

PUBLIC

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ARGENTINA

POTABLE WATER PROGRAM - V STAGE

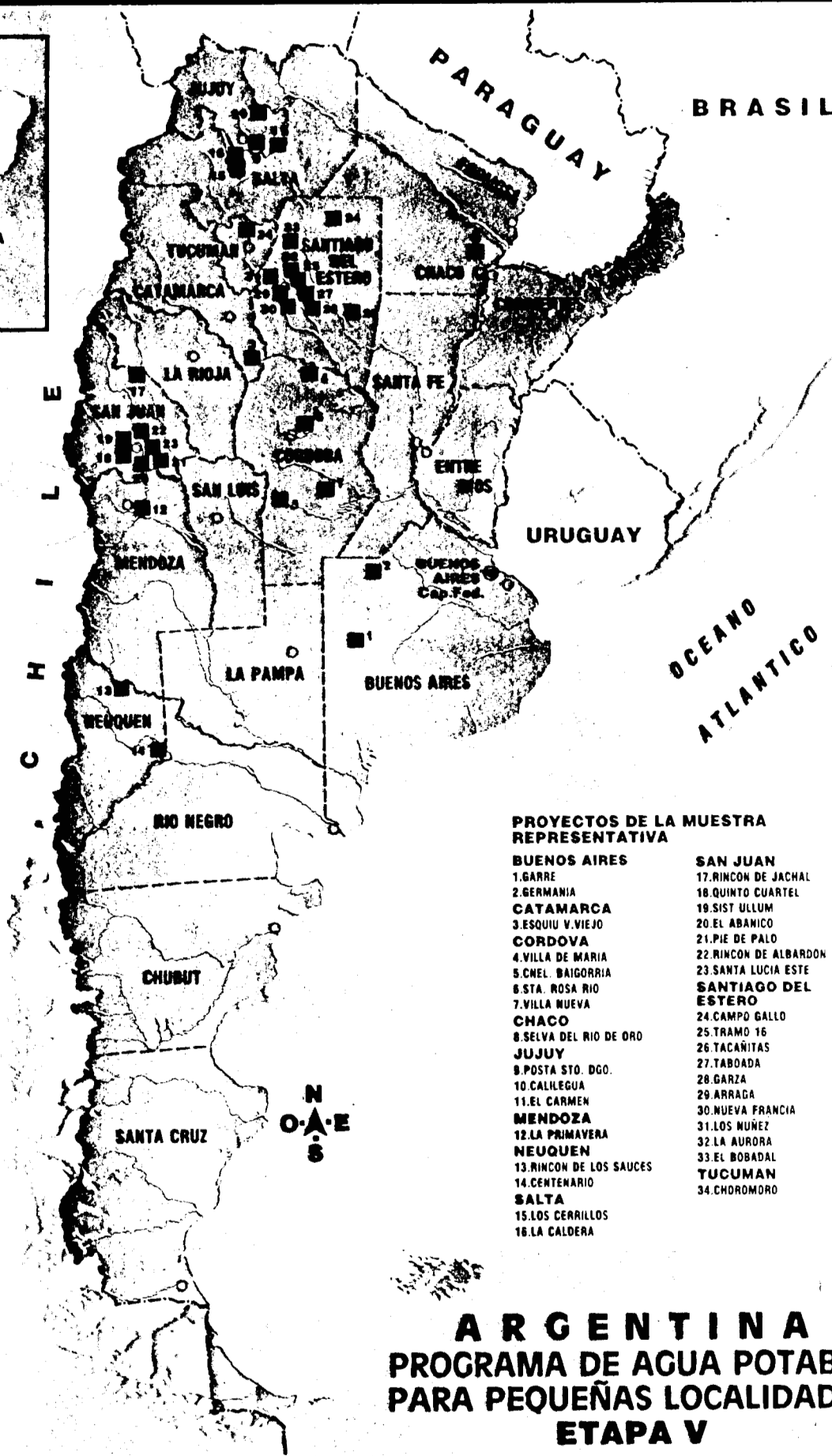
(AR-0117)

LOAN PROPOSAL

1987



OCEANO
PACIFICO



MAPA SUMINISTRADO POR EL SNAP

Basic Socieconomic Data of Argentina

1. General

Total population (millions of inhabitants. 1986)	31.0
Rural population (%) (1986)	15.1
Land area (thousands of Km2)	2,776.7
Population per Km2	11.0
Birth rate per thousand (%) (1984)	24.6
Population growth rate (average 1970-85) (%)	1.6
Death rate per thousand (%) (1984)	8.7
Infant mortality rate per thousand (1975-80)	36.0
GDP per capita US\$ 1986 a/	2,461.0
Life expectancy at birth (1984)	69.7
Literacy (1982) (%)	94.2
Official exchange rate (december 1985); (australes/US\$)	0.80
December 1986 (australes/US\$)	1.21
September 1987 (australes/US\$)	2.42
November 1987 (australes/US\$)	3.50
Energy consumption per inhabitant. 1985 (Kwh)	1,245.0
Low income level per inhabitant	
December 1985 (australes)	765
December 1986 (australes)	1,340
July 1987 (australes)	2,185

Economically Active Population (1986):

	<u>Thousands</u>	<u>%</u>
<u>T o t a l</u>	<u>9,989</u>	<u>100.0</u>
Agriculture and fishing	1,289	12.9
Mining	50	0.5
Manufacturing	2,138	21.4
Construction	1,079	10.8
Trade	1,828	18.3
Transportation	499	5.0
Electricity, water and gas	109	1.1
Financial services and others	2,997	30.0

Unemployment rate

October 1983	3.9
October 1984	4.5
October 1985	5.9
Octubre 1986	5.2

Underemployment rate

October 1983	5.6
October 1984	5.9
October 1985	7.2
October 1986	7.3

a/ Preliminary.

2. Gross Domestic Product a/ (at market prices)											
Composition (%)											
1980	1981	1982	1983	1984	1985	1986	1980	1981	1982	1983	1984
Expenditure of GDP											
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gross Domestic Investment	22.9	18.8	16.8	14.9	12.0	11.9	4.7	-23.3	-15.4	-10.7	-10.7
Consumption	81.1	84.0	79.0	79.4	82.9	80.7	4.7	-3.2	-10.8	3.6	3.6
Exports	11.2	12.8	13.7	14.5	14.0	16.4	-3.9	7.9	1.5	7.8	7.8
Imports	15.2	15.6	9.5	8.8	8.9	10.5	42.8	-3.8	-42.1	-4.7	-4.7
By Origin c/											
Agriculture	12.6	13.8	15.6	15.3	15.4	14.8	-6.4	2.4	7.3	1.9	1.9
Mining	2.5	2.7	2.8	2.8	2.7	2.5	3.8	0.6	-0.7	0.2	0.2
Manufacturing	25.0	22.4	22.6	24.2	24.8	24.2	-3.8	-16.0	-4.7	10.8	10.8
Construction	6.6	6.1	5.1	4.7	3.6	3.2	6.4	-13.8	-19.8	-13.1	-13.1
Transportation	10.7	11.0	11.3	11.4	11.6	11.5	0.6	-3.7	-2.6	4.2	4.2
Trade	15.0	14.9	12.8	12.8	13.1	14.5	5.6	-6.8	-18.3	2.1	2.1
Government	9.5	10.2	11.0	10.7	10.7	10.6	0.8	1.0	2.3	0.1	0.1
Electricity, water and gas	3.6	3.8	4.1	4.3	4.4	4.7	7.8	-1.1	3.1	8.0	8.0
Financial services	9.1	9.2	8.6	7.7	7.7	7.8	12.3	-5.3	11.5	-7.0	-7.0
Other services	5.4	5.9	6.2	6.1	6.0	6.2	4.6	3.8	-1.8	1.2	1.2
a/ At 1970 constant prices.											
b/ Preliminary.											
c/ At factor cost.											

Source: Central Bank and Ministry of Economy.

Real Annual Growth R

	Millions of Dollars							Real Annual Growth Rate					
	1980	1981	1982	1983	1984	1985	1986 a/	1980	1981	1982	1983	1984	1985
<u>External Trade</u>													
<u>Exports of goods (FOB)</u>	<u>8,020</u>	<u>9,143</u>	<u>7,624</u>	<u>7,836</u>	<u>8,107</u>	<u>8,396</u>	<u>6,987</u>	<u>2.6</u>	<u>14.0</u>	<u>-16.6</u>	<u>2.7</u>	<u>3.5</u>	<u>1.3</u>
Beef	568	564	488	338	245	214	192	-22.9	-0.7	-13.4	-30.7	-27.5	-12.1
Other meat	120	115	112	92	59	68	45	-15.7	-4.2	-1.7	-17.8	35.0	13.5
Corn	513	1,308	585	803	749	806	748	-15.3	155.0	-55.3	37.2	-6.7	1.1
Wheat	816	764	676	1,474	971	1,085	405	34.7	-6.4	11.5	118.0	-34.1	1.1
Sorghum	208	637	508	554	459	295	143	-31.1	206.3	-20.2	9.0	-17.1	-3.1
Oil seeds	633	600	439	361	924	752	702	26.9	-5.2	-26.8	-17.8	156.0	-1.1
Vegetable oils	442	340	394	517	897	1,007	636	-5.5	-23.1	11.6	31.2	73.5	-1.1
Leather goods	367	309	370	291	333	326	323	901.9	-15.8	19.7	-21.3	14.4	-1.1
Wool	235	287	185	145	175	151	139	27.7	22.1	-35.5	21.6	20.7	-1.1
Industrial foods products	1,213	1,133	884	1,147	1,122	850	1,079	85.8	-6.6	-21.9	29.7	-2.2	-2.1
Mineral products	315	658	580	372	353	619	145	256.5	108.9	-11.9	-35.9	-5.6	7.1
Metalmechanic, machinery and transportation equipment	844	876	1,025	591	679	1,120	1,234	13.2	3.8	17.0	-42.3	14.9	6.1
<u>Imports of goods (CIF)</u>	<u>10,541</u>	<u>9,430</u>	<u>5,337</u>	<u>4,505</u>	<u>4,584</u>	<u>3,814</u>	<u>4,700</u>	<u>57.0</u>	<u>-5.4</u>	<u>-43.4</u>	<u>-15.6</u>	<u>1.7</u>	<u>-1.1</u>
Consumption goods	1,857	1,632	395	209	250	198	250	160.8	-7.9	-75.8	-47.1	19.6	-2.1
Intermediate goods	5,217	4,728	3,320	3,074	3,290	2,514	3,250	56.5	-9.3	-29.8	-7.4	27.5	-2.1
Capital goods	2,392	2,059	950	769	600	648	800	52.6	-13.9	-57.8	-19.1	-22.0	8.1
Fuel	1,075	1,011	672	453	460	454	400	-2.1	-5.9	-33.5	-32.6	1.5	-1.1

Preliminary.

