

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BRAZIL

**SOCIAL AND ENVIRONMENTAL PROGRAM FOR THE IGARAPÉS IN MANAUS
PROSAMIM III**

(BR-L1297)

LOAN PROPOSAL

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ELECTRONIC LINKS	
REQUIRED	
1.	Annual work plan (AWP) (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36346460
2.	Monitoring and evaluation plan (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36346500
3.	Procurement plan (full) (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358870
4.	Environmental and social management report (ESMR) (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358956
OPTIONAL	
1.	Technical annex: Description of components (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358284
2.	Socioeconomic viability http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36346553
3.	Financial capacity assessment (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36346594
4.	Institutional assessment http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358159
5.	Program Operating Regulations (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36337811
6.	Report on neglected tropical diseases in Manaus http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358239
7.	List of available documents (in Portuguese) http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=36358296

ABBREVIATIONS

ADA	Aguas de Amazonas [Amazonas state water company]
AFEAM	Agência de Fomento do Estado de Amazonas [State of Amazonas Development Agency]
ARSAM	Agência Reguladora dos Serviços Públicos Concedidos do Estado do Amazonas [Regulatory Agency for Concessioned Public Services of the State of Amazonas]
AWP	Annual work plan
BOD	Biochemical oxygen demand
CISR	Cuenca do Igarapé São Raimundo [São Raimundo Igarapé watershed]
COD	Chemical oxygen demand
COFIEIX	Comissão de Financiamentos Externos [External Financing Commission]
EIA	Environmental impact assessment
EIR	Environmental impact report
ESMP	Environmental and social management plan
ESMR	Environmental and social management report
FVS	Fundação de Vigilância em Saúde [Health Surveillance Foundation]
GRP	Program risk management
IBGE	Instituto Brasileiro de Geografia e Estatística [Brazilian Institute of Geography and Statistics]
ICAS	Institutional Capacity Assessment System
ICB	International competitive bidding
IPAAM	Instituto de Proteção Ambiental do Estado do Amazonas [Environmental Protection Institute of the State of Amazonas]
masl	meters above sea level
MIF	Multilateral Investment Fund
MPN	Most probable number
NCB	National competitive bidding
NTD	Neglected tropical diseases
PROSAMIM	Programa Social e Ambiental dos Igarapés de Manaus [Social and Environmental Program for the Igarapés in Manaus]
SEFAZ	Secretaria da Fazenda do Estado [State Department of Finance]
SEMMAS	Secretaria Municipal de Meio Ambiente e Sustentabilidade [Municipal Department of Environment and Sustainability]
SFW	Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean
SICOP	Sistema Integrado de Controle e Gestão de Obras Públicas [Integrated Public Works Control and Management System]
SIGPRO	Sistema Integrado de Gerenciamento de Projetos [Integrated Project Management System]
SUHAB	Superintendência de Habitação do Estado do Amazonas [Office of the Superintendent of Housing of the State of Amazonas]
TCE	Tribunal de Contas do Estado [State Audit Office]

UGPI	Unidade de Gerenciamento do Programa Igarapés de Manaus [PROSAMIM Management Unit]
WTP	Willingness to pay

PROGRAM SUMMARY
BRAZIL
SOCIAL AND ENVIRONMENTAL PROGRAM FOR THE IGARAPÉS IN MANAUS
PROSAMIM III
(BR-L1297)

Financial Terms and Conditions			
Borrower: State of Amazonas		Amortization period	25 years
Executing agency: The State of Amazonas, acting through the PROSAMIM Management Unit (UGPI) within the Office of the Governor.		Grace period:	5 years
Guarantor: Federative Republic of Brazil		Disbursement period:	5 years
Source	Amount (US\$)	Inspection and supervision fee:	*
IDB (OC)	280 million	Interest rate:	LIBOR-based
Local contribution	120 million	Credit fee:	*
Total	400 million	Currency:	United States dollars from the Single Currency Facility
Project at a Glance			
<p>Objective and description: The general objective of PROSAMIM III is to help solve the environmental, urban planning, and social problems affecting the city of Manaus, specifically those living below the 30-meter flood contour in the São Raimundo igarapé watershed (CISR), to improve their living conditions. The specific objectives are to: (i) improve environmental and health conditions in the CISR through the installation of drainage and sanitation systems; (ii) improve housing conditions for the people who reside in the program target area through urban land use planning, including the removal of populations from at-risk areas, construction of adequate housing, creation of recreational areas, and environmental and health education for the local population; and (iii) consolidation of the institutions involved and of the community, to ensure the sustainability of interventions. The project contributes one city to the “100 Cities” target, and one subwatershed to the “Water Defenders” target of the Water and Sanitation Initiative (document GN-2446-3).</p>			
<p>Special conditions precedent to the first disbursement: (i) Bank approval of the specific resettlement plan (see paragraph 2.3); (ii) delivery by the PROSAMIM Management Unit (UGPI) of the planning and control module for the project management system (SIGPRO) (see paragraph 2.5); and (iii) entry into force of the Operating Regulations approved by the Bank (see paragraph 2.5).</p>			
<p>Execution conditions: (a) As a condition precedent to the start of any works: (i) the applicable legal instruments will be in effect between the borrower and Amazonas Energia, and between the borrower and the State of Amazonas Development Agency (AFEAM) (see paragraph 2.11); (ii) the SIGPRO system has been deployed (see paragraph 2.5); (iii) the environmental and social management plan (ESMP) has been updated to include the recommendations of the environmental impact report (EIR) and the Bank’s environmental and management report (ESMR) (see paragraph 2.2); and (iv) the relevant environmental authorizations have been obtained (see paragraph 2.4). (b) As a condition precedent to the start of any water and sanitation works: (i) a legal instrument will be signed and in effect between the borrower and Aguas de Amazonas for installation of the program sewer systems and operation and maintenance of the facilities and equipment on terms previous agreed upon with the Bank; and (ii) the Bank has approved the final designs, including the final disposal and treatment of effluents (see paragraph 2.11). (c) As a condition precedent to the start of any works in a specific area, evidence will be provided that the affected families in that specific area received treatment in accordance with the Resettlement Plan (see paragraph 2.3). (d) Throughout program execution, the applicable legal instruments of the borrower related to institution-strengthening will remain in effect (see paragraph 2.8). (e) The borrower, acting through the UGPI, will execute and operate the program in compliance with the socioenvironmental performance requirements of the Operating Regulations, the updated ESMP, resettlement plans, environmental authorizations and startup permit, the recommendations for studies for the introduction of reduced rates for low-income customers / sanitation fund, and the recommendations of the sewer master plan validated by the regulatory agency (see paragraph 3.2).</p>			

Exceptions to Bank policy: None.
Project consistent with the Country Strategy: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Project qualifies as: SEQ <input checked="" type="checkbox"/> PTI <input checked="" type="checkbox"/> Sector <input checked="" type="checkbox"/> Geographic <input type="checkbox"/> Headcount <input type="checkbox"/>
Procurement: See paragraph 3.6.

(*) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provisions of the Bank's policy on lending rate methodology for Ordinary Capital loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, rationale

1. Socioenvironmental liabilities generated by the rapid growth of Manaus

- 1.1 The population of the city of Manaus has grown at a rate of 4.78% per year since the creation of the duty-free zone in 1967, expanding from 311,622 inhabitants in 1970 to 1,802,525 in 2010, according to the Brazilian Institute of Geography and Statistics (IBGE).¹ Immigrants attracted by the duty-free zone come from elsewhere in the State of Amazonas and from other Brazilian states, mainly in the northeast.
- 1.2 Although the city of Manaus has an integrated local development plan, and more an urban and environmental master plan, urban space was not occupied in an organized way; and immigrant groups, mainly of low income, settled in areas along the banks of the small streams called igarapés that drain the city in the direction of the Negro River. These settlements create physical and health risks for the populations living there (see paragraph 1.4), and cause major environmental harm to the city² with the corresponding loss of these natural areas.
- 1.3 Igarapés are small streams that traversed the Amazon forest when it covered the area occupied by the city today. Every year in the rainy season (January to June) these streams are flooded by the Negro River, whose volume increases significantly, raising water levels from 13.7 m to 29.8 m, which is the reason for setting the benchmark flood contour level at 30 meters above sea level (masl). Settlements along the igarapés below the 30 masl contour are flooded nearly every year with the accompanying human, financial, environmental, and social damage. The low-income housing plan of the Município of Manaus (February 2010 version) estimates the number of homes in permanent conservation areas (corresponding to the banks of the igarapés and steep sloping zones) at 29,480.³ Restoring the drainage function of the igarapés is essential to mitigate the effects of the more severe weather events resulting from climate change.
- 1.4 In addition to high flood risk, settlements along the igarapés are characterized by: (i) makeshift constructions built on stilts, known as palafitos; (ii) risk of collapse; (iii) low-income population groups; (iv) no macro- and microdrainage systems; (v) little or no garbage collection; (vi) little or no sewer systems; and (vii) proliferation of water-borne diseases; (viii) occupation of environmental protection areas; (ix) no social interaction areas; and (x) difficulty getting around.

