the SAP will be the development and agreement of bi-national protocols for the environmental impact assessment (EIA) of projects developed in the common use area of the Rio de la Plata and its Maritime Front. So far, there is no agreed procedure for environmental impact assessment of projects developed for the area. The adoption of this bi-national instrument will make it possible to arrive at uniform assessments, will facilitate the establishment of common standards and guarantee a holistic vision of the impacts in the area and mitigation measures required. A system will be designed for the training and certification of specialists carrying out EIA in the area. GEF financing is requested to cover the cost of the diagnostics. This

involves: (i) assessing EIA protocols and regulations in force in both countries, (ii) assessing protocols and regulations that might be relevant for the common use area and (iii) preparing a concept paper on the most appropriate EIA protocols for the area and actions proposed for incorporation into the SAP. Formulation, consensus-building and design of a training system will be covered with non-GEF funds.

4) Bi-national strategy for the protection and conservation of coastal and aquatic biodiversity. Based on the results of the TDA and the National Biodiversity Strategies, a bi-national strategy will be prepared for the co-ordination of and co-operation in regard to protection of biodiversity from pollution and its conservation in the area. The strategy will be prepared with the collaboration of relevant national and local authorities (e.g., DINAMA, SRNyDS), key related projects (e.g., BIOPATA, PROBIDES) and organisations that are linked to the subject (e.g., Uruguayan Network of Environmental NGOs, Vida Silvestre, IUCN). A public consultation on the draft strategy has been included as a prior step to its incorporation in the SAP.

5) Investments: The SAP will contain a set of activities aimed at solving the priority transboundary environmental problems of the Rio de la Plata and its Maritime Front. It will include an implementation plan and a budget to guide future investments (public or private; national, regional or international) in the area. The priority investment planning will be coordinated by a Working Group formed by the Consortium, key national and local authorities (responsible for the implementation of action plans), the finance or planning authorities of both countries, the IDB, the World Bank and the UNDP. This will secure the insertion of SAP implementation activities into budgetary decisions and investment portfolios of national and local governments of Argentina and Uruguay. The investment plan would try, as much as possible, to offer opportunities for private investment, both local and international. A draft of the priority investment plan would be circulated among other international development agencies to identify parties interested in funding priority components of the SAP and jurisdictional action plans. International Financial Institutions (IFI's) such as IDB and/or the World Bank will be invited to participate in the preparation and financing of investments addressing the priority transboundary issues identified in the TDA/SAP process; these arrangements will be finalized prior to Project Document signature.

43. During the execution of the Project, a design of the institutional framework for full SAP implementation will be prepared. The proposed implementation structure will be included as an element for execution under the full SAP.

44. The draft of the SAP will be put forward to the Project Coordination Committee for analysis and consensus building. The SAP will be adopted by the Consortium on behalf of Argentina and Uruguay and endorsed by the members of the Coordination Committee. In addition each Authority will also endorse the corresponding action plan for its jurisdiction. The SAP and action plans will be made public and widely disseminated.

### **Output 3: Strengthening and Sustaining the SAP Implementation Framework**

45. As noted in para. 31, a number of barriers exist which prevent the successful joint management of this international waterbody. These include incomplete knowledge of the Plata/MF system, poorly informed decision-makers, weakly integrated binational planning, various institutional weaknesses, limited tools for transboundary resource management, and general lack of public awareness of the project area's situation. Output 3 is designed to overcome many of these barriers through a suite of capacity building and institutional strengthening activities which will in turn enhance and sustain the SAP implementation process.

46. Actions will be taken to i) strengthen the bi-national Commissions and key national and local institutions in both countries in order to prepare and implement the Strategic Action

Program of priority interventions; and ii) increase the level of understanding and participation of key stakeholders in the process of solving priority transboundary environmental problems in the project area.

47. Institutional Strengthening. A Working Group made up of the Consortium and key national and local authorities, with assistance from specialists on institutional arrangements for cooperation and environmental management, will develop mechanisms and agreements for the implementation of the SAP at national and jurisdictional levels based on the institutional analysis prepared as part of the TDA.

48. The analytical capacities of the two bi-national Commissions and key national and local entities will be strengthened to enable them to formulate the SAP and associated jurisdictional action plans. Emphasis will be placed on the exchange of knowledge and experience between related initiatives. Capacity building activities may include: (i) visits to areas where related transboundary environmental and pollution management programmes have been executed; and (ii) specific training in transboundary environmental and pollution management to sensitise managers to new management approaches, methods and techniques.

49. Communication and dissemination. Relevant stakeholders will be systematically informed regarding priority transboundary environmental issues and challenges for pollution reduction in the Rio de la Plata and its Maritime Front. In particular, communication and dissemination activities will aim at promoting recognition of upriver and downstream linkages of pollution and other transboundary problems in the Rio de la Plata and its Maritime Front. All communication and dissemination activities will be co-ordinated with other projects in the area to ensure programmatic congruity.

50. During the first year, awareness activities will aim at making the ~~environmental situation~~ priority transboundary issues of the area better known. Messages will be transmitted through low cost mass media (*e.g.*, advertisements on the radio, press releases and interviews) and through community events, which will be organised in collaboration with local organisations. From the second year onwards, a communication strategy for the project will be implemented, with a wide scope and degree of penetration, based on the voluntary participation of municipalities and other entities (including NGOs) in both countries. It is anticipated that the project will develop messages and other material, and that the municipalities and entities in the countries will cover the costs of transmission. In this way, the entire project area will receive coherent messages.

Exchange seminars between scientists and decision-makers will take place in years 2, 3 and 4. At these events, the results of the different elements of the project will be presented and the floor opened for analysis and discussion. Practitioners and the family of GEF and other projects working on transboundary problems and solutions in other areas of the Plata basin and Southeast South American Shelf Large Marine Ecosystem will be encouraged to present their results in these seminars to facilitate the initiation of basin-wide understanding, cooperation and coordination. These seminars will complement the electronic forum on transboundary issues in the Plata basin (see paragraph 39) to form a basin-wide information sharing and exchange mechanism.

Four high level events will be organised, with the objective of focussing attention on priority transboundary issues identified during the TDA phase. These events will assemble relevant decision-makers and resource managers to present and analyse issues relevant for the preparation of the SAP and associated jurisdictional action plans.



#### **Output 4: International Waters Indicators**

51. Working in concert with appropriate scientific and technical institutions and government agencies in the region, in line with emerging GEF policies the project will develop a set of 'indicators' to track the short and long-term impacts of this and other related projects in Plata/Maritime Front. Key indicators will include *process* (e.g. policy, legal, institutional, etc. reforms), *stress reduction* (e.g. reduced pollutant loads, fishing pressure, etc.), and *environmental status* (e.g. cleaner waters/sediments, restored habitats, sustainably managed fisheries, etc.).

#### **RISKS AND LONG TERM SUSTAINABILITY**

52. Risks. FODA analysis was used to identify the project's strengths, opportunities, weaknesses and threats. The proposal incorporates activities to overcome the greatest extent possible, the weakness and threats identified. The project will face the following risks:

1. The Commissions have limited experience in addressing transboundary environmental management issues, particularly pollution. As mentioned above, the Commissions' work has concentrated on the management of fisheries resources and infrastructure works. The Commissions recognise the need to direct joint efforts towards integrated environmental management of the area. To lessen this risk, close cooperation with national and local authorities and institutional strengthening activities have been incorporated into the project, and will enhance capacity to prepare and implement the SAP.
2. The Commissions have different management responsibilities. The responsibilities of CARP concerning pollution and formulation of management plans are not as broad as those of CTMFM. This subject was analysed by both Commissions during the PDF. The Treaty foresees that other functions may be entrusted to the Commissions. For this reason, it would be feasible to bring into line the functions of both Commissions. This subject is on the agenda of CARP.
3. The authorities of the countries may delay implementation of SAP actions. The Commissions' areas of responsibility do not encompass some of the sources of pollution that are affecting the area. In such cases, the adoption of measures will require the collaboration of local, provincial, departmental, or national authorities. There are a great number of authorities involved, each with their own agenda and implementation priorities. The risk is that authorities may delay interventions aimed at addressing the recommendations generated by the project. In order to minimise it, the following actions have been incorporated:
  - (i) The Consortium has established a Project Coordination Committee (see implementation arrangements) for the coordination of activities among bi-national, national and local authorities in preparation of the TDA and the formulation, adoption and implementation of the SAP.
  - (ii) The Consortium has also established a Technical Advisory Group in order to optimise the coordination at the implementation level with scientific and technical organisations, the private sector and the NGOs.
  - (iii) The SAP will be endorsed by the agencies represented in the Coordination Committee, which includes the Finance and Planning authorities of the Parties. Each authority will also endorse the action plan for its jurisdiction.
  - (iv) The preparation and analysis of all project products will be made by means of open and participatory mechanisms. Intersectoral Working Groups will be established to guide the processes and analyse the results.
  - (v) The direct participation of local governments and entities in the two countries will be actively promoted. This will contribute to the dissemination of information to a wider

constituency, and placement of transboundary environmental issues on the agenda of the entities with responsibilities in the area.

