

DOCUMENT OF THE INTERAMERICAN DEVELOPMENT BANK

BRAZIL

**A SOLID WASTE MANAGEMENT STRATEGY FOR THE ENVIRONMENTAL AND SOCIAL
SUSTAINABILITY OF THE UNA WATERSHED IN THE CITY OF BELÉM - PROGRESBU**

(BR-T1157)

PLAN OF OPERATIONS

This document was prepared by the Project Team consisting of Cláudia Nery, Team Leader, (WSA/CBR), Fernando Bretas (INE/WSA), Horacio Terraza (INE/WSA), Andrés Consuegra (LEG/SGO) and Yolanda Galaz (INE/WSA).

TABLE OF CONTENTS

I.	BACKGROUND AND PROBLEM STATEMENT	1
A.	Bank's Support and Relationship with Bank Strategy in Brazil.....	2
II.	PROGRAM OBJECTIVE AND DESCRIPTION.....	3
A.	Objectives, Components and Activities.....	3
III.	COSTS AND FINANCING.....	5
IV.	EXECUTION AND SUPERVISION	6
A.	Executing Agency and Execution Mechanism	6
B.	Period of Execution and Disbursement	6
C.	State of Preparation.....	6
V.	MONITORING AND EVALUATION	7
A.	Supervision and Evaluation	7
B.	Basic Technical Responsibility by the Bank	7
VI.	BENEFITS AND RISKS	7
VII.	ENVIRONMENTAL AND SOCIAL IMPACTS	8

ANNEXES

ANNEX I	Logical Framework
ANNEX II	Project Cost and Financing
ANNEX III	Procurement Plan

ELECTRONIC LINKS

Términos de Referencia - 1
Términos de Referencia - 2
Términos de Referencia - 3
Términos de Referencia - 4
Safeguard and Screening Forms

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>

ABBREVIATIONS

ANA	Agência Nacional de Águas	National Water Agency
FUNPAPA	Fundação Papa João XXIII	Pope John XXIII Foundation
IBGE	Instituto Brasileiro de Geografia e Estatística	Brazilian Inst. of Geography and Statistics
IPEA	Instituto de Pesquisas Econômicas Aplicadas	Institute of Applied Economic Research
JCF		Japan Trust Fund for Consulting Services
JSF		Japan Special Fund
MCIDADES	Ministério das Cidades	Cities Ministry, Federal Government
MPOG	Ministério do Planejamento Orçamento e Gestão	Ministry of Planning and Budget and Administration
PLANSAB	Plano Nacional de Saneamento Básico	National Plan of Basic Sanitation
PMSS	Programa de Modernização do Setor Saneamento	National Sanitation Sector Modernization Program
PROGRESBU	Programa de Gerenciamento de Resíduos Sólidos como Estratégia de Sustentabilidade nas Intervenções de Controle para inundações de bacias urbanas da Cidade de Belém	Program of Solid Waste Management as Strategy to ensure the sustainability of the Una Watershed of Belem and control flooding
PMB	Prefeitura Municipal de Belém	Belém Municipal Government
PEV	Ponto de Entrega Voluntário	Voluntary Solid Waste Delivery Point
RSU	Resíduos Sólidos Urbanos (RSU)	Municipal Solid Waste (MSW)
RCC	Resíduos da Construção Civil (RCC),	Construction Waste
RV	Resíduos Volumosos (RV),	Voluminous Waste
SESAN	Secretaria Municipal de Saneamento	Municipal Sanitation Department of Belém
SEMMA	Secretaria de Estado de Meio Ambiente, Governo do Pará	State of Pará Environmental Secretariat
SEBRAE	Serviço de Apoio às Micro e Pequenas Empresas	Service of Support to Small and Micro-enterprises
UBA	Unidade Básica Ambiental	Basic Environmental Unit

PLAN OF OPERATIONS
SUPPORT FOR A SOLID WASTE MANAGEMENT STRATEGY FOR THE ENVIRONMENTAL AND
SOCIAL SUSTAINABILITY OF THE UMA WATERSHED IN THE CITY OF BELÉM
(BR-T1157)