¹ IBGE 2010.

² For example, fecal coliform levels above 40×10^4 NMP/l, and BOD₅ above 20mg O₂/l, at the Kako Camonha bridge.

³ This figure is consistent with the assessment made by the Office of the Superintendent of Housing of the State of Amazonas (SUHAB) (preliminary version, May 2011) of 45,313 dwellings in makeshift settlements statewide. Since the Manaus housing deficit represents just over half of the state's total needs, there would be some 26,000 makeshift dwellings in this city.

- 1.5 **The Bank's action.** Within this framework, the State Government of Amazonas has been implementing the Social and Environmental Program for the Igarapés in Manaus (PROSAMIM), which has received Bank support through several loans: PROSAMIM I (1692/OC-BR), PROSAMIM II (2006/OC-BR) and PROSAMIM I Supplementary Financing (2165/OC-BR). In addition to these loans, on 30 November 2010 the state government signed a nonreimbursable investment financing agreement with the Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean (SFW), Manaus Igarapés project (GRT/WS-12169-BR).

Table I-1. Summary of the PROSAMIM program

Project	Amount of financing (US\$ million)		Amount disbursed (end-June 2011) (US\$ million)		Life of loan	
	IDB	Local contribution	IDB	Local contribution	Signature	Last disbursement
PROSAMIM I	140	60	140	60	19/01/2006	19/09/2009
PROSAMIM II	154	66	128	17	10/11/2008	10/05/2013
PROSAMIM I Supplementary Financing	77	33	45	14	10/09/2009	10/09/2012
SFW Agreement	5	54.45 ⁴	0	0	30/11/2010	30/11/2014
Total	376	160.45	313	91		

- 1.6 The PROSAMIM program, formulated by the state government, has various interdependent and multidisciplinary objectives, including: (i) restoration of the drainage function and environmental quality of the igarapés; (ii) promotion of urban planning and the resettlement of families living in makeshift conditions; (iii) inclusion of families in economic and social integration projects; (iv) building of public parks and facilities for services and community life; (v) improvement of the road system; (vi) implementation of basic sanitation services in the target areas; (vii) improvement of the operational and management capacity of organizations involved in the program; and (viii) effective promotion of community participation in all phases of the program.
- 1.7 The four operations are being executed by the PROSAMIM Management Unit (UGPI), a state government entity with administrative autonomy. The UGPI (see chapter III for details) has an executive coordinator and technical coordination subunits in the engineering, social, environmental, legal, financial, and institutional areas, as well as social communication, administrative, and information technology advisors. The UGPI is supported by specialized project management and inspection firms for its tasks related to management, works supervision, preparation of program engineering designs, and fiduciary issues. The UGPI has demonstrated its

⁴ Of this amount, US\$53 million corresponds to the PROSAMIM II project.

execution capacity with a consolidated disbursement level of over 80% for the various PROSAMIM contracts, and a disbursement level of US\$40 million for 2011.

1.8 Table I-2 shows the main outcomes obtained by the PROSAMIM program.

Table I-2

Indicators	Unit	PROSAMIM I, Supplementary Financing, and PROSAMIM II		PROSAMIM Other entities
		Projected total	Actual (May 2011)	Actual (May 2011)
Family resettlement	Number of families	11,754	6,539	5,330
Wastewater system	meters	221,988	108,792	76,442
Parks built	ha	61	32	47
Roads built	meters	28,458	13,343	13,249
Dwellings built	units	2,797	2,001	-
Drainage systems built	meters	41,228	21,264	7,533
Community organizations established	Number of organizations	37	35	-
Environmental education courses held	Number of participants	1,550	1,231	-
Women trained for vocational placement	Number of women	270	195	-

1.9 **Lessons learned.** The Bank's PROSAMIM operations have yielded important lessons learned,⁵ which have been incorporated into the design of this operation. Specifically, they emphasize the importance of: (i) shared social management, with the presence of committees of community representatives, local support groups, and a crisis management commission; (ii) ongoing work with the environmental agency, the Environmental Protection Institute of the State of Amazonas (IPAAM), which is responsible for guidelines relating to licensing, management, and monitoring of the program; (iii) involvement of the environmental unit in determining needs and identifying sources of raw materials (sand, stone, etc.), to expedite the process of obtaining the required permits; (iv) tendering works only when final designs are ready; (v) communication actions as fundamental support for implementing social actions; and (vi) greater diversification of the proposed resettlement alternatives.

1.10 **Coordination with other financial institutions.** Under operation GRT/WS-12169-BR (see paragraph 1.5), SFW is supporting PROSAMIM with a grant to finance health facilities for the neediest population groups. PROSAMIM also receives financial resources from the federal government, through Caixa Econômica Federal and the Growth Acceleration Program.

⁵ Compiled from the PROSAMIM I final evaluation report and the PROSAMIM II midterm evaluation report, among other sources.

- 1.11 **The operation's strategy.** The operation involves actions in the urban watershed of the São Raimundo Igarapé (CISR), with actions similar to those conducted previously in the Educandos-Quarenta watershed, and under the same implementation arrangement, applying the lessons learned from the earlier operations.
- 1.12 Comparative studies of possible PROSAMIM target areas, conducted in 2003, assigned priority to the Educandos-Quarenta watershed. Based on this, the resources of PROSAMIM I and II were invested in this first watershed, where work is still ongoing (see paragraph 1.8). The CISR is a subwatershed of the São Raimundo River located at its confluence with the Negro River, in a historical and commercial district of the city. It has broad banks and flood-prone areas below the 30 masl contour, which are densely populated (92 inhabitants/hectare) by low-income groups subject to high social vulnerability.⁶ These features make the CISR the higher priority target area for the program, now that work on the Educandos-Quarenta watershed is nearing completion. The proposed work is integrated with other PROSAMIM actions in the São Raimundo watershed.
- 1.13 PROSAMIM's multidisciplinary approach has resulted in broad-based relationships with local entities that have functions and responsibilities related to the works and actions undertaken. This relationship is forged through strengthening actions financed by the program and interagency cooperation agreements. These activities were evaluated as part of the program's monitoring and evaluation plan, and the recommendations were incorporated into this operation, such as the need to expand the scope and/or extend the term of some of the existing agreements (see paragraph 2.8 to 2.11). Since the program was conceived as a framework for transforming the city, both citizens and the state and municipal entities themselves have expectations for its continuity, and this makes it easier to establish cooperation agreements related to the program.
- 1.14 This operation also has a new subcomponent for the integrated control of intestinal parasitic infections⁷ in the PROSAMIM beneficiary regions, as part of the Bank's program to control neglected tropical diseases (NTD) and lock in health improvements among the population groups benefited by PROSAMIM ([Link: Neglected Tropical Diseases in Manaus](#)). The operation will also receive support from the Multilateral Investment Fund (MIF) to promote private sector participation in operating and maintaining the parks built by PROSAMIM, to ensure the sustainability of these actions.
- 1.15 PROSAMIM III fits into the Bank country strategy update (document GN-2570), under the line for living conditions and efficiency in cities, in actions targeting the environmental quality of the cities, as described in the 2011 Operational Program

⁶ Over 30% of families considered poor in the program area are direct beneficiaries, most of them (62%) with women heads of household.

⁷ Helminth prevalence of 43% according to a 2002 study performed by the State Education Department (SEDUC) in Manaus schools.

Report (document GN-2617). PROSAMIM III qualifies as a poverty-targeted and equity-enhancing operation on the strength of its actions to improve access to sanitation. The program also includes activities to promote improvements in health (NTDs), social integration (for the resettled populations), gender (vocational training for women), and the environment (restoration of degraded areas, with reforestation). The operation will contribute to regional targets⁸ and includes climate change adaptation measures.⁹ Its actions directly benefit the poorest populations of Manaus (see paragraph 1.12).

