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BRAZIL

SUSTAINABLE DEVELOPMENT PLAN FOR THE REGION OF THE UPPER URUGUAY RIVER WATERSHED

(BR-T1018)

PLAN OF OPERATIONS

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BASIC SOCIOECONOMIC DATA

For basic socioeconomic data, including public debt information, please refer to the following address:
http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata

INFORMATION AVAILABLE IN THE FILES OF RE1/EN1

PREPARATION:

Report of a Proposal to Elaborate the Master Plan for the Sustainable Development of the Upper Rio Uruguay Watershed

Compilation of Similar and Related Studies

Compilation of Relevant Studies and Initiatives – Federal Sector

Institutional and Juridical Evaluation for the Elaboration of a Master Plan for the Sustainable Development of the Upper Rio Uruguay Watershed

Memorandum of Understanding between the States of Rio Grande do Sul and Santa Catarina

EXECUTION:

Terms of Reference for Contracting a Consulting Firm to Elaborate the Master Plan for the Sustainable Development of the Upper Rio Uruguay Watershed

Social Communication Strategy

Schedule of Activities

ABBREVIATIONS

ANA	Agencia Nacional de Águas
CESI	Committee for Environment and Social Impacts
CODERES	Regional Development Councils
COF/CBR	Country Office Brazil
EPE	Empresa de Pesquisa Energética
FEPAM	State Foundation for Environmental Protection
FZB	Zoo-botanical Foundation
GEF	Global Environment Facility
GIS	Geographical Information System
ISDP	Informe de Seguimiento de Desarrollo del Proyecto
JCF	Japanese Trust Fund for Consultancy Services
OAS	General Secretariat of the Organization of American States
PPMR	Project Progress Management Report
SEMA	State Secretariat of Environment
SRH/MMA	Water Resources Secretariat/Ministry of Environment
TC	Technical Cooperation
TORS	Terms of Reference
WB	World Bank

PLAN OF OPERATIONS

SUSTAINABLE DEVELOPMENT PLAN FOR THE REGION OF THE UPPER URUGUAY RIVER WATERSHED

(BR-T1018)

EXECUTIVE SUMMARY

Beneficiaries:	States of Santa Catarina and Rio Grande do Sul.		
Executing Agency:	Inter-American Development Bank.		
Target Beneficiaries:	The population of the River Uruguay Watershed, through the betterment of the region's socio-environmental conditions and the institutions responsible for the management of the watershed's natural resources.		
Financing:	IDB: (JCF)	US$	1.200.000
	Local:	US$	1.500.000
	Total:	US$	2.700.000
Objectives:	The goal of the Technical Cooperation (TC) is to contribute to improved environmental management and protection of the Uruguay Watershed, in view of its importance in recharging the Guarani Aquifer. The purpose of this TC is to develop a Master Plan for the Sustainable Development of the Uruguay Watershed, which will be the planning instrument to guide the interventions in the watershed.		
Execution timetable:	Execution 24 months and Disbursement 30 months		
Special contractual conditions:	There are no special contractual conditions.		
Exceptions to Bank Policies and Procedures:	None.		
Environmental and social review:	This operation will have positive social and environmental impacts. The TC will finance the development of a Master Plan that will be a planning instrument and will establish the guidelines, goals and interventions at the state and regional level for the sustainable development of the watershed (¶7.1-7.3)		

Coordination with Other Donors: There are two projects financed through the Global Environmental Facility (GEF) that are being implemented in the region. The first GEF/WB, *Project for the Environmental Protection and Sustainable Development of the Guarani Aquifer System,* promotes the environmental protection and sustainable use of the Guarani Aquifer and involves Brazil, Argentina, Uruguay and Paraguay. The second GEF project, *Development of the Plata Watershed Water Resource Management System,* is expected to strengthen the institutional framework established by the Plata Basin Treaty of 1967. The project, currently under preparation, is expected to be executed by the General Secretariat of the Organization of American States (OAS). The proposed TC complements these two initiatives. It will finance a study to better understand the nature of the processes (use and recharge) between the Uruguay Watershed and the Guarani Aquifer; and, although covering a much smaller area, it will propose mechanisms to manage international watersheds within a multi-country structure.

I. BACKGROUND AND JUSTIFICATION

A. The Guarani Aquifer

1.1 The Guarani Aquifer is one the world's largest aquifer systems and extends from central-west Brazil, to part of Argentina, Paraguay and Uruguay. Its total surface area is approximately 1.18 million square kilometers of which 839,800 km^2 (71%) are in Brazil; 225,500 km^2 (19%) are in Argentina; 71,700 km^2 (6%) are in Paraguay and 45,000 km^2 (4%) in Uruguay. With a volume of about 40,000 km^3 and total recharge rate from precipitation of about 166 km^3/yr, it is the largest single body of groundwater in the world, capable of supplying fresh drinking water to the world for 200 years.

1.2 It is estimated that some 15 million people live in the area of the Guarani Aquifer, and up to 500 cities, partially or entirely, supply their water needs from it. Drinking water supply in this heavily populated region is increasingly dependent on groundwater, a demand that is expected to grow in the immediate future due to demographic growth and economic expansion, together with an increase in pollution of surface waters. The main threat to this resource, both in terms of quality and quantity, stems from uncontrolled drilling and pollution in extraction and recharge areas.

1.3 The Guarani Aquifer is a strategic water resource for the region and for the world, which needs to be protected and managed. In order to protect the aquifer, it is necessary to rationalize water use and maintain the water quality of the contributing watersheds. The sheer magnitude of the Aquifer and the participation of multiple jurisdictions make it difficult to tackle encompassing management programs for all the watersheds involved. Improved management would have to come one watershed at a time.