4. Information of relevance for the Project is dispersed. In the workshop in Mar del Plata, several Working Groups mentioned the difficulty of accessing information as a management constraint. To reduce this risk, activities to foster linkages between users of information and agencies responsible for data gathering and storage have been incorporated into the design of the project.

53. Sustainability. Institutional sustainability is ensured through the operational mechanisms of the two Commissions. For the execution of the Project, the Commissions have established an agreement formalising the joint operation. Also a Project Coordination Committee has been created. During the execution of the Project, a decision will be made on whether this will be sufficient for the implementation phase or if a different structure is needed. However, the development and implementation of the SAP would be a joint undertaking by multiple executors, considering the levels and responsibilities of the authorities and organisations involved (i.e., local, national, regional and international). Financial sustainability will be ensured through several mechanisms. The Commissions foresee increasing their budget to cover the costs associated with the new activities they will be taking on (e.g., maintaining and updating the management information system). It is foreseen that the operation, maintenance and updating of the GIS and virtual centre of information will, in the long-term, be financially self-supporting. Training activities for operators and user groups will be supported, in the mid-term, by cost recovery.

54. Finally, as part of the preparation of the SAP: (i) cost estimates for baseline and additional SAP interventions will be prepared, (ii) SAP implementation mechanisms determined, and (iii) political and financial commitments will be leveraged. SAP implementation activities would be inserted into budgetary decision and investment portfolios of national and local government. Emphasis will be placed on ensuring that SAP funding mechanisms proposed and selected are feasible and equitable.

55. The execution of this project will involve the participation of donors. It has been proposed that the fourth public awareness event be entitled: “The economics of environmental management in the Rio de la Plata and its Maritime Front” and that it focus on the economic implications of transboundary environmental management of the area, including pollution reduction and management, and the instruments required to sustain efficient environmental management of this transboundary resource. Finally, a donor meeting will be arranged in year four. This will the broader donor community to gain interest in financing the implementation of the SAP.

## **PUBLIC PARTICIPATION AND IMPLEMENTATION ARRANGEMENTS**

### **Stakeholder commitment and participation**

56. The stakeholders linked to the key environmental management issues of the area were identified in the PDF by means of (i) the Working Groups in the Piriapolis workshop and (ii) the study on “Stakeholders Identification and Analysis”. Environmental issues, and particularly pollution, are a high priority for the institutions and societies of both countries. National, Provincial, Departmental and Municipal governments are investing resources in the understanding and regeneration of the river, marine and coastal areas. A high level of participation and commitment was obtained during the PDF phase.

57. The formulation of the SAP involves wide participation of stakeholders at all stages. The main mechanisms to be used are as follows:

- (i) Participation of stakeholders in the Technical Advisory Group of the project.
- (ii) Intersectoral and binational Working Groups, including all organizations on the Project Coordination Committee, that will guide the processes and analyse the results of nearly all the outputs;
- (iii) Analysis and harmonisation events -- e.g., (a) bi-national fora for revising and refining the SAP draft, (b) events to analyse strategies to control transboundary pollution and protect biodiversity and (c) awareness raising events. Additionally, several mechanisms have been incorporated into project design to involve the stakeholders of the area, namely (a) the virtual information centre, (b) dissemination events, (c) community events, (d) mass dissemination of messages.

### **Implementation Arrangements**

58. The project will be implemented taking advantage of the existing bi-national structure and mechanisms for co-ordination, co-operation and management provided by the TREATY OF THE RÍO DE LA PLATA AND ITS MARITIME FRONT and the two bi-national Commissions.

59. As mentioned before (see paragraph 14) CARP and CTMFM are international governmental organisations with the legal standing required for the implementation and fulfilment of their objectives. The Commissions established the Consortium CARP-CTMFM on 19 June 1998 by means of a Joint Resolution. The Resolution established the co-operation, co-ordination and institutional framework for the preparation and implementation of the SAP. The Consortium will serve as the Project's Executing Agency.

60. The institutional structure for project implementation comprises five elements:
1. Consortium Executive Board. Its members are the Chairmen of the four Delegations to CARP and CTMFM<sup>4</sup>. The functions of the Consortium Executive Board include:
    - (i) General supervision of the project.
    - (ii) Approve progress and financial reports.
    - (iii) Select and contract the International Coordinator of the Project according to standard UNDP procedures.
    - (iv) Ensure the participation of relevant authorities and stakeholders of the two countries in the process of drafting the TDA and SAP and its later implementation.
    - (v) Adopt the SAP on behalf of Argentina and Uruguay.
  2. Project Coordination Committee. It will be chaired by the Executive Board of the CARP-CTMFM Consortium and include (i) representatives of the agencies of Argentina and Uruguay, responsible for establishing environmental protection regulations, either in the Project Area or in adjacent areas linked to same, and whose participation is necessary to accomplish the Project objectives, (ii) representatives of the planning offices of the Parties, (iii) representatives of the GEF implementing agencies and (iv) representative of the Inter-American Development Bank. The Coordination Committee will have the following members:
    - ❖ The CARP-CTMFM Consortium (project executing agency), which will chair the Committee and call the meetings.
    - ❖ The following national and local authorities:
 

Argentina	Uruguay
<ol style="list-style-type: none"> <li>1. Secretary for Natural Resources and Sustainable Development (Undersecretary for environmental planning)</li> <li>2. Secretary for Urban Planning and</li> </ol>	<ol style="list-style-type: none"> <li>1. Ministry of Housing, Land Planning and Environment (National Directorate for the Environment, DINAMA)</li> <li>2. Municipality of Montevideo</li> </ol>

<sup>4</sup> Each national delegation to CARP and CTMFM has a President.

Environment of the City of Buenos Aires

- |   |   |
|---|---|
| 3. Secretary for Environmental Policy of the Province of Buenos Aires | 3. A representative designated by the other municipalities on the Rio de la Plata and its Maritime Front. |
| 4. Navy and Coastguard  | 4. Navy (Coastguard)  |
| 5. Ministry of Economy  | 5. Planning and Budget Office   |
- ❖ The three GEF implementing agencies (UNDP, WB and UNEP).
  - ❖ The Inter-American Development Bank (IDB).
  - ❖ The international coordinator of the project will be the Secretary of the Coordination Committee with the support of the Project Implementation Unit.