- 1.16 The program will also contribute one city to the “100 Cities” target, and one subwatershed to the “Water Defenders” target of the Water and Sanitation Initiative (document GN-2446-3).

B. Objectives and components

- 1.17 The general objective of PROSAMIM III is to help solve the environmental, urban planning, and social problems affecting the city of Manaus, specifically those living below the 30-meter flood contour¹⁰ in the São Raimundo igarapé watershed (CISR), to improve their living conditions.

- 1.18 The specific objectives are to: (i) improve environmental and health conditions in the CISR through the installation of drainage and sanitation systems; (ii) improve housing conditions for the people who reside in the program target area through urban land use planning, including the removal of populations from at-risk areas and settlement in adequate housing, creation of recreational areas, and environmental and health education for the local population; and (iii) consolidation of the institutions involved and of the community, to ensure the sustainability of interventions. The operation will have two components:

- 1.19 **Component 1. Environmental, urban planning, and housing improvement (US\$291 million)**, which will finance works for macrodrainage, storm drainage, parks and roads, sanitary sewer networks, rehabilitation and expansion of the pretreatment station and river outfall, urban land redevelopment and rehabilitation, resettlement, housing units and attendant infrastructure, environmental remediation works on the banks of the igarapés, and reforestation.

- 1.20 **Component 2. Environmental, social, and institutional sustainability (US\$6 million)**, which will finance the continuation and expansion of social communication programs, as well as the promotion of community participation, post-resettlement assistance, environmental education activities, actions for the integrated control of intestinal parasitic infections, strengthening of institutions

⁸ Targets: 2.2.1, 2.2.4, and 2.5.3 and Outputs 3.1.5, 3.2.2, and 3.2.5 of Tables 1 and 2 of Annex I of document AB-2764.

⁹ Removal of populations from at-risk areas (flooding below the 30 masl contour) and improvements to the drainage capacity of the São Raimundo igarapé, reducing the frequency and impact of flooding.

¹⁰ Datum reference: Port of Manaus.

related to the program, and the promotion of private-sector participation in the operation and maintenance of program works.

- 1.21 An additional amount of US\$59 million will finance specific studies and designs, contracting of the management firm and works supervision firms, and support for the UGPI. Program audit, monitoring, and evaluation will be financed under associated costs.

C. Cost and financing

- 1.22 The total cost of the program is US\$400 million. Of that amount, US\$280 million will be financed by the Bank, and US\$120 million will be the counterpart contribution of the State Government of Amazonas. The program’s financial costs will be US\$10 million. The expected distribution of costs by source is shown in Table I-1. The program has a program request (“carta consulta”) approved by the External Financing Commission (COFIEX) pursuant to Resolution 1221 of 10 December 2010, as supplemented by Resolution 1267 of 6 October 2011 (see paragraph 3.4).

Table I-3. Cost Table

Categories	US\$000s			Percentages		
	IDB	CP	Total	IDB	CP	Total
I. Engineering and administration	36,379	22,543	58,922	62%	38%	14.7%
1.1 Program execution unit	3,479	14,543	18,022	19%	81%	4.5%
1.2 Support for management and supervision	30,000	8,000	38,000	79%	21%	9.5%
1.3 Additional studies	2,900		2,900	100%	0%	0.7%
II. Direct costs	228,645	68,379	297,024	77%	23%	74.3%
2.1 Environmental and housing improvements	222,371	68,379	290,750	76%	24%	72.7%
2.2 Institutional development	6,274		6,274	100%	0%	1.6%
III. Associated costs	3,500		3,500	100%	0%	0.9%
IV. Financial costs		10,000	10,000	0%	100%	2.5%
V. Contingencies	11,476	19,078	30,554	38%	62%	7.6%
Total	280,000	120,000	400,000	70%	30%	100%

D. Key results indicators

- 1.23 The program’s expected outcomes complement those obtained by PROSAMIM (see paragraph 1.8): (i) a 45 ha reduction in flood-prone areas, as a result of the installation of 30,000 meters of drainage structures; (ii) the construction of 1,242 housing units; (iii) reforestation of 32 ha and the creation of 7 ha of parks, squares, and boulevards with greenspace and recreation facilities; (iv) construction and restructuring of 5,390 meters of urban roads; (v) restoration of 4,310 linear meters of igarapé banks, with revegetation, slope stabilization, and the implementation of sidewalks and bicycle paths; (vi) installation of 55,000 meters of sewer collector network, with trunk collectors and elevator/pumping stations for

11,062 residential connections; this action is complemented by the restoration and expansion of the Educandos pretreatment station and restoration of the underwater river outfall; (vi) resettlement of 3,451 families living in areas subject to natural flooding in safer locations; and (vii) reduction in the prevalence of helminth parasites among school-age children and pregnant women in the PROSAMIM target area. The specific outcomes are described in greater detail in the Results Matrix (see Annex II).

II. FINANCING STRUCTURE AND RISKS

A. Financing instruments and financial terms

- 2.1 The loan, drawn from the Bank's Ordinary Capital, will be subject to the following terms: (i) LIBOR-based interest rate; (ii) amortization period of 25 years; (iii) 2-year period for physical start of works; and (iv) disbursement and grace period of 5 years.

B. Environmental and social safeguard risks and mitigation measures

- 2.2 At its 27 April 2011 meeting, the Environmental and Social Impact Review Secretariat (ESRNET) approved the program's environmental and social strategy and endorsed the classification of category "A" proposed for the operation. Pursuant to the agreements reached during approval of the project profile, an environmental and social audit was performed on the program. The corresponding recommendations were taken into account in the environmental and social management report (ESMR) and environmental and social management plan (ESMP). The ESMR includes a draft action plan, with measures to improve the scheme of periodic reporting on the fulfillment of the socioenvironmental commitments. In addition, the recommendations requiring more specific monitoring will be included in this action plan, as agreed upon with the Bank and implemented according to the schedule agreed upon with the action plan. As a condition precedent to the start of any works, the ESMP will be updated to include the recommendations of the environmental impact report (EIR) and the Bank's ESMR.
- 2.3 The positive impacts of the operation will be associated with better hydraulic flow conditions that prevent flooding, reduce pollution of residential and industrial origin, and create environmental protection and recreational areas. The social benefits are reflected in better health and housing conditions for residents and more basic sanitation service offerings. Environmental education and social assistance will contribute to program sustainability. The main social risks are associated with possible reoccupation of the cleared areas before the start of works construction. To prevent reoccupation, the program calls for careful planning of works and resettlement so as to prevent new incursions. The main adverse environmental impacts relate to the works, and are localized and temporary, associated especially with the construction period and works to dredge and clean the igarapés. Urban traffic will be affected, resident access will be restricted and obstructed, and dust and noise will be produced. The operation will adopt the integrated environmental

and social management methodology and procedures that have been applied successfully to the program, enhanced by lessons learned from previous phases. For the resettlement actions, cooperation will continue between the PROSAMIM Management Unit (UGPI) and state Office of the Superintendent of Housing (SUHAB), based on Executive Decree 24775 of 22 December 2004. SUHAB will contribute the required housing (roughly 746 units) for the PROSAMIM III resettlement actions. As a condition precedent to the start of any works in a specific area, evidence will be provided that the affected families in that specific area received treatment in accordance with the Resettlement Plan, and, **prior to the first disbursement, the borrower will obtain Bank approval for the specific resettlement plan for the CISR.**

- 2.4 The actions to be implemented in the CISR have already obtained the prior environmental permit. Pursuant to current Brazilian legislation, a startup permit will be requested from the Environmental Protection Institute of the State of Amazonas (IPAAM) once the environmental impact assessment (EIA) and environmental impact report (EIR) have been delivered to that agency. As a condition precedent to the start of any works, the relevant environmental authorizations will be obtained.