RESUMEN EJECUTIVO

Beneficiary	Municipal Government of the City of Belém, Pará		
Project Team	Team Leader: Claudia Nery (WSA/CBR). Members: Benard Darnel (WSA/CBR), Fernando Bretas (INE/WSA), Horacio Terraza (INE/WSA), Andres Consuegra (LEG/SGO) and Yolanda Galaz (INE/WSA).		
Executing Agency:	Municipal Sanitation Department (Secretariat) of the City of Belém – SESAN.		
Direct Beneficiaries:	The UNA Watershed population of 200,000 people; the Municipal Government of Belém; the city's population at large of approximately 1.4 million inhabitants; other Brazilian municipalities that may benefit from the example and expected positive results of the proposed Program		
Financing:	BID: Japan Special Fund	US\$	750, 000
	City of Belém:	US\$	188, 000
	Total:	US\$	938, 000
Objectives:	The overall objective of this technical cooperation is to contribute to the social, environmental and technical sustainability of the UNA project. The purpose is to implement a solid waste management strategy in the UNA watershed to (i) reduce the disposal of solid waste and residues into the canals, flood control structures, and along roadways and unoccupied areas, (ii) rehabilitate communal areas and empty spaces within the watershed and (iii) strengthen SESAN to adequately manage solid waste in the area.		
Execution Period:	Period of Execution: 24 months Disbursement Period: 30 month from the date of the signing of the Agreement.		
Special Contractual Conditions:	<u>Conditions prior to first disbursement:</u> presentation for IDB approval of: (i) the final engineering designs for the UBA; (ii) the final Terms of Reference (TORs) for the revitalization and use of the degraded areas; (iii) the final TORs for the Institutional Strengthening Component; and (iv) evidence by SESAN that the association of solid waste collectors and recyclers that will manage the UBA has been legally constituted and it is operational.		
Exceptions to Bank Policies:	None		
Social and Environmental Aspects:	The Technical Cooperation profile was revised by the Environmental and Safeguard Unit (ESG) on its ESR 04-10 of January 25, 2010, and classified Category "B". ESG's comments made during the QRR are incorporated to this Plan of Operations.		

I. BACKGROUND AND PROBLEM STATEMENT

- 1.1 The city of Belém, located at the confluence of the Guamá River and Guajará Bay, faces a series of problems that are typical of rapid and uncontrolled urban growth. Between 1970 and 2004 its population doubled, from just over 600,000 inhabitants to slightly more than 1.4 million—a much faster rate of growth than that of Brazil's southern cities over the same period. This expansion was associated with the development of industrial and commercial activities, as well as growth of public services and government activities. Rapid population growth through natural increases as well as strong rural-urban migrations during several decades of the latter part of the past century was not accompanied by the necessary infrastructure investments or controls on land use and occupation. This situation, which was further aggravated by a lack of urban housing alternatives accessible to low-income groups, gave rise to spontaneous settlements with makeshift housing on untitled land, in environmentally vulnerable areas, subject to periodic flooding, between and along the banks of the drainage canals which traverse large sections of the city. In many sections between the canals of the macro-drainage system, the occupation density, over time, became so high that natural drainage of the area was impeded and completely obstructed by the construction of stilt houses [palafitos] accessed via footbridges. Most of these areas were subject to recurring flooding as well as permanent ponding, rendering its inhabitants vulnerable to waterborne diseases and other adverse health conditions.
- 1.2 With the support of IDB financing, under loans 649/OC-BR and 869/SF-BR, (BR-0055), the State of Pará concluded, in december of 2004, the implementation of a Program of macro and micro drainage of the UNA Watershed in Belém, which included improvement of flood control structures of the Una and Jacaré canals, basic sanitation, improvement of roads, passageways and bridges, and resettlement of families, within the most affected areas of the Una Watershed. The City of Belém acted as a co-executing agency for a component of urban sanitation. Other interventions (Tucunduba watershed) were funded directly by the Municipality with resources obtained from the program Habitar Brasil (loan 1126-OC/BR). Presently, the Municipality of Belém is using another IDB loan to finance interventions in the Estrada Nova watershed (BR-L1065). These projects involve resettlement of population in risky areas and implementation of macro (drainage canals) and micro (sewerage systems) drainage structures. The UNA project promoted a total urban transformation in the areas of direct and indirect impact benefiting more than 150,000 families.
- 1.3 Four years after the final disbursement of loan 649/OC-BR and 869/SF-BR, the structures and systems built are functioning as planned but much of the solid waste generated by the residents of the area are illegally disposed off into and along the canals and flood control reservoirs, impairing normal operation of these structures and compromising the environmental gains of the project such as efficient drainage, improved sanitation and the canal's water quality. Furthermore, after removing the population from the areas of greatest risks, some open spaces were created which also ended up as dumping grounds and, in some instances, resulting in new attempts of illegal invasion and construction of ramshackle shelters. The UNA project relied on the Municipal Sanitation Secretary (SESAN) to manage these areas. Although SESAN houses the city's solid waste