Source: Central Bank.

	Millions of Dollars							Annual Growth Rate				
	1980	1981	1982	1983	1984	1985	1986 a/	1980	1981	1982	1983	1984
Balance of Payments												
Exports (FOB)	8,020	9,169	7,157	7,834	8,107	8,396	6,849	2.6	14.3	-21.9	9.5	3.5
Imports (FOB)	-9,398	8,414	4,573	4,123	4,104	3,766	4,392	56.2	-10.5	-45.6	-9.8	0.2
Trade balance	-1,378	754	2,584	3,711	4,003	4,630	2,437	-	-	-	-	-
Services (net)	-3,431	-5,365	-4,858	-6,166	-6,397	-5,583	-5,275	45.9	56.4	-9.4	26.9	3.7
Transfers	22	-22	29	15	1	-1	2					
Current Account	-4,787	-4,633	-2,241	-2,439	-2,391	-953	-2,821					
Capital account (net)	2,465	1,791	1,443	54	3,293	397	746					
Public	798	1,197	2,505	290	3,331	1,156	564					
Private	2,097	193	-1,062	-235	-38	55	-182					
(Direct Investment)	790	931	251	183	269	919	574					
(Short run)	-1,991	-8,466	-4,429	-346	1,687	-1,733	-392					
Errors and omissions	310	213	157	-88	-52	-	-					
Net exchange in foreign reserves (- increase)	2,628	3,056	641	2,473	-265	-556	2,075					

Preliminary.

Source: Central Bank.

	Percentage of GDP											
	Central Government a/							Public Sector b/				
	1970	1980	1981	1982	1983	1984	1985 a/	1980	1981	1982	1983	1984
<u>Public Finances</u>												
Current income	26.6	27.6	25.8	22.4	23.4	26.4	24.5	36.3	36.2	32.4	34.3	32.9
Current expenditure	21.7	24.6	30.1	27.5	27.6	26.9	22.6	34.6	42.5	39.8	42.1	38.2
Savings	4.9	3.9	-4.3	-5.1	-4.2	-0.4	1.9	1.7	-6.3	-9.4	-7.8	-5.3
Capital expenditure	6.7	6.0	6.4	4.9	5.6	5.5	3.9	9.6	9.8	8.5	9.5	8.0
Deficit (-) Surplus (+)	-1.7	-2.9	-10.6	-9.9	-9.7	-5.0	-2.0	-7.6	-15.9	-15.1	-16.8	-12.8
Financing												
Domestic	1.4	2.9	6.4	8.1	9.5	5.4	1.5	6.5	10.3	13.7	16.6	13.2
External	0.3	-	4.2	1.8	0.2	-0.4	0.5	1.1	5.6	1.4	0.2	0.6

Includes Central Administration (Central Government, decentralized entities and special accounts), Provinces, the Municipality of Buenos Aires Security System.

Non-financial public sector.

Preliminary.

Source: Ministry of Economy.

- v -

6. National Financial System	Millions of Australes							Annual Growth Rate (%)				
	1980	1981	1982	1983	1984	1985	1986	1980	1981	1982	1983	1984
Net international reserves	0.1	-0.3	-1.5	-12.5	-69.1	133.8	-95.6	-56.4	-300.0	-345.5	-712.5	-451.8
Domestic credit	10.0	28.6	91.6	367.1	2,298.9	10,079.6	21,287.3	111.0	186.0	220.3	300.8	580.7
Public sector (net)	1.7	6.4	22.6	76.3	616.0	2,924.2	4,915.5	107.7	276.4	253.1	237.6	682.2
Private sector (net)	8.3	22.2	69.0	290.8	1,902.1	8,472.2	16,368.2	108.5	167.5	210.8	321.4	554.1
Money	2.7	4.6	16.2	75.0	485.0	3,006.8	5,576.0	97.7	68.5	176.3	362.0	604.9
Quasi-money	5.3	11.3	29.7	129.0	946.0	5,713.3	11,240.0	81.2	115.2	161.3	333.2	678.5
Total (M2)	8.0	15.9	45.9	204.0	1,431.0	8,720.1	17,976.4	86.5	99.3	187.5	342.3	604.9
(Percentage of GDP)	28.5	29.1	30.5	29.8	27.1	23.6	23.9					

a/ Preliminary.

Source: Central Bank.

7. Prices	1978	1979	1980	1981	1982	1983	1984	1985
(Annual growth rate)								
GDP deflator	158.2	150.2	100.7	105.6	248.2	355.6	n.a.	n.a.
Consumer prices (annual average)	175.5	159.5	100.8	104.5	164.8	343.8	626.7	672.2
(December to December)	169.8	139.7	87.6	131.3	109.7	433.7	688.0	385.1
Wholesale prices (annual average)	146.0	149.3	75.5	109.6	256.2	360.9	573.6	363.1

a/ December to December.

n.a. Not available.

Source: Central Bank.

8. <u>External Debt</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986 a/</u>
<u>T o t a l</u>	<u>27,162</u>	<u>35,671</u>	<u>43,634</u>	<u>46,005</u>	<u>47,821</u>	<u>49,297</u>	<u>49,185</u>
Public sector	14,459	20,024	28,616	31,706	36,139	39,913	n.a.
Long term	10,284	13,901	17,325				
Short term	4,175	6,123	11,291				
Private sector	12,703	15,647	15,018	14,299	11,682	9,384	n.a.
Long term	6,593	12,166	10,637				
Short term	6,110	3,481	4,381				
<u>Debt Service</u>							
Total debt service (millions of US\$)	4,676	6,307	7,321	8,562	6,263	8,269	6,135
Service/Exports of Goods and non-factor services (%)	46.9	57.7	84.5	91.9	59.2	79.9	66.2

a/ Preliminary.

n.a. Not available.

Source: Central Bank.

9. <u>IDB Loans</u>	<u>Millions of US\$</u>	<u>% of Total</u>
(Approved through 30-VI-87)		
<u>T o t a l</u>	<u>4,041.4</u>	<u>100.0</u>
Ordinary Capital	1,681.2	41.6
Interregional Capital	1,791.8	44.3
Fund for Special Operations	519.4	12.9
SPTF	45.9	1.1
Other funds	3.1	0.1
<u>By Sector</u>	<u>4,041.4</u>	<u>100.0</u>
Agriculture and fishing	417.9	10.3
Industry and mining	702.4	17.4
Transportation and communications	387.8	9.6
Energy	1,701.5	42.1
Education, science and technology	276.6	6.8
Housing and urban welfare	163.8	4.1
Health	297.0	7.3
Preinvestment	3.3	0.1
Export financing	91.1	2.3

DOC. DATA-AR.TXT

10-XI-87

ECC/POOL

INTER-AMERICAN DEVELOPMENT BANK
Office of the Deputy Operations Manager - Region II

ARGENTINA

LOAN PROPOSAL

Fifth Stage of the Potable Water Program - SNAP
(AR-0117)

I. BASIC INFORMATION ON THE OPERATION

A. Background

- 1.01 The fifth stage of the Potable Water Program is the continuation of a program which began in 1965 with financing from the Argentine federal government, the Servicio Nacional de Agua Potable y Saneamiento (National Potable Water and Sewerage Service) (SNAP), the provincial water-supply and sewerage services (SPAPs), and the Bank.

B. Borrower and executing agency

- 1.02 The borrower would be the Argentine Nation and the executing agency the Servicio Nacional de Agua Potable y Saneamiento (SNAP). The Servicios Provinciales de Agua Potable (SPAPs) would participate as coexecuting agencies.

C. Financing request and priority of the program

- 1.03 On April 3, 1987, the General Administrator of SNAP requested financing from the Bank for the fifth stage of the National Potable Water Program. In a letter to the Bank dated August 25, 1987, the Ministry of Economic Affairs confirmed the priority assigned to the program by the Argentine Government.

D. Objectives and description of the program

- 1.04 The object of the program is to expand the coverage of the water supply system to bring service to approximately 400,000 persons living in 130 communities with populations ranging from 100 to 15,000. The program also provides for institutional support to SNAP, staff training and technical support for the new administrative boards, and the preparation of studies and designs to complete the universe of the program and develop the following stage envisaged by SNAP.

E. Cost and financing

- 1.05 The cost of the program will be US\$140 million. The Bank would provide financing from the ordinary capital resources in the amount of US\$56 million equivalent in foreign exchange and US\$14 million

equivalent in local currency. Local counterpart funding would be furnished through national and provincial budget appropriations and contributions from the communities that the program is to benefit.

