

PROGRAM OF SUPPORT FOR RESTRUCTURING THE
NATIONAL WATER AND SEWER UTILITY
(PREIDAAAN)

(PN-0030)

EXECUTIVE SUMMARY

**BORROWER AND
GUARANTOR:** Republic of Panama

EXECUTING AGENCY: Ministry of Planning and Economic Policy (MIPPE) for subprograms I and III, and Sociedad Anónima de Panamá Metropolitano de Agua Potable y Alcantarillado for subprogram II and the downsizing component.

AMOUNT AND SOURCE:

| | |
|--------------------------|-----------------------|
| IDB (ordinary capital): | US\$45 million |
| Government contribution: | <u>US\$20 million</u> |
| Total: | US\$65 million |

**FINANCIAL
TERMS AND
CONDITIONS:**

| | |
|-----------------------------|--|
| Amortization period: | 20 years |
| Disbursement period: | 4 years |
| Interest rate: | variable |
| Inspection and supervision: | 1% |
| Credit fee: | 0.75% |
| Currency: | U.S. dollars, Single Currency Facility |

OBJECTIVES:

The main objective is to help consolidate the process of reform of the water supply and sanitation sector and its institutional structure in order to achieve efficient and sustainable quality service.

The specific objectives of the program are: (i) to support the restructuring of the water and sewer sector operating agency, Instituto de Acueductos y Alcantarillados Nacionales (IDAAAN), to bring the private sector into its management and the financing of future investment; (ii) to rehabilitate systems in order to support the process of sector reform and the restructuring of the utility company, and organize community promotional and education campaigns; and (iii) to carry through coordinated actions to protect water resources of the Interoceanic Region Basin and draw up a master plan and feasibility studies for the Panama City sewer system.

DESCRIPTION:

To attain these objectives, the program has been divided into three subprograms. The first subprogram has to do with the process of reconfiguring IDAAN and privatization of the part of that company that will become a corporation. The other two subprograms will help implement this process. The subprograms are described below.

- a. Subprogram I: Restructuring of the public utility (US\$13.2 million). Includes: (i) the creation of Sociedad Anónima de Panamá Metropolitano (the Corporation) and downsizing of IDAAN staff; and (ii) the sale of at least 51% of the capital stock of the Corporation to a strategic operator in the private sector that would handle water and sewer service in Metropolitan Panama City.
- b. Subprogram II: Rehabilitation (US\$30.5 million): Rehabilitation of systems that are needed immediately to start the process of reducing unaccounted-for (unmetered) water, managing demand, improving water quality, and making distribution more efficient in Metropolitan Panama City, the immediate vicinity, and rural areas served by the project. Includes also community education and promotional activities during the rehabilitation work.
- c. Subprogram III: Ancillary activities (US\$3.6 million): Includes: (i) actions to support the participation of the Corporation as a user of water resources of the Interoceanic Region Basin, and of MINSA as the agency in charge of water quality assurance, and (ii) preparation of a sanitary sewer master plan and feasibility studies for Panama City, that are consistent with the plans for storm drainage and solid waste management.

**ENVIRONMENTAL
CLASSIFICATION:**

The Environment Committee, at its meeting of April 26, 1994, classified this as a Category III operation. The environmental impact assessment was presented in Panama at a meeting of those concerned and representatives of the community and released to the public on April 15, 1996. The Committee on Environment and Social Impact approved the environment and social impact report on June 9, 1997.

RISKS:

- a. Establishment of the mixed-capital Corporation: There is a risk that the objective of creating and privatizing the Corporation will not be achieved because of delays in the process.

However, the degree of commitment shown by the government in passing legislation setting up the Public Utilities Regulatory Agency (January 1996), instituting the regulatory and institutional framework for water and sewer service (January 1997), and governing unrestricted competition and consumer affairs (February 1996) is a clear indication of its interest in pursuing the restructuring of the public utility.

- b. Compatibility with the reforms: The program to restructure the public utility will be jeopardized if it does not dovetail duly with the ongoing sector reforms. The involvement of the MIPPE, through the Public Policy Technical Unit (PPTU), which is carrying through the sector reforms and will be executing agency for the public-utility restructuring, is expected to minimize these risks. This will help to: (i) coordinate the work of the groups of consultants engaged to support the two operations; and (ii) verify compatibility and compliance with indicators and milestones.
- c. Implementation of the program and service delivery: The nature of the activities to reduce the level of unmetered water, to rehabilitate the systems, and to provide service with minimal interruptions entails a risk of adverse reactions on the part of system users. To minimize these potential risks which could disrupt service during the transition period and to achieve the objectives on schedule, construction of all of the works will be carried out by specialized companies, selected through a prequalification process and hired in accordance with the Bank's procurement procedures.

BENEFITS:

- a. Most of the benefits that would ensue from the PREIDAAN program proposed herein, in support of the government's reform program, are directly related to substantial improvements in the efficiency, quality, and sustainability of water and sewer service, with managerial and technical input from a private-sector strategic operator.
- b. Having a strategic operator involved in the delivery of water and sewer service also will help make available private-sector funds to finance the Metropolitan Panama investment plan.
- c. From a technical, operational, and financial standpoint, the systems that are rehabilitated

will make it possible to expand service to large numbers of low-income groups in the program area, whose present service is extremely inefficient.

**THE BANK'S
COUNTRY AND
SECTOR STRATEGY:**

The proposed operation is consistent with the objectives of the Bank's strategy inasmuch as it envisages: (i) benefits of social policy, particularly to low-income groups by improving their quality of life through the delivery of basic services; (ii) sustainable development, through support for the sector reforms and self-sustaining corporate structure; and (iii) the strengthening of governance, removing the public sector from service delivery and giving the private sector a more prominent role.

POVERTY-TARGETING:

A household survey providing data on family income in the project area served as a basis for the poverty-targeting analysis. The threshold established by the Bank as the poverty line in Panama is US\$164/family/month. According to the analysis done, 42% of families in Arraiján, Chorrera, Colón, and Panama City belong to low-income groups. The proposed program thus does not qualify as poverty-targeted.

**PROCUREMENT OF
GOODS AND
SERVICES:**

International competitive bidding procedures will be used for all IDB-funded procurement with an estimated contract value exceeding the equivalent of US\$1.5 million for construction works and the equivalent of US\$250,000 for goods.

**EXCEPTIONS TO BANK
POLICY:**

It is proposed that authorization be given for the United Nations Development Programme (UNDP) to be hired directly as a specialized agency for administrative support to the PPTU, such as the hiring of consultant services (see paragraphs 3.22, 3.23, and 3.24).

The proposal is that the "minimum-cost" approach be used to select consultants, whereby a "minimum acceptable technical level" is established and the quality of technical proposals is rated against it. Bids are submitted in two separate envelopes. Technical proposals are opened first and examined, and those not meeting the acceptable technical level are discarded. Only the second envelopes, containing the price bids, of the remaining bidders are opened. The firm with the lowest bid is awarded the contract. It is understood, with this method, that only proposals above the "minimum acceptable technical level" are competing as to cost. The acceptable minimum will be explicitly stated in invitations to bid (see paragraphs 3.36, 3.37, and 3.38).

**SPECIAL
CONTRACTUAL
CONDITIONS:**

Conditions precedent to the first disbursement:

The borrower shall submit to the Bank:

- a. For subprograms I and III, evidence that (i) it has appointed the PPTU of the Ministry of Planning and Economic Policy as executing agency for subprograms I and III, it has a detailed plan for engaging experts and consultants to assist the PPTU, and it has selected two experts – one for the corporate configuration and one for the restructuring process (strategy consultant) – from the group of experts that will help the PPTU and the CIPSP implement the program (see paragraph 3.12); and (ii) it has signed an administration agreement with UNDP on terms similar to those agreed upon with the Bank (see paragraph 3.24).
- b. For subprogram II and the downsizing component of subprogram I, evidence that: (i) Sociedad Anónima de Panamá Metropolitano has been established and is operating with its management team and staff, logistical facilities, assets, and the necessary resources for implementation of subprogram II and the downsizing component of subprogram I (see paragraph 3.21(i)); (ii) a detailed downsizing plan is ready (see paragraph 2.5b); (iii) the Corporation has opened a special account with Banco Nacional de Panamá to administer funds for subprogram II and the subprogram I downsizing component (see paragraph 3.21(ii)); (iv) the contract for management and technical, financial, and environmental supervision has been awarded to a consulting firm or consortium (see paragraph 3.21(iii)); and (v) an agreement for the transfer of funds for subprogram II and the subprogram I downsizing component has been signed between the government and the Corporation, the preliminary draft of which must have received the Bank's nonobjection (see paragraphs 3.4, 3.5, and 3.10).

Conditions during implementation of the program:

The borrower shall submit to the Bank:

- a. One year after the effective date of the loan contract, an action plan for coordination and quality control of water of the Interoceanic Region Basin (see paragraph 4.11c) and, each year, commencing one year after the effective date of the loan contract, detailed reports with

data illustrating progress made toward the indicators and milestones in the logical framework, to be verified annually by the Bank (see paragraph 3.33).

- b. Within 24 months of the effective date of the loan contract: (i) the findings and outputs of consultancies in support of the Ministry of Health for modernization of the solid waste management subsector and rural water supply and sanitation (see paragraph 2.5c); (ii) evidence that a contract for the sale of at least 51% of the capital stock of the Corporation has been awarded to a strategic operator in the private sector (see paragraph 3.13), or (iii) evidence that the Corporation has adopted and is applying a tariff structure that satisfies the criteria described in paragraph 4.16.

The Corporation shall present to the Bank:

- a. Prior to tendering the works, a work plan prepared on the basis of the recommendations contained in the environmental impact assessment and the environmental permits granted by the competent authorities for execution of the works (see paragraph 4.11b).
- b. A year after the effective date of the loan contract, the action plan for implementation of the components for community education and promotion during the works projects (see paragraph 4.11c).

The loan contract will also include the General Conditions pertaining, inter alia, to audits by independent public accountants, reports, and inspections.

I. FRAME OF REFERENCE

A. Sector reform and public-utility restructuring

1. Sector reform

- 1.1 In light of shortcomings in public utility services, in 1992 the Panamanian government, with the support of the Bank, launched a public enterprise reform program (PREP) in four sectors, including water supply and sanitary sewerage.
- 1.2 The objective of the PREP program for the water supply and sanitation sector was to strengthen the public utility in charge of providing service through activities (i) to collect outstanding accounts, (ii) to rationalize staffing, and (iii) to outsource support activities to the private sector. The program was financed with the proceeds of loan 688/OC-PN (US\$80 million) and loan 689/OC-PN (US\$40 million), which were to be disbursed in three tranches. The first two tranches of US\$50 million and US\$35 million were disbursed in August 1992 and November 1995, respectively.
- 1.3 As part of the institutional strengthening for the water and sewerage sector, it was agreed that an operation would be prepared to optimize the technical areas as well as the areas of administration, finance, and operations and to improve service in the country's major cities. The basic studies and designs were completed in 1995, to the satisfaction of the parties.
- 1.4 The PREP targets were only partially attained, and it is felt that even if they had been fully achieved, the problems that limit capacity to provide efficient service, mobilize resources, and ensure that operations are financially self-sustaining would still not be resolved. As a result of this situation, the present administration replaced the strengthening of the national water and sewer utility, Instituto de Acueductos y Alcantarillados Nacionales (IDAAAN), proposed in the PREP with a more comprehensive reform program. In response to the government's request, the Bank: (i) cancelled the undisbursed balance of US\$35 million for the third tranche of the PREP, in April 1996; and (ii) approved a basic infrastructure sector reform program (PRIBA), in November 1996. The sectors addressed in that program were telecommunications, electric power, and water supply and sewerage.
- 1.5 The PRIBA is a fast-disbursing sector operation in which US\$120 million will be disbursed in 36 months, accompanied by a technical-cooperation loan for US\$3.3 million and a MIF operation of US\$1.8 million to start up a public utilities regulatory agency. For the water and sewerage sector, the PRIBA's main objective is to support reforms centering on the separation of policy-setting and regulatory functions. In addition, PRIBA is supporting the

adoption of instruments to encourage private-sector delivery of these services.