The Coordination Committee will:

- (i) Provide policy advice for the implementation of the project.
  - (ii) Coordinate project activities among bi-national, national and local levels for the formulation, adoption and later implementation of the SAP.
  - (iii) Agree with the respective Authorities of the Parties the adoption of the SAP and action plans, within the geographical context corresponding to each one of them and according to their respective responsibilities.
  - (iv) Ensure that commitments to implement the SAP, the national and jurisdictional action plans and management instruments generated by the project are made by the Authorities involved at each level within their geographical scope and their responsibilities.
3. Technical Advisory Group shall be established to provide advice and promote broader involvement of civil society in the drafting of the TDA and SAP process. The members will include, among others, representatives of the following entities:
- (i) Scientific and technical organisations which will participate in the activities of the project, including the Naval Hydrographic Service (SHN, Argentina), the Oceanographic, Hydrographic and Meteorological Service of the Navy (SOHMA, Uruguay), the coastal pollution control units of the cities of Buenos Aires and Montevideo, the National Institute for Fisheries Research and Development (INIDEP, Argentina), the National Fisheries Institute (INAPE, Uruguay), the University of Buenos Aires (Argentina) and the University of the Republic (Uruguay).
  - (ii) Associations and chambers of private sector representatives directly linked to activities in the project area.
  - (iii) The most relevant non-governmental environmental organisations of Argentina and Uruguay and the International Union for the Conservation of Nature (IUCN).
4. Project Implementation Unit. This will consist of an International Co-ordinator, a team of sectoral experts and intersectoral Working Groups. This team will be in charge of executing project activities.
5. Intersectoral Working Groups. Entities including national and local authorities, private sector and NGOs, will participate in Working Groups to analyse and develop specific elements of the TDA and SAP.

61. The Consortium Executive Board is integrated by national delegates to the Commissions. Therefore the Consortium will cover their participation. The GEF will cover personnel costs of the Project Implementation Unit.

62. It has been agreed that the Project Implementation Unit will be based in the city of Montevideo, and staffed by nationals of both countries. Meetings and events shall take place in both countries. The Consortium will provide office facilities for the operation of the Project Implementation Unit.

63. During the first year of implementation, an agreement will be signed between participating institutions and the project. Agreements are foreseen with the following international organisations:

- 1) ATAS - GTZ, for co-financing of the development of training activities.
- 2) IDB, for co-financing of specific activities to be determined which would include, among other activities, the integration of economic factors in the development of pollution control strategies.
- 3) IDRC, for co-financing of TDA preparation and the development of the integrated information system.
- 4) IMO, for technical assistance regarding the protection of the marine environment.
- 5) TRAIN - SEA - COAST, for short - term training in environmental management.
- 6) UNESCO, for co-operation with the BIOPLATA project and access to regional oceanographic information as elements of the TDA and integrated information system.
- 7) University of Hamburg (Centre for Marine and Climate Research) for the preparation of the TDA and integrated information system.
- 8) IUCN for collaboration in the preparation of the biodiversity element of the TDA and the bi-national strategy for the protection and conservation of coastal and aquatic biodiversity.

64. The UNDP Office in Montevideo will provide administrative support and will be responsible for general oversight, follow up, and monitoring of the project and will organise evaluation activities.

65. The selection of staff, supplies and hiring will be done according to UNDP procedures and regulations.

## **INCREMENTAL COSTS AND PROJECT FINANCING**

64. The cost of the project is US \$ 10.8 million, including the cost of PDF activities. The GEF will contribute US \$ 5.7 million in incremental cost financing. Project co-financing will amount to US \$ 4.8 million. Of this amount, the requesting countries, through the Commissions, will contribute US \$ 0.8 million in cash, national entities will contribute US \$ 1.6 million in kind and the remainder will be covered by other agencies.

**Component financing in US Dollars (sub-totals in bold)**

<b>PROJECT OUTPUTS</b>	<b>GEF</b>	<b>COFINAN<sup>5</sup></b>	<b>TOTAL</b>
<b>Output 1. Complete Transboundary Diagnostic Analysis</b>	<b>2,462,224</b>	<b>3,001,044</b>	<b>5,463,268</b>
1.1. Preparatory stage	191,265	70,354	261,618
1.2. Diagnostic stage	1,868,769	2140,284	4,009,053
Circulation in the Rio de la Plata and Maritime Front	0,000	1,458,023	1,458,023
Water pollution assessment	372,700	41,837	414,537
Sediments pollution assessment	232,562	85,879	318,441
Assessment of pollution by hazardous residues	69,854	25,678	95,532
Biodiversity	307,373	112,989	420,363
Fisheries resources	315,616	116,020	431,636
Introduction of exotic species	41,912	15,407	57,319
Red tides	41,912	15,407	57,319
Accumulation of pollutants in the trophic chain	104,782	38,516	143,298
Zoning	161,606	61,457	223,063
Ecological charts	74,241	27,291	101,532
Social, economic and legal assessments	35,524	45,620	81,144
Institutional assessment	0,000	55,472	55,472
Personnel and follow up	110,686	40,688	151,374
1.3. Integration of assessments	118,890	43,705	162,595
1.4. Integrated information system	283,301	746,702	1030,003
a. Geographic information system	251,290	331,398	582,688
b. Management information system	0,000	290,112	290,112
c. Virtual Centre of Information	32,011	125,192	157,203
<b>Output 2. Strategic Action Program</b>	<b>1,585,801</b>	<b>746,227</b>	<b>2,332,028</b>
2.1 Targets for water and sediments quality and pollution reduction	369,297	173,894	543,190
2.2. National and jurisdictional pollution control programs	202,947	50,272	253,219
2.3. Binational EIA protocols	194,475	143,569	338,044
2.4 Binational strategy for protection and conservation of biodiversity	114,998	28,487	143,485
2.5 Investments portfolio	441,934	286,754	728,688
2.6 Other SAP elements	113,840	26,512	140,352
2.7 SAP analysis and adoption	148,311	36,738	185,050
<b>Output 3. Strengthening and sustaining the SAP</b>	<b>1,609,265</b>	<b>987,475</b>	<b>2,596,739</b>

<sup>5</sup> Includes US \$ 1,568,000 of contributions in kind

\* includes project support costs @7.5%

<b>implementation framework</b>			
3.1. Institutional strengthening	836,735	270,737	1107,471
3.2. Communication and dissemination	772,530	716,738	1489,268
<b>Output 4. International Waters Indicators</b>	<b>25,000</b>	<b>25,000</b>	<b>50,000</b>
<b>TOTAL</b>	<b>*5,682,290</b>	<b>4,759,746</b>	<b>10,442,036</b>

## MONITORING AND EVALUATION

65. The UNDP Office in Montevideo will be responsible for the follow up and monitoring of the project, and will organise evaluation activities. The Project Implementation Unit will prepare half-yearly reports. At the end of each year, a progress report and financial audit will be prepared, and submitted to all members of the Project Coordination Committee for review. Meetings will take place at least once a year to review the status of implementation.

66. At the end of year 2, a mid-term independent assessment will be made, carried out by specialists selected by UNDP-GEF. This will include: an assessment of (a) the outputs generated, (b) the processes used to generate them and (c) project impacts using indicators included in the logical framework matrix (Annex II). The review would provide recommendations to optimise project delivery. In the last year, a final independent assessment will be made, and its report will be part of the final project report.

67. Working in concert with appropriate scientific and technical institutions and government agencies in the region and in line with emerging GEF policies, the project will develop a set of 'indicators' to track the short and long-term impacts of this and other related projects in the Plata/Maritime Front. Key indicators will include *process* (e.g. policy, legal, institutional, etc. reforms), *stress reduction* (e.g. reduced pollutant loads, fishing pressure, etc.), and *environmental status* (e.g. cleaner waters/sediments, restored habitats, sustainably managed fisheries, etc.).

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## **ANNEXES**

### **REQUIRED:**

- I. Incremental cost analysis
- II. Project planning matrix
- III. STAP Roster Technical Review

### **OPTIONAL:**

- IV. GEF Focal Point Endorsement Letters  
Copies of the official endorsement letters from GEF Operational Focal Points in Uruguay and Argentina
- V. Root cause analysis  
Analysis of priority environmental issues and root causes for Rio de la Plata and Maritime Front
- VI. Groups of actors  
A summary of direct and indirect actors/stakeholders identified during the project preparatory phase.
- VII. Additional information
  - 1. Project Area  
Map showing jurisdictional boundaries of the Rio de la Plata and Maritime Front
  - 2. La Plata basin  
Map showing drainage basin of the River Plate system



## ANNEX 1 INCREMENTAL COST ANALYSIS

### 1. Broad Development Goals

1. Both Argentina and Uruguay—the riparian countries— are committed to protecting the integrity of the Río de la Plata and its Maritime Front, and have developed a raft of national policies, strategies, and programmes aimed at improving management of the waterbodies. The National Environmental Action Plans of both countries place a top priority on conserving and rehabilitating the waterbodies. The countries are parties to a number of international protocols pertaining to international waters, including the United Nations Convention on the Law of the Sea, and the Ocean Charter, have subscribed to the Río Declaration on Environment and Development, and ratified the Convention on Biological Diversity. Critically, the two countries have recognized the necessity of coordinating interventions in order to address the transboundary externalities of development— impacts that are not currently being addressed by national environmental management programmes. A framework for bilateral co-operation has existed since 1973 when the Río de la Plata and Maritime Front Treaty was signed. The Treaty led to the establishment in 1976 of the Technical Commission for the Maritime Front (CTMFM) and the Administrative Commission for the Río de la Plata (CARP), responsible for the conservation and rational use of living aquatic and marine resources and the prevention and remediation of pollution in the waterbodies.