C. Other key issues and risks

- 2.5 **Financial fiduciary risk.** The financial management assessment performed using the Bank's Institutional Capacity Assessment System (ICAS), together with the program risk management (PRM) analysis, scores the executing agency's performance as good and rates the risk as low, consistent with its experience (see paragraph 3.1) in executing Bank programs. The Financial Supervision Plan in Annex III (Fiduciary Agreements and Requirements) is based on an evaluation of potential risks and their severity levels, and describes budgetary, accounting, and disbursement processes and the corresponding systems. Based on the review of financial management capacity and progress made in implementing the program's integrated project management system (SIGPRO), the financial review of disbursements may be performed ex post. As a condition precedent to the start of any works, the SIGPRO system will be deployed, and, **prior to the first disbursement, the UGPI will deliver the SIGPRO planning and control module and confirm that the Operating Regulations approved by the Bank have entered into force.**
- 2.6 **Procurement fiduciary risk.** The ICAS evaluation of goods and services management indicates low risk. During the preparation of the operation, additional refresher activities were conducted to bring UGPI staff up to date, and conditions were set for review of the operation's procurement and contracting processes (see Annex III).
- 2.7 **Internal controls.** The state government and the UGPI (see paragraph 1.8) have the management and administrative capacity to execute programs such as PROSAMIM, as has been shown by their execution of Bank programs, and works carried out in other watersheds of the city, whether with own resources or resources of the

- federal government. The SIGPRO is at advanced stages of development, which, together with the optimization of processes and addition of a coordination subunit for planning, should enhance the UGPI's control and management capacity.
- 2.8 **Institutional viability.** The program's institutional viability is based on agreements with local entities with functions and responsibilities related to PROSAMIM (see paragraph 1.13), and on the credibility earned by the program.¹¹ The program's activities as a whole provide a comprehensive response to problems affecting the country's large cities, which are priority issues for the Brazilian government: greater coverage of sanitation services, and solutions for poor populations living in informal housing in at-risk areas. This alignment with the priorities of the Brazilian government, and those of the State Government of Amazonas, takes the form of ongoing support for the PROSAMIM program at both the federal and state government levels. The applicable legal instruments of the borrower related to institution-strengthening will remain in effect throughout program execution.
- 2.9 **Technical viability.** The program's technical viability is based on a detailed review of engineering studies, designs, and unit costs for each of the projects in the sample, which were reviewed during analysis of the operation. The projects reviewed meet the standards of the Brazilian Technical Standards Association (ABNT). ([Link: Technical annex](#)).
- 2.10 **Financial guarantee.** To furnish the guarantee, the national government requires compliance with the Fiscal Responsibility Law and the Fiscal Adjustment Program, as well as a counterguarantee from the State of Amazonas. The analysis of the latter's accounts shows that all required conditions are met, and there is a margin of capacity to provide the counterguarantees ([Link: Institutional and financial analysis](#)).
- 2.11 **Operation and maintenance.** Of the works financed by PROSAMIM III, housing will be transferred to the beneficiary families; the parks and urban facilities will be transferred to the municipal departments; and the sanitation works will be transferred to the município, which in turn will transfer them to the Manaus sanitation service operator, Aguas de Amazonas (ADA). The program will include social integration actions and support for the resettled families, and operation and maintenance responsibilities will be assigned to the departments and the ADA, respectively, under interagency agreements. As a condition precedent to the start of any works, the applicable legal instruments will be in effect between the borrower and Amazonas Energia, and between the borrower and the State of Amazonas Development Agency (AFEAM). Additionally, as a condition precedent to the start of any water and sanitation works: (i) a legal instrument will be signed and in effect between the borrower and Aguas de Amazonas for installation of the program

¹¹ The PROSAMIM intervention model has been replicated in several other Bank-funded projects in Brazil. At the state level, the Bank's pipeline for 2012 includes an operation to extend this model to other cities in Amazonas (PROSAIMAUES, BR-L1314), targeting first the município of Maués. The model would also be adapted to Bank projects in other countries, such as Reconquista in Argentina.

sewer systems and operation and maintenance of the facilities and equipment on terms previous agreed upon with the Bank; and (ii) the Bank has approved the final designs, including the final disposal and treatment of effluents.

- 2.12 **Socioeconomic viability.** A cost-benefit analysis was performed for projects to be implemented in the first year for the São Raimundo igarapé, which will form the sample. These include sewerage, storm drainage, and urban development works (road improvements, solid waste collection solutions, housing solutions, construction of parks and reforestation, and construction of social-use facilities). The aim of these projects is to improve the urban environmental quality of the igarapé and enhance the quality of life of the population surrounding it. The benefits were quantified using the population willingness to pay (WTP) models developed in previous studies for the city of Manaus and other comparable cities in Brazil (transfer of benefits). The figures were updated to 2011 by making monetary corrections in respect of average family income and the national consumer price index (INPC) (R\$57.59 per family/month for sewer networks; R\$2.14 per family/month for treatment; R\$32.08 family/month for drainage in the direct area; R\$14.19 per family/month for drainage in the indirect area; R\$9.42 per family/month for parks), a rise in real-estate values calculated through surveys (10%), and the difference between the rental value of housing solutions and the rent currently paid by the families to be resettled, calculated through surveys (R\$481.92 per family per month). Ex ante socioeconomic evaluations will be performed for projects to be financed by the program that were not included in the sample, based on estimated WTP values obtained through specific surveys to be done, and estimated real estate appreciation values obtained through hedonic pricing models. These evaluations will follow the guidelines established in the Operating Regulations. The costs used for the evaluation were incremental investment and operation and maintenance costs, excluding taxes and other charges. Details on the analysis and methodology used are presented in the Economic Analysis Annex ([Link: Economic analysis](#)). The cost-benefit analysis for projects in the sample yielded internal rates of return above 12% per year. The benefit/cost ratio was also greater than one.

Table II-1

Sample projects	Population No. of families year 4	Investment cost (R\$-NPV economic prices)	O&M cost (R\$-NPV economic prices)	Total cost (R\$-NPV economic prices)	Unit benefit (R\$/family/month)	Total benefit (NPV)	IRR (%)	Benefit/cost
Networks	2,022	9,538,024	967.663	10,505,687	57.59	10,893,107	13.30	1.08
Treatment	2,022				2.14			
Direct drainage	2,763	5,656,533	4,509,036	10,165,569	32.08	7,392,131	24.11	1.44
Indirect drainage	4,011				21.63			
Urbanization	1,751	27,473,445	1,412,877	28,886,322	10%	37,691,577	58.04	1.30
Housing and resettlement	198				481.92			
Greenspace	16,612	2,402,247	5,112,717	7,514,964	9.42	13,040,024	47.09	1.74

- 2.13 **Risk analysis.** An analysis was done of the key variables affecting the socioeconomic viability of the projects, both individually and as a group (WTP, sewer connection rate, percentage increase in property values, investment costs and scheduling). It was found that all projects, except for the sanitary sewer project, have a low probability of proving unviable (under 10%). In the case of the sanitary sewer project, it needs to be ensured that the works do not exceed a cost that would make the project unviable, and that connection rates are actually achieved.
- 2.14 **Ability to pay.** Beneficiary ability to pay was calculated for the water and sewer systems. The monthly water and sewer bill was determined to be less than 5% of family income among the program’s beneficiary population. According to the ADA’s pricing schedule, and assuming an average monthly consumption of 10 cubic meters, the average basic payment for water and sewer service is R\$40.07 per month. Data on income distribution in the program target area indicate that this would represent more than 5% of monthly income for 27% of families, which could result in higher rates of payment arrears for water and sewer service. In an effort to avoid a reduction in revenue collection rates and maintain investment levels, the Regulatory Agency for Concessioned Public Services of the State of Amazonas (ARSAM) has conducted a study to create a special discounted rate (targeted and based on household size and income) to be covered by the state subsidy. This study is currently being reviewed by the state government. Applying this discounted rate to average monthly residential consumption in the program target area would ensure that the payment for water and sewer service does not exceed 5% of beneficiary family incomes.
- 2.15 **Social equity and poverty reduction.** This operation qualifies as a social equity enhancing project (SEQ) and A poverty-targeted investment (PTI), as described in the Report on the Ninth General Increase in the Resources of the Bank (document AB-2764).
- 2.16 **Distributive impact.** To analyze the distributive impact of benefits for the low-income population, three potential groups of direct beneficiaries were

identified: (i) the public sector (state and município); (ii) the private sector (low-income beneficiaries); and (iii) other private-sector beneficiaries (those not in the low-income category and the ADA). The analysis shows that 34.56% of the net economic benefit generated by the program would be captured by low-income beneficiary groups. Taking this estimate as representative, and applying that percentage to the value of the investment (US\$170 million), it can be concluded that approximately US\$58.75 million equivalent would benefit low-income groups.