- 1.6 As part of the new reform package, the Public Utilities Regulatory Agency (ERSP) was created by Law 26, and for the water and sanitation sector, a specific regulatory and institutional framework was approved pursuant to Decree-Law 2 in January 1997.
- 1.7 The ERSP is in charge of ensuring compliance with the Law and its Regulations, protecting consumers, promoting service in competitive conditions, preventing abuses of monopolistic position that are detrimental to efficiency, approving and monitoring compliance with tariff regimes, controlling the quality of service, and reporting regularly to MINSA and other parties involved as to the status and operation of the services.
- 1.8 The ERSP was created as an operationally and financially independent body. Initially, its activities have centered on: (i) setting up the structure that is needed for its operations, with a staff of three directors and 29 officers in the areas of engineering, economics, accounting, and law; (ii) arranging logistic support and basic facilities; and (iii) hiring consultants, with funding provided under the PRIBA, to devise technical and service-quality standards, rate policies and schedules, model contracts for participation by the private sector and operating regulations.
- 1.9 The legislation in force reaffirms the State's responsibility for establishing sector policy, now under a new high-level unit planned for the Ministry of Health (MINSA), and sets out arrangements for participation by the private sector, which entail: (i) public bidding to promote competition for the market and (ii) efficient business parameters, commitments to investment and tariffs associated with expanded service and quality targets.

2. Reconfiguration of IDAAN

a. Current status of IDAAN

- 1.10 Weaknesses in the sector and in the configuration and business operations of IDAAN, the national water and sewer utility, have adversely affected the quality, efficiency, and sustainability of these services. The shortcomings at the utility's level are associated with:
 - a. Restrictions on financial autonomy that have had a negative impact on financial administration and operations and on the company's capacity to administer and apply tariffs and budgets efficiently, deliver efficient service, and comply with corrective maintenance plans.

- b. Difficulties at the political level in reconciling tariffs that reflect the economic cost of service with an internal generation of funds that is insufficient to meet the financing requirements of the program for investment in water supply and sewer systems. The tariff structure now in place has remained unchanged since 1982 and has not promoted efficient service or the rational use of water resources.
- c. Planning and execution without an integrated water production and distribution focus and without proper management of the collection and final disposal of wastewater – factors that have led to inefficient service and user complaints.
- d. Unreliable technical and user records, that are chronically outdated and therefore do little to facilitate tasks in the business and operational areas and initiatives to curb improper use.
- e. Ineffective metering (only 44% of connections had meters), high levels (46%) of unmetered water, and low account collection rates (always under 85% of amounts outstanding), owing to deficiencies in the commercial area.
- f. Ineffectual coordination of the control and protection of water sources and receiving bodies.
- g. The size and mix of the staff do not fall within the range of normally acceptable management indicators, as a result of an excessively bureaucratic organizational structure.

b. Support for the restructuring of IDAAN

- 1.11 In view of the weaknesses noted in the sector and the public utility, which have systemically affected the quality, efficiency, and sustainability of water and sewer service, and in order to further the objectives of the PRIBA program, the scope of the institutional strengthening and rehabilitation originally envisaged in the PREP was broadened, to restructure IDAAN under the operation proposed herein (PREIDAAN).
- 1.12 The government awarded the studies on the restructuring of the public utility to specialized consulting firms, using the funding available under the PREP. A total of 13 options for the restructuring of water and sewer services across the entire country were studied, seven in the areas of Arraiján, Chorrera, Colón, and Panama City, designated as Metropolitan Panama, and six in Chiriquí and the central provinces.
- 1.13 The analysis was based on criteria consistent with the objectives that would be expected to be attained under the new management model. These criteria were: (i) the introduction of efficient management to the sector and improvements in the quality of

service; (ii) participation by the private sector in capital investment; (iii) impact on present water and sewer rates; and (iv) lasting solutions to the problems affecting the sector, that would be implemented in the short term.

- 1.14 The government decided to convert the part of IDAAN that provides services to Metropolitan Panama into a mixed company. The private sector would control at least 51% of the share capital. Support for the creation of this mixed-capital private company to serve Metropolitan Panama is one of the objectives of the operation proposed herein. In the other areas of Chiriquí and the central provinces, which are also served by IDAAN, the government has decided to award service concessions later, pursuant to commitments assumed under the PRIBA program.

B. Physical features of the project area

- 1.15 The project area, designated as Metropolitan Panama, includes urban zones, suburban areas, and neighboring rural communities along the strip from Arraiján to Chorrera (to the west of the Panama Canal) and in the corridor extending from Colón to Panama City (east of the Canal).
- 1.16 This area is of high priority because: (i) it was targeted as the first area for action under the PRIBA program; (ii) nearly one half of the country's population and 70% of its urban population are concentrated here; and (iii) it is located in the vicinity of the strategic Interoceanic Region Basin (see map).
- 1.17 The Interoceanic Region Basin, consisting of six subbasins that supply water to the artificial lakes of Gatún and Alajuela, is the source of water for: (i) the major water systems of the urban centers, suburban areas, and rural communities in the Metropolitan Panama area; (ii) the Panama Canal operations; and (iii) power generation. At present, water resources are generally abundant here. Whether they will remain that way will depend on the degree of protection and control afforded to the hydrographic basin and subbasins.

C. Water and sewer service

- 1.18 The percentages of the population served by IDAAN in the country and in the project area (Metropolitan Panama) are nominally high, particularly in cities, as the following table shows. However, this coverage does not reflect the poor quality of service or the fact that service delivery is not efficient or sustainable - problems which need to be remedied, as will be explained in the following sections of this proposal.

| TOTAL POPULATION IN IDAAN SERVICE TERRITORY; POPULATION SERVED <u>a/</u> | | | | | | | | | |
|--|-------------------------------|------|------|----------------------------------|---------------|---------------|---|---------------|---------------|
| Area <u>b/</u> | Total population <u>c/</u> | | | Population with running water | | | Population with sewer connection <u>d/</u> | | |
| | T | U | R | T | U | R | T | U | R |
| COUNTRY TOTAL | 2.13 | 1.38 | 0.75 | 1.82 85.4% | 1.36 98.6% | 0.46 61.3% | 1.99 93.4% | 1.35 97.8% | 0.64 85.3% |
| METROPOLITAN PANAMA | 1.15 | 0.97 | 0.18 | 1.14 99.1% | 0.97 100% | 0.17 94.4% | 1.11 96.5% | 0.94 96.9% | 0.17 94.4% |
| T = total U = urban R = rural | | | | | | | | | |

a/ 1995 data. Population with service means (a) for running water, persons with household connections, public standpipe or water truck and (b) for sewerage, residents of dwellings hooked up to a sewer or with septic tanks or latrines.

b/ Both urban and rural areas.

c/ Total 1995 population (urban and rural) was 2.6 million.

d/ Some 38.5% of the population was connected to sewers and 58.5% had septic tanks and latrines. The rest used some other form of on-site disposal.

D. Customer metering: technical and commercial losses

- 1.19 The metering of only some of the water connections and the increasingly high level of unaccounted-for water are only some of the factors that account for the deficient service in Metropolitan Panama. The figures reported are consistent with the continuing deterioration on the business side and reflect the problems besetting IDAAN's commercial operations.
- 1.20 End-user metering dropped from 40% to 15% between 1981 and 1991 and inadequate controls caused the level of unmetered water to rise steadily, to more than 46% by 1994. Panama Oeste, which includes Arraiján and Chorrera, accounted for most of the change. From 1992 to 1995, the level of individual metering rose to 44% after IDAAN installed 90,222 meters, acquired with the proceeds of loans 90/IC and 673/SF-PN.

E. Water supply in Metropolitan Panama

- 1.21 In 1995, the water treatment plants and facilities of IDAAN and the Panama Canal Commission that served the Metropolitan Panama area had an available supply of 206 million gallons a day (mgd). Upon completion of works now under way, the available supply should increase to 228 mgd. Of this volume, 208 mgd correspond to the corridor between Panama City and Colón and 20 mgd to the stretch between Arraiján and Chorrera. The basic data on population and water volume are presented in the table below.
- 1.22 The expansion of IDAAN's water treatment plant in Chilibre, the largest in the Metropolitan Panama area, has been virtually completed. Works have also been carried out to increase the

capacity of the treatment plants in Sabanitas and Caimito, which are also operated by IDAAN and located in the Metropolitan Panama area. The Panama Canal Commission is making ongoing improvements to the water treatment plants in Miraflores and Mount Hope, which supply water in bulk to Metropolitan Panama.

BASIC DATA ON POPULATION AND WATER SUPPLY ^{a/}

| System ^{b/} | Population Year: 1995 | Projected population, year 2005 | Current production (millions of gallons per day) ^{c/} | | Availability (gallons/person/day) | |
|-----------------------------|--------------------------|---------------------------------------|--|-------|--------------------------------------|------|
| | | | 1995 | 2005 | 1995 | 2005 |
| ARRAIJÁN | 94,453 | 138,475 | 7.4 | 8.9 | 78 | 64 |
| CHORRERA | 93,211 | 131,085 | 8.6 | 11.1 | 92 | 85 |
| ARRAIJÁN AND CHORRERA | 187,664 | 269,560 | 16.0 | 20.0 | 85 | 74 |
| COLÓN | 139,521 | 185,019 | 26.3 | 35.0 | 188 | 189 |
| PANAMA CITY | 911,990 | 1,166,925 | 163.3 | 172.6 | 179 | 148 |
| TOTAL | 1,239,175 | 1,621,504 | 205.6 | 227.6 | | |

^{a/} Of the 206 mgd: (i) 190 mgd are supplied to 1.05 million inhabitants in the corridor between Panama City and Colón (Chilibre 128 mgd, Miraflores 27 mgd; Pozos and Cabras, Juan Díaz, Tocumen and Tapia rivers systems 7 mgd; Sabanitas 8 mgd; Mount Hope 20 mgd); and (ii) 16 mgd go to 190,000 inhabitants in the stretch between Arraiján and Chorrera (Miraflores 6 mgd; Caimito 7 mgd; Pozos and other systems 3 mgd).

^{b/} Includes cities and adjacent rural areas.

^{c/} Availability of water in sources and treatment plants.

- 1.23 It can be seen from the table above that if the unacceptably high levels of physical and commercial losses can be reduced, demand properly managed, and systems optimized from a technical and operational standpoint, through a focus on distribution as proposed in the present operation, the daily supply of water available per inhabitant would be: (i) reasonable for Arraiján and Chorrera, given the social and economic conditions of the inhabitants and considering the fact that virtually the entire population in these areas uses septic tanks and latrines for sewage disposal; (ii) very high for Colón, in all respects and scenarios; and (iii) more than sufficient for Panama City, even considering that it is the country's most advanced urban center, the population is served by a sewerage network, and septic tanks and latrines are in use only in periurban and marginal areas.