### 2. Global Environmental Objectives

2. The target waterbodies are threatened by a multitude of factors stemming from anthropogenic activities within the La Plata River Basin, coastal areas, and the Southwest Atlantic. Degradation is being caused by discharges of sewage and solid wastes, agricultural and industrial waste, including bio-accumulative toxins, the spillage of hydrocarbons (a threat exacerbated by the possibility of shipping accidents), sedimentation, depletion of fisheries, and loss of critical wildlife habitats. But the ability of Argentina and Uruguay to address these threats is constrained by a number of barriers, which may be summarised as follows: [1] knowledge of the functioning of the waterbodies and understanding of how cross- sectoral activities impact the aquatic and marine environments remains deficient; [2] this in turn handicaps efforts to develop targeted interventions; [3] key decision makers and agents of civil society are not adequately informed of root cause issues, nor are they sensitised to innovative and cost-effective solutions; [4] the national sustainable development baselines of the two countries, although sizeable, are poorly integrated, leaving critical programmatic gaps; [5] environmental management standards and norms differ in the countries and binational management instruments for pollution prevention and control are lacking; [6] institutional capacities to address threats on a holistic basis are weak; and [7] communications infrastructure is inadequate. Thus, despite the laudable goals articulated in the various bilateral agreements, imminent international waters concerns have yet to be holistically addressed. In the meantime, the waterbodies face accelerating pressures—undermining their productivity.

3. This project would contribute to a long-term process aimed at addressing the transboundary externalities imposed by sectoral activities. The determinants of degradation are complex, foreclosing a “quick fix” approach to management. The first step, supported by this

project, would strengthen collaborative efforts through improving understanding of the biophysical functioning of the waterbodies, identifying and prioritising cost-effective solutions, harmonising institutional arrangements for river and coastal zone management, raising stakeholder awareness of underlying problems, leveraging financial resources, and integrating transboundary considerations into domestic environmental impact abatement programmes. The second step, succeeding implementation of this project, would involve investing in pollution control and holistic measures to effect the conservation and sustainable use of living resources. This process will accord sizeable regional benefits by safeguarding human health and productivity, widening the menu of potential livelihood options, and sustaining recreational opportunities and amenity values. Global benefits would be generated through the conservation of biological diversity, reduction in pollution export to international waters, and protection of commercially important straddling fish stocks.

### **3. Baseline**

4. Argentina and Uruguay have instituted a number of baseline programmes to address national environmental concerns particularly in the coastal areas of the Rio de la Plata and the Maritime Front. Most of these are independent national-level activities occurring within territorial waters that, while significant, are deficient in addressing transboundary concerns. The narrative below describes the activities that would occur in a business as usual scenario as they relate to each of the project outputs and activities.

#### *Transboundary Diagnostic Analysis*

5. In the absence of the GEF intervention, the effect of cross-sectoral activities in upstream and adjacent coastal areas on the system will remain imperfectly understood and, as a result, an integrated analysis of pollution problems and impact on the waterbodies will not be effected. The data set is (i) scattered amongst different national institutions, (ii) limited to a few topics, and (iii) in general has limited spatial and temporal coverage. Little investment is planned to support binational information collection and assessment. Baseline efforts with regard to information on and monitoring of water quality and pollutant levels are restricted to specific coastal sectors and include the following:

#### Argentina

- (i) Regular monitoring of water quality on the Argentinian shore of the Rio de la Plata (between San Isidro and Magdalena) is carried out by Aguas Argentinas S.A. in collaboration with SHN and OSN;
- (ii) Assessment of pollution levels in the Matanzas-Riachuelo watershed in Argentina, steps to rehabilitate the area and control/manage industrial pollution and solid waste disposal, being funded by the IDB.
- (iii) A pollution management project, focusing on pollution control in two Buenos Aires municipalities, being funded by the World Bank (SRNyDS-BM).

#### Uruguay

- (iv) Monitoring water quality along the coastline of the Department of Montevideo, rehabilitation of urban streams, and information dissemination by IMM with support from the IDB;

- (v) Study of red tides in the municipality of Colonia undertaken by the Municipality and the Universidad de la Republica de Uruguay (IMC-UR);
  - (vi) Efforts to monitor environmental quality indicators (including pollution) in Uruguay's coastal zone and studies of the saline front (ECOPLATA project).
6. The above monitoring and management programs focus on coastal waters (limited to a few hundred meters offshore) rather than binational or international waters. In addition, they are not monitoring or addressing pollution trapped in sediments, nor the biological uptake of contaminants. These efforts will need to be scaled up over the longer term to address transboundary issues.
7. At a regional level, CARU -- in association with SHN of Argentina and SOHMA and DINAMA of Uruguay -- monitors water quality and sediments in the Uruguay River.
8. The Commissions (CARP and CTMFM) will be allocating some resources to specific studies on fisheries, hydrography, cholera outbreaks, and red tides among other issues (about 70% of this amount is spent on fisheries). However, there will be few interdisciplinary studies. INIDEP and INAPE will also be monitoring and studying cholera outbreaks.
9. In terms of biodiversity monitoring, baseline assessments of habitats and species in waters that lie outside national jurisdictional influences are limited. The existing data set is fragmented, and there is a paucity of information regarding the effects of pollution on fauna, and the location of sensitive habitats. Priority has been given to studies of commercially important species. Biodiversity assessments that will take place in the baseline include the following:
- (i) A project sponsored by the Environment Secretary of the Province of Buenos Aires (SPABA), which will allocate one million dollars over a three-year period to survey biodiversity and prepare management plans for two coastal protected areas in the Province.
  - (ii) Biodiversity research conducted by local universities, (focusing on taxonomy, ecology, population dynamics etc).
  - (iii) The BIOPLATA project funded by UNESCO, which will expend moneys on collating existing information on biodiversity. However, the scale of this exercise is inadequate and needs to be expanded, to facilitate ground-truthing and fill critical data gaps.
10. In the baseline the two countries will also be investing in projects for assessment and management of fishery resources, wherein the focus is clearly on commercially important species. These projects include the following:
- (iv) INAPE in Uruguay—studies of fisheries biology, focusing on selected species (mostly Hake, Corvina, and Squid);
  - (v) ECOPLATA, in Uruguay, which is sponsoring a study of Corvina, an important commercial fishery; and
  - (vi) INIDEP in Argentina conducts two research cruises annually to collect samples for biodiversity assessments, focusing on fisheries surveys and organic pollution.
11. Clearly, there is limited but valuable information on water quality, hydrography, sediment contamination, handling and pollution by hazardous residues, commercial fisheries, and exotic species that needs to be analyzed from a regional perspective. Joint oceanographic programs to study the biophysical dynamics of the area are lacking.

### *Strategic Action Program*

12. Despite the laudable efforts of the binational Commissions there is no strategy for the environmental management of the Rio de la Plata and its Maritime Front and binational tools for the management of resources other than fisheries have not been developed. In the baseline the Commissions have programmed resources for organizing and convening monthly technical and policy meetings of the different Commission members and organizing working groups around specific topics. The Commissions' emphasis has largely been on fisheries management in the regional context over the past five years, and budgetary allocations are inadequate to support effective binational management of an international waterbody.