department, its staff is ill-prepared to face the challenge of working with the community to promote and obtain behavioral changes aimed at the proper disposal of solid wastes, the selective collection of recyclable material, and support by the communities to ensure the maintenance of the unoccupied areas.

- 1.4 The project area, which today counts with a population of some 200,000 inhabitants, is regularly served with waste collection, however, in large part because of a lack of sustained environmental and social development work with the communities and SESAN's limited institutional capacity, the population that participated in the community organization and training activities during the implementation of the UNA project, is not responding as expected. As a result, in this area of Belém, SESAN continues to face a seemingly intractable waste management problem for which it needs resources and to develop new expertise to address this issue jointly with the residents and communities of the area.
- 1.5 To effectively deal with and remediate the situation, SESAN is asking for IDB support in the form of a technical cooperation (TC) to closely work with the population to reduce waste generation, to clean up, restore, and implement better uses as green spaces of the existing empty areas of the UNA watershed, and to strengthen SESAN's capacity to deal with the area's solid waste management challenges through the adoption of culture-based solutions elicited from extensive consultations and interaction with the community and local professionals. The proposed interventions represent an innovative approach to solid waste management in the city of Belém. The proposal departs significantly from the current practice of daily collecting and disposing tons of solid wastes in a landfill, part of which could be recycled, thereby providing opportunities for the promotion of greater community awareness as well as incentives for more effective participation of the population of the area in the solid waste management of the UNA watershed.
- 1.6 It is important to emphasize that in Belem there already exist some organized groups of collectors of recyclable materials. This arrangement for the collection and sale of recycled solid waste materials is achieving excellent results, as in the case of the Association of Selective Collectors of, the Umarizal and Nazareth neighborhoods, where its associates collect on the average 114.8 tons of recyclable materials each month (SESAN, 2009). Two thirds of the persons involved in informal recycling in Belém are women. Not infrequently, entire families participate in the process.

A. Bank's Support and Relationship with Bank Strategy in Brazil

- 1.7 The proposed Technical Cooperation is of high interest to both the IDB and the State of Pará. In supporting the improvement of living conditions in poor neighborhoods of the UNA Watershed, it is fully consistent with the Bank Strategy for Brazil (GN-2570), and the Country Document CPD (GN 2576) satisfying the established priorities of (i) poverty reduction, (ii) promotion of equality and social inclusion, and (iii) solution of environmental and natural resource management problems. The TC is also aligned with the Water Defenders Program of the Water and Sanitation Initiative (GN- 2446-3) since, among its objectives, it is aimed at the protection and sustainability of the UNA River watershed.