F. Quality of service in Metropolitan Panama

- 1.24 The high percentages of the population with access to water service in Metropolitan Panama merely reflect the fact that the capacity of some treatment plants in the service area has increased in recent years. However, they hide the poor quality and low efficiency of

water service, which are attributable to operational constraints and serious shortcomings in commercial operations.

- 1.25 In Metropolitan Panama, although water is available from intake structures and treatment plants (production), in the (distribution) networks: (i) water flow is intermittent in a number of service areas; (ii) sharp differences exist in residual pressure which ranges from excessively high (greater than 70 lbs/in²) to extremely low (under 20 lbs/in²) in areas of elevation some distance away from the distribution centers; and (iii) the quality of water supplied has sometimes failed to meet internationally accepted guidelines and standards.
- 1.26 The Metropolitan Panama sewer systems comprising mains and sewer networks, pumping plants, ancillary structures and outfalls, and septic tanks and latrines are not in fully satisfactory operating condition. Most wastewater is emptied untreated into receiving bodies, causing considerable pollution. This situation has reached critical proportions in Panama City, owing to the high population density, problems with sewer networks, and the absence of an environmentally acceptable and technically sound system for final disposal.

G. Conceptual design of the operation

- 1.27 In the preceding paragraphs, a description was given of: (i) the problems associated with weaknesses in the configuration of the water and sewer utility; and (ii) the progress of the reforms and how the present operation would complement the government's efforts to provide efficient and sustainable quality service. The operation has been designed to help resolve the problems impeding the development of the sector and to remedy weaknesses in the public utility's configuration and operation. The solutions fall into three areas:

1. Restructuring of the public utility

- 1.28 The phases of the restructuring of the public utility would be a precorporatization stage followed by establishment of the Sociedad Anónima (the Corporation), dovetailing with the PRIBA sector reform program. During the precorporatization stage, the features and separation of functions of the company will be devised. During establishment of the Corporation, the government would: (i) adjust IDAAN staffing for the Metropolitan Panama area; (ii) recognize and settle severance liabilities and make training available for staff and assist with worker outplacement; and (iii) bring in a strategic operator from the private sector. The Corporation would be responsible for developing a plan for future investments in Metropolitan Panama, drawing on the strategic operator's management and technology.

2. Investments in support of the restructuring

1.29 One of the core objectives of the reconfiguration of the water and sewer utility is to transfer to the private sector the function of financing expansion of systems in the Metropolitan Panama area. However, before the company is privatized, priority rehabilitation work will be done on the systems. The following considerations went into this decision:

- a. The intention is to halt deterioration of the existing infrastructure and leave the systems less vulnerable, by completing high-priority works that are absolutely essential to avert emergencies in the operation of the service.
- b. The US\$30.5 million cost of the proposed rehabilitation works is less than 10% of the Metropolitan Panama investment requirement, estimated at US\$350 million for 1997-2002.
- c. Public funding for a small portion of the investments will mean that the short-run impact of capital outlays on customer rates will be attenuated while service improvement efforts begin.
- d. In the transition period, and to be prepared for any delay in the privatization process, the intention is to make sure that these rehabilitation investments are duly carried through.
- e. The transition will be expedited, so that when the private-sector strategic operator subsequently takes on its responsibilities, the desired impact will be ensured in terms of efficiency improvements and reduction of technical and commercial losses and of system operating costs.
- f. According to the government's timetable, tendering would begin in year 1 of the program, given the priority of these rehabilitation works.

1.30 The investments would be made in (i) Arraiján, Chorrera, Colón, and periurban and rural areas served by the project, which are home to underserved low-income groups requiring special attention from the government; and (ii) rehabilitation works that are urgently needed and of high priority for the Panama City system. To expedite the rehabilitation work, it would be necessary to organize community education and promotion events in the Panama City metropolitan area.

3. Ancillary activities

1.31 Specific action is needed on the following fronts, to complement and expedite the process of restructuring the public utility and the associated investments: (i) protection and control of the Interoceanic Region Basin; and (ii) preparation of a master plan for the sanitary sewer system and feasibility studies for the

Panama City system, that are consistent with the storm drainage and solid waste management plans.

H. Compatibility with the government's program

- 1.32 The aim of the government's program is to redefine and pare back the role of the public sector in the economy and to promote participation by the private sector in production and the delivery of public services.
- 1.33 The outcomes sought with the operation are compatible with the government's decisions on the regulatory framework adopted for the delivery of services and legal frameworks to support sector reform and restructuring of the public utility. The reform of the water supply and sewerage sector is designed to separate the function of providing service from the function of establishing policy and regulating service. The regulatory framework will help to put in place competitive market structures.
- 1.34 The government set in place an enabling environment for pursuit of these objectives with the passage of important legislation relating to the sector reform and restructuring of the public utility: (i) the law establishing the Public Utilities Regulatory Agency (Law 26 of January 1996); (ii) the Regulatory and Institutional Framework Law for the provision of water and sewerage services (Decree-Law 2 of January 1997); and (iii) the Law on Unrestricted Competition and Consumer Affairs (Law 29 of February 1996).
- 1.35 In addition, the government (i) formally set up, pursuant to Law 2 of 1997, the Commission for Private Sector Participation (CIPSP), chaired by an official appointed at the pleasure of the executive branch, the Minister of Planning and Economic Policy, and the Minister of Finance and Revenue, or officials designated by them; and (ii) appointed the President of the CIPSP.

I. The Bank's strategy and rationale for its participation

- 1.36 The objectives of the Bank's strategy have to do with (i) extending benefits to socially vulnerable and marginalized groups; (ii) promoting sustainable development; and (iii) sustained economic growth and strengthening of governance. The proposed operation is consistent with these strategy aims, inasmuch as it envisages: (i) benefits of social policy, particularly for socially vulnerable groups in order to help them improve the quality of life through the delivery of basic services; (ii) sustainable development, in support of sector reforms and a self-sustaining corporate structure; and (iii) the strengthening of governance, removing the public sector from service delivery and encouraging the private sector to take on a more prominent role.
- 1.37 The proposed operation would afford temporary support for the fundamental changeover of a public utility to a corporate form,

with private-sector participation, and will help resolve structural problems affecting the water supply and sewer sector and public finances.

J. The Bank's experience and lessons learned

- 1.38 The public enterprise reform program (PREP) for which the Bank approved funding in 1992 successfully attained its objectives in telecommunications and ports and harbors. In the areas of water supply, sanitation, and electricity, however, its objectives were only partially met.
- 1.39 One initial lesson learned from the PREP relates to its conceptual framework and raises legitimate concerns as to the type of support that the Bank should be giving Panama for programs confined to the administrative, financial, and operational strengthening of State-owned companies as an ultimate objective for the sector. It also justifies the need to support programs for sector reform and public-utility restructuring.
- 1.40 A second lesson having to do with questions of design concerns the scope of the conditions and mechanisms for supervision and monitoring. Experience suggests that there is a need for supervision and monitoring to target the most important and easily verifiable indicators that make it possible to evaluate the progress of the operation and attainment of its objectives.
- 1.41 Finally, a third lesson shows that is indispensable to have a political body that is highly placed within the government and that is identified with the reform objectives, to guide the process along and facilitate consensus-building among stakeholders.
- 1.42 The proposed program of support for the restructuring of the national water and sewer utility, Instituto de Acueductos y Alcantarillados Nacionales (PREIDAN), described herein, incorporates these lessons. Specifically: (i) the institutional strengthening was replaced by sector reforms that add new legal frameworks and a separation of functions, and a restructuring of the water and sewer company; (ii) the operation has been designed by reference to a logical framework with indicators that are realistic and verifiable; and (iii) the necessary political support is forthcoming since the Executive Branch, from the Office of the President, has assumed a leadership role in the economic program and, with the ministries directly involved, responsibility for the design of the sector reforms and the restructuring of the public utility.

K. Financing for the water supply and sewerage sector

- 1.43 The level of investment in the sector has been dependent to some extent on lending from multilateral development banks. At the rural level, the government has also benefited from bilateral

financing and the assistance of nongovernmental organizations. Between 1980 and 1992, investment in water and sewer systems and sanitation amounted to US\$97.8 million. Of this amount, investment by MINSA accounted for 12.1%, by IDAAN for 81.7%, and by the Emergency Social Fund (FES) for 6.2%.

- 1.44 Average annual investment declined significantly starting in 1986. Since 1994, investment has been on the rise again with the use of the undisbursed balances from IDB loans 90/IC and 673/SF-PN, to expand individual metering.
- 1.45 In the 1980s, investment centered on expanding system capacity to meet growing demand. Once the works were constructed, major maintenance was not fully performed or properly programmed. The systems have functioned under serious constraints and inefficiencies, since rate revenues covered operations, preventive maintenance, and only some depreciation.
- 1.46 To resolve the shortcomings in water service and in sewer services in particular, it is estimated that investment of approximately US\$200 million in system rehabilitation and expansion is needed in the country between 1997 and 2002, and this does not include investment in sanitation for Panama City and the Bay of Panama estimated at around US\$50 million a year. IDAAN's present condition makes it ineligible for financing of this magnitude. This further justifies the need for a strategic operator from the private sector to bring in management expertise, technology, and venture capital.

II. THE PROGRAM

A. Objectives of the program

- 2.1 The main objective of the program is to help consolidate the process of reform of the water supply and sewerage sector and to strengthen its institutional structure in order to achieve efficient and sustainable quality service.
- 2.2 The specific objectives are: (i) to support the restructuring of the sector's operating agency and involve the private sector in its management and in funding future investment in the Metropolitan Panama area; (ii) to rehabilitate the systems, at levels that further the reform of the sector and the restructuring of the public utility; and (iii) to carry out activities that help accomplish the main objective of the program.

B. Description of the program

- 2.3 To achieve the proposed objectives, the program has been divided into three subprograms as follows:
 - a. Subprogram I: Restructuring of the public utility
Includes: (i) establishment of Sociedad Anónima de Panamá Metropolitano (the Corporation) and downsizing of IDAAN; and (ii) the sale of at least 51% of the Corporation's capital stock to a strategic operator in the private sector that would handle water and sewer service for the Metropolitan Panama area.
 - b. Subprogram II: Rehabilitation works
Consists of (i) systems rehabilitation works that are needed immediately in order to start the process of reducing unmetered water, managing demand, improving service quality, and distributing water more efficiently in the Metropolitan Panama area and in periurban and rural communities in the service area, and (ii) community education and promotion activities during the rehabilitation work.
 - c. Subprogram III: Ancillary activities
Includes: (i) actions to support participation of the Corporation as a user of water resources in the Interoceanic Region Basin, and of the Ministry of Health (MINSA) as the agency in charge of water quality assurance and water resources protection, and (ii) preparation of a sanitary sewer master plan and feasibility studies for Panama City.