B. Uruguay Watershed

1.4 Three main watersheds provide surface water that feeds the Aquifer: the Paraná, the Paraguay and Uruguay River watersheds. Of these, the latter is the most important in terms of its potential impact on the conservation of the Aquifer as it generates the most pollution. The Uruguay River is 2,200 km in length, and has great geopolitical relevance, since it serves as border between two Brazilian states (Rio Grande do Sul –RS and Santa Catarina -SC), between Brazil and Argentina, between Brazil and Uruguay, and between Uruguay and Argentina.

1.5 The Uruguay Watershed extends from southern Brazil, reaching northeastern Argentina and central-western Uruguay and has an area of approximately 371,000 km^2, of which 175,300 km^2 are in Brazil (153,300 km2 in Rio Grande do Sul and 52,000 km^2 in Santa Catarina). In Brazil, the Uruguay Watershed has been divided, for management purposes, in 13 sub-basins[1]. The region is of great economic importance to Brazil because of its hydroelectric potential and its agro-industrial activities. The population of this region is estimated at 3.8 million

[1] These sub-basins are: Canoas, Peixe, Chapecó, and Peperi-Guacu/Antas in Santa Catarina and Inhandava, Passo Fundo/Várzea, Turvo, Ijuí, Pritainim/Icamaaqua, Quaraí, Ibicuí, Santa Marta, and Negro in Rio Grande do Sul.

inhabitants (2.3% of Brazil's population) and covers 230 municipalities in Rio Grande do Sul and 147 in Santa Catarina.

1.6 According to data form the National Water Agency (ANA), the region has great hydroelectric potential with a total production potential of 16,500 mW, of which only 3,995 mW (approximately 6% of the energy produced in Brazil) is exploited. Regarding other water uses, the region's demand for irrigation is 88.1 % of total water demand. The greatest consumer is rice farming (3,440 km^2) in Rio Grande do Sul. Total human demand for the watershed represents 4.4 % of total demand, and livestock demand is 4.8 %. Industrial demand is 2.6 %, principally from agro-industries associated with the slaughterhouses, sawmills, wood mills and the cellulose industry, all of which are concentrated in the Upper Uruguay Region.

1.7 Because the Uruguay Watershed includes regional and transnational rivers, its management is the responsibility of the Federal, States, and Municipal Governments. At the Federal level, the responsibility lies with the Water Resources Secretary of the Environment Ministry (SRH/MMA). At the State level, the State Secretariat of Environment (SEMA) in Rio Grande do Sul and the State Foundation for Environment Protection (FEPAM) in Santa Catarina have main responsibility for the management of the region's sub-basins. Municipalities have responsibility for the provision of water and sanitation services and local economic development initiatives. Due to its multiple uses and economic potential, other institutions with responsibilities in the watershed include the National Electricity Agency (ANEEL), ANA, the National Council for the Environment (CONAMA), State and Municipal Environmental Councils, and the Transportation Ministry.

C. Problems Facing the Uruguay Watershed

1.8 The Uruguay watershed faces several problems. These are: (i) human encroachment in fragile ecosystems, coupled with unsustainable production practices and land-use changes from forestry to agriculture, that has resulted in deforestation, loss of biodiversity, erosion, and desertification; (ii) high point and non-point source pollution levels from agro-industry mainly from rice farming and waste from pig and poultry farming; (iii) increasing urbanization, coupled with low level of wastewater treatment, that has created pressure on water resources and is affecting surface and underground water quality[2]; (iv) flooding, affecting mainly communities bordering the Uruguay River and some of its tributaries; and (iv) periodical water rationing, mostly in municipalities in the Upper Uruguay River.

1.9 These problems stem principally from lack of a planning instrument to regulate and monitor land use. There is limited information to guide the states' land use planning and economic development; lack of monitoring and evaluation systems; and conflicting institutional and hierarchical responsibilities. Disperse and sometimes contradictory regulations and norms have exacerbated these problems and underscored the need to have an umbrella planning instrument to guide the sustainable development of the Uruguay Watershed.

[2] Discharge of untreated waste is estimated to be 64% urban domestic , 19% urban pluvial and 17% domestic rural effluents.

D. Project Strategy

1.10 Good planning and monitoring of land use requires three elements: (i) knowledge of the potential and more adept uses, (ii) political will to implement the best solutions, and (iii) a set of economic, environmental, social, political, and financial instruments to implement them. A development plan provides the factual base for the first element, technical support for the second and analysis of alternatives for the third. Such a development plan must utilize an appropriate planning unit, in this case, the watershed as a whole.

1.11 The governments of the States of Santa Catarina and Rio Grande do Sul have proposed the preparation of a Master Plan for the Development of the Brazilian section of the Uruguay Watershed as the starting point for a more ambitious program of interventions and investments in the whole watershed. This Plan will initially be limited to the Uruguay River Region shared by the two States; later on it will be expanded to cover the whole watershed, and it is expected that neighbouring Argentina, Uruguay, and Paraguay will get involved in later phases.

1.12 Thus, the development of the Uruguay watershed management plan will be carried out in consecutive phases, each of which will stress a participatory approach that will result in solutions agreed by public institutions, the private sector, and civil society. The process will encompass: (i) a diagnosis of the region that will focus on pollution, environmental problems and its relation with economic activities and land use, and the interaction between the watershed and the Guarani Aquifer, (ii) development of strategic lines of action and identification and prioritization of investments and other interventions; (iii) development of a monitoring and evaluation system, and (iv) a proposal of an institutional framework for the implementation of the Plan.