II. PROGRAM OBJECTIVE AND DESCRIPTION

A. Objectives, Components and Activities

- 2.1 The overall objective of this technical cooperation is to contribute to the social, environmental and technical sustainability of the Una project through the implementation of an innovative solid waste management strategy in the watershed area of the city of Belém that will reduce and eliminate the illegal disposal of solid wastes into and along canals and roads and empty lands of the area. To attain this objective, the proposed project established three components with the following related purposes: (i) to reduce the disposal of solid waste and residues along, and into, the canals, in flood control structures, and along roadways and unoccupied areas, through a selective solid waste collection, recycling and public education program; (ii) to rehabilitate communal areas and empty spaces within the watershed for transformation into communal green spaces, parks and vegetable gardens; and (iii) to strengthen SESAN to adequately manage solid waste in the area with the voluntary collaboration of the community.
- 2.2 **Component 1: Waste selection, recycling and disposal (US\$332,000).** This component will finance activities to identify the underlying causes and take the necessary remedial action to eliminate the illegal dumping of wastes generated in the project area.
- 2.3 The Component will focus upon the promotion of selective solid waste collection, recycling, reuse and appropriate final destination of the collected and processed solid waste materials. The Component will include: (i) the construction and operation of a Basic Environmental Unit (UBA); (ii) implementation of door to door selective solid waste collection in the project area and (iii) implementation of a comprehensive environmental education program in the watershed area.
- 2.4 The UBA concept is being disseminated by the federal government as a proven solution to manage waste from yard trimmings, construction activities and domestic sources of solid waste in areas similar to the UNA watershed.
- 2.5 The UBA is to be constructed on a land of approximately 1,500 m², owned by SESAN, located in the Passagem Mirandinha in the district of Maracangalha, Administrative District of Sacramento. The UBA will serve as temporary storage, sorting and recycling centers for the appropriate final destination of the solid waste, including the commercialization of recycled materials.
- 2.6 The UBA will be administered by an association, established for this purpose, constituted of the members of solid waste collectors and recyclers (UBA operator). Under the program, the association and its members will receive administrative, legal, environmental and other necessary training and count with the supervision and support of a technical task force of SESAN as well as the support of consultants envisaged for the Project. Members can be employed in the UBA or as collectors or as independent entrepreneurs, counting with the logistic support and training of the UBA operator.
- 2.7 The UBA will also serve as centers for environmental education, to disseminate information to the public, train community leaders, and to serve as a focal point in the

community for voluntary delivery of selected solid waste and as call center to request the pick up of trash and rubble from residences. Through its members of solid waste recyclers and collectors, the UBA operator will organize and implement scheduled rounds throughout the neighborhoods for the regular pick up of recyclable solid waste materials, thereby serving the communities, as well as being productively employed with a source of income from the sale by the UBA operator of the recycled materials.

- 2.8 The Project will provide: (i) the basis for the organization of individuals and groups of waste collectors into a legal entity in the Val de Cans Project Areas; (ii) organization, support and training for the collection, recycling, and sale of recycled solid wastes or the disposal of non-marketable waste materials; and (iii) the basis for the necessary community outreach and education. The UBA will serve as the operational center and focal point for the project.
- 2.9 The expected goals of this component are: i) identification of the causes of illegal dumping and the provision of the necessary support to the community and SESAN to solve this problem; (ii) establishing and placing into full operation two Basic Environmental Units in the area, in large part with counterpart resources to (a) serve as collection, recycling and environmental education centers for the UNA watershed area, (b) to support educational campaigns, organize and train the collectors and recyclers, and provide for the commercialization of recycled products and proper disposal of non-usable materials; (iii) (a) to sensitize the population about the need for the separation of solid waste and to raise public awareness about the value of the recyclable product; (b) to attend 100% of the population of the district with educational campaigns and follow-up measures to permit implementation of the recommended practices through voluntary delivery to the UBA as well as scheduled door to door visits throughout the area by collectors and recyclers trained and organized by the UBA operator; (c) to work with local schools to raise students and teachers awareness on the need and benefits of recycling and to train students in the catchment area to develop environmental education activities; (d) to train 25 leaders (multipliers) of neighborhood associations of the district and to establish an environmental education committee; and (e) to conduct 16 seminars related to environmental health and safety.
- 2.10 The expected outcomes of Component I are: a reduction of the solid waste from the area that requires final disposition, a reduction of solid waste collection costs, and a reduction and gradually complete elimination of all illegal dumping of solid waste along of and into the canals, along the roads and empty lands. The program is also expected to generate employment and income for an estimated 100 families already involved with informal solid waste recycling in the project's area.
- 2.11 **Component 2: Rehabilitation and use of empty areas (US\$ 274.600).** This component will finance the identification, removal and proper disposal of illegally disposed residential solid waste by the community and accumulated on sixteen empty land areas that were created during the execution of the UNA project. Based on local experience and interests, these communal areas are being planned to be used as parks and food production by establishing communal vegetable gardens. The component also finances the activities necessary to attract the private sector to contribute to the operation and