F. Proposed terms and conditions

1.06 The terms and conditions of the proposed loan would be as follows:

	<u>Foreign exchange</u>	<u>Local currency</u>
(i) Interest rate	Variable	4%
(ii) Credit fee	1.25%	-
(iii) Inspection and supervision	1% of the loan	1% of the loan
(iv) Terms		
- Disbursement and grace period	4 years	4 years
- Amortization	25 years	25 years
- Physical initiation of works	3 years	3 years

II. FRAME OF REFERENCE 1/

A. The sanitation sector in Argentina

1. Sectoral framework

2.01 Argentina's sanitation sector, which was at the forefront of Latin American development efforts in this area in the early part of the century, has deteriorated steadily in the past 15 years. Expenditure for water-supply and sewerage infrastructure as a percentage of gross domestic investment fell from an average of 1.5% in the period from 1966 to 1970 to 0.58% from 1981 to 1985, when investment reached record lows. Consequently, since 1980, population growth has outstripped the growth in sanitation services, and the percentage of the population being served by water and sewerage systems has declined accordingly.

2.02 The fiscal crisis facing the country and the inefficient system of providing water and sewerage services have compounded the problem of the shortage of funds for investment in sanitation works. One fundamental constraint for the development of the sector has been insufficient rate-based operating revenues, which have made it impossible to generate enough internal resources to supplement government efforts and the external funding available. This problem is manifesting itself as well in the inadequate operation and maintenance of existing services, many of which are functioning in precarious conditions, particularly in the larger cities.

1/ See Annex II-1 to the project report for a description of the economic situation in recent years and prospects for the economy.

- 2.03 The lack of adequate planning in the sanitation sector is responsible in part for the fact that initiatives in the sector may not always reflect an effort to make the most efficient possible use of funds. To compound the problem, Argentine legislation precluding the dismissal of personnel has left the sector overstaffed, and the low salaries now being paid are not sufficient to motivate employees.
- 2.04 The government has analyzed the serious situation that has arisen as a result of the series of factors outlined above, in order to define basic policy guidelines that would open the way for renewed growth in the sector. Major initiatives such as the preparation of the National Basic Sanitation Plan, the program to strengthen the provincial bodies in charge of the water supply, rate measures, and the coordination of foreign financing through the Secretary of Water Resources and SNAP must be supplemented with plans for improvements in staff training and sanitation company management, and systems of generating enough internal funds for capital investment purposes.
- 2.05 Through SNAP's efforts under the operations funded by the Bank in rural areas and small communities of up to 15,000 inhabitants, the percentage of the population served by public water systems has grown more quickly than the population itself. Furthermore, the rates being charged for the service are acceptable and cover adequately, with few exceptions, the operating costs of the systems.
- 2.06 In urban areas, the decentralization process fostered by the government led to a further decline in investment in sanitation works. Only in the last two years have policies been defined to attempt to reverse this trend, by increasing the resources available for rehabilitating old systems and expanding new ones. It may be concluded, in light of the current policy of setting rates high enough to cover the operating costs of the systems, and the sectoral approach being taken to devise reorganization plans and bring investment back up to acceptable levels, that the process now under way will be able to overcome the deterioration of the country's urban sanitation system.
- 2.07 The problems mentioned above require long-range solutions and heavy investment, both to expand water and sewerage coverage and to restore and upgrade very old systems and systems which have not been well maintained. The Bank's contribution to the sector since 1965, and a recently-approved World Bank operation, are important elements for the growth of the sector, primarily owing to considerations of quality. This same focus has been maintained in the proposed operation, which would support the decentralization process initiated by the country, giving the provinces a prominent role in the development of the sector.

2. Organization

- 2.08 The Secretary of Water Resources (SRH) of the Ministry of Public Works and Services (MOSP) is responsible for the planning and general oversight of activities in the sanitation sector. Since 1980, responsibility for other matters has been divided between: (a) Obras Sanitarias de la Nación (OSN), for the delivery of water and sewerage services in metropolitan Buenos Aires; (b) the Servicio Nacional de Agua Potable y Saneamiento (SNAP); (c) the provincial agencies in charge of the water supply systems in each of the 22 provinces, to which the Servicios Provinciales de Agua Potable Rural (SPAPs) are attached; and (d) the National Environmental Sanitation Directorate (DNSA).
- 2.09 The decentralization of these services was the first step in the process of rationalizing an overly-centralized and inefficient sanitation sector, in order to satisfy the needs of the population. The decentralization process coincided with a period of economic instability and institutional adjustments which, at the outset, weakened the sector even further, but some of the benefits originally foreseen now can be perceived.
- 2.10 The Servicio Nacional de Agua Potable y Saneamiento (SNAP) is the national agency responsible for directing and overseeing water-supply and sanitation programs in rural and semiurban communities with between 100 and 15,000 residents. It performs a planning function in the area of regulations and guidelines and financing and technical support for the Servicios Provinciales de Agua Potable (SPAPs). The provincial services are responsible for promoting, preparing, and constructing projects. The SPAPs come under the Secretariats of Public Works, Economic Affairs, or Welfare in the various provinces, and most of their staff is part of the complement of the provincial agency in charge of potable water services. The communities contribute financing for the construction projects through cooperatives or community boards or associations, and assume responsibility for operating and maintaining the systems and for billing and collection.
- 2.11 Isolated rural communities of fewer than 100 inhabitants that are not served by SNAP are the responsibility of the National Environmental Sanitation Directorate (DNSA), which falls under the Secretary of Health and Sanitation of the Ministry of Health. The DNSA performs a regulatory function and provides financial support for the provincial programs, and is responsible for the quality control of water delivered to rural and urban customers.
- 2.12 Medium-sized cities (between 150,000 and 650,000 inhabitants), and communities having fewer than 150,000 residents are served by the respective provincial or municipal agencies, which took over the functions once performed by OSN. The Secretary of Housing is carrying out an infrastructure program, with support from the Bank to finance eligible projects carried out by those agencies. (See section D, "IDB participation in the sanitation sector".)

3. Sector planning

- 2.13 Argentina does not have a specific development plan for its sanitation sector. In the absence of such a plan, investments are not following a defined order, and tend to depend mainly on what financing is available. However, it should be noted that two important steps have been taken in an effort to remedy this situation:
- (a) Using IBRD resources, the Secretary of Water Resources is preparing a National Basic Sanitation Plan which will establish an institutional framework for the efficient operation of the decentralized system. The plan will contain a program of priority investments for the sector, financial and technical criteria for analyses, the design of systems and services, rates and rate structures, and an analysis of the institutional and financial structure needed for the effective development of the sector.
 - (b) As an intermediary step, the Secretary of Water Resources, in the framework of the PNUD/AR/85/020 project, drafted guidelines for the National Water-Supply and Sewerage Sector Strategy. This document, completed in August 1986, establishes criteria for the ranking of investments in the sector, based on factors such as the following: geographic distribution of areas without full service; volume of demand; socioeconomic composition of demand; population growth trends; and the water supply, with reference to the risks inherent in deteriorating supply sources and production infrastructure.
- 2.14 It should be mentioned that the country does have a National Rural Potable Water Plan, which sets targets for coverage in rural and semiurban areas and specifies the respective annual investments. SNAP is in charge of updating and implementing this plan, which is consistent with the guidelines referred to in paragraph 2.13(b) above. The IDB has provided financing for the plan since its formulation.

4. Financing for the sector

- 2.15 Historically, investment in the sector has been financed by the national and provincial treasuries, and primary revenues from the rates charged to customers have not constituted a major source of income. Under the new government policies, a rate system is being applied in all rural areas, and progress is being made in setting rate levels that will allow city sanitation companies to be financially self-sufficient, as an essential step towards resolving the fiscal problems that have been affecting the country in recent years.
- 2.16 The Bank first provided funding for OSN and SNAP projects in 1964, as outlined in section D of this chapter, and until 1986 it was the only source of foreign funding for projects in the sector.

- 2.17 The World Bank approved its first operation for the sector recently (contract signed in November 1986) in the form of a US\$60 million loan for the rehabilitation of water and sewerage systems in three cities, the expansion of service to new areas, and the strengthening of planning and administration in the basic environmental sanitation sector.
- 2.18 Since 1964 SNAP also has maintained close technical cooperation ties with the Pan American Health Organization. PAHO's assistance has taken the form of advisory support from consultants in various areas of basic sanitation, training for professional and technical staff, study grants, and conferences and symposia.
- 2.19 Mention should be made of the successful sectoral approach being adopted by SNAP, which gives the provinces and the communities an important role in financing the construction, operation, and maintenance of potable water systems.

B. Growth of the population and expansion of sanitation services

- 2.20 The percentage of the total urban and concentrated rural population served by potable water systems dropped from 58% in 1980 to 53% in 1985, and the percentage with sewerage services fell from 30% to 27% in that same period. Based on 1985 population estimates of 30.6 million, the aforementioned coverage levels would mean that more than 14 million persons have no access to public water-supply systems, and more than 22 million are without sewerage services. These persons must resort to other water-supply and waste-disposal options that do not meet minimum health protection standards.
- 2.21 With these percentages, Argentina in 1985 ranked fourteenth in comparison with the 21 largest countries in Latin America and the Caribbean in terms of water-supply availability and nineteenth for sewerage services. While such comparisons must be viewed with caution, inasmuch as the definition of a "good" water-supply system varies considerably from one country to another, they are a valid indication of the deficiencies in coverage that exist in the sanitation sector.
- 2.22 It should be pointed out that in the 10 years from 1970 to 1980 the growth in Argentina's population living in cities of 2,000 residents or more was 25% higher than the growth in the country's total population, owing to heavy in-migration, notably in the Northeast and South. In the most densely-populated provinces, and particularly in Greater Buenos Aires, the lack of access to public water and sewerage systems is creating hazardous situations. Low-income groups comprise virtually all of the population without service in those communities which do have extensive coverage.
- 2.23 More than 50% of the population still needing sanitation facilities in the provinces are low-income groups, and that population has the

highest incidence of waterborne diseases. According to studies conducted by the Secretary of Water Resources, there is a need for programs designed especially for the low-income population, in which that population would participate very actively in the construction, operation, and maintenance of the systems, and the possibility that the population might be unable to pay certain rates would be recognized. Such programs should be carried out primarily in smaller rural communities and the sections of small and medium-sized cities in which low-income groups are concentrated, in which an efficient sanitation infrastructure is not available. If programs with these objectives were carried out, migration to the large cities could be checked and the high social cost associated with the crisis of accelerated urban development could be reduced.