1.13 The governments of the States of Santa Catarina and Rio Grande do Sul have established a legal and institutional framework in order to facilitate the development and implementation of a Master Plan for the watershed. They have established the Sustainable Development Project for the Uruguay River Watershed -*Pró-Rio Uruguay–Guarani Aquifer*[3], of which the development of the Master Plan is the first step. They have also created two State Executive Secretariats in charge of the design of the project; have signed a *memorandum of understanding*, which establishes the procedures to be followed by both States for the development and implementation of the *Pró-Rio Uruguay–Guarani Aquifer* Project; and have entered into several agreements with universities and other institutions to advance on the development of studies[4].

1.14 The proposed Technical Cooperation (TC) will provide the first comprehensive study on which to base decisions and constitutes therefore a crucial input for long-term sustainability in the region.

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3 State Decree no. 42,400 - Clause 1 for the State of Rio Grande do Sul; and State Decree no. 1,669 for the State of Santa Catarina.

4 The State of Rio Grande do Sul signed an agreement with *Universidade do Vale do Taquari*-UNIVATS, to support the Plan's preparation, developing specific studies on surface water quality.

E. Bank's Strategy, Value Added and Lessons Learned

1.15 The Bank's strategy with Brazil establishes three objectives: (a) promote sustainable growth, with stability and environmental sustainability; (b) reduce poverty, promote social inclusion, and enhance social and regional equity; and (c) support institutional strengthening and promote democracy and participation. The proposed TC is consistent with the first objective as it finances activities that will identify measures to curb the environmental impact of productive activities and to improve the environmental quality of the region. The participation of the Bank will facilitate the design and use of a methodology that will combine environmental and social criteria with economic and financial analysis to select (evaluate the feasibility) and prioritize interventions in the watershed within the framework of an ample participation and consultation process with stakeholders.

1.16 The Bank has supported through technical cooperations and loan components the preparation of sustainable development as well as water resource management plans that involve one or more regions. The lessons learned from these operations are: (i) For plans to be implemented they must be the product of a participative and inclusive process. (ii) If beneficiary agencies have not taken initial steps to ensure a plan's implementation, before financing is approved, the probability of the plan being implemented is greatly reduced. These steps include having institutional arrangement and legal framework in place for executing and implementing plans, executing mechanisms that ensure local participation (governmental and local non-governmental technical personnel) in the plan's development, and awareness campaigns to ensure stakeholder participation. (iii) A monitoring and evaluation system must be part of a Plan. The process of setting goals and targets allows beneficiary agencies to be realistic about what can really be implemented given financial and political constraints. These lessons have been taken into account in the design of this operation.

F. Coordination with other Donors

1.17 There are two projects financed through the Global Environmental Facility (GEF) that are being implemented in the region. The first one, *Project for the Environmental Protection and Sustainable Development of the Guarani Aquifer System,* promotes the environmental protection and sustainable use of the Guarani Aquifer and involves Brazil, Argentina, Uruguay and Paraguay. The second GEF project, *Development of the Plata Watershed Water Resource Management System,* is expected to strengthen the institutional framework established by the Plata Basin Treaty of 1967. The project, currently under preparation, is expected to be executed by the General Secretariat of the Organization of American States (OAS). The proposed TC complements these two initiatives. It will finance a study to better understand the nature of the processes (use and recharge) between the Uruguay Watershed and the Guarani Aquifer; and, although covering a much smaller area, it will propose mechanisms to manage international watersheds within a multi-country structure.

II. PROJECT DESCRIPTION

A. Objectives

2.1 The goal of the Technical Cooperation (TC) is to contribute to improved environmental management and protection of the Uruguay Watershed, in view of its importance in recharging the Guarani Aquifer. The purpose of this TC is to develop a Master Plan for the Sustainable Development of the Uruguay Watershed, which will be the planning instrument to guide the interventions in the watershed.

B. Activities

2.2 Technical consulting services will be needed to complete the following outputs: (i) a watershed diagnosis; (i) the Master Plan; (iii) a monitoring and evaluation system; and (iv) an institutional framework proposal for Plan implementation. These outputs and activities are shown in the Logical Framework (Annex I).

2.3 **Watershed Diagnosis.** It will include the following activities: (i) data gathering and mapping; (ii) technical studies; and (iii) definition of the environmental vulnerability and environmental risks.

2.4 Data gathering and Mapping. The data gathering process includes the compilation and analysis of existent documentation, including maps and other visual aids. Data will be gathered on: (i) institutional and legal framework; (ii) land use and tenure; (iii) hydrological and water quality conditions; (iv) water supply and demand; (v) water use by activity; (vi) sewer and water treatment systems; (vii) solid waste systems; (viii) industrial effluents; (ix) agro-industrial effluents; (x) domestic effluents; (xi) forest cover and biodiversity; (xii) erosion; (xiii) economic activities; (xiv) characterization of rural areas; (xv) characterization of urban areas. All the information and maps will be structured, organized and presented in a geo-referenced database, whenever possible.

2.5 Technical studies. Specific studies will include: (i) study on the desertification of areas in the hydrographic region, (ii) initial hydrological study on surface and underground water regime, especially regarding the Guarani Aquifer recharge processes, and (iii) assessment of the dynamics between the environment and economic development in the Region.