maintenance of these areas, based on the experience in other parts of the city where the private firms became sponsor of parks and/or boulevards. The prospect of private sector involvement is high, given the involvement of various private sector firms and entities with similar projects in other areas, and their expressed interest in extending their actions to the UNA watershed.

- 2.12 The expected outcomes are: i) illegal dumping of solid wastes on currently empty land areas is completely eliminated; 12 of the 16 areas rehabilitated and transformed for effective recreational and productive uses as green space and gardens; (ii) two environmental theme parks, planted with native species, are established and are being maintained; (iii) private sector is involved in the adoption and maintenance of at least 20% of the rehabilitated areas; and (iv) municipal maintenance costs of the empty and rehabilitated areas is reduced by 50 percent.
- 2.13 **Component 3: Institutional Strengthening (US\$100,000).** This component will finance the hiring of consultants to train SESAN's personnel on the implementation and maintenance of projects that involve extensive community involvement. It will also finance the exchange of experiences with similar projects in the Region and the establishment of a permanent task force from among SESAN's personnel with direct responsibility for solid waste management and supervision of the operation of the activities of the UBAs in the UNA Watershed.

III. COSTS AND FINANCING

- 3.1 The total cost of the project is estimated at US\$ 938,000. The amount of US\$ 750,000 will be financed with the non-reimbursable resources from the Japanese Special Fund (JSF). The counterpart contribution in the amount of US\$188,000 will be provided by the Municipal Government of the City of Belém and will consist of \$99,108 in currency and US\$88,892 in kind.

Cost and Financing in US \$	IDB/JSF	Local Contribution	Total
Supervision and Administration (execution)	112,508	88,892	201,400
Component 1. Waste reduction and disposal	232,892	99,108	332,000
1.1. Equipment for the UBAs	42,733	59,267	102,000
1.2. Implementation of UBA	190,159	39,841	230,000
Component 2. Rehabilitation of empty areas	274,600	-	274,600
2.1. Equipment for the Parks	39,092	-	39,092
2.2. Rehabilitaton of degraded areas	196,416	-	196,416
2.3. Landscaping	39,092	-	39,092
Component 3. Institucional Strengthening	100,000	-	100,000
3.1 Consultants in institutional strengthening	100,000	-	100,000
Auditoria	30,000		30,000
TOTAL	750,000	188,000	938,000

IV. EXECUTION AND SUPERVISION

A. Executing Agency and Execution Mechanism

- 4.1 **Executing Agency:** SESAN will be the Executing Agency for this technical cooperation. SESAN is the sanitation department of the Municipal Government of Belém which participated as Co-executor of the UNA Project, financed by the IDB under loans 649/OC-BR and 869/SF-BR, concluded in 2004, thus, SESAN is familiar with Bank policies and procedures and can readily be brought up to date on current procurement and financial procedures of the Bank to implement the Project. SESAN will be responsible for: (i) hiring the required consultants; (ii) organizing and managing the training programs; (iii) preparing terms of reference (TORs); (iv) provide the technical supervision of the services delivered; and (iv) render financial accountability. As previously noted the UBA will be administered by an association of solid waste collectors and recyclers, established and trained for this purpose, counting with the supervision and support of SESAN. SESAN will assign a coordinator, an engineer, a social specialist and an environmental specialist to execute the TC.
- 4.2 Procurement of goods and contracting of consulting services will be carried out in accordance with the procedures established in the Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (GN-2349-7 and updated versions) and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (GN-2350-7 and updated versions). A detailed Procurement Plan is presented in Annex III).
- 4.3 Administration and Supervision: The administration and supervision this Technical Cooperation is assigned to WSA/CBR with the support of INE/WSA of the IDB in Washington.
- 4.4 Disbursement and Flow of Funds: The Executing Agency will prepare, and update the project financial plan semiannually estimating the timing and amount of the project's resources (Bank and local counterpart funding) as well as anticipated expenses for the life of the project. The Bank will disburse the project resources, according to the true liquidity needs of the project, as evidenced by the Executing Agency's current and anticipated future commitments and obligations. Each advance must be justified, once the amount of project expenses reaches 80% of the amount advanced. The justification must be submitted and accepted by the Bank, prior to receiving any subsequent advances.