C. Scope of the proposed program and subprograms

- 2.4 From the logical framework seminar held in Panama with institutions involved in the sector and other stakeholders, the program, subprograms, and their components were designed and scaled and indicators with annually verifiable milestones as well as physical targets were established. These indicators will make it possible to determine the rate of advance of the program and the extent to which its objectives are being attained. The logical framework matrix and stakeholder analysis are presented in Annex I. The subprograms have the following scope:

1. Subprogram I - Restructuring of the public utility
(US\$13.2 million)

- 2.5 This subprogram is closely linked to the basic infrastructure reform (PRIBA) program since it will further that program's objectives. The subprogram is divided into the IDAAN precorporatization phase, establishment of the Corporation, and support for MINSA. These phases will require consulting support and settlement of obligations to employees.

a. Precorporatization. The World Bank will be furnishing technical cooperation for these activities, as described in paragraphs 2.13 and 2.14, which include devising the technical, financial, and legal configuration of the IDAAN segment which will become the Corporation "Sociedad Anónima de Panamá Metropolitano." The assets and liabilities of IDAAN will be segregated and transferred to the Corporation and the necessary legal arrangements will be established. The opening balance sheet will be prepared according to generally accepted accounting principles.

b. Establishment of the Corporation. Includes sets of activities geared to the establishment of the Corporation and its privatization. These activities are: (i) analysis of the present condition of the company and its future prospects; (ii) design of a downsizing plan for about 1,685 employees, which will serve as the strategy vehicle for putting the new structure in place and will entail compensation as provided in the Regulatory and Institutional Framework Law for the sector, collective bargaining, technical assistance and in-service training, development of new skills and facilities for worker outplacement; (iii) establishment of terms and conditions for involving the private sector in service delivery and investment in improvements and system expansion; (iv) determination of final staffing requirement; (v) preparation of bid documents for international calls for tenders, and (vi) calls for tenders, promotion, evaluation of bids, recommendations on the contract award, and negotiation of the contract for sale of shares. The borrower is to submit to the Bank a staff

downsizing plan, satisfactory to the Bank, prior to the first disbursement of funds under subprogram II and the downsizing component of subprogram I.

- c. Support for MINSA. This support supplements World Bank-funded actions, with US\$1 million in funding, being carried through by the government to: (i) organize a new Sector Policy and Investment Planning Subdirectorate, (ii) formulate subsidy policies, (iii) define development strategies, (iv) design management information systems, and (v) train personnel. The Bank's support is specifically geared toward the solid waste and rural water supply and sanitation subsectors. It will include a diagnostic assessment, formulation of options, design of the new organizational structure, regulatory and legal framework, rates and tariff structures, subsidy policy, and alternatives for participation by the private sector in solid-waste management, including hazardous waste and, at the rural level, the studies for modernization of water supply and sanitation service. Within 24 months of the effective date of the loan contract, the borrower is to submit, to the Bank's satisfaction, the results of these activities.

2. Subprogram II - Rehabilitation (US\$30.5 million)

- 2.6 This subprogram consists of rehabilitation works for systems supplying water to Arraiján, Chorrera, Colón, and Panama City, in support of the sector reform and restructuring of the public water and sewer utility, with a view to: (i) reducing water losses, (ii) managing demand, (iii) utilizing existing production infrastructure more efficiently, (iv) initiating changes in distribution to eliminate restrictions that hamper efficient service, and (v) improving the quality of service in areas which are home to nearly one half of the urban, semiurban, and rural population.
- 2.7 The subprogram includes activities in the technical, operations, and commercial areas and waterworks and sanitation works, for each project. On the technical and operational side, geographic information systems, technical records, system metering, and operating and control units for the entire Metropolitan Panama area will be upgraded or developed. The commercial activities are designed to upgrade or develop customer records, end-user metering, flow measurement, detection and reduction of water loss in each of the four systems targeted under the subprogram.
- 2.8 The waterworks and sanitation infrastructure works are for systems rehabilitation. The scope of these works in each system is described below.
 - a. Arraiján system: The present population of the Arraiján district is 94,453. By the year 2005, the end of the planning

horizon, the beneficiary population will number about 138,475. Work planned here is as follows: (i) purchase and installation of approximately 5,800 customer meters and four system metering stations; (ii) rehabilitation of the Miraflores pumping plant, a 1 million gallon reserve tank, 15 kilometers of water mains and pipes and household connections, and (iii) replacement of 83 control valves.

- b. Chorrera system: The present population of the Chorrera district stands at 93,211, and is estimated to reach 131,085 by the year 2005, the end of the planning horizon. Rehabilitation work here will include: (i) purchase and installation of approximately 8,200 household meters and eight system metering stations; (ii) rehabilitation of the El Caimito treatment plant, groundwater pumping plants, an 800,000 gallon reserve tank, and 33 kilometers of water mains and pipes and household connections; and (iii) replacement of 90 control valves.
- c. Colón system: The district of Colón has a population of 139,521, which is expected to rise to 225,508 by the year 2005, the end of the planning horizon. Under the project: (i) approximately 7,000 meters and four system metering stations will be purchased and installed; (ii) a 300,000 gallon reserve tank will be rehabilitated; and (iii) 99 control valves will be replaced.
- d. Panama City system: Panama City, the capital, which takes in the districts of Panama City and San Miguelito, has a population of 911,990, that is expected to increase to 1,166,925 by the year 2005. The project will benefit one half of the population. It includes: (i) purchase and installation of approximately 34,000 household meters and 36 system metering stations; (ii) rehabilitation of the pumping plant, treatment plant, and Chilibre 66-inch and 60-inch supply main, repumping plants, and reserve tanks; and (iii) replacement of 946 control valves.
- e. Promotion and education activities: While the rehabilitation work is being done there will be a need to make users aware of the benefits this will bring. The plan is to organize awareness campaigns to show the public the value of water and how to make efficient use of this resource.

3. Subprogram III - Ancillary activities (US\$3.6 million)

- 2.9 This subprogram is expected to produce the following results: (i) establish a system of coordination with the competent authority for the control and use of water resources in the Interoceanic Region Basin; and (ii) prepare the master plan and feasibility studies for the Panama City sanitary sewer system. These activities will require specialized consulting support.

D. Scaling of the program

- 2.10 The program has been scaled to reflect the financing that is required to transform part of IDAAN into a corporation, including support for the process, urgently needed rehabilitation works, and support activities.
- 2.11 The financing requirements were calculated on the basis of feasibility studies, basic designs, and the following criteria: (i) amount of severance compensation to workers and fees for specialized consultants for the restructuring and investments; (ii) quantity estimates and analysis of unit prices for each of the components; (iii) price quotations on electrical and mechanical equipment, piping, accessories, household and system meters and other supplies; (iv) the cost of the consultancy for developing the master plan and feasibility studies for the Panama City sewer system; and (v) cost comparisons with similar operations. The criteria used by the borrower in estimating the costs are considered reasonable and conform to accepted practice.

E. Cost of the program

- 2.12 The cost of the program has been estimated at the equivalent of US\$65 million, as shown in the table below. The costs include capitalization of accrued interest during execution.

F. World Bank technical cooperation

- 2.13 The World Bank has worked out an agreement with the Panamanian government to fund part of the consulting services required to support the sector reform and restructuring of the public utility. The technical cooperation that organization will furnish, at the estimated costs, complements the support for the program described in this proposal, but are not included in the table of costs since the World Bank will participate with parallel financing and will directly inspect and supervise these activities.
- 2.14 In accordance with the agreements reached on May 30, 1997, between the Panamanian government and the World Bank, that institution will provide US\$2.6 million in funding to support: (i) precorporatization activities, to devise the technical and financial features and requirements of the water and sewer systems at the national level (US\$1,200,000) and the market and risk-alleviation study for participation by the private sector (US\$200,000); (ii) MINSA, for the organization of the new Sector Policy and Investment Planning Subdirectorate, as explained in paragraph 2.5c (US\$1 million); and (iii) the Commission on Free Competition and Consumer Affairs and preparation of the education program on water use and care (US\$200,000).

COST OF THE PROGRAM

| Categories | Total by source of financing (in thousands of US\$) | | | |
|--|--|---------------|---------------|--------------|
| | IDB | Local | Total | % of total |
| I. ENGINEERING AND ADMINISTRATION | 3,060 | 310 | 3,370 | 5.2 |
| 1.1 Consultants — restructuring | 660 | 0 | 660 | 1.0 |
| 1.2 Consultants — management and technical supervision | 2,400 | 0 | 2,400 | 3.7 |
| 1.3 UNDP administration | 0 | 310 | 310 | 0.5 |
| II. DIRECT COSTS | 30,399 | 16,896 | 47,295 | 72.8 |
| 2.1 Subprogram 1 — Restructuring | 3,192 | 10,000 | 13,192 | 20.3 |
| <u>Precorporatization phase</u> | | | | |
| World Bank technical cooperation (paragraphs 2.13 and 2.14 of this proposal) | | | | |
| <u>Creation of Corporation</u> | | | | |
| a. Temporary Corporation management | 612 | 0 | 612 | 0.9 |
| b. Severance compensation | 0 | 10,000 | 10,000 | 15.4 |
| c. Collective bargaining and training | 280 | 0 | 280 | 0.4 |
| d. Procedures-User rights/obligations | 100 | 0 | 100 | 0.2 |
| e. Integrated consulting services-investment bank | 1,000 | 0 | 1,000 | 1.5 |
| <u>Support for MINSA</u> | | | | |
| Consultants — Solid-waste mgt., rural water | 1,200 | 0 | 1,200 | 1.9 |
| 2.2 Subprogram 2 — Rehabilitation | 23,907 | 6,596 | 30,503 | 47.0 |
| a. Arraiján system | 5,482 | 1,427 | 6,909 | 10.6 |
| b. Chorrera system | 5,940 | 1,481 | 7,421 | 11.4 |
| c. Colón system | 1,690 | 400 | 2,090 | 3.2 |
| d. Panama City system | 10,395 | 2,888 | 13,283 | 20.5 |
| e. Education and promotion | 400 | 400 | 800 | 1.3 |
| 2.3 Subprogram 3 — Ancillary activities | 3,300 | 300 | 3,600 | 5.5 |
| a. Basin protection | 300 | 300 | 600 | 0.9 |
| b. Master Sewerage Plan | 3,000 | 0 | 3,000 | 4.6 |
| III. UNALLOCATED | 4,352 | 2,312 | 6,664 | 10.2 |
| 3.1 Contingencies | 3,550 | 1,859 | 5,409 | 8.3 |
| 3.2 Cost escalation | 802 | 453 | 1,255 | 1.9 |
| IV. FINANCIAL COSTS | 7,189 | 482 | 7,671 | 11.8 |
| 4.1 Interest | 6,739 | 0 | 6,739 | 10.4 |
| 4.2 Credit fee | 0 | 482 | 482 | 0.7 |
| 4.3 Inspection and supervision | 450 | 0 | 450 | 0.7 |
| TOTAL | 45,000 | 20,000 | 65,000 | 100.0 |
| % FINANCING | 69.2 | 30.8 | 100.0 | |

G. Financing of the program

- 2.15 The Bank will provide financing of US\$45 million drawn on the Single Currency Facility of the ordinary capital, at the request of the Panamanian government. The proposed terms of the financing are: (i) amortization period, 20 years, (ii) disbursement period, four years, (iii) grace period, four years, (iv) interest rate, variable, (v) credit fee, 0.75%, and (vi) inspection and supervision, 1.0%.
- 2.16 The local counterpart funding, amounting to the equivalent of US\$20 million, will be provided by the Republic of Panama with national budget funds.