- 2.24 Specifically as regards SNAP action in the sanitation sector, by November 1986, after 22 years of operation, the agency had brought service to 27.9% of the total population of communities with 100 to 15,000 inhabitants, or a total of 1,340,000 persons. By the end of the fourth stage of the program, in September 1988, SNAP, with financial assistance from the Bank, will have constructed about 706 systems serving approximately 1,787,000 persons. It is expected that the proposed program would raise the coverage in communities of between 100 and 15,000 residents to 44.6%, or a total of 2,380,000 rural dwellers.

C. Health indicators

- 2.25 While Argentina's mortality rate for enteric diseases is very low, the morbidity rate is extremely high, and the latter rate is, in many ways, a better indicator of general health conditions. In 1980, persons suffering from infectious and parasitic diseases accounted for most hospital admissions in the country, not counting maternity admissions presenting no complications. Persons suffering from infectious diseases accounted for 8.8% of all admissions and those with intestinal diseases for 5.4%. In the developed countries these percentages were only 1% and 0.3%, respectively.

D. IDB participation in the sanitation sector

- 2.26 The Bank has helped finance water supply programs through nine loans totaling the equivalent of US\$177.2 million, of which US\$53.7 million was for the urban sector and US\$123.5 million for the construction of rural water supply systems. Chapter VI of document PR-832-A, the October 1977 project report for the Rural (Third Stage) and Urban (OSN) Water Supply Systems Program (loans 14/IC-AR and 526/SF-AR), contains an evaluation of the first five loans provided by the Bank for the development of the sanitation sector in Argentina. Two of those loans were for the rural sector and the other three for urban areas. Section E of Chapter II of the project report for the proposed operation contains comments on the last four loans.

- 2.27 The rural component of the program carried out with loans 14/IC-AR and 526/SF-AR was completed 1-1/2 years later than planned. Although the original targets were reduced (see paragraphs 2.36 to 2.39 of the project report), the component was properly executed and all of the conditions of the contract were performed. The only work not completed in the urban component was the installation of 240,000 meters of the 440,000 called for in the operation (see paragraphs 2.43 to 2.48 of the project report). It should be noted that OSN's original commitment covered Greater Buenos Aires plus the rest of the country, because in 1977 it was responsible for sanitation works nationwide. Since 1980, however, its territory has been limited to Greater Buenos Aires, and it thus could not require 240,000 meters to be installed in the provinces, which have had full jurisdiction for water-supply and sewerage services since that year.
- 2.28 With funding from the World Bank Loan, 200,000 meters are to be installed in the OSN area and 64,000 in the provinces of Córdoba and Rosario. This program is the first stage in a process that will see meters used by all customers, which is directly related to the government's plans to establish a rate policy based on metered service.
- 2.29 As for loans 83/IC-AR and 661/SF-AR which are financing the fourth stage of the Potable Water Program, progress on the program has been slow. As of September 30, 1987, weighted physical progress stood at 67.5%, with 97 works projects completed and 60 under way; 52% of the funds had been disbursed. SNAP monitored the SPAPs' supervision of the construction projects through inspections of the works. The impact of the program in areas in which systems are finished and operating can be seen in the progressive decline in the instances of waterborne diseases and in improvements in the standard of living of the population. All of the resources of the loan that were allocated for direct costs have been committed and are expected to have been disbursed by September 1988, the current time limit for disbursement. There have been no problems with the timely submission of the projects which constitute the universe of the program.

E. Performance of contractual obligations

1. Rates

- 2.30 The rate requirements set forth in the loan contracts entered into with the Bank were as follows: (a) in the first and second stages, operating revenues from the rates charged were to cover at least operating and maintenance costs and were to generate resources for the servicing of the debt; and (b) in the third and fourth stages, the rates applied were to generate revenues at least sufficient to cover the operating expenses of the systems, including those related to administration, operation, maintenance, and depreciation.

- 2.31 Information on compliance with rate clauses for the individual loans has only been available since 1986. Previously, the provinces had submitted information to SNAP in consolidated form, which made it impossible to identify the types of expenditure. This situation came about because there was no direct link between SNAP and the communities which prepared the information, and there was no provincial information system that SNAP could use for this purpose.
- 2.32 Financial information was furnished by 92.3% of the systems which were required to do so, and the information shows that 93.6% of those systems were satisfying the rate requirements set forth in the contracts. Almost 70% of the 34 systems that had not fulfilled these conditions belong to the first stage of the program, which served communities of 3,000 or fewer residents. Under the terms of the agreements in force, these communities must, inter alia, service the debt and assume the exchange risk.
- 2.33 As for compliance with the minimum requirements of the Bank's rate policy, it was found that in 94.7% of the systems the revenues from the rates being applied were covering operating, maintenance, and administrative costs. In some situations, various services are being provided, and the deficits arising from water sales are being made up with surpluses from the other services, from reserves or cash balances, or through other charges.
- 2.34 The other conditions of the loan contracts for the previous stages of the program have been met to the Bank's satisfaction.

2. Maintenance of the works and equipment

- 2.35 The previous stages of the National Potable Water Plan provided for training programs in the areas of operations and maintenance. IDB resources were used to update preventive maintenance standards for plant and equipment, inventory and specifications lists, preventive maintenance timetables, checklists and other items. Through these activities, the provinces have been given the infrastructure needed both for construction projects and for the administration, operation, and maintenance of sanitation systems by the communities themselves, with technical support and supervision from the SPAPs. According to the information available, these activities have been carried out properly.
- 2.36 Some problems have been reported, however, particularly in the provinces with fewer resources and in the smallest communities, for a variety of reasons which have to do with aging systems, the departure of staff members who had already been trained and subsequent delays in training their replacements, delays in replacing lost manuals and technical documents, limited control of water quality at the source and in distribution systems, and other factors. In order to remedy this situation, emphasis is being placed in the proposed operation on reinforcing the operations and maintenance areas, through activities such as training courses and the

acquisition of mobile shops, communications systems, and water-quality laboratories.

III. THE PROGRAM, ITS COST AND FINANCING

A. Objectives and targets

3.01 The basic objectives of the fifth stage of the Potable Water Program are:

(1) To expand the coverage of the water-supply system in rural and semiurban areas, by bringing service to approximately 400,000 persons in some 130 communities throughout the country, with populations ranging from 100 to 15,000.

(2) To assist in the process of institutional strengthening of SNAP and the SPAPs.

B. Description

3.02 This global multiple-works program would consist of the construction of approximately 110 water supply systems, including new works and the upgrading of existing systems.

3.03 The program also would provide for technical support for: (a) assistance to SNAP in financing feasibility studies and final designs for water and sewerage works; (b) training courses to improve the capabilities of intermediate-level staff of the SPAPs and the communities in charge of supervising the construction of the new systems and operating and maintaining them; and (c) strengthening the financial and accounting information system and assisting with the economic analysis of projects and the review of technical standards for studies and designs of water and sewerage works.

1. Selection criteria

3.04 The project selection criteria are similar to the ones used in previous stages of the potable water program financed in part by the Bank. Primary responsibility for the selection process rests with the SPAPs. The final decision is made after SNAP has approved the process, following an analysis of the technical, economic, financial, and legal aspects of each project. Some of the basic selection criteria are as follows: the community must have a population of between 100 and 15,000; there must be an assured source of water to cover the demand for 20 years, of sufficiently high quality so as not to require special complicated treatment; the community must be able to contribute funds covering at least 10% of the cost of the system; and, after an evaluation using a methodology acceptable to the Bank, the project must be shown to have an internal economic rate of return of at least 12%. Special emphasis has been placed on

the matter of rates, at both the community and provincial level. In this connection, prerequisites will be established in this stage of the program for the participation of the provinces, relating to the signing of the additional agreement between SNAP and the province, evidence that sufficient staff is available, and compliance with the rate clauses from previous stages of the program.

2. Design and representative sample

- 3.05 The size of the projects in the representative sample has been determined using design criteria from SNAP's technical standards. The design period is 20 years (10 years for electromechanical equipment), and the average initial water supply is 40 liters per person per day for public water sources and from 75 to 200 liters per person per day for systems with household service connections.
- 3.06 The representative sample consists of 34 projects, chosen from a total of 60 submitted by SNAP, which would supply safe water to 44 communities that meet the selection criteria for this stage of the program. The direct cost of these projects, not including contingencies or escalation, is the equivalent of US\$27,168,900, or 30% of the total construction cost of the systems. (See map showing the location of the projects in the representative sample.)
- 3.07 Argentina has 1,344 communities with populations of between 500 and 15,000. Forty-eight percent (48%) of these have potable water systems, whose state of repair and current operating conditions vary. About 698 communities (52%) have no formal water-supply system. The information available on communities of between 100 and 499 residents is not particularly reliable.
- 3.08 Technical solutions for the projects in the representative sample were devised through studies of alternatives, particularly for water sources. The sources selected have been shown to be reliable through water quality analyses, measurement of surface and ground-water courses, and pumping tests for aquifer use.

3. Characteristics of the works

- 3.09 Each water supply system will consist of catchment works, intake and supply lines, treatment units, storage tanks, and distribution systems using house connections, most of which will have meters. When the works for each system have been completed, it is expected that at least 80% of the homes fronting the distribution main will be connected to the system. Flow regulators will be used in a few systems, and public taps will be installed, for economic reasons, in several smaller systems in remote communities or communities situated at high elevations, with small populations, which are unable to operate and maintain a more complete system. Meter masters will be installed in all systems. Facilities will be installed for measuring water leaving the storage tanks and, if the size of the project warrants, for measuring raw water at the source (see Appendix IV-2 of the project report).

- 3.10 In most instances, plastic and malleable cast iron pipes will be used. If asbestos-cement pipes are to be installed, the Bank must be given a full evaluation and justification, including information on the appropriateness of this material for the conditions to which it will be exposed and the risks, if any, to users.