B. Period of Execution and Disbursement

- 4.5 The Technical Cooperation will have an execution period of 24 months and a disbursement period of 30 months from the date of the signing of the Agreement.

C. State of Preparation

- 4.6 SESAN, in cooperation with the beneficiary communities and the IDB, has completed the necessary preparations to commence the implementation of the Program with the support of the proposed Technical Cooperation. Completed supporting documents include: (i) Logical Framework; (ii) Procurement Plan with estimated costs for each category; (iii) Implementation Schedule for an 18 months execution period; (iv) Draft Terms of

Reference for the Consolidation of Selective Collection and Environmental Education; (v) Draft Terms of Reference for the Basic Environmental Unit – UBA, including cost details; (vi) Draft Terms of Reference for the revitalization and use of the degraded areas; and (vi) Draft Terms of Reference for the Institutional Strengthening Component.

- 4.7 **Execution:** Prior to first disbursement the execution Agency should present for the IDB's approval the following: (i) final engineering designs for the UBA; (ii) the final Terms of Reference (TORs) for the revitalization and use of the degraded areas; (iii) the final TORs for the Institutional Strengthening Component, and (iv) evidence by SESAN that the association of solid waste collectors and recyclers that will manage the UBA has been legally constituted and it is operational.

V. MONITORING AND EVALUATION

A. Supervision and Evaluation

- 5.1 The work established in the respective terms of reference will be accompanied by SESAN in cooperation with WSA/CBR and INE/WSA. SESAN will produce internal monthly report for its own records and quarterly reports for presentation to the Bank. Disbursements will be subject to the approval of the latter reports by the Bank. The Bank will contract a consultant to produce a mid-term evaluation within 18 months from the date of the signing of the Agreement, and a final Report within 90 days after the completion of the 24 months execution period.
- 5.2 Auditing and financial aspects: Project financial statements will be audited by a firm of independent auditors acceptable to the IDB, in accordance with previously approved Terms of Reference as established under IDB policies.

B. Basic Technical Responsibility by the Bank

- 5.3 INE/WSA will be responsible for all aspects related to the execution of this Technical Cooperation through the WSA's specialist in the Country Office of Brazil, Claudia Nery (claudiabo@iadb.org) (55-61-3317-4273).

VI. BENEFITS AND RISKS

- 6.1 As evinced by the Terms of Reference presented by SESAN, the preparation of this Project and proposed Technical Cooperation involved an ample process of consultations within SESAN and other municipal government departments of the City of Belém, consultations with the IDB and numerous consultations with the involved communities, ONGs and representatives of public and private sector organizations to demonstrate the readiness and interest for its implementation as well as its significant potential for success.
- 6.2 The Project is expected to substantially reduce and eventually eliminate the problem of illegal deposit of solid waste in the UNA Watershed area and thereby mitigate a chronic environmental problem as well as its serious physical and adverse public health

consequences of impeded drainage in the area. The planned measures of selective solid waste collection and recycling, as well as the restoration of empty public lands, accompanied by campaigns of public education on the benefits of selective waste collection and recycling, will enhance the sustainability of the operation, improve the quality of life of some 200,000 residents of the UNA watershed as well as of the population of the metropolitan region of Belém at large. The successful implementation of the Project also augers well for its eventual emulation by other municipal governments of Pará and other neighboring states with similar solid waste problems.