III. THE BORROWER, EXECUTING AGENCY, AND PROGRAM EXECUTION

A. The borrower and executing agencies

- 3.1 The borrower will be the Republic of Panama. The executing agencies will be (i) the Ministry of Planning and Economic Policy (MIPPE), through its Public Policy Technical Unit (PPTU), for subprogram I for the restructuring of the public utility and subprogram III of ancillary activities, and (ii) Sociedad Anónima de Panamá Metropolitano (the Corporation) for subprogram II for rehabilitation works and the downsizing component of subprogram I. The PPTU will also be in charge of overall coordination for the program, with support from the Commission on Private Sector Participation (CIPSP), experts, and consulting specialists.
- 3.2 The PPTU will be responsible for the restructuring of the public utility and interagency coordination for: (i) the precorporatization stage; (ii) preparation of legal documentation, bylaws, and regulations; (iii) segregation of assets and liabilities and producing the opening balance sheet; (iv) establishment of the Corporation and appointment of its temporary management; and (v) additional actions for control and protection of the Inter-oceanic Region Basin and preparation of the master sewerage plan and system feasibility studies for Panama City. 1/
- 3.3 The Corporation will discharge functions and responsibilities pertaining to (i) the downsizing process and settlement of severance entitlements; (ii) delivery of water and sewer service to Metropolitan Panama; (iii) fulfillment of contractual conditions of the IDB loan; and (iv) implementation of the future systems expansion and upgrading plan.

B. Transfer of funds

- 3.4 Initially, the funds for the rehabilitation subprogram will be transferred to the Corporation as a loan, on the same terms and conditions as the Bank's financing to the Government of Panama, while the company's stock is still wholly State-owned.
- 3.5 Subsequently, the government will have the option of negotiating with the private-sector strategic operator for all or only part of the proceeds of the financing to be capitalized in the Corporation. The specific approach ultimately taken as to how these funds will be treated (as a loan, equity contribution, or combination of the two) will depend on the outcome of negotiations for the sale of at least 51% of the Corporation's capital stock and the privatization

1/ Terms of reference for these consulting services are in the program technical files.

process. The options will entail different costs to the government and have a different impact on rates. Accordingly, one important criterion for the final decision will have to do with the objective of attenuating the short-term impact on rates paid by customers.

- 3.6 The private sector will be brought into service delivery in Metropolitan Panama pursuant to the law establishing the regulatory and institutional framework for the water supply and sewerage sector (Decree-Law 2 of January 1997). Under that legislation, the stock of the Corporation would be sold by open competition, the central element of which will be negotiation of conditions and bid documents with prequalified strategic operators. That process, and awarding of the shares to the strategic operator, will include an agreement as to system expansion and coverage targets, service quality, a capital investment program to achieve the targets, and a tariff regime. Ownership of the shares will be awarded to the strategic operator which, having undertaken to achieve the targets negotiated, proposes the most advantageous tariff system for the country.
- 3.7 Selling the shares through an open competition will ensure that, through competition for the market, (i) the eventual strategic operator will not capture any financial benefits ensuing from the presence of the Bank's funds in the investment financing, and (ii) the benefits will be passed on to end-users through rates.
- 3.8 The government will make the final decision as to the best option with due regard to the findings of the analysis to be performed by the integrated investment-bank consulting services, as part of the process to establish terms and conditions for the sale of the shares. These services will be engaged using program funds. 2/
- 3.9 The policy elements mentioned in the foregoing paragraphs are central to privatization processes in the water and sewerage sector. Given the political, financial, and social dimensions of these services, the government contribution is seen as essential for the privatization process to be workable.
- 3.10 The government will transfer the funds for subprogram II and for the downsizing component of subprogram I to the Corporation, by virtue of a signed agreement. Specifically, the agreement is to describe: (i) the legal arrangement under which the resources will be transferred and the terms and conditions of transfer; and (ii) the operating and institutional regulations for implementation of subprogram II and the subprogram I downsizing component. As a condition precedent to the first disbursement of the aforesaid funds, the Bank must have indicated its nonobjection to the

2/ The basic terms of reference are in the technical files of the program.

preliminary draft agreement and the agreement must be duly formalized. A funds transfer agreement will not be required for the use of the funds allocated to subprograms I and III since they will be administered directly by the MIPPE through the PPTU.

C. Program implementation arrangements

1. Subprograms I and III

- 3.11 The PPTU, on behalf of the MIPPE, will be the executing agency for subprograms I and III (restructuring of IDAAN, ancillary activities). It will have administrative support from the United Nations Development Programme (UNDP) and technical support from experts and consultants, to be hired with program funds.
- 3.12 Prior to the first disbursement of funds for subprograms I and III, the borrower is to (a) provide the Bank with a detailed plan on the hiring of experts and consulting services to support the PPTU in corporate configuration and valuation and privatization, market and risk study, tariff systems, sector strategies, quality and efficiency standards, and legal matters, following guidelines agreed with the Bank, and (b) demonstrate to the Bank that it has (i) designated the PPTU as the executing agency for these subprograms and (ii) selected two experts to be hired for the corporate configuration and valuation work, from the group that will assist the PPTU and CIPSP with program implementation.
- 3.13 After the Corporation has been created, the group of experts and some of the consultants will continue assisting the PPTU and the CIPSP until the Corporation has been privatized. The period of transition from the sale of the Corporation's shares until the strategic operator is brought in is not expected to last more than three months. During this interval, functions and responsibilities would be transferred over from the temporary to the permanent management team. The borrower is to demonstrate to the Bank that it has awarded the contract for the sale of at least 51% of the shares of the Corporation to a strategic operator from the private sector within a maximum of 24 months from the effective date of the loan contract.
- 3.14 IDAAN has a staff of 1,685 serving in the Metropolitan Panama area. Pursuant to the Regulatory and Institutional Framework Law for the water and sanitation sector, upon declaration of the sale of the Corporation's stock, the entire staff is entitled to seek compensation, which would amount to US\$8.9 million. If the staff is then reduced, to achieve a ratio of roughly four employees per 1,000 connections, an additional US\$1.1 million will be needed for compensation averaging one year for staff affected by the adjustment. Those payments would be funded from the local counterpart.

3.15 The following experts and consultants will assist with the implementation of the utility restructuring (subprogram I):

- a. Experts in the areas of corporate restructuring and private-sector participation referred to in paragraph 3.12. These experts and consultants would be hired by the PPTU on varying terms, within the first 24 months of the program, until the Corporation's shares were sold.
- b. Integrated investment-bank consultancy services, to draw up detailed bid documents for public tendering and market the sale of stock of Sociedad Anónima de Panamá Metropolitano to a private-sector strategic operator. These consultants will also advise the government on the entire privatization process, up to the awarding and signing of agreements for sale of the shares.
- c. Consultancies to support MINSA in framing sector policy and planning for solid waste management and rural water supply and sanitation, to supplement the World Bank-funded consulting services for the setup of the new Sector Policy and Planning Subdirectorate.

2. Subprogram II and the downsizing component of subprogram I

3.16 The executing agency for subprogram II and the downsizing component of subprogram I will be the Corporation, initially with the temporary management team and the support of a firm or consortium of consultants specializing in technical, financial, and environmental supervision. The temporary management team will consist of a general manager, technical and operations and financial and administrative managers, and a general counsel. The team will be hired for a maximum of 24 months, in which time it is expected that 51% of the shares will have been formally sold to the private operator and a permanent management team will be in place.

3.17 Among the activities for which the temporary management team will be responsible are: (i) the timely submission of reports and documentation requested by the PPTU to complete the process of privatizing the Corporation; (ii) the operations of the Corporation for efficient delivery of service; and (iii) the hiring of a consulting firm or consortium for technical, financial, and environmental supervision.

3.18 The consultancy for technical, financial, and environmental supervision, to assist the Corporation management team, will provide professional services for: (i) the detail engineering, (ii) administration of subprogram II and the projects and components for which the Corporation is responsible and the associated contracts, (iii) technical, financial, and environmental supervision, (iv) collection and processing of data for annual reviews by the Bank; and (v) advisory assistance relating to

implementation of the program. The consultants' responsibilities will overlap with those assumed by the private operator when the Corporation's stock has been purchased. Their work therefore will last four years. 3/

- 3.19 The Corporation will carry out all the subprogram II components: (i) investments to control unaccounted-for water and for system rehabilitation work, and (ii) health and environmental education and promotion among system users. The investments it will be in charge of will be in: (i) Arraiján, Chorrera, and Colón, which have relatively small low-income populations and might be of less interest to an operator in the private sector; and (ii) Panama City, in order to deal immediately with rehabilitation works of priority.
- 3.20 Management, technical, and financial support will be brought in when the Corporation begins to be privately run. Thus, it is not considered operationally or financially efficient for the program to include investments other than rehabilitation works for subprogram II. The expansion works for the systems will be the responsibility of the Corporation after privatization, as part of the medium- and long-term plan.
- 3.21 Prior to the first disbursement of the resources for subprogram II and the downsizing component for subprogram I, the borrower is to demonstrate to the Bank's satisfaction that: (i) Sociedad Anónima de Panamá Metropolitano (the Corporation) has been established and is functioning with its management team and staff, logistical facilities, assets, and resources; (ii) the Corporation, in agreement with the borrower, has opened a special account with Banco Nacional de Panamá for the management of the proceeds of the financing, cofinancing, and the local counterpart contribution for subprogram II and the downsizing component for subprogram I; and (iii) the contract for management and technical, financial, and environmental supervision has been awarded to a firm or consortium of consultants.

3. Operating arrangements with UNDP

- 3.22 The government is seeking authorization to work with UNDP under an administration agreement. The request is based on Panama's successful experience with UNDP involvement in projects funded by the Bank and other multilateral organizations.
- 3.23 UNDP offers an institutional comparative advantage as an administrator, since it fulfills the prerequisites of IDB policy GS-603. In sum: (i) the agency has good working relationships with MIPPE

3/ The basic terms of reference for this consulting work are in the program technical files.

and the PPTU; (ii) it is able to effectively coordinate the work of a number of individual experts; (iii) it offers continuity for subsequent support after completion of the program; (iv) it is equipped to help MIPPE and the PPTU administer the contract and ensure that contractual covenants are adhered to; (v) it can expedite execution of the program and disbursements of funds; (vi) it has access to a roster of qualified consultants, and an effective and efficient contracting procedure; (vii) it offers an efficient administrative support system; and (viii) the average rating of the agency's performance of similar services for the Bank in Panama is "Very Good". In addition, UNDP is providing administrative support for the PRIBA program now under way, and its services would be paid for with local counterpart funds. Its fee would not exceed 3% of the funds it would administer.

- 3.24 For all the foregoing reasons it is recommended that the Bank accede to the government's request that UNDP take part from the start of program execution as administrator of subprograms I and II, except for the downsizing component. All contracting and procurement will be done pursuant to Bank policies and procedures. To this end, it will be a condition precedent to the first disbursement from the loan that the government demonstrate to the Bank's satisfaction that it has signed an administration agreement with UNDP, on terms similar to those agreed upon with the Bank. UNDP's role will be confined to administration of consultant contracting and procurement of goods for subprograms I and III, except for the downsizing component of subprogram I, which will be carried out by the Corporation.
- 3.25 MIPPE will ask the Bank to deposit the loan proceeds corresponding to the consultant contracts and goods to be acquired under UNDP administration in a special account, and will transfer the local counterpart funds to UNDP as required. The PPTU will keep the program accounts according to accounting standards acceptable to the Bank and the pertinent legislation, will keep budget records by expenditure category, and will be subject to annual audits by a firm of independent public accountants acceptable to the Bank.

D. Readiness of the program

- 3.26 The documentation that served as a basis for the analysis of this operation was prepared by consultants hired with IDB financing, in accordance with the strategy agreed on with the Panamanian government. It consists of: (i) documents for making the program for restructuring of the public utility compatible with the reforms in the area of water supply and sewerage being carried out by the government and studies of alternative management models; and (ii) technical, economic, and financial feasibility studies, the corresponding basic designs, budgets, and bid documents for the system rehabilitation works.