2.6 Environmental Vulnerabilities and Environmental Risks Assessment. It will include: (i) identification of vulnerable areas in basins and sub-basins, and quantification of risks; (ii) quantification and qualification of critical and chronic environmental problems; and (iii) strategic environmental analysis.

2.7 **Master Plan for the Sustainable Development of the Region.** Based on the watershed diagnosis, the Master Plan will be developed. It will include: (i) a sustainable development strategy, (ii) identification and prioritization of projects and initiatives, and (iii) a social communication strategy.

2.8 Sustainable Development Strategy**.** Based on the results of the diagnosis and the technical studies, a strategy will be prepared that will include: (i) definition of goals and priorities in the short (1-5 years); medium (6-10 years) and long run

(11-25 years). These goals will include environmental goals (pollution reduction, water conservation, erosion control, biodiversity preservation), social goals (health improvement) and socioeconomic goals (income growth, job creation); (ii) strategic lines of action to achieve these goals; and (iii) proposal for financing de Plan (identifying sources of funds taking into account fiscal constraints).

2.9 Projects and Initiatives to Promote Sustainability. A list of sustainable projects and initiatives will be developed, based on: (i) definition of criteria and parameters for the selection and prioritization of projects and initiatives that will include environmental and social criteria (pollution reduction, erosion control, water use, land use), socioeconomic criteria (impact, benefit/cost, rates of return, cost), and financial criteria in order to assure that only feasible projects or activities are identified and implemented; (ii) analysis of existing projects and initiatives that have been proposed for the watershed; (iii) application of criteria to select and prioritize projects and initiatives; (iv) preparation of pre-feasibility studies for selected projects indicating its approximate cost and benefits; (v) the total amount of resources needed to implement them and their implementation horizon; and (vi) preparation of terms of reference for the feasibility studies of the projects and interventions that can be implemented within the first 2 years.

2.10 Social Communication Strategy. A communication strategy will be developed in order to ensure proper awareness about the initiative; adequate participation in the Plan's development; dissemination of studies being developed and initiatives being proposed; wide dissemination of the Master Plan and its elements; and later ample dissemination of the results of its implementation.. Participatory workshops will be conducted in a way that: articulates the proposed activities with regional priorities; fosters compatibility between demands for intervention and expectations; promotes public-private partnerships and integrates the planning and management structures; and establishes mechanisms for conflict resolution, prioritizing the continuity of public policies. The strategy will include: (i) identification of target audience (civil society organizations, private sector, NGOs and governmental institutions); (ii) design of an awareness and promotion and dissemination campaign (taking into account social, cultural, and gender characteristics); (iii) design and production of communication materials (visual, and audio-visual); (iv) identification distribution networks; (v) design of a web site; and (v) design and participation in the consultation process (see ¶ 4.5-4.6) of the Plan and its elements.

2.11 **Monitoring and Evaluation System**. A GIS-based system will be developed that will include: (i) a monitoring and evaluation plan including l mechanisms for monitoring activities; identification of resources (human and financial) needed, dataflow, institutional responsibilities, and type of information generated; (ii) indicators to measure environmental quality, socioeconomic development, and indicators to monitor the progress of the Plans' implementation; (iii) a baseline for the indicators; and (iv) definition of the Plan's performance evaluation mechanism based on the goals and targets and the timeframe for achieving them, as defined in the Plan.

2.12 **Institutional Framework for the Implementation of the Plan.** This plan will include: (i) mapping of institutional responsibilities at the municipal, state and federal levels; (ii) development of a proposal for the legal and institutional structure needed for the Master Plan to be implemented taking into account all of the stakeholders (municipalities, states, federal government, private sector, and civil society); (iii) preparation of draft agreements and arrangements, and all of the necessary legal and institutional documents needed to formalize the relationships among stakeholders; and (iv) proposal for the legal and institutional structure needed to facilitate the involvement of neighboring countries (Argentina and Uruguay) in the management of the watershed.

III. COST AND FINANCING

A. Summary Cost Table

3.1 The total cost of the operation is estimated US$ 2,700,000, of which the Bank will finance up to US$ 1,200,000 provided by the Japanese Trust Fund for Consultancy Services (JCF). Local counterpart of US$1,500,000 will be provided by the states of Santa Catarina and Rio Grande do Sul. The counterpart funds will finance consultancies, logistical support and transportation, field coordination, participatory activities, technical and administrative personnel, and office space. Table 3.1 shows the main budget categories; the detailed budget is presented in Annex II.

TABLE 3.1 SUMMARY OF COST AND LOCAL COUNTERPART (US$)

ITEM	Months	JCF/BID	Local Counterpart[1]	TOTAL
Consultancy Work				**1,160,000**
Honoraria	91	807,000		807,000
Travel		153,000		153,000
Overhead (approx. 25% of honoraria)		200,000		200,000
Other Costs of the TC				**1,430,000**
Equipment and training		-	220,000	220,000
General Support (in-kind)		-	40,000	40,000
Local Personnel (in-kind)	240	-	655,000	327,500
Local consultants	60		228,000	228,000
Implementation of Communication Strategy		-	237,000	237,000
Publications	-		50,000	50,000
Contingencies		40,000	70,000	**110,000**
TOTAL (US$)		**1,200,000**	**1,500,000**	**2,700,000**

1/ The local counterpart will be provided by the States of Santa Catarina and Rio Grande do Sul in equal parts.

IV. EXECUTING AGENCY AND MECHANISM

A. Executing Agency

4.1 The IDB will act as the executing agency for this operation. The Bank will hire the consultants and administer the JCF funds through the Environment and Natural Resources Management Division of Region 1 (RE1/EN1).