III. IMPLEMENTATION AND MANAGEMENT PLAN

- 3.1 **Borrower, executing agency, and guarantor.** The borrower and executing agency is the State of Amazonas, and the guarantor is the Federative Republic of Brazil. The borrower will execute PROSAMIM III through the PROSAMIM Management Unit (UGPI), reporting to the Office of the Governor and created by State Decree 23949 of 2 December 2003 (see paragraph 1.8). The UGPI will be responsible for coordination, execution, evaluation and monitoring, and meeting the deadlines and targets agreed upon for the program. The PROSAMIM Operating Regulations will be applied for execution of this operation.
- 3.2 **Implementation arrangements.** The UGPI will perform functions related to the technical, administrative, and financial procedures associated with program execution, including monitoring, supervision, and evaluation. It will contract a firm to manage and supervise the program throughout the execution period. This firm will support the UGPI in: (i) the planning and physical/financial programming of actions, including monitoring and oversight activities; (ii) financial management; (iii) obtaining environmental permits; (iv) works supervision and quality control support; (v) obtaining the respective interference-free clearances and rights of way from energy and telecommunications concessionaires, etc.; (v) preparation and consolidation of the information needed to manage the program actions; and (vi) environmental and occupational safety and health supervision. The borrower, acting through the UGPI, will execute and operate the program in compliance with the socioenvironmental performance requirements of the Operating Regulations, the updated environmental and social management plan (ESMP), resettlement plans, environmental authorizations and startup permit, the recommendations for studies for the introduction of reduced rates for low-income customers / sanitation fund, and the recommendations of the sewer master plan validated by the regulatory agency.
- 3.3 **Execution of the components.** The UGPI will be responsible for the production of engineering designs, bidding and contracting, supervision and monitoring of the works for collectors, interceptors, and the pretreatment station, as well as the commissioning of consulting services for institution-strengthening. Prior to the start of any works, the borrower will demonstrate that it has legal possession of the land and rights of way, together with all environmental and other applicable permits.

- 3.4 **Readiness.** The operation profile was approved for Bank financing of US\$140 million, as the first phase of a US\$280 million program to be implemented in two operations, pursuant to COFIEX Resolution 1221 of 10 December 2010, mentioned in paragraph 1.22. This loan proposal for US\$280 million reflects a new scope (the two phases or operations combined into one) in response to the new programming agreed upon with the country and ratified by COFIEX Resolution 1267 of 6 October 2011.
- 3.5 **Disbursements and execution period.** The projected disbursement schedule is given in Table III-1.

Table III-1

Source	Year 1		Year 2		Year 3		Year 4		Year 5		Total	
	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%	US\$ million	%
IDB-OC	73.9	66.3%	100.6	74.8%	56.1	70.8%	39.4	69.3%	17.1	55.6%	280.0	70.0%
State Government of Amazonas-CP	37.5	33.7%	33.8	25.2%	23.2	29.2%	17.5	30.7%	9.6	44.4%	120.0	30.0%
Total	111.5	27.9%	135.1	33.6%	79.3	19.8%	56.9	14.2%	26.8	4.5%	400.0	100.0%
Cumulative	111.5	27.9%	243.1	61.5%	325.1	81.3%	382.0	95.5%	400.0	100.0%		

- 3.6 **Procurement.** Procurement of goods and contracting of works and consulting services for the program will be conducted in accordance with the Bank policies contained in documents GN-2349-9 and GN-2350-9, respectively, both of March 2011. Procurement processes will be subject to ex post review, as indicated in the Procurement Plan ([see electronic link](#)).
- 3.7 **Advances of funds.** The advance of funds method may be used for program disbursements. The UGPI will control the use of the funds, prepare disbursement requests on behalf of the borrower, and deliver status reports on their use to the Bank, within 60 days after the close of each calendar semester.
- 3.8 **Recognition of expenditures.** Pursuant to Operational Policy OP-504, the Bank may recognize up to US\$7 million in advance contracting by the borrower against the counterpart, related to studies and support for management and supervision of the PROSAMIM program, and to the São Raimundo igarapé watershed (CISR).
- 3.9 **Evaluation and monitoring.** The UGPI will deliver six-monthly progress reports to the Bank, indicating the progress achieved in each component and in terms of the program's overall performance, based on the indicators agreed upon in the Results Matrix. The borrower will also deliver a progress assessment prepared by an independent consulting firm, 18 months after the loan disbursement eligibility date. A final program evaluation will be done by an independent consulting firm within 90 days after the date on which 90% of the loan proceeds have been disbursed. This will include: (i) the financial execution results by component; (ii) targets met, based on the agreed outcome indicators, including evaluation of the outcomes of activities

under the social, institutional, and environmental sustainability component such as the social communication programs, promotion of community participation, post-resettlement assistance, environmental education activities, and others; and (iii) contractual commitments met.

- 3.10 **External audit.** The program's financial statements will be audited by a firm of independent auditors acceptable to the Bank (eligibility level I). The audit will be financed with the loan proceeds and contracted in accordance with selection procedures and an audit scope acceptable to the Bank. The audit work will adhere to international auditing standards. The reports to be audited will include the basic financial statements (statements of cash flows, source and application of funds, program investments); notes to the financial statements including a reconciliation of liabilities with the Bank and advances of funds; compliance with contractual clauses of a financial/accounting nature; internal control environment; management letter; and security letter. The audited financial statements as of 31 December of each year will be submitted to the Bank annually within 120 days after the close of each calendar year, once disbursements of the loan proceeds have begun, and will include intermediate visits (as of 30 June), including a review of disbursement processes and procurements processes, if any.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	Aligned		
Lending Program	(i) Lending for poverty reduction and equity enhancement, and (i) Lending to support climate change initiatives, renewable energy and environmental sustainability.		
Regional Development Goals	(i) Incidence of waterborne diseases (per 100,000 inhabitants), (ii) Proportion of urban population living in dwellings with hard floor, and (iii) Annual reported economic damages from natural disasters.		
Bank Output Contribution (as defined in Results Framework of IDB-9)	The intervention contributes to Banks outputs: (i) Individuals (all, men, women, youth) benefited from programs to promote higher labor market productivity, (ii) Households with new or upgraded sanitary connections, and (iii) Number of households with new or upgraded dwellings.		
2. Country Strategy Development Objectives	Aligned		
Country Strategy Results Matrix	GN-2570	Poverty reduction. Indicator: % of population without sanitation.	
Country Program Results Matrix	GN-2617	The project is included in the 2011 Country Program Document.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	Highly Eevaluable	Weight	Maximum Score
	9.1		10
3. Evidence-based Assessment & Solution	9.2	25%	10
4. Ex ante Economic Analysis	10.0	25%	10
5. Monitoring and Evaluation	7.1	25%	10
6. Risks & Mitigation Monitoring Matrix	10.0	25%	10
Overall risks rate = magnitude of risks*likelihood	Medium		
Environmental & social risk classification	A		
III. IDB's Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)	Yes	Procurement: shopping method; information systems. For national public bidding: advanced use of national system. Financial management: internal audits.	
The project uses another country system different from the ones above for implementing the program	Yes	Electronic auctioning.	
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality	Yes	Professional training for women to increase employment opportunities.	
Labor	Yes	Training of Public Servants.	
Environment			
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan.			

The utilization of urban space in Manaus has not been orderly and the immigrant population, which is primarily low income, has occupied the land on the banks of numerous Igarapes that drain water from the city towards Negro River. Annually, in the rainy season, these igarapes are flooded by the Negro River. Almost every year, the settlements that exist on the banks of the igarapes are covered by water generating human, financial, environmental and social losses. In addition to the high risk of flooding, the settlements on the banks of the igarapes are characterized by: 1) precarious structures; 2) risk of collapsing; 3) low income population; 4) lack of macro and micro drainage; 5) deficient or nonexistent sewerage system; 6) proliferation of waterborne diseases; 7) lack of areas for social cohesion; and 8) poor accessibility.

The POD presents the problems that will be addressed by the program as well as the factors that generate these problems. The references to the sources of information upon which the diagnosis was based are not presented. The magnitude of the problems are included in the POD and the proposed interventions are clearly linked to the problems that have been identified in the diagnosis.