### *Strengthening and sustaining the SAP implementation framework*

13. The two countries are in the process of strengthening the regulatory capacities of their national environmental authorities, with funding from the IDB. Both have developed legislation relating to environmental management, with regulations governing water quality and other standards. Environmental impact assessments (EIA) are mandatory for all industrial and infrastructure projects. But the regulations and management instruments adopted by the countries are not compatible, and do not relate to common waters and transboundary impacts. Instruments for these waters are limited to contingency plans for oil spills. Moreover, despite existing protocols and binational institutional arrangements, the mechanisms for collaborative management of pollution and resources other than fisheries are weak. There is limited coordination of pollution prevention and control programmes between the countries. National authorities and the binational Commissions lack the financial resources to initiate and sustain a joint strategic effort for pollution control and management.

14. The different management institutions operate limited training schemes for personnel as part of their recurrent work programmes. These include the ECOPLATA project and IDB investments in national institution building as they relate to the systems boundary (IDB-SRNyDS and IDB DINAMA). But the binational Commissions do not currently invest in training, impeding institutional capacity to develop the TDA and SAP and more importantly sustain the SAP implementation framework as the countries confront binational and regional management problems. In addition, there is very limited inter-phase with management approaches in other regions, limiting exposure to innovative management methods.

15. A number of programmes are imparting general environmental awareness to civil society in Uruguay and Argentina. These include modest investments by the ECOPLATA project and PROBIDES. However the coastal population and other important stakeholding groups have limited awareness of the state of the environment and understanding of the causal factors of degradation in the Rio de la Plata and the Maritime Front. This in turn handicaps community action. At present, awareness activities focus on local and national issues and do not highlight the transboundary causes and effects of pollution problems. Although the binational Commissions do disseminate some scientific and technical information by hosting technical symposiums, there is no co-ordination of awareness raising activities between the two countries.

## **4. GEF Alternative**

16. Without GEF investment, the ability of the countries to jointly manage the Río de la Plata and its Maritime Front would be limited, and problems of transboundary waterbody degradation

would accelerate. The project will create a framework to enable the two countries to address issues that presently lie beyond the mandate and scope of activity of national management bodies. Moneys would be appropriated for the purposes of overcoming barriers to regional action, by diagnosing the root causes of degradation, and identifying appropriate management interventions, strengthening the capacity of key decision makers to programme targeted investments to address international waters concerns, raising awareness of transboundary pollution issues, identifying and monitoring international waters indicators, and catalysing multi-stakeholder support for collaborative management, effecting joint programming of interventions, including measures to harmonise institutional arrangements and policies, and leveraging financing to implement new measures. These activities, will, collectively, provide a springboard for a follow on investment phase, which will be financed through a variety of vehicles.

#### *Transboundary Diagnostic Analysis*

17. The GEF Alternative will complement the national focus of baseline programs by addressing transboundary issues through joint binational programming. Current activities do not target the causes of transboundary pollution because understanding of the functioning of the system and the transboundary determinants of the problem is inadequate. Whilst information has been collected and assessed as part of Block B activities, further work is required in order to finalise the Transboundary Diagnostic Analysis. This will require that data be collated, critical data gaps filled, and information assessed. The project would provide technical assistance to undertake these tasks, and generate a quality product that would underpin preparation of the SAP and its later operationalization. The GEF would contribute approximately US\$2.4 million for TDA work. Cofinancing for this component, amounting to US\$3 million, has been secured from the governments, IDB, IDRC, and the University of Hamburg, Germany.

#### *Strategic Action Program*

18. While the Commissions are well placed to undertake binational management given their mandates, they lack the resources to effectively carry out this task. Modest baseline resources to convene periodic meetings and working groups need to be complemented for preparation of the SAP. GEF resources will support the preparation of the SAP for the area and catalyse political and financial support for implementation. The GEF would finance further technical work to identify barriers to harmonising environmental quality standards and EIA protocols, institutional arrangements, and policies between the two countries. This would then form the basis of efforts to leverage policy, institutional, financial and regulatory reforms at the binational and national levels. A major focus of activities would be on developing an investment portfolio that could be used to leverage finances from capital markets. The GEF would make a contribution of US\$1.5 million, and co-financing amounting to US\$746,227 has been secured.

#### *Strengthening and sustaining the SAP implementation framework*

19. In order to secure effective implementation of the SAP framework training and communications strategies that target specific stakeholding groups need to be developed. Baseline programs on general environmental training and communications, while important, are unlikely to build institutional capacities or public action to address the transboundary threats to the Rio de la Plata and the Maritime Front. The GEF alternative will, therefore, assist in the development of information tools to integrate information and elucidate transboundary externalities. This, in turn, will allow the incorporation of transboundary concerns into decision

making. More specifically, GEF funds would be used to (i) identify policy and institutional barriers and develop mechanisms that engender collaborative efforts to control and manage pollution and other causes of degradation, (ii) provide specific training to enhance local capacity to prepare and implement the SAP, (iii) mobilise national and international support for joint management, (iv) inform stakeholders about issues and solutions, and (v) extensively disseminate technical and scientific information. The GEF contribution to the component is US\$1.6 million, and cofinancing from the two governments, GTZ, IDB and IDRC amount to US\$ 987,474.

#### *International Waters Indicators*

20. In addition, under the alternative, indicators to monitor the health of the Río de la Plata and Maritime Front will be identified and monitored, in consultation with appropriate scientific and technical bodies and drawing from emerging GEF policy on international waters indicators (GEF: 25,000 and cofinancing: 25,000).

### **5. Systems Boundary**

21. The project area comprises the Río de la Plata (total surface *ca.*, 35 thousand km<sup>2</sup>) and its Maritime Front (*ca.*, 215.900 km<sup>2</sup>), as demarcated in the Río de la Plata and its Maritime Front Treaty, and the adjacent coastal areas, particularly as activities within them pertain to transboundary pollution and habitat degradation. The scope of analysis includes activities that would be carried out during the lifetime of the proposed project; activities implemented prior to 1998 are treated as sunk costs and are not included in the assessment. The design of the proposed project has taken full consideration of its complementarity with other projects in the region (outside of the systems boundary) including other GEF initiatives (but the incremental cost assessment does not take these activities into account).

### **6. Summary of Incremental Costs**

22. The baseline has been estimated at US \$139,209,000. The alternative has been costed at US\$149,651,036, giving an increment of US \$10,442,036 (not including the US \$ 327,000 allocated in PDF B funds). The GEF would contribute with US \$5,682,290, amounting to 3.8 % of the total cost of implementing the Alternative. Project co-financing amounts to US \$4,759,746. Of this amount the Commissions will contribute US\$ 800,000 and the remainder will be covered by government and private entities, the IDB, IDRC, ATAS-GTZ and University of Hamburg.

23. SAP preparation will yield mainly intangible domestic benefits -- enhanced scientific knowledge, awareness of systems dynamics, management capacity, and joint programming. Co-financing (over and above the baseline) has been leveraged in light of these benefits. Because the benefits are intangible, proposed interventions are unlikely to occur but for the participation of GEF. Over the longer term, succeeding preparation of the SAP, the removal of barriers to joint waterbody management will provide tangible national benefit. For this reason, SAP implementation would for the most part be effected by drawing on non-GEF resources. Sizeable regional and global benefits will accrue as a result of the SAP process, and are briefly described in the accompanying incremental cost matrix.