B. Execution Mechanism

4.2 The Bank will hire a consulting firm to carry out the activities to be financed by this operation. The consulting firm will work in coordination with the beneficiaries and within the framework of existing agreements among the institutions involved in the design of the *Pró-Rio Uruguay–Guarani Aquifer* Project.

4.3 The institutional arrangement established to guide the *Pró-Rio Uruguay–Guarani Aquifer* Project is composed of: (i) A *Steering Committee* with the mandate to guide and validate the process of development of the *Pró-Rio Uruguay–Guarani Aquifer* Project and accompany its implementation; (ii) a *Consultation Committee* to monitor and evaluate the technical aspects of the *Pró-Rio Uruguay–Guarani Aquifer* Project; (iii) the *Executive Secretariats* whose responsibility is the development of the *Pró-Rio Uruguay–Guarani Aquifer* Project and the Master Plan and, later, will coordinate and supervise its implementation. A core technical group, within the Executive Secretariats, will be in charge of developing the Project, and will include technical personnel from the State Secretariat of Environment-RS (SEMA), Zoo-botanical Foundation-RS (FZB), State Foundation for Environment Protection-SC (FEPAM), Regional Development Councils (CODERES) and watershed organizations (Basin Committees).

4.4 The Bank will have the support of the Executive Secretariats in the coordination of field activities and review of consulting reports. The Executive Secretariats will supervise and accompany the preparation of the Master Plan and, later, will coordinate and supervise its implementation. The two Executive Secretariats will be responsible for: (i) accompanying the work of the consultancy firm; (ii) leading the promotion, consultation and validation process; (iii) facilitating and ensuring the coordination between the consultants and local organizations and private and public institutions that bear relevance to the project; (iv) providing personnel, and logistical support; and (v) coordinating activities regarding the financing for the implementation of the Master Plan.

4.5 The Executive Secretariats will also coordinate the workshops: (i) one inception workshop, with the participation of representatives of the Federal Government (ANA, ANEEL, SRH/MMA) and State water resources management and regional development institutions, to review the consulting firm's Plan of Activities and associated schedule; (ii) 39 regional workshops at the sub-basins: one workshop in each of the sub-basins during the watershed diagnosis; on workshop in each of the sub-basins during identification and prioritization of activities, and one workshop in each of the sub-basins to validate the Master Plan; (iii) a final seminar for the presentation and validation of the Master Plan.

4.6 The technical reports and documents produced during the development of the Plan, as the Plan itself, will be made available to the public at large through several media, including an internet site that will be built for this purpose (¶2.10).

C. Program Implementation Readiness

4.7 The public institutions that will support this operation have the technical capacity to provide the necessary technical counterpart for the consulting activities. The

ToRs for the consulting work have been developed and discussed with the various participating agencies. A Memorandum of Understanding has been signed between the State Governors, establishing the coordination mechanism between the two Executive Secretariats.

D. Execution Period and Disbursement Schedule

4.8 The execution period for the project will be 24 months and disbursement will be 30 months from the date the Letter of Agreement is signed with the Bank.

E. Procurement

4.9 One Japanese firm, or a consortia led by a Japanese firm will be contracted to carry out the activities outlined in this Plan of Operations in accordance with the Bank's procurement policies and requirements of the agreement for use of Japanese funds.

V. MONITORING AND EVALUATION

A. Monitoring

5.1 RE1/EN1 will be responsible for supervising the work of the consultants, and the monitoring of the operation. To ensure an adequate monitoring, the consulting firm will prepare quarterly advance reports and submit them to the Bank. The Bank and the Executive Secretariats will review these reports. The reports will evaluate the progress of the studies, the consultation process with the civil society and the State institutions, as well as the achievement of the goals for each of the Master Plan's activities, according to the Logical Framework.

B. Technical and Basic Responsibility

5.2 During execution, RE1/EN1 will have the basic and technical responsibility. RE1/EN1 will have the responsibility for hiring and processing payments for the consulting firm, and approving the products and reports generated by the Firm after they have been reviewed and approved by the Executive Secretariats.

C. Progress and Final Reports

5.3 The consulting firm will submit to the Bank quarterly progress reports that will include: (i) the activities' advance with regards to the Plan's execution, and (ii) proposals to overcome any difficulty that may have arisen regarding the completion of the planned activities. The firm will also submit to the Bank a Final Report.

D. Description of Proposed Evaluations

5.4 The Bank will prepare a PCR based on the reports prepared by the consulting firm and the indicative parameters established in the Logical Framework and monitored through the PPMR for non-reimbursable TCs.

VI. PROGRAM BENEFITS AND RISKS

A. Program Benefits and Developmental Impact

6.1 Benefits from the preparation of the Master Plan will be realized even during its elaboration process. The multi-institutional arrangements needed for the

preparation of the Plan are complemented with an ample participatory framework involving the public sector, private sector and civil society in multiple instances of the process, which favors the validation of proposals. In that way, the Plan will assist the governments of the States in the identification and design of actions aimed at promoting the sustainable development of the region. This will be achieved by taking into account the technical, legal, institutional, environmental, social and financial criteria to select and prioritize interventions. Moreover, the Plan will result in the integration and compatibilization with other natural resources management initiatives in the region and will significantly contribute to coordination of the decision-making process at the Federal, State and Local Government levels, regarding sustainable economic development and water resources management for surface and underground water. These coordination and integration efforts should be expanded, later on, to include the other countries in the Uruguay River Watershed, Uruguay and Argentina, in order to share the management of the watershed in an integrated approach. This example of implementation of shared environmental sustainable development mechanisms could be useful for other Latin American countries with bi-national or multi-national watersheds.