- 3.27 The project team reviewed the diagnostic assessments, institutional and legal frameworks, restructuring options, studies and designs for the system rehabilitation works. In the process, the team conferred with the beneficiary and the consultants, and studies and designs were adjusted when considered appropriate. The documentation conforms to standard engineering and project-appraisal practices.

E. Basic design criteria and parameters

- 3.28 Internationally accepted design criteria and parameters in use in Panama were applied in preparing the program. In certain special cases, the technical criteria and parameters were modified to suit the local conditions and unique features of the program.
- 3.29 Decisions on the works projects, which will be carried out to support the restructuring of the public utility, were made in accordance with least-cost criteria and criteria of technical, economic, and financial viability.
- 3.30 A socioeconomic survey was conducted to determine the behavior of demand. Total demand was estimated by means of population and average per capita demand projections, using an econometric model. Based on the demand studies, projections were made to determine design conditions with a view to establishing present and future behavior patterns in the water supply systems of the different components, using the CYBERNET water modeling program.

F. Acquisition of land

- 3.31 No land needs to be acquired for the rehabilitation works for subprogram II, since the land needed is owned by the nation or municipality. However, the executing agency will be required to furnish evidence of possession of land to the Bank before calls for tenders are issued for the works.

G. Annual reviews

- 3.32 The Bank will perform an annual review of the progress of the successive stages (precorporatization, the public Corporation, the privatized Corporation), and implementation of the program and the degree of compliance with the verifiable indicators and milestones agreed on.
- 3.33 The borrower will gather and process data. The data processed will be forwarded to the Bank within the first 120 days of each year starting in year one of program execution until completion of the program. The data will be directly related to the indicators and milestones to be verified each year by the Bank. The procedures for collecting and processing data will be described in the first annual progress report to be submitted to the Bank.

- 3.34 The firm or consortium of consultants in charge of the technical, financial, and environmental supervision will also be responsible for the data gathering and processing activities described above. At the conclusion of the program, the borrower will hand over the data and information to the Corporation.

H. Schedule of investments

- 3.35 Given the nature and scope of the proposed restructuring and system rehabilitation works, the program will take four years to implement. The program will bring about a fundamental change in business operations in the sector, initiating processes to control and reduce unmetered-water loss and for demand management and equitable distribution. A significant portion of the investment will be concentrated in year two of the program as shown in the schedule below. This is because, according to the schedule, bids will be awarded in year 1 and all the works would be under way in year 2. Year 2 also would see the disbursement of funds to IDAAN staff affected by the downsizing. Completion of execution, operating tests, delivery/acceptance, and final settlement will take place in years 3 and 4.

INVESTMENT SCHEDULE
(US\$000)

| Source of funds | Year 1 | Year 2 | Year 3 | Year 4 | Total | % |
|-------------------|--------|--------|--------|--------|--------|-------|
| IDB (OC) | 9,537 | 18,185 | 10,639 | 6,639 | 45,000 | 69.2 |
| Local counterpart | 2,019 | 4,488 | 2,342 | 1,151 | 20,000 | 30.8 |
| Total | 11,556 | 32,673 | 12,981 | 7,790 | 65,000 | 100.0 |
| Percentage | 17.8 | 50.3 | 20.0 | 11.9 | 100.0 | |

I. Procurement and timetable for calls for bids

- 3.36 The government has proposed to the Bank that the "minimum-cost" approach be used to select and hire consultants, whereby the "minimum acceptable technical level" is established and the quality of technical proposals is rated against it. Bids are submitted in two separate envelopes. Technical proposals are opened first and examined, and those not meeting the acceptable technical level are discarded. Only the second envelopes, containing the price bids, of the remaining bidders are opened. The firm with the lowest bid is awarded the contract. It is understood, with this method, that only proposals above the "minimum acceptable technical level" are competing, on a cost basis alone. The minimum acceptable technical level will be explicitly stated in invitations to bid, and the Bank will exercise its right to inspect and supervise the process.
- 3.37 As a general rule, using this method, once a preselection has been made from the technical proposals, a clearly defined set of equivalent bids is obtained, all of them qualified to attain the

objectives set out in the consulting terms of reference. The proposed method transfers to consultants and consulting firms the responsibility for submitting technically sound bids and also requires them to come up with approaches that are economical and competitive.

- 3.38 In light of the foregoing, it is recommended that the Bank accede to the government's request for a waiver of IDB policy, to use the minimum-cost method to select and hire consultants and consulting firms. This is warranted by the nature of the work envisaged in the program. Though this work is for the most part complex, there are already in place well-established sets of standards and professional best practices for the activities planned. Panama has positive experience in this regard, and this is the practice being followed for the basic infrastructure sector reform (PRIBA) program, which the operation proposed herein would continue and complement.
- 3.39 International competitive bidding will be required for all IDB-funded procurement with an estimated contract value exceeding the equivalent of US\$1.5 million for construction works and the equivalent of US\$250,000 for equipment and materials. Prequalification will be employed for tendering on works projects, since the physical and commercial water loss reduction and control components and demand management require a high degree of experience and expertise to fulfill the objectives with minimal disruptions to service. After the Corporation is privatized, it may use restricted tendering for items that need to put to bid, provided the procedure followed allows for competition.
- 3.40 The amounts shown below in the tentative procurement schedule do not include tax or escalation.

PROCUREMENT SCHEDULE

| Major procurement | Year 1 | Year 2 | Year 3 | Year 4 | Financing (US\$000) | |
|--|---------|--------|--------|--------|------------------------|-------|
| | | | | | IDB | Local |
| Consultants | | | | | | |
| Management and technical supervision | S-A-C-E | E | E | E | 2,400 | 0 |
| Integrated investment bank consulting services Metropolitan Panama | S-A-C-E | E | | | 1,000 | 0 |
| Sector planning solid waste and rural water supply | S-A-C | E | E | | 1,200 | 0 |
| Master plan and feasibility studies, Panama City sewer system | S-A-C | E | E | | 3,000 | 0 |
| Works | | | | | | |
| Control/reduction Unaccounted-for water | I-A-C | E | E | E | 8,066 | 2,138 |
| Rehabilitation of systems | I-A-C | E | E | | 8,388 | 2,211 |
| Optimization distribution | I-A-C | E | E | | 7,036 | 1,854 |

Key: S = Selection, I = International competitive bidding, A = Award,
C = Contract, E = Execution

The notices of prequalification of consulting firms will be published in Development Business in July 1997.
The calls for tenders will be issued in the first half of 1998.

J. Audit of the program

- 3.41 The financial statements of the program and of the Corporation, audited by a firm of independent public accountants acceptable to the Bank, will be submitted by the borrower within 120 days of the close of the respective fiscal year. The financial statements of the program will be presented during program execution and those of the Corporation while the loan contract is in effect.

IV. VIABILITY OF THE PROGRAM

A. Technical viability

- 4.1 According to the technical evaluations performed, the program, the three subprograms, and their execution are feasible on the conditions and in the time-frames specified in the present document. Implementation of the program is expected to: (i) help consolidate the reform process; (ii) improve the quality and efficiency of water and sewer service, through effective participation by a strategic operator from the private sector and resources to finance expansion of the systems; and (iii) establish an enabling environment for the sustainable development of the sector.

1. Subprogram I - Restructuring of the public utility

- 4.2 The proposed restructuring is the result of studies performed by specialized consultants who used direct impact criteria to remedy the technical, operational, and financial weaknesses of the water and sewer utility and to achieve efficient and sustainable quality service. These criteria are: (i) introduction of efficient management to the sector and improvements in the quality of service; (ii) participation by the private sector in capital investment; (iii) impact on present water and sewer rates; and (iv) lasting solutions to the problems affecting the sector, that would be implemented in the near term.

2. Subprogram II - Rehabilitation

- 4.3 The rehabilitation works in support of the restructuring have been designed and scaled in such a way as to reduce the high levels of unmetered-water loss and manage demand in the systems of Arraiján, Chorrera, Colón, and Panama City, deferring investment in expansion. The basic designs of these works and the budgets were prepared on the basis of feasibility studies, least-cost criteria, and generally accepted professional practices. Complementing this subprogram will be actions to educate users and encourage them to become involved in the rehabilitation work, and raise their awareness of the value of water and importance of using it efficiently.

3. Subprogram III - Ancillary activities

- 4.4 These activities, which are particularly important, will contribute to the accomplishment of the objectives of the first two subprograms by helping to: (i) pool efforts for control and protection of water resources in the Interoceanic Region Basin; and (ii) resolve the serious problem of water pollution that now exists in watercourses in the Metropolitan Panama area and in Panama Bay

and to avert the environmental degradation that could result from expansion of the water supply systems in subsequent stages of investment.

4. Period of implementation and contracting

- 4.5 The planned four-year implementation period for the program is considered realistic. The contracts will be awarded to consulting firms and contractors demonstrating professional expertise and capacity in the prequalification phase. With the method proposed to implement the program, it is expected that the restructuring of the public utility and the awarding of contracts for goods and services will proceed on schedule.

B. Environmental viability

- 4.6 Given their nature, the rehabilitation works should not have any significant environmental effects on water use since increases in water production are not involved. On the contrary, the program would have a favorable impact since it seeks to rationalize consumption and make the volume available to users more balanced. Nevertheless, the construction phase could generate some environmental effects for which known and effective mitigation measures now exist. The specifications in this regard will form an integral part of the bidding documents and the cost of measures to alleviate harmful effects will be funded out of the proceeds of the program.
- 4.7 Upon completion of the rehabilitation works, the next project will be to increase water production, which will have to be carried out jointly, or after initiation of a project for improvement and expansion of the sewer system. In anticipation of the possible adverse effects that could result from this project, the government plans to move ahead with the preparation of the master plan, feasibility studies, and prioritization of investments in the sanitary sewer system for Panama City and the surrounding area, the largest urban center in the area served by the Corporation. These same concepts will be applied to other urban areas in which increases in water production are planned.
- 4.8 The social effects of the downsizing process were also considered during preparation of the operation, in accordance with Decree-Law 2 of January 7, 1997. To facilitate the adjustments that will result from participation by the private sector in the operation of the systems, agreements have been reached with staff on the compensation to which personnel would be entitled and provision has been made for a worker outplacement and training plan.
- 4.9 Interagency coordination to protect and control water resources in the Interoceanic Region Basin will be strengthened through the design and use of a specific action plan for the operation of the Corporation, as a user of these resources, and MINSA, as the agency

in charge of water quality assurance. The funding is provided for in the program cost, as one of the subprogram III ancillary activities (see paragraph 2.10). The operator of the Metropolitan Panama systems will sit on the Users Committee.