## Annex I. Incremental Cost Matrix

Costs/Benefits	Baseline	Alternative	Increment
<b>Domestic Benefits</b>	Understanding of the effects of pollution on the ecosystems of the Río de la Plata and its Maritime Front is limited.	Existing information will be compiled and consolidated with the objective of (i) identifying the causes and effects of pollution (ii) developing joint management tools and (iii) making information accessible to all major stakeholders.	The key causes of pollution will be understood. Management tools will have been identified. There will be mechanisms to disseminate updated information regarding the causal factors that underpin degradation.
	Despite existing protocols and institutional mechanisms for collaborative waterbody management, policy and programmatic development is poorly co-ordinated at an inter country level. National efforts, by themselves, are insufficient to prevent and abate environmental degradation of the waterbodies because of the existence of externalities.	Develop a SAP for the environmental protection of the Río de la Plata and its Maritime Front and strengthen the capacity of CARP, CTMFM, and national authorities of both countries to operationalize and sustain joint waterbody management.	Co-operative framework provides a basis for addressing priority international waters dilemmas, so protecting economic values captured by the riparian countries from the delivery of basic ecological goods and services.
	Inadequate financial mechanisms and resources for the protection of the Río de la Plata and its Maritime Front.	Development of financial mechanisms for the reduction of pollution and the sustainable use of resources.	Fiscal benefits, through accessing new investment opportunities, and internalising the cost burden imposed by waterbody management into economic activities
<b>Global Benefits</b>	The degradation of the area, caused by pollution, sedimentation, channelisation and other factors imperils habitats and species of global importance. There is limited and scattered information about the determinants of loss to biodiversity and the location of sensitive habitats.	Collate existing information on biodiversity and identify areas requiring special attention. Formulate a strategy for biodiversity protection and conservation as an element of the SAP.	Strengthened co-operation between Argentina and Uruguay in the conservation arena in order to protect species of global importance.
	Insufficient understanding of the underlying transboundary causes of pollution in the waterbodies and processes and impacts of contaminant exports to the Atlantic Ocean.	Finalisation of a Trans Boundary Diagnostic Analysis and preparation of a Strategic Action Programme to improve understanding of the determinants of waterbody degradation and its wider impacts on international waters, and catalyse well targeted joint management actions to holistically address root cause issues.	Identification of priority and cost-effective actions to address the root causes of transboundary environmental degradation in the waterbodies.
	Biological uptake of pollutants by fish, threatens important distant water fisheries operations	Identification of joint management measures to improve status of the fishery.	Protection of important fish stocks (so reducing incentives for operators to switch effort to other stocks, thus potentially contributing to over-exploitation of other stocks).
	Suboptimal level of national investment to address transboundary pollution concerns	Leveraging of policy & financial commitments to effect priority mgmt. measures identified in the SAP.	Better targeting of pollution control and mitigation interventions with efficiencies in programmatic delivery.

Costs/Activities	Baseline (US \$)	Alternative (US \$)	Increment (US \$)
Transboundary Diagnostic Analysis	<p style="text-align: right;"><u>US\$ 134,040,000</u></p> <p><b>Monitoring of water quality and pollutants (US\$ 108,560,000)</b></p> <p>Water quality monitoring on the Argentinian shore of the Rio de la Plata by Aguas Argentinas S.A.; Assessment of pollution levels in the Matanzas-Riachuelo watershed, funded by IDB; Pollution management project in 2 Buenos Aires municipalities, funded by WB; Coastal water quality monitoring, Dept. of Montevideo, by IMM with support from IDB; Study of red tides in the Municipality of Colonia; Monitoring of environmental quality along the Uruguayan coastline by ECOPLATA; Regional monitoring of Uruguay river by CARU; Studies on fisheries, hydrography, cholera, red tides by CARP and CTMFM; INIDEP and INAPE monitoring of red tides.</p> <p><i>Biodiversity monitoring (US\$ 7,200,000)</i></p> <p>Biodiversity survey and management plans for 2 coastal protected areas by SPABA; Research by local Universities; Collation of existing biodiversity information by BIOPLATA.</p> <p><i>Assessment of commercially important fisheries (US\$18,280,000)</i></p> <p>INAPE studies of mostly Hake, Corvina, Squid; ECOPLATA studies of Corvina; INIDEP studies of commercial fisheries in Argentina.</p>	<p style="text-align: right;"><u>US\$139,503,268</u></p> <p>Baseline programs plus the following transboundary assessments:</p> <p><i>Preparatory stage of TDA (US\$ 261,618)</i></p> <p><i>Diagnostic stage (US\$ 4,009,053)</i></p> <p>Circulation in the Rio de la Plata and Maritime Front; Water pollution assessment; Sediment pollution assessment; Pollution by hazardous residue; Biodiversity; Fishery resources; Introduction of exotic species; Red tides; Accumulation of pollutants in trophic chain; Zoning; Ecological charts; Socio-economic and legal assessments; Institutional assessment; Personnel and follow-up</p> <p><i>Integration of assessments (US\$ 162,595)</i></p> <p><i>Integrated information system(US\$ 1,030,003)</i></p> <p>Geographic Information System; Management information system; Virtual information center</p>	<p style="text-align: right;"><u>Increment: US\$ 5,463,268</u></p> <p>Of which, GEF: 2,462,224 Cofinancing: 3,001,044</p>
Strategic Action Program	<p style="text-align: right;"><u>US\$ 800,000</u></p> <p><i>Organizing and convening of binational Commissions' (CARP and CTMFM) meetings and working groups</i></p>	<p style="text-align: right;"><u>US\$ 3,132,028</u></p> <p>Baseline resources plus the following:</p> <p><i>Targets for water and sediments quality and pollution reduction (US\$ 543,190)</i></p> <p><i>National and jurisdictional pollution control programs (US\$ 253,219)</i></p> <p><i>Binational EIA protocol (US\$ 338,044)</i></p>	<p style="text-align: right;"><u>Increment: US\$ 2,332,028</u></p> <p>Of which, GEF: US\$ 1,585,801 Cofinancing: US\$746,227</p>



		<i>Binational strategy for protection and conservation of biodiversity</i> (US\$ 143,485) <i>Investments portfolio</i> (US\$ 728,688) <i>Other SAP elements</i> (US\$ 140,352) <i>SAP analysis and adoption</i> (US\$ 185,050)	
Strengthening and Sustaining SAP implementation	<u>US\$ 4,369,000</u> <i>Environmental Institutions building</i> <i>(US\$ 3,700,000)</i> Institution building support to SRNyDS from IDB; institution building support to DINAMA from IDB <i>Environmental communications and awareness strategies</i> <i>(US\$ 669,000)</i> Programs by ECOPLATA and PROBIDES.	<u>US\$ 6,965,739</u> Baseline programs plus the following: <i>Institutional strengthening for SAP preparation and implementation</i> (US\$ 1,107,471) <i>Communications and info. dissemination to target groups</i> (US\$ 1,489,268)	<u>Increment: US\$ 2,596,739</u> Of which, GEF: 1,609,265 Cofinancing: 987,474
International Waters Indicators	--	<u>US\$ 50,000</u> <i>Identification and monitoring of IW indicators</i>	<u>Increment: US\$ 50,000</u> Of which, GEF: 25,000 Cofinancing: 25,000
Totals	Baseline total: <u>US\$139,209,000</u>	Alternative total: <u>US\$149,651,036</u>	<u>Increment total:</u> <u>US\$10,442,036</u> Of which, GEF: 5,682,290 <sup>6</sup> Cofinancing: 4,759,746 <sup>7</sup>

<sup>6</sup> This includes project support costs at 7.5%, but does not include the PDF amount of US\$327,000.

<sup>7</sup> This does not include cofinancing leveraged from IDRC for PDF activities to the tune of US\$ 43,800.