B. Target Beneficiaries

6.2 The inhabitants of the Uruguay Watershed that will benefit from the betterment of the socio-environmental conditions and from improvement in their quality of life. The institutions responsible for the management of the watershed's natural resources which will benefit from the coordination of the decision-making process at the Federal, State and Local Government levels.

C. Sustainability

6.3 The preparation and implementation of the Master Plan has the full support of the governments of the States of Santa Catarina and Rio Grande do Sul. The Executive Secretariats (one in RS and another in SC) have strong political support from their respective Legislative Houses and from the government institutions directly associated with the elaboration of the Master Plan. The budget commitment guaranteed for the *Pró-Rio Uruguay – Guarani Aquifer* project is included in the States' respective Pluri-annual Budgets, where funds have been allocated for this activity. To guarantee the necessary funds for the preparation and initial implementation of the Plan, specific bills were proposed to both Legislative Houses, for the states' budget updating. This means that the Plan to be developed with Bank funding will be readily used as a decision-making instrument, that will include specific investments to promote the sustainable development of the Watershed.

D. Risks

6.4 There is a risk associated with the multi-institutional coordination needed at the federal, state, and local level, as well as the complexity of the policy decisions required for the preparation of the Plan; which could result in the development of a Plan that might not reflect the contributions from all participants, and hence it would not reflect the demands from the population or the needs of public

institutions. To mitigate this risk, multiple consultations and discussions of proposals, as well as a strong coordination and supervision effort is required. The TC will develop technical documents to aid the States in the discussions with other levels of government and the civil society (¶2.3-2.6); a series of workshops involving all the stakeholders will be conducted (¶4.5 and 4.6); and a communication strategy has been designed to promote participation (¶2.10). In addition, the States have established an institutional arrangement to ensure proper coordination among all the actors in the watershed (¶1.13 and 4.3).

6.5 There is the possibility of changes in governmental priorities, lack of resources for implementation, and institutional discontinuity, which may delay the implementation of the Plan. This risk exceeds the scope of this operation; however, steps have been taken in order to mitigate it. The States have signed a *memorandum of understanding*, which establishes the mechanisms for the development and implementation of the Plan centered on only one functional unit for both States and have provided funding for its operation (¶1.13 and 6.3). The preparation of the Plan includes an ample consultation process that will involve all of the stakeholders in the region, and steps will be taken towards the dissemination of results and technical documents, in order to promote discussions with other government institutions and the civil society, which will increase the expectations for implementing the Plan. This, in turn, will induce the Governments to preserve the priority originally given to the Plan, including the flow of financial resources (¶6.3).

VII. ENVIRONMENTAL AND SOCIAL REVIEW

7.1 This operation will have positive social and environmental impacts. The foreseen activities will lead to the development of a Master Plan that will be a planning instrument and will establish the guidelines, goals and interventions at the state and regional level for the sustainable development of the region.

7.2 The Master Plan will be the result of a broad participative process that includes the States' natural resources management institutions, the Federal Government, private sector and civil society. The Plan will identify the environmental vulnerabilities and impediments for the region's sustainable development, pointing to key elements to focalize investments and effort. This will be conducted within a framework of partnerships established between the State's authorities and civil society, with ample discussion of priorities and processes. This approach, besides providing the necessary social validation of the development mechanisms for the region's gradual environmental recovery and economic growth, will put in place mechanisms for the resolution of conflicts and will propose and introduce mechanisms that include environmental, social, and economic variables to be considered in order to assure that only feasible projects or activities are proposed and implemented.

7.3 The environmental policies of both States foresee interventions for environmental protection and recovery of degraded areas, as well as monitoring of the environmental quality. The Master Plan will establish and provide guidelines for the implementation of those policies.

SUSTAINABLE DEVELOPMENT PLAN FOR THE REGION OF THE UPPER URUGUAY RIVER WATERSHED

BR-T1018

CERTIFICATION

I certify that this operation was approved for financing by the donor of the Japanese Trust Fund for Consultancy Services through a memorandum dated June 6, 2005 and signed by Keisuke Nakamura, RE2/FSS. Also, I certify that resources from the Trust Fund for Consultancy Services are available for up to US$ 1,200,000 in order to finance the activities described and budgeted in this document. The commitment and disbursement of these resources shall be made only by the Bank in US Dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except that local consultants working in their own borrowing member country shall have their remuneration defined and paid in the currency of that country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this Plan of Operations. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.

(Signed original by)	***(May 25, 2006)***
Goro Mutsuura **Chief** **Japan Special Fund**	**Date**