C. Total cost

- 3.11 The total cost of the fifth stage of the Rural Potable Water Plan, updated to June 1987 prices, is estimated at the equivalent of US\$140 million. A breakdown by investment category and source of funds is given in the following table.

COST OF THE PROGRAM BY INVESTMENT CATEGORY
AND SOURCE OF FINANCING

(in US\$000 equivalents)

<u>INVESTMENT CATEGORY</u>	<u>IDB FINANCING</u>		<u>LOCAL CONTRIBUTION</u>	<u>TOTAL</u>	<u>%</u>
	<u>FOREIGN EXCHANGE</u>	<u>LOCAL CURR.</u>			
I. <u>ENGINEERING AND ADMINISTRATION</u>	<u>554</u>	<u>2,163</u>	<u>13,917</u>	<u>16,634</u>	<u>11.9</u>
1.1 Studies and designs	-	2,163	2,169	4,332	3.1
1.2 Construction supervision	554	-	7,365	7,919	5.7
1.3 Administration of the program	-	-	4,383	4,383	3.1
II. <u>DIRECT COSTS</u>	<u>46,719</u>	<u>7,304</u>	<u>49,266</u>	<u>103,289</u>	<u>73.8</u>
2.1 Construction and expansion of systems	46,719	7,304	49,266	103,289	73.8
III. <u>ASSOCIATED COSTS</u>	<u>1,034</u>	<u>3,239</u>	<u>5,341</u>	<u>9,614</u>	<u>6.9</u>
3.1 Land and easements	-	-	170	170	0.1
3.2 Operating and maintenance equipment	728	873	875	2,476	1.8
3.3 Technical support training	306	-	1,924	2,230	1.6
3.4 Preparation of new projects	-	2,366	2,372	4,738	3.4
IV. <u>FINANCIAL EXPENSES</u>	<u>7,693</u>	<u>1,294</u>	<u>1,476</u>	<u>10,463</u>	<u>7.4</u>
4.1 Interest	7,133	1,154	-	8,287	5.9
4.2 Credit fee	-	-	1,476	1,476	1.0
4.3 Inspection and supervision	560	140	-	700	0.5
GRAND TOTAL	<u>56,000</u>	<u>14,000</u>	<u>70,000</u>	<u>140,000</u>	<u>100.0</u>
Percentage	40.0	10.0	50.0	100.0	

3.12 Some of the information taken into account to calculate the cost of the program were equipment and machinery price quotes obtained by the SPAPs and SNAP, the most recent real costs of similar construction projects, and unit prices for the projects in the representative sample.

3.13 It should be noted that because the proposed operation is a global multiple-works program, the amount calculated for escalation and contingencies has been redistributed among the various investment categories.

D. Financing of the program

1. IDB financing

3.14 The proposed IDB loan for the equivalent of US\$70 million from the ordinary capital resources would consist of US\$56 million in foreign exchange and the equivalent of US\$14 million in local currency. The foreign-exchange portion would cover 40% of the total cost of the program and the local-currency portion would cover 10% of that total cost, in conformity with the existing policy, outlined in document GN-1335, concerning the share of foreign-exchange financing that the Bank may provide for sanitation infrastructure projects in Group A countries.

3.15 The Bank's resources would help defray the direct costs of the program, the cost of equipment for the technical support and training activities, the cost of 32 vehicles for construction supervision, the cost of studies for the next stage of the program, and 100% of the interest and inspection and supervision charge for the loan.

2. Local contribution

3.16 The local counterpart contribution, in the amount of US\$70 million equivalent, would be provided through national and provincial budget appropriations and contributions from the communities, each of which would contribute approximately the same share it provided for the previous stage of the program. This share would fall within the following ranges: (a) between 10% and 20% from the federal government; (b) between 10% and 25% from the provinces; and (c) at least 10% from the communities.

3.17 The local counterpart funding would defray part of the direct costs, the cost of consulting services and technical support to prepare studies and designs for the program, consolidate the process of reviewing and updating water-supply and sewerage standards, train intermediate-level staff of the SPAPs and participating communities in the supervision, operation, and maintenance of the new systems, strengthen the financial and accounting information system, and

assist with the socioeconomic analysis of projects; and 100% of the program's administrative costs, the cost of land and easements, and the credit fee on the Bank's loan.

IV. EXECUTION OF THE PROGRAM

A. Mode of execution

- 4.01 The form in which the proposed program would be carried out would be similar to the one followed for the four previous stages implemented by SNAP. The agreements signed between SNAP and the provinces and between the provinces and the communities would stipulate how responsibilities were to be divided and coordinated at the national, provincial, and local level (see Recommendations). These agreements would provide for the transfer of the proceeds of the IDB loan by SNAP to the provinces for credit to a special account once the province's share and the cash contribution from the community had been deposited. The amounts contributed by the national and provincial governments would be nonreimbursable, and the Bank's funding would be in the form of a loan.
- 4.02 SNAP would be responsible for advisory support in the technical, administrative, accounting, and legal areas, and for promoting the program at the community level.
- 4.03 The provinces, through the Servicios Provinciales de Agua Potable (SPAPs), would prepare designs and budgets for the construction projects and submit them to SNAP for approval, and would carry out the projects through public calls for bids or on force account, according to the system agreed upon in each case. The provinces also would make a nonreimbursable contribution to the financing of the works.
- 4.04 The communities that are to benefit from the program would assist with the financing of the program through contributions of cash, land, labor, and other services. Contributions in kind will be made only for minor works carried out by force account in the smaller communities. Once the construction project has been completed, the communities will assume responsibility for operating and maintaining the works, billing customers, and collecting for services delivered.
- 4.05 The construction program would begin with the projects in the representative sample, for which designs, technical reports, drawings, specifications, and bid documents are available. These documents could be used immediately for a call for bids for 34 water supply systems.

B. Preparation of remaining projects

- 4.06 The 76 projects for the program that are not part of the representative sample will be prepared by the SPAPs, with assistance from

Argentine engineers and firms specializing in sanitation works. Before these projects are presented to the Bank they will be approved by SNAP. When this same system was used in previous stages of the program, the additional projects were ready in good time.

- 4.07 In order to ensure that there will be enough duly-justified projects to complete the program universe, it is estimated that approximately 120 new projects, with designs, would have to be prepared in the 30 months following the date of signature of the eventual loan contract (see Recommendations).

C. Goods and services

- 4.08 In the acquisition of goods and the awarding of construction or service contracts that are to be financed with resources of the program, the procedures agreed upon with the Bank and appended as an annex to the loan contract will be followed. When acquisitions are to be financed in whole or in part using foreign-exchange resources of the Bank, international calls for bids will be issued. Calls for offers for goods or services to be acquired with local-currency resources of the Bank or local counterpart funds may be restricted to Argentina.

D. Works on force account

- 4.09 As was the case in previous stages of the program, in special situations, for which a justification must be furnished, some works may be executed on force account. This would occur in the case of projects of a relatively low amount but with high costs of administering construction contracts because the works are located in remote communities, which usually are fairly or very inaccessible and thus are not attractive to contractors. When using the force account method, the practice has been to acquire the materials through public calls for bids or restricted calls for quotations, leaving about 40% of the project (in terms of cost) to be carried out without a bid process. Inasmuch as these cases involve local-currency expenditure and are located in areas of the country with relatively low incomes, it is recommended that authorization be given in this stage of the program for up to US\$5 million to be used to execute works on force account in communities of 2,000 or fewer residents, up to US\$2.5 million of which would come from the local-currency portion of the loan (see proposed resolution).

E. Timetable for calls for bids

- 4.10 In accordance with Argentine legislation, each province arranges for the projects falling under its jurisdiction. The standard practice is to put projects out to tender one at a time, allowing for active monitoring on the part of the agencies in the beneficiary communities.

- 4.11 The projects would be arranged in four groups. The provinces would have direct responsibility for calls for bids for these groups of projects, through the SPAPs and in coordination with SNAP, the national agency (see paragraph 4.33 of the project report).

F. Schedule of investments

- 4.12 The schedule of investments by source of financing is summarized below:

<u>Financing</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Total</u>	<u>%</u>
IDB - Foreign exchange	9,724	10,568	18,629	17,079	56,000	40.0
IDB - Local currency	2,962	3,713	4,609	2,716	14,000	10.0
Local contribution	14,551	14,911	22,236	18,302	70,000	50.0
Total	27,237	29,192	45,474	38,097	140,000	100.0
Percentage	19.4	20.9	32.5	27.2	100.0	

G. Physical initiation of works

- 4.13 Given the nature of the construction projects, none of which will require more than one year to complete, a three-year term for the physical initiation of the works is being proposed. A realistic estimate of the time generally needed for this type of water supply system would be from four to 10 months, depending on the size and particular features of the works. Accordingly, if all of the works are started before the end of the third year, the program would be completed within the scheduled four-year period.

H. Community information and health education

- 4.14 Since the program's first stage, SNAP and the SPAPs have been aware of the strong impact of community promotion efforts directed toward the target population, and since that time they have had groups to motivate the communities and provide instruction in matters of hygiene. At present SNAP has a well-organized Promotion and Health Education Directorate with a Director and six staff members (community workers, instructors, and support staff). The SPAPs also have Promotion and Health Education Units with a total staff complement of 115, consisting of professional community workers, technical instructors, and support staff.
- 4.15 According to the current rules, the community workers and hygiene instructors are to attempt to achieve the following objectives in the period preceding the execution of a project: (a) to interest the community in the project and encourage it to take an active,

conscientious role in the construction of the water-supply or waste-disposal system and its subsequent administration; (b) to teach the population more about community action, health, and development, and improve its habits and attitudes in this regard; (c) to change the attitude of members or segments of the community that the community study may have shown to be opposed or indifferent to the project; (d) to encourage the community to pursue other development objectives, once its drinking-water and sewerage needs have been met; (e) to clearly stress the fact that the community will own the works to be constructed and that it is to administer and take care of them in that capacity to protect the health of all members of the community; and (f) to obtain agreement for the establishment of a community body which would sign the agreement for the construction project and assign responsibility for the administration, operation, and maintenance of the system, including the charging of rates to users.