The results matrix has vertical logic and the impact, outcomes and outputs are clearly presented. All the impact and output indicators are SMART. Not all outcome indicators are SMART given that some are not specific. For example, for one outcomes the phrase "adequate final destination" is not specified. In addition, the outcome that relates to sewage connections is the same as the output indicator, and the term "new" connections generates confusion since it raises the question as to whether there are dwellings that currently have these connections in the area affected by the project. Outcome indicators should measure the current situation and how it will change as a result of the project. The following indicator is suggested instead: percentage of homes with in-house sewerage connections in the area affected by the project. How the data will be collected is specified for all indicators. The outcome and output indicators have baselines and targets, while some of the impact indicators do not have targets. For purposes of the PMR, all products have annual targets and the costs of the project are broken down by the output presented in the results matrix. In addition, annual costs per product are also presented.

The project was analyzed using a cost-benefit analysis. All economic benefits were adequately quantified, the costs used reflect real resource costs, assumptions were spelled out and a sensitivity analysis was undertaken. The operation has a monitoring and evaluation (M&E) plan which follows the DEM guidelines. The budget for M&E is broken down by activity for each of the two areas. The project will be evaluated using an ex-post cost-benefit analysis. To conclude, the risk matrix presents the projects risks which are rated for magnitude and probability. Mitigation measures are presented for each risk as well as indicators to monitor their implementation.

Component I							
Works	Base 2011	Year 1 2012	Year 2 2013	Year 3 2014	Year 4 2015	Year 5 2016	Means of verification
Outputs 1							
Macrodrainage and microdrainage system constructed.	Construction of canals, macrodrainage galleries, and stormwater collectors.						Responsible: UGPI How: Monthly measurements of the works/inspection report
Macrodrainage collectors constructed (meters) [Total: 2,491 m]	0	569	1,071	500	351	-	
Stormwater collectors constructed (meters) [Total: 27,584 m]	0	6,275	6,275	6,275	8759	-	
Outcome 1							
Reduction of flood-prone areas (hectares). [Total: 45 ha]	45	15	15	8	4	3	Responsible: UGPI How: Ratio between the existing flood area and the area where drainage works have been concluded.
Output 2							
Housing built by the program for use by resettled families (units) [Total: 1,242 units]	Construction of housing and related infrastructure (earthwork, electricity and sanitation services, and common areas)						Responsible: UGPI How: Monthly works measurements/inspection report
	0	264	540	366	72	-	
Outcome 2 see Outcome 5 (Component 2)							
Outputs 3							
Parks and urban roads built	Urban restoration of the São Raimundo igarapé						Responsible: UGPI How: Monthly works measurements/inspection report
Vehicle access roads and cycle paths built (meters) [Total: 5,390 m]	0	385	1,075	2,502	1,428	-	
Urban parks and squares built (m ²) [Total: 70,003m ²]	0	10,759	21,447	16,805	20,992	-	
Igarapé banks restored for recreational use (linear meters) [Total: 4,310 m]	0	1,000	1,400	600	1310	-	
Reforestation completed (m ²) [Total: 322,054 m ²]	0	-	-	122,054	130,000	70,000	
Outcome 3							
Number of people in the project target area who can use the areas developed and recovered by the project [Total: 75,960 people]	0	-	Bairro Pres. Vargas/Aparecida/Center 50,195	Bairro São Raimundo 11,600	Bairro da Glória 14,165		Responsible: UGPI How: Identification of neighborhoods with actions completed

Works	Base 2011	Year 1 2012	Year 2 2013	Year 3 2014	Year 4 2015	Year 5 2016	Means of verification
Outputs 4							
Sewer system built							Responsible: UGPI How: Monthly works measurements/inspection report
Wastewater collector networks built (meters) [Total: 55,000 m]	0	12,000	20,000	10,000	13,000	-	
Interceptor built (meters) Total: 1,815 m]	0	-	965	400	450	-	
Wastewater pumping station built (units) [Total: 7 units]	0	2.00	3.00	1.00	1.00	-	
Educandos pretreatment station rehabilitated (units)	0	0.50	0.50	-	-	-	
River outfall rehabilitated (unit)	0	1.00	-	-	-	-	
Household connections installed (units) [Total: 11,062 units]	0	2,670	1,712	3,000	3,680	-	
Outcome 4							
Households connected to the sanitation system by new networks in the project area (households) [Total: 11,062 households => 100%] <i>Note: Regional indicator 3.2.2 Annex I, document AB-2764</i>	0	2,670	1,712	3,000	3,680	-	
Wastewater from dwellings in the São Raimundo igarapé subwatershed areas collected with adequate final disposal (m ³ /day) (1) [Total: 8.849 m ³ /day => from 0% to 100%]	0	2,136	1,369	2,400	2,944	-	Responsible: UGPI How: Report, ADA data (1): 800 liters x connection/day

Component 2							
Social and institutional sustainability	Base 2011	Year 1 2012	Year 2 2013	Year 3 2014	Year 4 2015	Year 5 2016	Means of verification
Outputs 5 - Resettlement alternatives							
5.1.1 Number of compensations paid [Total: 615]	0	154	215	147	99	0	Responsible: UGPI How: Reports of the SAP/Habitar system
5.1.2 Number of housing bonds issued [Total: 320]	0	112	114	62	32	0	
5.1.3 Number of housing checks issued [Total: 457]	0	160	162	90	44	0	
5.1.4 Number of houses in government housing complexes delivered [Total: 746]	0	186	262	149	149	0	
5.1.5 Options of units built by PROSAMIM [Total: 1,242] <i>Note: Construction as Output 2 of Component 1</i>	0	264	540	366	72	0	
5.1.6 Number of housing supports provided [Total: 580]	0	145	203	136	96	0	
5.2 Number of economic activities restored under the Resettlement Plan [Total: 256]	0	88	92	50	26	0	
Outcome 5							
5.1 Families living in flood-prone housing in the CISR (families) [Total: 3,959]	3,959	3,959	2,463	1,513	492	0	Responsible: UGPI Such as: Reports of the SAP/Habitar system

Component 2							
Social and institutional sustainability	Base 2011	Year 1 2012	Year 2 2013	Year 3 2014	Year 4 2015	Year 5 2016	Means of verification
Outputs 6							
Community representative committee created and operating	1	1	1	1	1	1	Responsible: UGPI How: Meeting minutes and information from the SAP/Habitar system contained in the monthly report. Cost: Provided for in the cost of the contract for seminars, meetings, and events; and also under agreements with the Municipal Employment and Social Development Department (SEMTRAD), the National Commercial Apprenticeship Service (SENAC), the Federal Institute of Amazonas (IFAM), and the National Industrial Training Service (SENAI).
6.1.1.1 Number of neighborhood agents trained	0	0	26	64	42	0	
6.1.1.2 Number of community associations established	0	0	2	0	2	2	
6.1.2.1 Number of environmental and health education offices built	0	24	36	64	60	56	
6.1.2.2 Number of people trained on the collection and proper disposal of urban solid waste	0	600	900	1,600	1,500	1,400	
6.1.2.3 Number of activities held for children and teenagers	0	4	8	12	12	8	
6.1.2.4 Number of presentations made in schools	0	30	30	32	32	32	
6.1.3.1 Number of children and teenagers participating in environmental awareness activities	0	200	300	500	500	580	
6.1.3.2 Number of women professionally trained to enter the labor market	0	32	34	30	38	38	
Outcome 6							
6.1.1 Number of community organizations participating in the PROSAMIM program (in such areas as planning, execution, or evaluation of the program)	0	0	1	1	2	2	Responsible: UGPI How: Meeting minutes and information from the SAP/Habitar system, contained in the monthly report

Component 2							
Social and institutional sustainability	Base 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Means of verification
Outputs 7							
7.1 Agreement with SEMMAS implemented (US\$200,000)	0					1	Responsible: UGPI How: Six-monthly specific evaluation report Costs of the agreements: Provided for in the Procurement Plan.
7.2 Agreement with the environmental police implemented (US\$200,000)	0		1				
7.3 Agreement with the Brazilian Institute of Municipal Administration (IBAM) implemented (\$70,000)	0		1				
Outcome 7							
7.1.1 Water quality control performed (Units)	0	1	1	1	1	1	Responsible: UGPI How: Six-monthly specific evaluation report
7.2.2 Environmental police delegation created and functioning in the PROSAMIM action area (units)	0	0	1	1	1	1	