- 4.10 On April 26, 1994, the Environment Committee classified this as a Category III operation. The environmental impact assessment was presented in Panama at a meeting attended by stakeholders and representatives of the community and released to the public on April 15, 1996. The Committee on Environment and Social Impact approved the recommendations contained in the environment and social impact summary on June 9, 1997. This includes, for establishment of the necessary complementarity, the recommendations previously approved under the PRIBA reform program and specific recommendations for the PREIDAAN restructuring program.
- 4.11 These recommendations are as follows: (i) under the PRIBA, that a regulatory framework be in place and that contracts for private-sector participation contain commitments for an environmental impact assessment of preexisting conditions and future actions, including mechanisms and instruments to alleviate these effects, consistent with cost recovery, tariffs, willingness to pay, and investment plans; and (ii) under the PREIDAAN program, (a) that prior to the first disbursement of funds allocated to subprogram II and to the downsizing component of subprogram I, the borrower demonstrate that the Corporation has awarded the services contract to a management and technical supervision firm that has the necessary staff to perform all of the environmental requirements relating to implementation of the aforesaid subprograms and component; (b) that prior to the bidding on the works, the Corporation present to the Bank's satisfaction, an implementation plan based on the recommendations contained in the environmental impact assessment and the environmental permits granted by the pertinent authorities for execution of the works; and (c) that 12 months after the effective date of the loan contract, the Corporation present to the Bank's satisfaction the action plans for operation of the Corporation, as user of water resources, and MINSA, as the agency in charge of quality assurance for water in the Interoceanic Region Basin (subprogram III component) and for community education and promotional efforts when the works are in process (subprogram II component), as agreed with the Bank and as described in paragraph 2.8e.

C. Financial viability

- 4.12 The studies conducted by specialized consultants show that the investments proposed exclusively for rehabilitation work, which are intended to initiate a process of improving the quality and efficiency of service, are financially viable. The viability was confirmed by means of an evaluation of three possible scenarios: (i) without the project and without an increase in tariffs,

(ii) with the project and without an increase in tariffs, and
(iii) with the project and with an increase in tariffs.

- 4.13 The third scenario shows that if tariffs are increased to match the inflation rate, the return would be 5.1% in the year 2005. In this scenario, using conservative assumptions, the proposed investments are justified.
- 4.14 Tariffs have not been increased in the last 14 years and the present operator just manages to cover operating and maintenance expenses and part of depreciation costs. However, for the sale of stock of the Corporation through an open competition, an evaluation will be done to define a tariff level and structure reflecting economic costs. The basic thrust of the restructuring of the public utility is that it will substantially raise its efficiency and lower its operating costs. The revenues of the new company, based on the use of best practices in management, operations, and the commercial area, with increases in tariffs in due course, would be projected to cover all operating costs as well as the financing of scheduled future investment.
- 4.15 From a legal standpoint, Decree-Law 2 of January 1997, establishing the regulatory and institutional framework for the delivery of water and sanitary sewerage services, is fully consistent with principles used in the private sector. This Decree stipulates that the tariff to be approved by the Regulatory Agency will need to be formulated in such a way as to ensure that, in conditions of operating efficiency, revenue is sufficient to cover the cost of operations, maintenance, rehabilitation, and expansion as well as to service the debt and produce a reasonable profit margin.
- 4.16 Notwithstanding the fact that the operation's objective is to create a Corporation and privatize it, it has been agreed that, should there be more than a 24-month delay in the process counted from the effective date of the loan contract, the borrower will demonstrate to the Bank that it has adopted and is applying a tariff regime consistent with the provisions of Decree-Law 2 of 1997. This requirement will remain in effect for the life of the loan contract. The borrower will demonstrate compliance with this condition every year beginning the third year, within the first 120 days of the year. This tariff structure should be such that, once the Corporation is operating efficiently, it can obtain revenues high enough to defray the costs of operating, maintaining, rehabilitating, and expanding water and sewer services, and also service the debt associated with the delivery of those services and yield a reasonable profit margin.

D. Institutional viability

- 4.17 The program was designed with the necessary elements for its viability and for the three subprograms to be implemented on the

terms and conditions envisaged. The implementation arrangement agreed on with the borrower, which will have the needed institutional and operating mechanisms and staff, will be used to attain this objective. The arrangement is compatible with the restructuring sequencing: precorporatization and establishment and privatization of the Corporation.

- 4.18 As part of the above-described arrangement, the following services will be paid for with program funds: (i) UNDP administrative support and experts and consultants to furnish technical support to the PPTU, the executing agency for subprograms I (restructuring of the public utility) and III (ancillary activities); and (ii) a firm or consortium of consultants for management and technical supervision to assist Sociedad Anónima de Panamá Metropolitano, executing agency for subprogram II (rehabilitation work) and the downsizing component of subprogram I.

E. Legal viability

- 4.19 There is no legal impediment to the execution of subprograms I (restructuring of IDAAN) and III (ancillary activities) as described in this proposal. The MIPPE has the legal authority to pursue these activities.
- 4.20 With respect to subprogram II and the downsizing component of subprogram I, the legal viability depends on: (i) the creation of the Corporation, to act as executing agency for the subprograms; and (ii) segregation and transfer of assets and liabilities and rights and obligations of a legal nature.

F. Economic viability

1. Methodology

- 4.21 The independent variables employed in the econometric modeling done to project demand are the average price of water and gross domestic product, the statistically most significant variables. The results are supported by surveys. The values for price elasticity used are -0.48, -0.35, and -0.40 for residential, business, and industrial and government customers, respectively. An annual increase of 2% in gross domestic product is assumed and US\$0.97 per 1,000 gallons is taken as the real price at the start of the period of analysis.
- 4.22 The supply of water is based on technical and engineering studies and the increases are attributable not to the development of new sources of water or expansion of treatment capacity but to reductions in unmetered water and demand management, as well as rehabilitation of the systems and optimization of distribution. The approach is to make better use of installed capacity and existing infrastructure and to expand service to those segments of the population now not receiving service. The areas in which the water pressure is unsuitable were identified by water modeling

simulation using the CYBERNET program, which serves as the basis for the engineering technical analysis and the economic analysis. The lowest acceptable technical residual pressure is 20 lb/in². In the absence of complete data, it was assumed that only one half of the water demand at current prices was available. The sensitivity analysis shows that the economic rate of return falls when the availability of water is overestimated. Consequently, the baseline values used for the analysis are conservative.

- 4.23 The benefits were estimated according to the ability of consumers to pay for water service. The estimate includes the consumer surplus at the four centers, calculated with the SIMOP model. In the case of Colón and Panama City, significant additional benefits would be derived from reductions in purchase of bulk water from the Panama Canal Commission to the year 2000 and subsequently through declining production costs. For the economic analysis, engineering costs and contingencies were considered as well. Transfers, financial charges, and cost escalation were not included. Given the economic liberalization occurring in the country, it is estimated that domestic prices can stand as proxies for opportunity costs.

2. Results of the evaluations

- 4.24 The discussion and detailed evaluations are in the program technical files. The internal rates of return calculated are as follows.

FINDINGS OF THE ECONOMIC APPRAISALS

| Project | Economic rate of return |
|-------------|-------------------------|
| Arraiján | 16.3% |
| Chorrera | 15.0% |
| Colón | >25% |
| Panama City | >25% |

3. Poverty-targeting

- 4.25 The household survey 4/ provides data on family income in the program area which served as the basis for the analysis of targeting of low-income groups. The threshold established by the Bank as the poverty line in Panama is US\$164/family/month. According to that criterion and the survey, 42% of families in Arraiján, Chorrera, Colón, and Panama City are in low-income groups. Individually, the percentages for these cities are as

4/ Household survey, Planning and Development (PLADES), 1994.

follows: Arraiján, 43%; Chorrera, 41%; Colón, 41%; and Panama City, 39%. The program thus does not qualify as poverty-targeted.

G. Risks and benefits of the program

1. Risks

- 4.26 Establishment of the Corporation. There is a risk of a delay in creating the Corporation and selling at least 51% of its shares to a strategic operator from the private sector. However, the degree of commitment shown by the government in passing the laws establishing the regulatory agency for public utilities and the regulatory and institutional framework for water and sewer service (January 1996 and January 1997, respectively) is clearly indicative of its interest in pursuing the restructuring of the public utility.
- 4.27 Compatibility with the reforms. The public-utility restructuring program entails a risk if it does not dovetail duly with the sector reforms. The involvement of the MIPPE, through its Public Policy Technical Unit, as executing agency for subprogram I (restructuring of the public utility) and also executing agency for the PRIBA reform program, is expected to allay these risks. This will facilitate: (i) coordination between the groups of consultants providing support for the two operations; and (ii) the verification of compatibility and compliance with indicators and milestones.
- 4.28 Implementation of the program, and service delivery. The nature of the activities to reduce the level of unmetered water, to rehabilitate and optimize the systems, and to provide service with minimal interruptions, carries a risk of adverse reactions on the part of system customers. To minimize these potential risks which could disrupt service during the transition period and to achieve the scheduled goals, all of the works will be carried out by highly specialized companies, which will be prequalified and hired in accordance with the Bank's present procurement procedures.

2. Benefits

- 4.29 Most of the benefits that would be derived from this program of restructuring the public utility, in support of the government reform program, are directly related to substantial changes in the efficiency, quality, and sustainability of water and sewer service, with private-sector participation on the management, technical, and operations side.
- 4.30 Having a strategic operator involved in the delivery of water and sewer service also will help make available private-sector funds to finance the Metropolitan Panama investment plan.
- 4.31 From a technical, operational, and financial standpoint, the systems that are rehabilitated and optimized will make it possible

to expand water supply service to large numbers of low-income groups in the program area, whose present service is extremely inefficient.

PANAMA
PROGRAM OF SUPPORT FOR RESTRUCTURING THE NATIONAL WATER AND SEWER UTILITY
(PREIDAAAN - PN-0030)

LOGICAL FRAMEWORK

PROGRAM MATRIX

| DESCRIPTIVE SUMMARY | VERIFIABLE INDICATORS | MEANS OF VERIFICATION | IMPORTANT ASSUMPTIONS |
|--|--|---|--|
| Water supply and sanitation sector reform and functioning to ensure an environmentally sustainable service | Water supply and sanitation sector restructured with private sector participation in delivery of service and investment through purchase of at least 51% of the shares of the Corporation to be created. The Public Utilities Regulatory Agency (ERSP) operating actively. Ministry of Health establishing suitable sector policies and regulating water quality and the discharge of wastewater into receiving bodies. | Surveys and verification (Corporation, ERSP, and MINSA). | The State guarantees the success and consolidation of the sector reform and of the water and sewer utility. |
| Restructured and private sector involvement in management and financing of the utility. | The restructuring of IDAAN and the private sector involvement in the management and financing of investment concluded by July 1999. | Contract for the sale of at least 51% of the capital stock formalized. | The State supports and encourages the process and interested companies that qualify are found. |
| Rehabilitated at levels that support the reform and restructuring of the company | The major works for rehabilitation of systems must be fully completed and functioning by July 2001. The users are connected to system and are receiving continuous service of acceptable quality: 1. Arraiján 1998 1999 2000 2001 2002 59% 60% 70% 80% 90% 2. Chorrera 1998 1999 2000 2001 2002 56% 60% 70% 80% 90% 3. Colón 1998 1999 2000 2001 2002 85% 85% 90% 95% 95% 4. Panama City 1998 1999 2000 2001 2002 80% 85% 85% 90% 95% | Periodic monitoring and supervision of projects. Nonobjection to progress and final reports. Statistical records and data of service operator evaluated, no objection made. | The bidding and works completed according to plan. Contractors comply satisfactorily with commitments. Sociedad Anónima de Panama Metropolitana functioning |