I. Operation and maintenance

4.16 The systems will be operated and maintained by local bodies, primarily cooperatives or community boards. While a series of manuals and standards will exist for these tasks, some reinforcement will be needed, particularly in the case of systems that are nearing the end of their service life or are located in small communities in provinces with limited resources. Accordingly, provision has been made in the program for a component to strengthen the operation and maintenance of the systems. This component will consist of training for intermediate-level staff and the purchase of equipment and vehicles, including laboratories for the physical, chemical, and bacteriological analysis of water. As well, it is being recommended:

- (a) that the program works be administered, operated, and maintained in accordance with generally accepted technical standards;
- (b) that the following be submitted to the Bank within the first quarter of each calendar year for 10 years after the date of acceptance of the works: (i) an annual maintenance plan for the water supply systems in the program; and (ii) a detailed report on the maintenance work carried out the previous year, the operating efficiency achieved, and the state of repair of the systems at the end of the previous year, including updated statistics on water produced, the quality of water at the source and when distributed, operating costs and operating revenues, and, to the extent possible, water consumption; and
- (c) that for projects using asbestos-cement tubes, statistics on water quality be provided to verify, using the appropriate acidity index, the pH balance of water being delivered to customers, including monthly average values and critical values (see Recommendations).

J. Environmental considerations

- 4.17 The program would have no adverse impact on the environment. The ground, subsurface and surface water flows to be used for the operation of the water supply systems would be relatively small and would be distributed to users after being treated, without affecting the communities or nearby irrigation areas.
- 4.18 The communities included in the representative sample have facilities for excreta disposal, usually in the form of latrines. At previous stages in the program it was found that, because of the cultural level and standard of living of Argentina's rural and semiurban population, when the communities are given access to a public water supply system, they normally use resources of their own to construct basic essential household waste-disposal facilities. Usually such works are septic tanks with soakage pits or drain-fields.
- 4.19 Full evaluations and justifications are to be prepared and submitted for the final selection of the type of material to be used for intake and supply conduits and distribution systems. This will include information on the appropriateness of such materials for the conditions to which they will be exposed and the risks, if any, to users.

K. Ex post evaluation

- 4.20 In order to assess the impact of the program and the extent to which its targets have been achieved, it is recommended that the contract require SNAP to submit to the Bank the baseline data, the annual comparative data, and the ex post evaluation report referred to in the Recommendations by the deadlines specified therein, containing the information outlined in Appendix III (Annex A to the contract).

L. OEO recommendations

- 4.21 The Operations Evaluation Office (OEO) has prepared a number of ex post reports on urban and rural water supply projects. All applicable recommendations were taken into account when analyzing the representative sample for this program. Some of these recommendations are as follows:
- (a) That design criteria take into account the future development of the communities taking part in the program.
 - (b) That engineering studies include water-quality analyses in order to determine the treatment required.
 - (c) That public water-supply facilities be set in place when it is not economical to bring potable water service to every user.

- (d) That the borrower/executing agency agree to submit annual reports on the administration, operation, and maintenance of the water supply systems built.

V. THE BORROWER AND THE EXECUTING AGENCY

A. The borrower and the executing agency

- 5.01 The borrower would be the Argentine Nation, through the Department of the Secretary of Water Resources. The executing agency would be the Servicio Nacional de Agua Potable y Saneamiento (SNAP). The other participants in the program would be the provinces through the Servicios Provinciales de Agua Potable (SPAPs), and the communities in which the works would be located.

B. The executing agency

1. Nature

- 5.02 The Servicio Nacional de Agua Potable y Saneamiento (SNAP) is a national agency that was established to carry out basic sanitation works in rural and semiurban areas of the country. SNAP answers to the Executive Branch through the Secretary of Water Resources of the Ministry of Public Works and Services.

2. Functions

- 5.03 SNAP plans, promotes, and supervises sanitation projects carried out in rural areas and administers funds for their execution. Under the terms of a bill presently before Congress, the legal structure of SNAP would change to that of a decentralized agency with legal capacity, and its jurisdiction would be expanded to include communities of up to 30,000 residents. The proposed law would broaden the scope of SNAP's objectives and functions in all matters pertaining to the study and solution of problems raised by the lack of water supply systems and other basic sanitation works in semi-urban and rural areas. SNAP would be in charge of all arrangements for foreign borrowing for the sanitation sector, and would regulate and supervise the application of the rate system.

3. Staff

- 5.04 According to the evaluations conducted, SNAP is properly organized to perform the functions that would be required of it as executing agency for the proposed water-supply program. It would not be necessary to hire specialists to supervise construction work, inasmuch as SNAP and the SPAPs have experience in this type of project and the basic staff needed for work of this nature.

- 5.05 The foregoing notwithstanding, the Office of the General Administrator would appoint additional staff as needed in the course of the program. In this regard, SNAP would be required to demonstrate to the Bank, within the first 150 days of each year during the period of execution of the program, that it continued to have the staff needed for that purpose (see Recommendations).
- 5.06 Because of the growing number of systems being added to the program, technical support and consulting services are required for the following: (a) advisory support to SNAP in the implementation of financial, accounting, and management information systems; (b) training courses; (c) the review and updating of design standards and criteria; (d) the preparation of studies and designs for water and sewerage systems; and (e) advisory support to SNAP in applying the methodology for the socioeconomic evaluation of projects in the program (see Recommendations).

4. Financial and accounting administration

- 5.07 The administration of SNAP resources is governed by the Government Accounting Act. SNAP operates on the basis of an annual budget which is part of the General Public Sector Budget. Government funding is received from the Treasury in the form of payment releases or direct transfers. In accordance with the provisions of the Accounting Act, SNAP uses a budget accounting system and keeps records of receipts and expenditures, assets, and inventories.
- 5.08 Separate books of account, in australes and U.S. dollars, are maintained for the program for which the Bank is providing partial financing, and the accounting system being used is considered to be suitable. The Bank is provided each year with supplementary financial information pertaining to the subloans made to the provinces and recoveries under those loans, statements of source and application of funds, and statements showing the source and application of financing.
- 5.09 Argentina's General Accounting Office is the government unit in charge of auditing the projects financed in part by the IDB. At this writing, the 1986 financial statements are being examined by that Office. A clean audit opinion was issued on the 1985 statements of the ongoing program and SNAP's budget performance. However, the report did recommend, for purposes of determining whether the rate clause was being complied with, that information be broken down by program stage and by system.

C. The Servicios Provinciales de Agua Potable y Saneamiento (Provincial Water and Sewerage Services) (SPAPs)

1. Functions

- 5.10 The SPAPs are in charge of planning and executing sanitation works and supervising the operation and administration of the systems once they are placed in service. Their general responsibilities are to conduct socioeconomic surveys, prepare and revise projects and their designs, prepare documentation, and arrange for calls for bids and construction of the works. When the works have been completed and transferred to the community bodies, the SPAPs monitor or supervise the works and may, in some instances, operate, administer, and maintain them directly. As well, the SPAPs provide advisory and technical support to the local cooperatives or associations.

2. Staff

- 5.11 The SPAPs are suitably organized. Basic staff numbers (a total of 1,104 officials and employees) are reasonable. Most of the staff is part of the complement of the provincial entities in charge of water supply systems. Nevertheless, in provinces in which construction activity will be stepped up, SNAP will require that more staff be hired, particularly for supervision and community information. Accordingly, it is recommended that the participating provinces demonstrate to SNAP, within the first 120 days of each year during the period of execution of the program, that they continue to have sufficient staff for that purpose (see Recommendations).

D. Community agencies

- 5.12 The rural communities in which sanitation works are built under the program play an important part in the projects. At the outset, they help execute the projects through monetary contributions or contributions of labor and other services and, once the water systems have been built, they assume responsibility for operating, maintaining, and administering them and for billing and collecting from users. In this way, the community agencies assume a series of obligations and rights and are given the necessary legal capacity for that purpose. The preferred form of organization of the community body is a cooperative, but it may also take the form of a nonprofit association with legal capacity, such as a community board or association.

E. Financial analysis

- 5.13 SNAP obtains funding for its activities from three major sources: (a) the proceeds of IDB loans; (b) repayments of the subloans made to the provinces; and (c) federal government contributions. The following table shows the funds received from each source since 1984.

(in thousands of constant U.S. dollars at December 31, 1986)

Income	1984		1985		1986		1987		Total 1984-86	
	Actual	%	Actual	%	Actual	%	Budg.	%	Actual	%
IDB loans	10,123	86.0	13,280	85.0	10,600	56.3	18,377	61.5	34,003	73.6
Federal government contributions	971	8.3	1,832	11.7	5,834	31.0	11,499	38.5	8,638	18.7
Other income	673	5.7	519	3.3	2,393	12.7	21	0.1	3,585	7.8
Total income	11,767	100.0	15,631	100.0	18,827	100.0	29,987	100.0	46,226	100.0

5.14 Although the structure of SNAP's income has undergone some adjustments, resources from IDB loans continue to account for a high share of the total (more than 50% of its total annual funding). Recoveries under subloans to the provinces are the next highest source of funds.

5.15 The recoveries under subloans made to the provinces have not been included in SNAP's income because they are transferred to the Federal Government for the repayment of the Bank's loans. In August of 1987, SNAP had a total loan portfolio of US\$93,043,000, 3% of which (US\$2,855,021) was in arrears. Most of the overdue debt is concentrated in five provinces, and two (Córdoba and Mendoza) account for 81% of the total. The provinces of Córdoba and Catamarca have signed agreements to bring payments on their debt up to date, and Mendoza is about to sign a similar agreement. Arrangements for the payment of overdue debt are being worked out in the other provinces.