Component 2 (NTD)							
	Base 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Means of verification
Outputs 8							
Number of people treated with antihelminthic medication [Total: 16,052]	0	6,000	16,052	16,052	16,052	16,052	Responsible: UGPI, "Health Surveillance Foundation, Municipal Health Department, State Education Department, and Municipal Education Department," Agreement How: Six-monthly execution reports of the Neglected Tropical Diseases (NTD) plan Costs: Provided for in the AWP and Procurement Plan (NTD component)
Outcome							
Prevalence of helminth parasites among school-age children reduced (%) in the PROSAMIM target area.	43% (2003)	40%	35%	30%	25%	20%	Responsible: UGPI, "Health Surveillance Foundation, Municipal Health Department, State Education Department, and Municipal Education Department," Agreement How: Six-monthly execution reports of the NTD plan. Costs: Provided for in the AWP and Procurement Plan (NTD component)

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Brazil
Project number/name:	BR-L1297. Social and Environmental Program for the Igarapés in Manaus (PROSAMIM III)
Executing agency:	The State of Amazonas, acting through the PROSAMIM Management Unit (UGPI) within the Office of the Governor.
Prepared by:	José Luis Vázquez and Carlos Lago (PDP/CBR)

I. EXECUTIVE SUMMARY

- 1.1 The fiduciary evaluation was based on the institutional capacity analysis of the PROSAMIM Management Unit (UGPI), the program risk management (PRM) analysis, and meetings with UGPI key staff. The UGPI is currently executing two loan contracts with the Bank (PROSAMIM II and PROSAMIM I Supplementary) and one operation with the Spanish Cooperation Fund for Water and Sanitation in Latin America and the Caribbean (SFW), and completed a loan in late 2009. All of these operations are part of the PROSAMIM program of the State Government of Amazonas.
- 1.2 The state's financial management systems are adequate and reliable. The study done in 2009 found a number of weaknesses in terms of the quality and punctuality of state budgetary control, and in the internal and external control system, which need modernizing to become more efficient. In terms of country procurement systems, the electronic procurement system is used for goods. No other national country is being used.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The State Government of Amazonas created the UGPI within the Office of the Governor to execute the PROSAMIM program. The UGPI has operational autonomy and an executive coordinator and technical coordination subunits in the planning, engineering, social, environmental, administrative/financial, institutional, and legal areas, as well as social communication and information technology advisors, and a special bidding committee dealing exclusively with program procurements. The UGPI will execute PROSAMIM III using the information and works management system designed for the PROSAMIM program.
- 2.2 The UGPI will perform functions related to the technical, administrative, and financial procedures associated with loan execution, as well as program supervision, monitoring, and evaluation. Its specific functions include:

- (i) planning of loan execution and annual work plans (AWPs); (ii) preparation and updating of procurement plans; (iii) review of bidding documents for the procurement of consulting services, works and goods, to ensure that they adhere to Bank procurement and contracting policies; (iv) support and monitoring of the status of contracts for consulting services, and works and goods procurement; (v) preparation and processing of the corresponding payments; (vi) preparation of financial statements and disbursement requests; and (vii) monitoring and evaluation of program execution.
- 2.3 For the program's management and fiduciary tasks, and for works supervision, the UGPI is supported by a management firm and a supervision firm, as well as by individual consultants. This support arrangement would be maintained.

III. EVALUATION OF FIDUCIARY RISK AND MITIGATION ACTIONS

- 3.1 The program evaluation identified certain needs for improvements, which were built into the design of this operation, for example: (i) further improve the integrated project management system (SIGPRO) and complete its full integration with the state's central official systems (the Integrated Financial management System for States and Municípios (SIAFEN) among others); (ii) strengthen the internal control environment and incorporate into its routines those of the project, particularly targeting management control and monitoring of results and indicators, without neglecting oversight of the project's budgetary, administrative, financial, and accounting processes; (iii) optimize program execution and management processes;¹ (iv) create a planning coordination subunit; and (v) develop bidding documents for the operation and repayment of water and sewer works. The specific fiduciary risks and mitigation measures are described in the link, "Proposal for Operation Development (POD)."
- 3.2 This assessment corroborates the results obtained during the program's midterm evaluation in March 2007 (using the ICAS methodology) and the risk analysis performed in February 2008. These demonstrated the UGPI's strong execution capacity, and identified a number of areas for improvement that are already being applied in accordance with the Bank's guidance, along with the specific actions necessary for execution of this first phase.
- 3.3 The specific fiduciary risks relate essentially to: the actual availability of SIGPRO to meet the program's growing demand, timely availability of counterpart resources (budget and treasury), possible delays in the strengthening of internal and external control processes, and difficulties in procurement processes in a market with a high level of demand (see the Risks Appendix of the POD and the link, "[Project Risk Management](#)").

¹ The budget, treasury, and record-keeping systems that satisfy state regulations and are currently used by the UGPI can be considered satisfactory for program execution.

IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACT

- 4.1 The following issues should be considered:
- a. Conditions precedent to the first disbursement: Administrative order (“portaria”) formalizing the use of the program Operating Regulations and the PROSAMIM monitoring and support system for the PROSAMIM III operation.
 - b. Special execution conditions: Engagement of the firm to support program management and work supervision for PROSAMIM III, within six months after signature of the contract with the Bank. The first part of this condition would be fulfilled since the PROSAMIM management contract expires in 2013.
 - c. Exchange rate for reporting purposes: exchange rate for conversion of advances of funds and presentation to the Bank (preparation date) for the reimbursement of payments made and recognition of counterpart, or the option indicated by the borrower prior to negotiation.
 - d. The borrower will publish the procurement plan in the Procurement Plan Execution System (SEPA), when available, and will update it at least every six months or as requested by the Bank, to reflect the project’s actual execution needs and progress made. It will be posted on the UGPI’s website at www.prosamim.am.gov.br and in the project procurement section of the Bank’s website (www.iadb.org).

V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 5.1 The fiduciary agreements and requirements for procurement specify the provisions applicable to all procurement processes envisaged for the project (Link: “[Initial procurement plan](#)”).

1. Procurement execution

- 5.2 Procurements will be conducted through the UGPI, which has established a specific bidding committee for PROSAMIM. Works, goods, and nonconsulting services will be procured in accordance with the “Policies for the procurement of goods and works financed by the Inter-American Development Bank” (document GN-2349-9). Consultants will be selected and contracted in accordance with the “Policies for the selection and contracting of consultants financed by the Inter-American Development Bank” (document GN-2350-9).
- 5.3 **Procurement of works, goods, and nonconsulting services.** Contracts for works, goods, and nonconsulting services² generated under the project and subject to international competitive bidding (ICB) will be implemented using the standard

² In the Bank’s procurement policies, nonconsulting services are treated as goods.

bidding documents (SBDs) issued by the Bank. Procurements subject to national competitive bidding (NCB) will be implemented using country bidding documents agreed upon with the Bank (or satisfactory to the Bank, if thus far none have been agreed upon). The electronic auction system may be used, provided that it is one of the systems assessed by the Bank (ComprasNet or BB). The project's sector specialist will review the technical specifications for procurements during the procurement preparation process.

- 5.4 **Selection and contracting of consultants.** Consulting service contracts generated under the project will be executed using the standard request for proposals (SRP) issued by the Bank. The project's sector specialist will review the terms of reference for the contracting of consulting services.
- 5.5 **Selection of individual consultants.** Individual consultants will be selected on the basis of their qualifications to do the work, comparing at least three candidates. When the situation so requires, notices can be placed in the local or international press, inviting qualified consultants to submit résumés.

Table of Threshold Amounts

Works			Goods ³			Consulting services	
ICB	NCB	Shopping	ICB	NCB	Shopping	International publicity consulting services	Short list 100% national
> 25 million	< 25 million and > 500,000	< 500,000	> 5 million	< 5 million and > 100,000	< 100,000	> 200,000	< 1 million

- 5.6 Threshold levels for prior review depend on the type of procurement risk presented by the project, as listed below.

Thresholds for prior review⁴

Works	Goods ⁵	Consulting services
For procurements over US\$5 million, the first use of each method regardless of amount, and all sole sourcing.	For procurements over US\$500,000, if the electronic bidding method was not used for goods, and all sole sourcing.	For procurements over US\$1 million, the first use of each selection method regardless of amount, and all sole sourcing.

³ Includes nonconsulting services.

⁴ During project execution, the Bank may modify the thresholds for prior review, as a routine matter, if it deems that the fiduciary context of the executing agency and/or the country have changed. In such case, the Bank will notify the executing unit of that decision, and the latter must change the procurement plan to take account of the new execution conditions.

⁵ Includes nonconsulting services.