PROGRAM MATRIX

| DESCRIPTIVE SUMMARY | VERIFIABLE INDICATORS | MEANS OF VERIFICATION | IMPORTANT ASSUMPTIONS |
|--|--|---|---|
| Means for protection and water resources, education of development of viable sanitation for Panama City implemented. | <p>Interoceanic Region Basin Authority operating satisfactorily and interagency coordination established.</p> <p>Campaigns to motivate and educate public in areas of sanitation and environment organized.</p> <p>Master sewer plan and feasibility study were put out to contract and final consultants' report completed to the satisfaction of all parties is ready.</p> | Monitoring and control (Corporation, Interoceanic Region Basin Authority, and MINSA). | Agencies involved meet commitments and obligations. |
| MS ing of IDAAN completed | <p>The creation of the Corporation and IDAAN staffing adjustment concluded in January 1998.</p> <p>The Corporation privatized in July 1999.</p> | <p>Official Gazette.</p> <p>Monitoring and supervision (MIPPE and the Corporation).</p> <p>Nonobjection to progress reports.</p> | Contracting of firm and legal procedures completed and plan. |
| ion investments completed and operating efficiently. | Contracts for technical supervision and management of investments in Metropolitan Panama awarded in January 1998 and satisfactorily concluded in July 2001. | <p>Contracts awarded and signed.</p> <p>Monitoring and control performed.</p> <p>Progress reports and final report receive nonobjection.</p> | Resources are guaranteed. Process for awarding contracts and efficient. |
| Activities for protection and control of water resources, user education, and planning in Panama concluded. | Activities coordinated with Basin Authority for protection and control of water resources, user campaigns, and consultancies for planning completed. | <p>Consultants' contracts and interagency agreements formalized.</p> <p>Monitoring and control performed.</p> <p>Progress reports and final report receive nonobjection.</p> | Process of awarding contracts and efficient. Interagency coordination satisfactory. |
| SUBPROGRAMS ring % of the capital stock to a private and staffing adjustment carried out. | Bidding and sale of 51% of capital stock concluded and Corporation privatized and fully operational (July 1998, December 1998, and July 1999). | <p>US\$13.2 million</p> <p>Public acts completed. Legal documentation formalized. Monitoring and supervision (MIPPE and the Corporation).</p> <p>Nonobjection to technical, operating, legal, and audit reports.</p> | Timely engagement of investment bank consultants. dissemination of information. Interested and qualified operators in private sector. |

PROGRAM MATRIX

| DESCRIPTIVE SUMMARY | VERIFIABLE INDICATORS | MEANS OF VERIFICATION | IMPORTANT ASSUMPTIONS | | | | | | | | | | | | | | | | |
|---|--|--|---|-------------|-----|----------|-----|----------------|------|-------------|----|-------------|----|----------|-----|----------------|-----|--|--|
| <p>Water Loss Reduction</p> <p>Install system metering</p> <p>of customer metering</p> <p>Measurement</p> <p>Records (census)</p> <p>Records</p> <p>Control</p> <p>Minimum</p> | <p>Net losses by the year 2001 are reduced (in million gallons) as follows:</p> <table><tr><td>1. Arraiján</td><td>1.1</td></tr><tr><td>2. Chorrera</td><td>1.4</td></tr><tr><td>3. Colón</td><td>3.6</td></tr><tr><td>4. Panama City</td><td>23.1</td></tr></table> <p>Per capita water consumption is rationalized by the year 2001 (gallons/person/day):</p> <table><tr><td>1. Arraiján</td><td>60</td></tr><tr><td>2. Chorrera</td><td>60</td></tr><tr><td>3. Colón</td><td>100</td></tr><tr><td>4. Panama City</td><td>110</td></tr></table> <p>Minimum pressure in undersupplied areas increases to a minimum of 20 lbs/inch² by the year 2001.</p> | 1. Arraiján | 1.1 | 2. Chorrera | 1.4 | 3. Colón | 3.6 | 4. Panama City | 23.1 | 1. Arraiján | 60 | 2. Chorrera | 60 | 3. Colón | 100 | 4. Panama City | 110 | <p>US\$30.5 million</p> <p>Technical inspections, metering and in situ verification, flow measurement, and water system analysis completed.</p> <p>Appropriate monitoring and supervision.</p> <p>Technical, operating, and statistical reports receive nonobjection.</p> | <p>Qualified companies that are interested.</p> <p>Process of awarding contracts is efficient, and appropriate for promotion and investment according to plan.</p> <p>Contracts awarded to contractors for construction.</p> |
| 1. Arraiján | 1.1 | | | | | | | | | | | | | | | | | | |
| 2. Chorrera | 1.4 | | | | | | | | | | | | | | | | | | |
| 3. Colón | 3.6 | | | | | | | | | | | | | | | | | | |
| 4. Panama City | 23.1 | | | | | | | | | | | | | | | | | | |
| 1. Arraiján | 60 | | | | | | | | | | | | | | | | | | |
| 2. Chorrera | 60 | | | | | | | | | | | | | | | | | | |
| 3. Colón | 100 | | | | | | | | | | | | | | | | | | |
| 4. Panama City | 110 | | | | | | | | | | | | | | | | | | |
| <p>Sanitary Sewerage</p> <p>Plan of control and protection of Inter-oceanic Region Basin.</p> <p>at the community level and environmental education</p> <p>of master plan and feasibility studies for Panama City sanitary sewer</p> | <p>The plan for coordination will be completed in July 1998. Coordination has been given effect from December 1998.</p> <p>Public promotion and information campaigns will be carried out starting in 1998.</p> <p>Contracts formalized in January 1998. Master plan and feasibility studies for Panama City sanitary sewer system completed in July 1999.</p> | <p>US\$3.6 million</p> <p>Contracts formalized.</p> <p>Periodic monitoring and supervision (Corporation and Inter-oceanic Region Basin Authority).</p> <p>Verification of number and evaluation of outcomes of campaigns and target population reached.</p> <p>Technical review meetings held systematically.</p> <p>Surveys, statistical data, technical, operational, and progress reports, and final reports reviewed with nonobjection.</p> | <p>Process of awarding contracts to consultants and performing contracts completed according to plan.</p> <p>Contracts awarded for construction design concluded as agreed.</p> <p>Process of selecting and awarding or consortiums of consultants completed on terms and conditions agreed on.</p> | | | | | | | | | | | | | | | | |

PANAMA
PROGRAM OF SUPPORT FOR RESTRUCTURING THE NATIONAL WATER AND SEWER UTILITY
(PREIDAAN - PN-0030)

LOGICAL FRAMEWORK

STAKEHOLDER ANALYSIS

| GROUPS | INTERESTS | PERCEIVED PROBLEMS | RESOURCES AND MANDATES |
|---------------------|---|---|---|
| | Facilitate means of planning and applying policies conducive to efficient financially sustainable water service at competitive rates. | Operating problems and financial constraints affecting the sector and its institutional situation | Coordinates public policies and develops programs. Formulates the budget. |
| | Promote public health and well being | Low-income population with deficient water service. | Authority to supervise water quality. Formulate policy. |
| | Guarantee services that satisfy the needs of the community at a reasonable price. | Deficiencies with service. | Law 26 of January 29, 1996. |
| | Supply continuous, reliable, and quality service | Deterioration and defects in distribution systems. Deficiencies on the operational and business side. Restrictions on rate adjustments. Lack of autonomy. | Charter authorizes delivery, operation, and maintenance of systems. |
| POPULATION | Meet demands of the population | Dissatisfaction with the level and quality of service in the sector. | Authority to approve legislation. |
| National Economic | Maintain technical and financial sustainability of investment projects. | Chronic financial deficit of service provider | Control and direction of government financial policies |
| | Adequately satisfy demand for service and promote economic development. | Present operator fails to meet demand promptly and efficiently. Inability of operator to generate financial resources. | Approve draft legislation, decrees, and regulations |
| OPERATOR GENERAL | Supervise use of resources. | Operator does not use proper procedures. | Legal authority to supervise use of resources |
| | Promote and carry out housing development programs with basic services. | Lack of basic services. | Regulations on urban development and housing. |
| Interoceanic Region | Control and protection of Interoceanic Region Basin. | Water demand for new developments in reverted areas. Accelerated deterioration of basin. | By law, administer resources of reverted areas. Prepare and implement conservation and development plan for Interoceanic Region |
| COMMISSION | Conservation and protection of Interoceanic Region Basin. Supply of water to Canal. | High level of degradation in the Basin. | Regulation of Canal Treaty |
| | Monitor, control, and alleviate adverse environmental effects. Protect Interoceanic Region Basin and nature resources generally. | Rapid deterioration of the Basin. | Legal authority for preservation of natural resources |
| | Satisfy demand of low-income population. | Deficiencies in basic services for low-income population. | Legally authorized to transfer public resources to meet demand of low-income population. |

STAKEHOLDER ANALYSIS

| GROUPS | INTERESTS | PERCEIVED PROBLEMS | RESOURCES AND MANDATE |
|--------------------------------|--|--|--|
| Presidential Advisory (Colón) | Resolve problems of basic services in Colón area. | Extreme deficiencies in delivery of basic services. | Legal authority to manage revenues from |
| LOCAL CUSTOMERS | Have efficient, reliable, and continuous service. | Users in outlying areas, in areas of elevation or marginal areas do not have proper service. | Presentation of problems to community NGOs, Legislator, the media, and closure of thoroughfares. Irregular payment for service. Voting power. |
| POTENTIAL CUSTOMERS | Have efficient service, reliable, and continuous service. | Intermittent service and low pressure affecting economic activity | Construction of private storage tanks. |
| SECTOR CUSTOMERS | Have efficient service, reliable, and continuous service. | Intermittent service and low pressure affecting activity. Services could be improved if in-house installations are repaired and water use is rationalized. | Legally authorized to file complaints through ministries and other government agencies. |
| ENVIRONMENTAL GROUPS | Defence and maintenance of green areas, ecological and protected zones, parks, and natural resources. Advisory assistance with formulation of laws for Panama's sustained ecological growth. | Deforestation of country nearly 70%. Degradation of hydrographic basins. Intermittent service and low pressure affecting activities of general public. | Lobby government to protect and conserve and natural resources in the country. |
| | Support Panamanian government with sector reform and public utility restructuring. | Inefficient supply of service. Inadequate conveyance and distribution of water. Weakness in the agency in areas of operations, administration, business, and finances. Impacts on fiscal revenues. | Support private-sector participation in management of public services and required sector infrastructure. Long-term availability of resources to finance operations. |
| | Cofinance program for restructuring the public utility. | Perception of inefficient service. | Availability of resources to a pre-established |
| BANK | Participate in the financing of technical cooperation for sector reform and restructuring the public utility. | Inefficiencies in sector and amongst providers of water and sewer service. | Availability of reimbursable and nonreimbursable resources for technical cooperation. |
| COMPANIES | Participate, for profit, in service provision. | Perception of government openness to private sector participation. | Availability of venture capital, experience, and technology. |
| (National Public Service) | Increase in salaries and stability Increase in number of public-sector employees | Unjustified dismissals, failure to observe seniority, rank, lack of incentives. | Call to strike (General Assembly). Defend the rights of members. |
| AND INTERNATIONAL AGENCIES | Assist agencies with studies, supervision, and specialized advisory assistance. | Selection and contracting process slow. | Considerable experience and expertise in sector reform and public-utility restructuring. |

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PN-0030
Original: Spanish

PROPOSED RESOLUTION

PANAMA. LOAN ____/OC-PN TO THE REPUBLICA DE PANAMA
(Program of Support for the Restructuring of the
"Instituto de Acueductos y Alcantarillados Nacionales")

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 República de Panamá, as borrower, for the purpose of granting it a financing to cooperate in the execution of a program of support for the restructuring of the "Instituto de Acueductos y Alcantarillados Nacionales". Such financing will be for the amount of up to US\$45,000,000, from the resources of the Single Currency Facility of the Ordinary Capital of the Bank, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.