SUSTAINABLE DEVELOPMENT PLAN FOR REGION OF THE UPPER URUGUAY/ RIVER WATERSHED
(BR-T1018)
LOGICAL FRAMEWORK

Program Summary			
Program goal: The goal of the Technical Cooperation is to contribute to improved environmental management and protection of the Uruguay Watershed, in view of its importance in recharging the Guarani Aquifer			
Program purpose: The purpose is to develop a Master Plan for the Sustainable Development of the Uruguay Watershed, which will be the planning instrument to guide the interventions in the watershed..			
Summary	**Impact/Result Indicators**	**Verification Means**	**Assumptions**
Goal:			
Environmental management and protection of the Uruguay Watershed improved in view of its importance in recharging the Guarani Aquifer.	• Agreements and other Institutional Documents for the implantation of the Plan signed 1 year after project completion. • 3 years after execution of the TC, the Executive Secretariats created to implement the *Pro-Río Uruguai* project are still functioning and implementing projects identified in the Master Plan. • At least one project co financed by the States of SC and RS is being prepared. • 3 years after project completion, at least 1 project identified in the Master Plan is being implemented in Rio Grande do Sul, and at least 1 project in Santa Catarina.	• *Secretaria de Meio Ambiente-RS* (Environmental Secretariat) and *Secretaria de Desenvolvimento Social-SC* (Social Development Secretariat) Reports. • *Fundação de Economia e Estatística-RS* (Statistic and Economy Foundation) *Secretaria de Desenvolvimento Social-SC* (Social Development Secretariat) Reports.	The State Governments maintain priority and environmental and water resources policy, in a way to assure the Plan's implementation. Governmental programs for the sustainable development should be maintained. The Fiscal situation in the States of Santa Catarina and Rio Grande do Sul is such that allows them to make the investments needed for the sustainable development of the Rio Uruguai Upper Watershed

Summary	Result Indicator	Verification Means	Assumptions
Purpose:			
Master Plan for the Sustainable Development of the Uruguay Watershed developed, which will be the planning instrument to guide the interventions in the watershed.	• At the end of execution, the methodology for project selection and prioritization for all activities and investments proposed in the watershed is being used by the States (RS and SC), as well as the 347 municipalities covered by the watershed. • At the end of execution of the TC, the States of SC and RS and the 347 municipalities covered by the watershed will have identified a set of short, medium and long-term sustainable interventions (projects), with feasibility studies completed for the interventions (projects) that can be financed within the first 2 years of the Plan's implementation.	• *Secretaria de Meio Ambiente-RS* (Environmental Secretariat) and *Secretaria de Desenvolvimento Social-SC* (Social Development Secretariat) Reports. • Partial and final reports elaborated by the consultancy firm and approved by the Executive Secretariats (RS/SC)	Program priority and goals are maintained by the States Governments Institutional articulation between the Plan elaboration relevant agents is maintained Civil society agents maintain their participation in the Plan elaboration process Master Plan is appropriate for the solution of Region's problems

Outputs			
Output 1 –Watershed Diagnosis			
Summary	**Product Indicator**	**Verification Means**	**Assumptions**
Watershed Diagnosis completed.	• Data gathering and mapping performed at the end of 6 months of project execution.	• Progress Reports • Technical Reports and Thematic Maps • Consolidated Data Base • Dissemination on Program web site	Integration and cooperation between scientific research institutions in the watershed area
	• Environmental vulnerabilities and risks assessments completed at the end of 9 months of project execution.	• Progress Reports • Synthesis reports and maps • Dissemination on Program site	Support from educational and research institutions for information gathering and divulgation
	• Studies completed at the end of 9 months of project execution.	• Progress Reports • Synthesis reports and maps • Dissemination on Program site	Support from educational and research institutions for information gathering and divulgation
	• Diagnosis final report concluded at the end of the first year of execution (12 months).	• Progress Reports • Dissemination on Program site and Diagnosis final report copies available	Support from governmental agencies in the information gathering and divulgation

Output 2 – Sustainable Development Plan.			
Summary	**Product Indicator**	**Verification Means**	**Assumptions**
Master Plan for Sustainable Development of the Region developed.	• Social communication strategy in execution at the end of 6 months of project execution.	• Advertisement • Proclamations • Publishing issues • Sending Packages receipt • Program Site operative	The media should maintain social interest focused in the sustainable development.
	• 39 Regional Workshops carried out at the end of 18 months of project execution.	• Meeting register • Participation Lists • Copies of Multimedia material available • Progress Reports	The participants keep interest and enthusiasm in the program viability.
	• Sustainable Development Strategy elaborated at the end of 18 months of project execution.	• Final Report finished and available	Existence of scientific research foment that takes into account regional and local demands
	• Development of Methodology and Criteria for the prioritization and selection of Projects and Actions completed at the end of 18 months of project execution.	• Projects and Actions Methodology and Prioritization Criteria defined	Projects and actions compatible with the available budget
	• Projects and Actions identification and selection completed at the end of 18 months of project execution.	• Selected Projects and Actions Report concluded	Public interest is taken into account in the project and actions selection and prioritization, keeping disclosure of its origins and finalities

	• Specific Studies and Projects Terms of Reference elaborated at the end of 24 months of project execution.	• Terms of Reference for Studies concluded • Terms of Reference for Projects concluded	Existence of a interventions portfolio to be implemented Strategic importance of the knowledge of surface and underground water interface mechanisms in the watershed
Output 3 – Program Implementation Monitoring and Evaluation System			
Summary	**Product Indicator**	**Verification Means**	**Assumptions**
Monitoring and Evaluation System developed and implemented.	• Indicators and Base line for Environmental Quality and Plan's implementation monitoring and evaluation defined at the end of project execution (24 months).	• Criteria and Parameters for the Environmental Quality defined	The data and information collected are consistent and sufficient to structure and implement the Program
	• Technical, Legal and Institutional Mechanisms for Monitoring and Evaluation Activities established at the end of project execution (24 months).	• Environmental Monitoring System elaborated	Interest from the main institutional parties and from civil society regarding participation on the Program structuring and implementation process.
	• Master Plan Implementation Performance Mechanisms defined by the end of project execution (24 months).	• Program Implementation Performance Evaluation system finished	Technical Cooperation effective execution and supervision