- 5.7 **Recurrent expenditures** are the operation and maintenance expenditures required to operate the project during its useful life, including: utility and communication expenses, translations, office supplies, photocopies, mail and other expenses needed for proper administration of the project, incurred chiefly within the UGPI. Such expenditures will be financed with the loan proceeds under the annual budget approved by the Bank, and managed under the UGPI's administrative procedures, which will be reviewed and accepted by the Bank provided that they do not violate the fundamental principles of competition, efficiency, and economy.
- 5.8 Recurrent expenses also include the costs of consultants engaged to assist the UGPI during the useful life of the loan. However, operating costs do not include the remuneration of public sector employees.
- 5.9 The project calls for the recognition of advance expenditures against the counterpart.
- 5.10 **Domestic preference.** No margins of domestic preference will be applied.
- 2. Initial procurement plan**
- 5.11 The proposal to date is attached. The version to be agreed upon may be updated during project execution, as circumstances dictate (Link: "[Procurement plan](#)").
- 3. Procurement supervision**
- 5.12 Bearing in mind the amounts in the table of thresholds for prior review, and considering the special features of the project and the UGPI's capacity in the area of operations, a post review will be conducted each year, covering at least one of every five contracts signed that are subject to ex post review.
- 4. Records and files**
- 5.13 The archives will be located in the UGPI offices and under appropriate security.

VI. FINANCIAL MANAGEMENT

A. Programming and budget

- 6.1 The budget of the State Government of Amazonas, to which the UGPI belongs as a state government agency established under Decree 23949 of 2 December 2003, is prepared by the State Department of Finance (SEFAZ), which is responsible for the state's budgetary and financial management. The proposal is prepared annually, based on the requirements projected by the spending agencies to meet their targets, including PROSAMIM. SEFAZ evaluates and consolidates the budget proposals received, in adherence to current public budgeting regulations, namely the Federal Constitution, multiyear plans and annual budgetary guidelines and Budget Law. Once approved by the state Legislative Assembly, the budget is recorded in the State's financial management system (AFI) and released to each spending agency for execution and subsequent accountability. If adjustments need to be made to the budget during the fiscal year, the agencies formulate the

respective justification for consideration. To date, the following laws are in force for 2011, the 2008-2011 Multiyear Law (PPA) (Law 3458 of 23 December 2009), the Budgetary Guidelines Law (LDO) (Law 3528 of 3 August 2010), and the Budget Law (LOA) (Law 3571 of 23 December 2010). The requirements for preparing the 2012 budget proposal will be delivered to SEFAZ by 15 September 2011; the proposal will then be sent to the Legislative Assembly for consideration by 30 October 2011, and approval by 30 December 2011. The PROSAMIM budget is formulated as a lump sum, which the UGPI administratively allocates for execution of each program.

B. Accounting and reporting systems

- 6.2 For the purposes of record-keeping, financial and accounting control over program execution, and preparation of the financial statements, the UGPI will use the existing PROSAMIM management system (SIGPRO), which is owned by the state and developed on a Web platform. SIGPRO operates on an integrated basis with the systems the state is required to use, particularly the AFI, with which it exchanges budgetary and financial information, adhering to the respective international accounting standards on public sector financial reporting and accounting, on a cash (paid) basis.
- 6.3 In terms of institution-strengthening and the use of country systems being implemented in PROSAMIM program execution, the UGPI is completing a SIGPRO module for the physical and financial measurement of the status of contracts and agreements, known as the Integrated Public Works Control and Management System (SICOP). The planning module, now in development, is expected to be operational by the second half of 2011. Accordingly, the delivery and use of a more integrated SIGPRO for the PROSAMIM programs may be presented to the Bank's satisfaction as a condition precedent.

C. Disbursements and cash flow (whether in coordination with use of the country system, or not)

- 6.4 Projections of PROSAMIM annual and quarterly cash requirements are based on the work plan and the schedule of payments according to commitments made (formalized contracts recorded in the PRISM system, or equivalent). A quarterly update is fed into the cash management financial control system, and executed according to measurements and recognition of approved expenditures, as payments are requested. Specific accounts will be opened for the receipt of funds and payment of program expenses (IDB and counterpart). The commitment of resources (use of budgetary appropriations), and the authorization and payment of expenses, are processed in the AFI and SIGPRO on an integrated basis. The disbursement modality and exchange rate for conversion into the loan currency will be specified in the loan contract. Previous experience suggests there is no need to review disbursement requests on a preventive basis, so reviews will be performed ex post, following verification of the satisfactory operation of SIGPRO.

- 6.5 In the SICOP module, measurements are processed and approved by the contract inspector, generating a measurement summary that is recorded in the SIGPRO physical module (currently in the final phase of electronic integration with SICOP), which allows the corresponding invoices to be recorded in the SIGPRO financial module. These invoices migrate electronically to the AFI, which issues a settlement and disbursement scheduling note (this requires prior authorization from the Secretary of Finance) and a bank transfer order, generating the record in the state accounts. This bank order migrates electronically to the SIGPRO financial module, which records it according to investment categories and sources of financing, generating the PROSAMIM financial reports.
- 6.6 The executing agency is currently evaluating the possibility of incorporating the Bank's e-disbursement system, for greater ownership of processes.

D. Internal control and internal audit

- 6.7 Internal control of the program is structured and monitored by the UGPI, based mainly on integrated systems for physical, financial, and accounting management and control (AFI, SIGPRO) currently used by the UGPI and by the SICOP (currently in the process of integration with SIGPRO). The objective is to ensure the security, protection, and reliability of PROSAMIM information in the procedures, processes, and authorizations necessary to execute the project transactions, as well as full compliance with applicable laws and regulations. The recognition of expenditures and authorization of payments requires prior preventive legal review of due process by the Finance Sector Inspectorate, and by the Commission on Interagency Cooperation and Relations (CCRIA) of the State Government of Amazonas. To monitor and control expenditure effectiveness and efficiency, the UGPI is developing the SIGPRO planning module, as noted in section 2 above, which will allow ongoing monitoring of PROSAMIM's physical and financial progress. The new module is expected to enter operation in the second half of 2011.

E. External control and reports

- 6.8 External oversight of the project will be through inspections and reviews by government bodies, the State Audit Office (TCE), and SEFAZ for the administrative/financial, asset, budgetary, and operational processes and operations under UGPI responsibility.
- 6.9 External audit will be performed, in principle, by an independent firm acceptable to the Bank at an estimated cost of US\$2 million, to be financed from the loan proceeds. For audit purposes, PROSAMIM III can be considered an extension of the current service contract in force for PROSAMIM Supplementary and PROSAMIM II. In any event, for the 2011 audit (PROSAMIM Supplementary and PROSAMIM II) the audit rules to be applied and scope of work will be harmonized with those of the Bank. This will include a review of the program's financial statements, notes to the statements, reconciliation of balances with the Bank, statement of advances of funds, performance of contractual provisions of a financial/accounting and institutional nature, internal control environment, review

of procurement processes for works, goods and services, sample review of disbursements presented to the Bank in the respective year, and physical inspection of works and the program's target areas.

- 6.10 Following an expression of interest and formal request to the effect, the Bank will consider the possibility of audit functions being performed by the TCE.

F. Financial supervision plan

- 6.11 The proposal to date is attached. The version to be agreed upon may be updated during project execution, as circumstances dictate (Financial supervision guide, Supervision plan) (Link: "[Financial supervision vs. risk](#)").

G. Execution arrangements

- 6.12 The updated version of the program's Operating Regulations will include flow charts of administrative, accounting, financial, and internal control processes, including those covered by SIGPRO, both in the physical and financial planning modules now being implemented, as well in as the financial and accounting modules already operating.

H. Other financial management agreements and requirements

- 6.13 With the Bank's prior consent, the UGPI will combine the following reports in comprehensive documents, broken down program-by-program: six-monthly status reports, six-monthly reports on advances of funds (revolving fund/advance of funds, as applicable), to be included in the six-monthly status reports, and annual statements of counterpart funding and the audited financial statements.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/11

Brazil. Loan ____/OC-BR to the State of Amazonas
Social and Environmental Program for the Igarapés
in Manaus - PROSAMIM III

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the State of Amazonas, as Borrower, and with the Federative Republic of Brazil, as Guarantor, for the purpose of granting the former a financing to cooperate in the execution of the social and environmental program for the igarapés in Manaus – PROSAMIM III. Such financing will be for an amount of up to US\$280,000,000 from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on _____)

LEG/SGO/CSC/IDBDOCS#36425301

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