5.16 Actual SNAP income as compared with budgeted amounts has been satisfactory, except for Federal Government contributions which were lower than those budgeted in the three-year period under review, owing to the policy of encouraging the provinces to increase their share.

F. Rates

5.17 The rate system that is to apply in systems built with IDB funding is stipulated in the agreements signed between SNAP and the province and between the province and the community. Some of the provisions of these agreements in this regard are as follows: (a) the province, through the SPAP, must with the local agency study the rate system to be established, under certain terms and conditions, and set rates for each water supply system and submit them to SNAP for consideration; (b) the rate to be charged to consumers must be consistent with the Bank's rate clause provisions for each stage (operating and maintenance costs and debt service in the first two stages; operating, maintenance, and depreciation costs in the third and fourth stages); (c) the community must implement the rate and

assume responsibility for collection; (d) the SPAP must monitor the rate implementation and collection process; and (e) unless the province has assumed the exchange risk, rates must be adjusted if there is any change in the U.S. dollar exchange rate compared to the rate for the amortization of the loan.

- 5.18 Even though a rate system allowing the water supply systems to be self-sufficient has been devised, such a system cannot be applied indiscriminately, owing to the different stages of development and socioeconomic levels of the various communities and provinces. (For information on compliance with the rate clauses for previous stages of the program, see paragraph 2.53 ff. of the project report.)
- 5.19 For the above-mentioned reason, different rate structures have been established for different communities. In some communities the rate is sufficient to cover all operating expenses, including depreciation, and in others it covers only operating, maintenance, and administrative expenses. The determination as to the costs that are to be covered is made on the basis of the communities' ability to pay. Usually, the provincial governments or municipalities alone have the right to set rates. Accordingly, for the proposed program it is recommended:
- (a) that the rate clause in effect for the third and fourth stages of the rural potable water program, which requires that administrative, operating, maintenance, and depreciation expenses be covered, be maintained, but that provision be made, by way of exception, to exclude depreciation for rural systems that supply communities of 3,000 or fewer residents (see proposed resolution and Appendix III of the normative documents);
 - (b) that the agreements signed by the provinces wishing to participate in the program stipulate that the rates applied in the systems must satisfy the requirements of the rate clause of the IDB loan contract (see Recommendations); and
 - (c) that the SPAP in each province participating in the program demonstrate that the rate requirements established for each system financed by the Bank are being satisfied or, if those requirements are not being satisfied, that it outline the steps that have been taken to ensure that they will be satisfied. As well, it is recommended that each year the SPAP inform SNAP, which in turn will advise the Bank, of the extent to which the conditions of the rate clause are being met in each of the systems (see Recommendations).
- 5.20 The proposed rate clause for the loan under consideration at present (see subsection 5.19(a) above) would entail the amendment of the rate clauses for the four previous operations, in order to standardize the Bank's contractual requirements and facilitate monitoring of the provinces' compliance with their obligations vis-à-vis SNAP (see proposed resolutions).

VI. JUSTIFICATION

A. Technical feasibility

- 6.01 The design criteria that were used to prepare the projects comprising the representative sample are considered to be suitable. All of the projects constitute solutions that are compatible with the conditions and characteristics of the communities that they are to benefit. The selection was made on the basis of clearly-defined criteria that were designed to identify projects that would be technically feasible, would generate demonstrable economic benefits, and would satisfy rate requirements, in the case of improvements and expansions of systems already in operation. These same criteria will be employed to complete the universe of projects for the program.
- 6.02 About 120 projects in addition to those in the sample will be prepared by the SPAPs with the assistance of consultants whose services would be financed with resources of the program. With this total number of projects, all of which could be ready by the period in which the works are to be started, there should be no difficulty in completing the program universe.
- 6.03 The cost of the program, which was calculated following the Bank's normal practice for this type of multiple-works operations, is considered to be reasonable and properly distributed among the various budget categories.
- 6.04 The Servicio Nacional de Agua Potable y Saneamiento and the Servicios Provinciales have built up experience in the program in the previous four stages they have implemented. The various measures that are being proposed to strengthen the administration, operation, and maintenance of the systems, including training courses for intermediate-level staff, should make those areas even more effective, and will protect the investments made at earlier stages and the investment to be made in the proposed operation.
- 6.05 It can be concluded from the analysis of the technical elements of the program that SNAP could carry out the program in the scheduled time and that the execution of the program would be feasible in the conditions outlined in the project report.

B. Institutional and financial feasibility

- 6.06 SNAP has the necessary organization and procedures to serve as the agency in charge of administering the resources of the proposed program, and it is able to assess the administrative and financial capacity of the provincial agencies that would be responsible for carrying out the construction projects. In light of the number of new water supply systems that are being added to the program, the proposed operation contains an institution-strengthening component as well.

- 6.07 Both the federal government and the provinces should be able to contribute their share of funds as required, inasmuch as: (a) the highest contribution that would be required of the federal government in any one year of the program would represent only 0.06% of the federal budget for the year; and (b) both the provinces and the communities contributed their share of the funding on time in the previous stages of the program.
- 6.08 It should be noted as well that SNAP does not transfer resources for specific projects until the province's contribution and the community's cash contribution have been deposited in the special project account.

C. Socioeconomic justification

- 6.09 The projects comprising the representative sample for the program were evaluated in accordance with the Public Works Simulation Model (SIMOP) methodology developed by the Bank. Under this system, the principal benefits arising from this type of project are considered to be those relating to: (a) savings in resources when existing supply sources are replaced and (b) increases in potable water consumption, with benefits determined in accordance with consumer maximum willingness to pay. No reference is made in the calculation to the benefits to be derived from improvements in the quality of water, which are important in projects in which unacceptable water sources might be replaced.
- 6.10 Benefits and costs were calculated through a comparison of the situation of the use of resources in cases with and without the project, and the incremental values deriving from carrying out the proposed projects were determined.
- 6.11 The direct cost of the projects in the sample is about A\$33.9 million, ^{1/} about 50% of which is for distribution works. The total cost, including land, engineering, administration, and contingencies, is approximately A\$45.1 million.
- 6.12 The investment costs used are in every case the least-cost solutions arrived at for the individual projects. The following steps were taken to obtain these costs: (a) the various possible supply sources were studied and, where necessary, the costs of competing alternatives were quantified; (b) for systems that were to serve more than one community, costs of various catchment, supply, and treatment configurations were presented; and (c) in determining the size of each distribution system, the minimum diameters necessary for the design flows and pressure levels were adopted.

^{1/} Exchange rate in December 1986: US\$1 = A1.247.

- 6.13 The benefits obtained for the representative sample as a whole are about A104 million (in economic present value terms). The benefits of individual projects range from a minimum of A228,000 to a maximum of A37 million. The cumulative net present value obtained after deducting costs totaling about A49 million for the entire sample is approximately A55 million.
- 6.14 Of the 34 projects selected, 19 were shown to have an internal rate of return higher than 20%, and four had returns ranging from 12% to 15%. The internal rate of return of the entire sample, taking a simple average of the rates, is 25%. The average cost/benefit ratio is 2.11; the lowest values (between 1.08 and 1.16) were for projects with low rates of return. The average NPV/INV ratio is 1.4.
- 6.15 The most significant element in the sensitivity analysis is the initial consumption figures adopted (population X supply) and their growth rate over time. ^{1/} With a 25% reduction in either of these variables, the rate of return of eight of the 34 projects in the sample would fall below the required minimum. As indicated earlier, special attention was given in the analysis to determining these variables, and the assumptions used were, for the most part, conservative. Changes in investment costs and the price elasticity of demand also are significant, albeit less so, in determining the rate of return of the projects.
- 6.16 An analysis of the timing of the projects (first-year-benefits methodology) showed that the optimum time for starting the works would fall within the three-year period in which the proposed program would be carried out.
- 6.17 It can be concluded from the foregoing information that the rate of return of all of the projects in the sample exceeds, with a reasonable safety margin, the minimum required by the Bank.
- 6.18 It has been calculated, using the methodology established for gauging the distributive impact of the program, that net income of about A85 million would flow to the private sector and that approximately A47.6 million of that total would go to the low-income population. The distributional impact coefficient thus would be 56%.

^{1/} Other variables that were studied and shown to have a less important impact, within probable margins of error, were the project horizon, future rates, costs of alternative systems, and period costs.

VII. RECOMMENDATIONS

- 7.01 The detailed study in the project report shows that the fifth stage of the National Potable Water Program for Small Communities is an appropriate and timely means of helping to resolve the problem of insufficient coverage of the water supply system in Argentina. According to the analysis carried out, the program described in this document is feasible from a technical, financial, and economic standpoint, and is consistent with current Argentine legislation. It therefore is recommended that the loan be approved and that the resolutions which approved loans 114/TF-AR, 302/SF-AR, 14/IC-AR, 526/SF-AR, 83/IC-AR and 661/SF-AR be amended. To that end, the following normative documents are submitted herewith to the Board of Executive Directors for consideration:

Proposed resolution

Recommendations

Description of the Project (Annex A to the loan contract)

Proposed resolution to amend Resolutions DE-101/65, DE-81/71, DE-161/77, DE-162/77, DE-145/81 and DE-146/81

PROPOSED RESOLUTION 1/

ARGENTINA. LOAN /OC-AR TO THE NACION ARGENTINA
(Fifth Stage of the Potable
Water Program)

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 Nación Argentina, as borrower, for the purpose of granting it a loan to cooperate in the execution of the fifth stage of the Potable Water Program. This financing shall be subject substantially to the following conditions:

1. Amount and Currencies: Up to US\$70,000,000, or the equivalent in other currencies which are part of the ordinary capital resources of the Bank, of which amount: (a) up to US\$56,000,000, or the equivalent in other currencies (except that of Argentina) shall be to pay for goods and services acquired through international competition in the member countries of the Bank, and for such other purposes as may be specified in the loan contract; and (b) up to the equivalent of US\$14,000,000 shall be in australes to cover local expenses. Payments of amortization and interest shall be made with respect to part (a) of the loan in the currency or currencies specified by the Bank, in a quantity equivalent to the corresponding amount owed, calculated in units of account in terms of dollars of the United States of America, and with respect to part (b) of the loan in australes, in a quantity equivalent to the corresponding amount owed, calculated in terms of dollars of the United States of America, in accordance with provisions to be included in the loan contract.
2. Source of Funds: The ordinary capital resources of the Bank.