- 6.3 No inordinate sectoral risks are foreseen in the implementation of the Project. The Project draws on the lessons of experience of the UNA Macro and Microdrainage operation (BR-0055), which, through the improvement of the urban transport infrastructure within the area was successful in implementing scheduled solid waste collection in the area, but fell short in carrying out a sustained effort of community education to avoid the illegal and indiscriminate dumping of refuse. These lessons of the past point to the alternative and innovative approach of the present proposal which seeks to actively and effectively engage the involved communities. In addition to the development of a heightened public environmental awareness over the past years since the completion of the UNA Project, SESAN has also broadened its base of support through partnerships with agencies like FUNPAPA, SEMMA, SEBRAE and civil community organizations. Thus, one of the potential risks of protracted community resistance, often typical of projects involving large segments of low income populations is mitigated.
- 6.4 Other potential risks are of a transverse nature, relate to unforeseen meteorological events, to macro-economic changes which could affect the profitability of recycling solid waste, and to administrative and political changes associated with elections which could result in dissensions and divisiveness within the communities involved. To the extent possible, transverse risks are mitigated and overcome by the strong community involvement that is part of the Program and the interest and interventions of its beneficiaries to ensure its permanence.

VII. ENVIRONMENTAL AND SOCIAL IMPACTS

- 7.1 The ESR 04-10 is dated January 25, 2010, approved, and classified Category "B". This TC will not generate social or environmental negative impact; on the contrary, it will make possible the correction of the existing liabilities associated with the lack of appropriate maintenance of the project's areas and structures. Minor impacts might be generated during the construction of the UBA during stockpiling the construction material; which is subjected to runoff. Good construction practices and material handling will be used to mitigate this potential impact to the receiving rivers. No earth movement will be required to implement the UBA. The residential solid waste removed from the empty areas will be directed to the city sanitary landfill and the recycled wastes that will be stored in bags or boxes at the UBA consists of paper, plastic and metals (cans and scrap metal). These pose no environmental or health treats since the recyclers will be trained on how to containerize and store them. Overall, the project will promote greater social and environmental awareness of the population and SESAN's personnel which are responsible for the project's sustainability. The technical cooperation proposal is coherent

with the strategic guidelines defined by the Bank for the country, including improvements in the environmental management through the promotion of better sanitary conditions. The project followed the guidelines of the IDB Environment Policies and Safeguards Policies (OP-703), and the Project Team suggested a classification as "B" for this operation.

LOGICAL FRAMEWORK

SOLID WASTE MANAGEMENT PROGRAM AS A STRATEGY FOR THE SUSTAINABILITY OF THE THE UMA WATERSHED FLOOD CONTROL SYSTEMS OF THE CITY OF BELEM - PROGRESBU

<i>DESCRIPTION</i>	<i>INDICATORS</i>	<i>MEANS OF VERIFICATION</i>	<i>DESCRIPTION</i>
OBJECTIVE Contribute to the social, environmental and technical sustainability of the UMA Project.	Reduction of 100% of solid waste in the canals of the UNA Basin within 12 months of the implementation of the program.	Production Report presented by the firm which collects the material in the area (quantity of solid waste, frequency of cleaning and dredging)	
PURPOSE Implement a strategy of solid waste management in the U Basin so as to avoid the illegal dumping of waste and rubble into and along the margins of the canals and drainage systems.	<ul style="list-style-type: none"> • 60% increase in recyclable materials; • 80% rubbish sent to unit of transfer or reuse. • 100% of the population reached with environmental education 	<ul style="list-style-type: none"> • Volume of material sold; • Volume of rubbish correctly classified and sent to the transfer unit or for reuse. • Monitoring and evaluation of the environmental education unit – DRES. 	<ul style="list-style-type: none"> • Government credibility is maintained in the community. • Solid waste management in the area of the program is improved. • A Solid Waste Management Plan is in effect.
COMPONENT 1: <u>Reduction and elimination of solid wastes</u>	<ul style="list-style-type: none"> • Construction of a Basic Environmental Units (UBA). • Implementation of door to door selective solid waste collection in the CRPP. • Implementation of Environmental Education Program. 	<ul style="list-style-type: none"> • UBA built and operating. • Population attended with selective collection. • Participation and satisfaction of the population. 	<ul style="list-style-type: none"> • Participation and coordination of SESAN. • Participation of the social actors (community leaders)
COMPONENT 2: <u>Rehabilitation and use of the left over/disoccupied/ remaining areas.</u>	<ul style="list-style-type: none"> • Implementation of 2 Theme Parks. • Removal of rubbish and cleaning up of the 12 remaining areas. 	<ul style="list-style-type: none"> • Theme parks built. • Remaining áreas rehabilitated. 	<ul style="list-style-type: none"> • Participation and coordination of SESAN. • Participation of the social actors (community leaders)