**Annex II. Logical framework matrix.**

<b>Intervention logic</b>	<b>Indicators of performance</b>	<b>Means of verification</b>	<b>Risk and assumptions</b>
<p><b>Development objective:</b> Mitigate degradation of the transboundary environmental resources of Rio de la Plata and Maritime Front and ensure sustainable use</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Pollution indicators for the Rio de la Plata and Maritime Front.</li> <li><input type="checkbox"/> Stress reduction indicators</li> <li>• Process indicators</li> <li><input type="checkbox"/> Indicators for biodiversity of coastal, river and marine areas.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Midterm and final external assessments of project execution.</li> <li><input type="checkbox"/> Annual reports of the Commissions and environmental authorities of the countries.</li> <li><input type="checkbox"/> Reports of international NGOs and multilateral organisations.</li> <li>• GEF PIR/IW Indicators section</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> New financial resources are allocated and available for SAP implementation.</li> <li><input type="checkbox"/> Political and social support for joint management of a transboundary waterbody.</li> </ul>
<p><b>Project purpose:</b> A Strategic Action Programme (SAP) for mitigation of transboundary environmental problems in the Rio de la Plata and Maritime Front built upon:</p> <ul style="list-style-type: none"> <li>(i) Solid TDA.</li> <li>(ii) Participatory process involving key stakeholders and local, national and international institutions.</li> <li>(iii) Integration of resources and programming of the bi-national Commissions and local/national institutions.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Endorsed SAP and associated jurisdictional action plans.</li> <li><input type="checkbox"/> Degree of participation of pertinent authorities, key stakeholders and national and international cooperation and funding entities in activities for SAP preparation and approval.</li> <li><input type="checkbox"/> Perception of coastal population and key stakeholders about the benefits of the SAP.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Policy statements and legal reforms of national and key local governments.</li> <li><input type="checkbox"/> SAP endorsements</li> <li><input type="checkbox"/> Minutes of Project Coordination Committee meetings</li> <li><input type="checkbox"/> Minutes and lists of participants attending preparation and approval meetings.</li> <li><input type="checkbox"/> Opinion surveys in year 3 and 4 of the project.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Countries and local governments charged with policy, legal and institutional reforms agree on the SAP.</li> <li><input type="checkbox"/> SAP is included in the investment portfolios of national and key local governments.</li> <li><input type="checkbox"/> Donors and financial institutions support the SAP.</li> <li><input type="checkbox"/> Stakeholders, national authorities and bi-national Commissions benefit from the SAP.</li> </ul>
A. Complete Transboundary Diagnostic Analysis (TDA)			
<p>A1. Critical information gaps filled. A1.1. Consolidate TDA working groups, set up institutional arrangements and contributions, agree common methodologies A1.2. Compile and integrate existing information – generate priority information.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> DA Working Groups functioning</li> <li>• TDA methodologies agreed upon</li> <li>• Information base assembled</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Agreement document.</li> <li><input type="checkbox"/> Document on TDA methodology</li> <li><input type="checkbox"/> Reports of the working groups.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Existing information is accessible.</li> <li><input type="checkbox"/> National and regional institutions agree in providing information and resources for TDA preparation.</li> <li>• Institutional players identified in PDF agree to participate in TDA preparation.</li> <li><input type="checkbox"/> Information collection has been limited to priority needs.</li> </ul>

Intervention logic	Indicators of performance	Means of verification	Risk and assumptions
<p>A2. Solid knowledge base to support the preparation of the SAP and its implementation</p> <p>A2.1. Consolidate and analyse information.</p> <p>A2.2. Produce TDA report in format useful for SAP preparation.</p> <p>A2.3. Disseminate TDA report.</p>	<p><input type="checkbox"/> TDA report is widely used by local, national and regional institutions for their own benefit and for SAP preparation.</p>	<p><input type="checkbox"/> Midterm and final external assessments.</p> <p><input type="checkbox"/> Distribution list of TDA report.</p> <p><input type="checkbox"/> Mention of TDA report or results in government statements and press.</p>	<p><input type="checkbox"/> National and regional institutions participate in TDA preparation.</p>
<p>A.3. Integrated information system (IIS) support decision making regarding transboundary waterbody management.</p> <p>A.3.1. Assess key information needs of decision makers, availability of required information and capacity to maintain an IIS.</p> <p>A.3.2. Develop Geographic Information System, Management Information System and Virtual Centre of Information.</p> <p>A.3.3. Secure financial and institutional mechanisms for GIS, MIS and VCI operation.</p>	<p><input type="checkbox"/> Information needs assessed</p> <ul style="list-style-type: none"> <li>• Functioning GIS, MIS, VCI</li> <li>• Decision making is enhanced by the provision of prompt information.</li> </ul> <p><input type="checkbox"/> There is an agreement between national and bi-national institutions for the provision of information and the maintenance of the system.</p>	<p><input type="checkbox"/> Midterm and final external assessments.</p> <p><input type="checkbox"/> Agreement between institutions.</p> <p><input type="checkbox"/> Resource allocations for IIS.</p> <ul style="list-style-type: none"> <li>• GIS, MIS, VCI (web sites, CD-ROMs, etc.)</li> </ul>	<p><input type="checkbox"/> National institutions provide information.</p> <p><input type="checkbox"/> Resources are available for the operation and maintenance of IIS.</p>

<b>Intervention logic</b>	<b>Indicators of performance</b>	<b>Means of verification</b>	<b>Risk and assumptions</b>
<b>B. Strategic Action Program (SAP)</b>			
B1. Enhanced capabilities for strategic planning of transboundary environmental management through the preparation of bi-national environmental tools. B1.1. Development of bi-national WQ standards and EIA protocols.	<ul style="list-style-type: none"> <li>• Binational WQ and EIA legislation in process or operational</li> </ul>	<ul style="list-style-type: none"> <li>• Reports/proposals for WQ standards and EIA protocols</li> </ul>	<ul style="list-style-type: none"> <li>• Countries able to agree on binational WQ standards and EIA protocols</li> </ul>
B2. Framework for SAP implementation and regional planning and management established. B2.1. Draft SAP B2.2. Analyse SAP draft in bi-national meetings. B2.3. Consensus on SAP contents and implementation framework.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Degree of participation of key entities and stakeholder in SAP drafting and analysis.</li> <li><input type="checkbox"/> SAP formally endorsed by the countries.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working documents, minutes and list of participants of drafting and analysis forum.</li> <li><input type="checkbox"/> Institutional agreements signed for SAP implementation.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Institutions and governments agree on framework for SAP implementation.</li> </ul>
B3. Portfolio of projects to operationalize the SAP identified. Governments negotiating financing with bilateral and multilateral sources. B3.1. Identify project portfolio to operationalize SAP implementation. B3.2. Review projects with Governments and potential donors.	<ul style="list-style-type: none"> <li>• Project portfolio and finance plan for SAP implementation agreed with governments, donors, and investors.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working documents, minutes and list of participants in meetings to define project portfolio and finance plan.</li> <li><input type="checkbox"/> Reports from investors and donors.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> International investors and donors are interested in supporting SAP implementation.</li> <li><input type="checkbox"/> Governments are willing to finance SAP implementation.</li> </ul>
<b>C. Strengthening and sustaining SAP implementation framework</b>			
C1. Collaborative framework for cooperation and coordination for the control and management of transboundary problems in the area.	<ul style="list-style-type: none"> <li><input type="checkbox"/> Institutional arrangements and agreements for collaborative management of transboundary issues.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Policy statements</li> <li><input type="checkbox"/> Reports of national and bi-national institutions</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The initiative is embraced at all levels in the countries.</li> </ul>

Intervention logic	Indicators of performance	Means of verification	Risk and assumptions
C1.1. Set up working group. C1.2. Identify options and develop institutional arrangements for collaborative cooperation and coordination. C1.3. Adopt collaborative framework.			
C2. Enhanced capacity of the Commissions and key national and local entities for SAP preparation and regional management of priority transboundary issues. C2.1. Institutional strengthening.	<input type="checkbox"/> Regional, national and local capacities in transboundary environmental management strengthened. <ul style="list-style-type: none"> <li>• Key institutions initiating and implementing new programs targeting priority transboundary issues.</li> </ul>	<input type="checkbox"/> Progress reports during SAP preparation. <input type="checkbox"/> Number and scope of resolutions concerning transboundary environmental issues by both Commissions and key national and local authorities.	<input type="checkbox"/> Personnel to be trained are carefully chosen. <input type="checkbox"/> Institutions give opportunity to trained personnel to introduce new ideas. <ul style="list-style-type: none"> <li>• Commissions and key national entities actively contribute to SAP preparation.</li> </ul> <input type="checkbox"/> Trained personnel consider the knowledge gained to be useful. <input type="checkbox"/> New knowledge is applied in decision making.
C3. Stakeholders duly informed on priority transboundary environmental issues and challenges for the management of the area. C3.1. General awareness activities (year 1) C3.2. Specific awareness activities (years 2 to 4) based on local contributions. C3.3. Opinion forming events. C3.4. Seminars for exchange between scientists and decision-makers.	<input type="checkbox"/> Increase of awareness and participation of coastal populations.	<input type="checkbox"/> Opinion surveys.	<input type="checkbox"/> The media and means for dissemination are effectively chosen.
<b>D. International waters indicators</b>			
D1. Develop process, stress reduction and environmental status indicators	<input type="checkbox"/> Decision making is enhanced by the provision of key indicators	<ul style="list-style-type: none"> <li>• Indicators are available through the integrated information system.</li> <li>• Use of indicators by national and binational organisations.</li> </ul>	<input type="checkbox"/> The indicators are effectively chosen and reflect the needs and reality of the area.