Output 4 – Institutional Arrangement for Plan Implementation			
Summary	**Product Indicator**	**Verification Means**	**Assumptions**
Institutional Arrangement for the Plan Implementation developed.	• Institutional Responsibility Map for the Plan Implementation concluded by the end of project execution.	• Institutional Responsibility Map concluded	Public policy priorities should have continuity Maintenance of Federal and State Institutional Framework Stability
	• Drafts of Agreements and proposals for institutional arrangements elaborated by the end of project execution.	• Drafts of Agreements elaborated	Institutional Articulation to be maintained between the Program main agents
	• Legal and Institutional to formalize Arrangements concluded by the end of project execution.	• Articulation Meetings, Seminars and Workshops realized	The Public Policies priorities should be maintained

BR-T1018
MASTER PLAN FOR THE SUSTAINABLE DEVELOPMENT OF UPPER URUGUAI RIVER WATERSHED
Detailed Budget

Item		xmonth	#months	subtotal	xunit	#units	subtotal	JCF	Counterpart		
									SC	RS	TOTAL
A.	**CONSULTING SERVICES**							**1,160,000**			
A.1	***International Expertise***							***650,000***			
A.1.1	***Honoraria***			***542,000***							
	Watershed diagnostic	16,000	12.0	192,000							
	Strategy for Sustainable Development	10,000	6.0	60,000							
	Projects and Initiatives for Sustainability	10,000	3.0	30,000							
	Monitoring and Evaluation System	10,000	3.0	30,000							
	Institutional Framework Analysis	10,000	3.0	30,000							
	Overhead			200,000							
A.1.2	***Travel***						***108,000***				
	Japan-Brazil-Japan				3,000	10	30,000				
	Regional Tickets				1,500	16	24,000				
	Per Diem in Brazil/Regional				100	420	42,000				
	Local Tickets				500	24	12,000				
A.2	***Local Expertise***							***510,000***			
A.2.1	***Honoraria***			***465,000***							
	Watershed diagnostic	10,000	24.0	240,000							
	Strategy for Sustainable Development	7,500	12.0	90,000							
	Projects and Initiatives for Sustainability	5,000	9.0	45,000							
	Monitoring and Evaluation System	5,000	9.0	45,000							
	Institutional Framework Analysis	5,000	9.0	45,000							
A.2.2	***Travel***						***45,000***				
	Regional Tickets				500	50	25,000				
	Per Diem in Brazil/Regional				100	200	20,000				

B.	**COUNTERPART**										
B.1	***Local Support SC and RS (in-kind)***			***655,000***					***327,500***	***327,500***	***655,000***
	Executive Secretaries (2)	4,000	48.0	192,000					96,000	96,000	
	Technical support personnel (6)	3,000	144.0	432,000					216,000	216,000	
	Administrative support personnel (2)	646	48.0	31,000					15,500	15,500	
B.2	***Consultants assigned to the Preparation Unit***								***114,000***	***114,000***	***228,000***
B.2.1	***Honoraria***			***204,000***							
	General Coordinator	4,000	24.0	96,000					48,000	48,000	
	Environmental and Water Resources Specialist	3,000	18.0	54,000					27,000	27,000	
	Economist	3,000	18.0	54,000					27,000	27,000	
B.2.2	***Travel***						***24,000***				
	Local tickets				500	16	8,000		4,000	4,000	
	Per diem local experts				100	160	16,000		8,000	8,000	
B.3	***Participatory Workshops (includes activities of dissemination, travels and perdiem of participants) Financial***			***237,000***					***118,500***	***118,500***	***237,000***
B.2.1	***Communication Strategy***			***70,000***					***35,000***	***35,000***	
	Dissemination Materials			50,000					25,000	25,000	
	Web Site Design and management			10,000					5,000	5,000	
	Dissemination (Media Outlets)			10,000					5,000	5,000	
B.2.2	***Participatory And Dissemination Workshops***			***167,000***					***83,500***	***83,500***	
	Participatory Workshops (39)	4,000	39.0	152,000					76,000	76,000	
	Dissemination Workshops (2)	7,500	2.0	15,000					7,500	7,500	

B.4	***Operation Costs (in-kind)***			***310,000***					***155,000***	***155,000***	***310,000***
	Equipment and training			220,000					110,000	110,000	
	Publications			50,000					25,000	25,000	
	Telecommunications	500	24.0	12,000					6,000	6,000	
	Office space	1,000	24.0	24,000					12,000	12,000	
	Office materials			4,000					2,000	2,000	
C.	**OTHER COSTS**							**40,000**	**35,000**	**35,000**	**70,000**
C.2	***Contingencies***			***110,000***				***40,000***	***35,000***	***35,000***	
	Subtotal							**1,200,000**			**1,500,000**
	TOTAL							**2,700,000**			

21/7/00

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION

Brasil. Nonreimbursable Technical Cooperation ATN/-----BR for the Sustainable Development Plan for the Region of the Upper Uruguay River Watershed

The Board of Executive Directors

RESOLVES:

1. That the President of the Inter-American Development Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the Japanese Trust Fund for Consultancy Services (JCF), to enter into such agreements as may be necessary with the States of Santa Catarina and Rio Grande do Sul, and to take such other measures as may be pertinent for the execution of the plan of operations referred to in Document AT-_____ with respect to a nonreimbursable technical cooperation for the sustainable development plan for the region of the upper Uruguay river watershed.

2. That up to the sum of US$1,200,000, is authorized for the purposes of this resolution, chargeable to the resources of the Japanese Trust Fund for Consultancy Services.

3. That the above-mentioned sum is to be provided on a nonreimbursable basis.