<p>COMPONENT 3: <u>Institutional Strengthening</u></p>	<ul style="list-style-type: none"> • Training of 30 SESAN technicians in the implementation and maintenance of projects involving the community. • Establishment of the SESAN Technical Council to accompany the program. 	<ul style="list-style-type: none"> • Courses, seminars presentations and technical visits undertaken. • Action of the Council during the implementation of the program. 	<ul style="list-style-type: none"> • Participation and coordination of the technicians of SESAN involved in the program. • Committee formed
---	---	---	---

PROJECT COST AND FINANCING

Components	Period of time	Number	Unit Cost (US\$)	Total Cost (US\$)
Supervision and Administration			201,400	201,400
Consulting services				100,000
Counterpart personal ¹				101,400
Project coordinator	14 months		3,000	41,400
Sanitary Engineer	10 months		2,000	20,000
Environmental specialist	10 months		2,000	20,000
Social specialist	10 months		2,000	20,000
1. Waste reduction and disposal			332,000	332,000
1.1. Equipment for the UBA	-	-	102,000	102,000
1.2. Implementation of UBA	-	-	230,000	230,000
Preliminary Services (Global)	1	1	7,665	7,665
Administrative Unit (Global)	1	1	44,619	44,619
Area Destined For Temporary Deposit Of Waste (Global)	1	1	52,986	52,986
Access Area (Global)	1	1	33,443	33,443
Landscaping (Global)	1	1	22,021	22,021
Cleaning Up Of Construction Site (Global)	1	1	5,774	5,774

¹ Counterpart personal allocate part of their time to the project.

2. Rehabilitation and use of empty areas	-	-	274,600	274,600
2.1. Equipment for the Parks (Global)	-	-	39,092	39,092
2.2. Rehabilitaton of degraded areas (Global)	-	-	196,416	196,416
2.3. Landscaping (Global)	-	-	39,092	39,092
3. Institucional Strengthening of SESAN				100,000
Coordenador (H-dia)	20	1	500	12,000
Economist Senior (H-dia)	15	1	400	6,000
Economist Junior (H-dia)	30	1	200	6,000
Engineer Senior (H-dia)	15	1	400	6,000
Engineer Junior (H-dia)	30	1	200	6,000
Environmentalist (H-dia)	20	1	500	10,000
Facilitator (H-dia)	10	1	500	5,000
Workshop (Global)	1	3	4,000	12,000
Publications (Unit)	1	2	1,000	2,000
Auditoria				30,000
Total				938,000

**A SOLID WASTE MANGEMENT STRATEGY FOR THE ENVIRONMENTAL
AND SOCIAL SUSTAINABILITY OF THE UNA WATERSHED
IN THE CITY OF BELEM – PROGRESBU**

BR-T1157

CERTIFICATION

I hereby certify that this operation was approved for financing under the Japan Special Fund (JSF) through an electronic mail message dated September 18, 2009 submitted by Mr. Takehiko Nakao, Director-General of the International Bureau, Ministry of Finance of Japan. Also, I certify that resources from the Japan Special Fund (JSF) are available for up to US\$750,000 in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of six (6) calendar months counted from the date of signature below. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in U.S. dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who shall have their remuneration defined and paid in the currency of such 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 operation. 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.

Handwritten initials: H d, 10/15/10


Marguerite S. Berger
Chief

Grants and Co-financing Management Unit
VPC/GCM

Handwritten date: 10/18/10

Date

APPROVAL



C. Federico Basañes,
Division Chief
Water & Sanitation Division
INE/WSA



Handwritten date: 10/19/10

Date