ANNEX III  
TECHNICAL REVIEW OF GEF INTERNATIONAL WATERS PROPOSAL RLA/97/G41

**Strategic Action Program for the Environmental Protection of the Río De La Plata and its Maritime Front**

**OVERALL IMPRESSION**

Río de la Plata is an important, international waterway, separating Argentina and Uruguay. It is located at the seaward South Atlantic terminus of the economically most important river system, with the second largest drainage basin (3,170,000 km<sup>2</sup>), in South America. Río de la Plata has an adjacent population of at least 16 million, including the densely populated Buenos Aires and Montevideo metropolitan centers with the industrial concentration of each country. Although the shallow (10-20 m deep) Río de la Plata is one of the largest estuaries in world, measuring 230 km across at the mouth and 320 km along the axis from the mouth to the rapidly prograding Río Paraná delta, it is also a highly impacted estuarine systems because of land use practices in the drainage basin; upstream water resource projects; domestic, industrial, and agricultural point and non-point source sediment and pollution runoff; sediment dredging; and shipping and port activities. At the same time, the estuary and the maritime frontal system is an immensely valuable international fisheries resource with an estimated annual harvest of 323,000 tons and a value of \$120M, at times affected by toxic plankton blooms (*red tides*), and in need of continued management. Although the estuary is dominated by the high freshwater runoff (23,000 m<sup>3</sup> · s<sup>-1</sup>) from the Paraná (including the Paraguay and other tributaries), Uruguay, and many smaller rivers, the entire system is estuarine in nature. It is characterized by a 0.3-1.0 m semidiurnal tidal range, a 0-34‰ fresh to marine salinity gradient, high suspended sediment concentrations typically from 50-300 mg l<sup>-1</sup>, a pronounced turbidity maximum zone, reversing tidal currents, and both a two-layered gravitational circulation and a residual tidal circulation. The maritime front is a region of high biological productivity on the continental shelf and continental slope seaward of the Río de la Plata mouth, where the riverine outflow encounters and mixes with the southward flowing warm Brazil western boundary current and the northward flowing cold-water Malvinas current.

Río de la Plata is an economically and socially important International Waters system in need of, and ideally suited for, the implementation of this well-articulated Global Environmental Facilities project. The RLA/97/G41 International Waters GEF project has succeed to address the most pressing of the regional needs as related to Río de la Plata and its maritime front. When completed after four years, this project should have managed to (i) solve or mitigate many regional problems related to pollution, estuarine water and sediment dynamics, fisheries management, protection of biodiversity and genetic information, and water resources; (ii) structure a useful integrated geographical information system (GIS) database and a management information system; (iii) decide on optimum estuarine management tools; (iv) design a holistic

plan for integrated estuarine and environmental management; (v) help develop the international infrastructure and legal instruments for continued international cooperation and collaboration; and (vi) establish an enduring mechanism for training of estuarine and environmental managers, technicians, and scientists with the understanding and ability to care for Río de la Plata during the next century.

## **RELEVANCE & PRIORITY**

The drainage basin of the Paraná-Paraguay-Uruguay rivers, terminating in Río de la Plata, is unquestionably the “bread basket” of South America. The Río de la Plata estuarine system and its maritime front constitute a well-defined, globally important International Waters system, which cannot adequately be managed by agencies of a single country. As evidenced by numerous existing international treaties, agreements, action programs, and resolutions, the management of Río de la Plata constitutes a national priority in both Argentina and Uruguay, at the same time that land use activities, water resources management, and river pollution loading in Bolivia, Brazil, and Paraguay impact the estuary. Strategic management of Río de la Plata system and the coordinated decrease of water and sediment pollution for the next century and beyond is of the highest international priority, but can realistically only be implemented successfully by the type of international cooperation expected to result from funding of RLA/97/G41.

## **APPROACH**

The general approach to the execution of this GEF project appears consistent with the GEF Water-Based Operational Programme and seems very reasonable, sound, and appropriate. Although Río de la Plata foremost is a large estuarine system, the word *estuary* is not mentioned, and the specific processes and problems typical of estuaries are not so identified. However, it is clear from the expected project outputs that the processes and variabilities commonly identified with estuaries are appropriately considered within the strong oceanographic components of the project. As a whole, the proposed GEF project is well balanced between components that define natural scientific, social scientific, technological, economic, and legal priorities and needs. The overall project is well articulated and comprehensive.

## **OBJECTIVES**

The principal objectives of RLA/97/G41 are to prepare a Transboundary Diagnostic Analysis and Strategic Action Plan for the environmental protection of the Río de la Plata system. The specific objectives include addressing of issues dealing with pollution of the water and the sea floor of Río de la Plata and their impacts on biodiversity, the ecological components of the system, the riparian population, and local water user groups; to develop mechanisms to aid in

decreasing the pollution load of Río de la Plata; to develop and improve local coordination, cooperation, and environmental management strategies and tools; to develop integrated geographical and management information systems; and develop better mechanisms for environmental sustainability and training of environmental managers. These objectives seem to be valid and are largely likely to be achieved as outlined within the time frame of the project.

## **BACKGROUND AND JUSTIFICATION**

The RLA/97/G41 GEF project is clearly written and presents an enormous quantity of relevant and substantiated background information with appropriate reference sources, cost analysis, and identification of governmental and non-governmental organizations with stakes in the competent execution of the project. The project justifications are ample and relevant, and the project, as a whole, is well justified and of high priority nationally to the countries directly involved, as well as internationally to the global community.

## **ACTIVITIES**

The project objectives seem well coordinated with the proposed project activities, and the flow of project activities seems scheduled in a logical sequence to address the problems and objectives outlined in the proposal. It is very encouraging that the execution of this GEF project will allow coordination of duplicated and unrelated efforts, e.g. the joining of the existing ECOPLATA, BIOPLATA, and PROBIDES biodiversity projects, as well as providing links between watershed management projects in Pantanal and the upper Paraguay river basin, the Hídrowia project, and the Río de la Plata estuary and maritime front.

## **PROJECT FUNDING**

This four-year (*note: final project duration set at 3.5 years*) proposed project is an expensive international undertaking at a total cost of US\$ 10.9M, of which GEF has been asked to provide US\$ 7.3M (*note: modified since STAP review to \$6.0 million*). However, in view of the complexity of the project and the many project activities, the level of funding seems entirely appropriate.

## **TIME FRAME**

RLA/97/G41 is an ambitious project to implement and carry to fruition in only 48 months. However, the objectives are well articulated and are likely to be achieved at a reasonable degree of completion within the proposed time frame. Most important, however, it seems likely that this GEF project can develop and implement instruments and training to ensure that the project can



continue in practice and spirit *ad infinitum* by the countries involved, subsequent to project completion and without further GEF funding.

## **RATIONALE FOR GEF SUPPORT**

Few systems in the world suit better the criteria and the geographical setting for an International Waters project than Río de la Plata. The economic and social importance of Río de la Plata and the value of holistic international management of the estuary, its maritime front, and the drainage basin is recognized by all countries involved. However, cultural variances and differing national priorities in Argentina and Uruguay, and among the additional countries in which the Río de la Plata drainage also basin is located (Bolivia, Brazil, and Paraguay), make GEF funding for this project a compelling priority. The project is likely to result in international management priorities and strategies, which can be embraced by all countries. The GEF project will, on one hand, begin the process of estuarine and environmental problem solving and rational, internationally coordinated environmental management, but will also be able to develop robust and enduring mechanisms for post-project continuation. This project is ideally suited for GEF funding.

Niterói, RJ, Brazil, 24 July 1998

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