1/ The provisions contained in this Appendix and in Appendices II, III, and IV shall only become final when the Board of Executive Directors has approved the loan proposal.

3. Guarantee: The general responsibility of the borrower.
4. Credit Fee: 1-1/4% per annum on the undisbursed portion of the amount referred to in paragraph (a) of Clause 1 of this Resolution, commencing to accrue 60 days after the date of the contract and payable in dollars of the United States of America on the same dates as the interest.
5. Amortization: The borrower shall amortize the loan in a period of 25 years from the date of the contract, by means of semiannual, consecutive and, insofar as possible, equal installments. The first installment shall be paid six months after the date scheduled for the last disbursement of the financing. The Bank may credit the amortization installments proportionally to the outstanding balance of each of the portions of the loan which accrue different rates of interest.
6. Interest: The borrower shall pay interest semiannually on the outstanding balances of the loan. The first payment shall be made six months after the date of the loan contract. In relation to the amount indicated in subparagraph 1(a) of this Resolution and during the disbursement period, the Bank: (a) shall determine the rate of interest to be applied as of the first day of January of each year and for the life of the loan to any amount disbursed during the ensuing year; and (b) may modify the interest rate, in accordance with the policy of the Bank, to be applied to disbursements of the loan made during the second half of the year. With respect to the amount indicated in subparagraph 1(b), the borrower shall pay interest of 4% per annum on the outstanding balance thereof (in both cases, interest shall include the 1% special commission of the Bank). At the request of the borrower, resources of the financing may be used to pay interest during the period of disbursement thereof.
7. Physical Initiation and Disbursement: The term for physical initiation of all the works of the program shall expire 3 years after the effective date of the contract, and the term for disbursement of the financing shall expire 4 years after the same date.
8. Special Conditions:
 - (a) The resources of the loan shall be used in their entirety by the borrower through the Servicio Nacional de Agua Potable y Saneamiento (SNAP), as executing agency, and the Servicios Provinciales de Agua Potable (SPAPs) as coexecuting agencies in the various provinces. If modifications in the legal provisions or the basic regulations concerning the SNAP and/or the SPAPs are approved which, in the opinion of the Bank, may substantially affect the program, the Bank shall have the right to require the borrower and/or the SNAP to provide explanatory and detailed information in order to determine whether such modification or modifications may have an adverse impact on the execution of the program. Only after hearing the borrower

and/or the SNAP and assessing its information and clarifications may the Bank take such measures as it deems appropriate, in accordance with provisions to be set forth in the loan contract.

- (b) The resources of the loan shall be used to participate in the execution of a program estimated at the equivalent of US\$140,000,000. Consequently, the loan contract shall contain appropriate provisions to ensure that such resources as may be necessary, in addition to the loan, for the complete execution of the program shall be duly provided, in an amount estimated at the equivalent of US\$70,000,000, in accordance with a schedule of investments satisfactory to the Bank.
- (c) Prior to the first disbursement of the financing, the borrower, through the SNAP, shall submit to the Bank's satisfaction:
 - (i) evidence that the legal instruments providing for the transfer of the proceeds of the financing to the SNAP have been signed;
 - (ii) the model agreements, previously agreed upon with the Bank, to be signed between: (1) the borrower and the provinces; (2) the SNAP and the provinces; and (3) the provinces and the participating communities; and
 - (iii) evidence that the SNAP has the staff needed for the execution of the program.
- (d) The borrower shall take appropriate measures acceptable to the Bank in order that the rates for the supply of water in the systems specifically related to the financing produce revenues at least sufficient to cover all operating expenses of those systems, including those related to administration, operation, maintenance, and depreciation. By way of exception, depreciation may be excluded for certain specific rural systems.
- (e) In the acquisition of machinery, equipment, and other materials for the program, and in the awarding of construction contracts, the system of public bidding shall be used in each case in which the value of such acquisitions or contracts exceeds the equivalent of US\$200,000. The bidding shall be subject to the procedures to be appended as an annex to the loan contract.
- (f) Notwithstanding the provisions of the foregoing subsection (e), with the prior approval of the Bank, construction projects for the program in communities of up to 2,000 inhabitants, may be executed by force account for a total amount of no more than the equivalent of US\$5,000,000, of which up to the equivalent of US\$2,500,000 may be covered by the local-currency resources of the Bank's financing, provided that this system has been shown to be advisable in light of the specific characteristics of the works in question.

- (g) The Bank shall establish such inspection procedures as it deems necessary to assure the satisfactory execution of the program, and the borrower, the SNAP, and the SPAPs shall extend all cooperation which is required for the most effective accomplishment of this purpose. From the amount of the financing the sum of US\$560,000 and the equivalent of US\$140,000 in australes shall be allocated for credit to the accounts of the Bank to meet expenses of general inspection and supervision.

RECOMMENDATIONS

- A. It is recommended that the following conditions, to be met to the Bank's satisfaction, be included in the loan contract in addition to the conditions set forth in the proposed resolution:
1. Unless the Bank agrees otherwise, the borrower shall, through the executing agency, submit the following to the Bank before initiating each public call for bids or, if works are to be executed by force account, before the initiation of the works: (a) the general plans, specifications, budgets, and other documents required for construction, and, where applicable, the specific bidding conditions and other documents necessary for the call for bids; and (b) in the case of construction projects, evidence that it has legal possession of the lands on which the works are to be built or the pertinent rights thereto.
 2. Within the prescribed period for the physical initiation of the program works referred to in Clause 7 of Appendix I, the borrower shall, through the SNAP, demonstrate to the Bank, for the participation of each province in the program:
 - (a) that the agreements and additional understandings have been signed, in accordance with the models referred to in Clause 8(c)(ii) of Appendix I, between: (i) the borrower and the respective province, and (ii) the SNAP and the province;
 - (b) that the provincial agency has the staff it needs to carry out efficiently the construction program in the province and also to continue to properly oversee the existing water supply system; and
 - (c) that the provisions of the rate clauses in the contracts covering the previous stages of the potable water program are being complied with or, if those provisions are not being complied with, that the SPAP in question is adopting appropriate measures to see that the requirements are satisfied.
 3. In the additional understandings to be signed between the SNAP and each province, provisions shall be included pursuant to which the province shall undertake:

- (a) to submit to the SNAP, within 30 months after the effective date of the loan contract, the studies and designs needed by the province to complete the universe of projects for the program;
 - (b) to include, in the agreements to be signed with the communities participating in the program, the commitment that a rate satisfying the requirement set forth in Clause 8(d) of Appendix I will be applied and, if the application of that clause should fail to generate sufficient revenues, to adopt, with the SNAP, the measures necessary to obtain the additional resources required for that purpose;
 - (c) to submit to the SNAP, within the first 120 days of each year, the information referred to in recommendation 4(b)(i) of this Appendix II; and
 - (d)
 - (i) to stipulate, in its agreement with the participating community, that the works executed under the program will be administered, operated, and maintained in accordance with generally accepted technical standards; and
 - (ii) to deliver to the SNAP, for subsequent submittal by the SNAP to the Bank, within 90 days after the end of each calendar year beginning with the second year of execution of the program, and for 10 years after the works are completed: (1) an annual maintenance plan for all of the potable water systems financed by the Bank, and (2) an annual report containing the information specified in paragraph 8.01 of Appendix III.
4. Within the first 150 days of each calendar year, the borrower, through the SNAP, shall submit to the Bank:
- (a) during the period of execution of the program, a report showing that the SNAP and the participating SPAPs continue to have the staff required for its execution; and
 - (b) commencing the second year of execution of the program and for the life of the loan contract: (i) for each system financed by the Bank, information regarding compliance in the previous year with the rate requirements referred to in Clause 8(d) of Appendix I, for this fifth stage of the program, and also with the rate requirements set forth in contracts for the previous stages; (ii) if any obligation set forth in the Additional Agreement entered into by the SNAP and any province is not being performed, an indication of the steps taken by the SNAP to ensure that the obligation will be performed; (iii) a report showing the balance of SNAP's loans, total debt in arrears broken down by province, and the age of that debt; and (iv) a report showing the balance of accounts receivable at the end of the year in question.

5. Within 18 months after the effective date of the loan contract, the borrower, through the SNAP, shall have contracted for the consulting services required for the review and updating of design standards and criteria for water works and sewerage systems.
 6. The borrower, through the SNAP, shall submit to the Bank:
 - (a) within six months after the effective date of the loan contract, evidence that it has engaged the services of consultants to advise the SNAP in the implementation of financial, accounting, and management information systems, according to terms of reference agreed upon previously with the Bank;
 - (b) within nine months after the effective date of the loan contract, the program and timetable for the training to be provided; and
 - (c) within the first 90 days of each calendar year during the period of execution of the training program, beginning the second year of the loan contract, a report on the training activities carried out the previous year and those scheduled for the current year.
 7. Within three years after the effective date of the loan contract, the borrower, through the SNAP, shall demonstrate to the Bank that contracts have been signed for water and sewerage projects for the following stage.
 8. For purposes of the ex post evaluation of the program, the borrower, through the SNAP, shall submit to the Bank:
 - (a) within 18 months after the date of signature of the loan contract, a report containing the baseline data for the program;
 - (b) within 30 months after the date of signature of the contract and annually thereafter until three years after the last disbursement, a report containing comparative annual data; and
 - (c) at the end of the third year after the last disbursement, an ex post evaluation report.

These reports shall be prepared following the methodology and guidelines agreed upon with the Bank, to which reference is made in Chapter V of Appendix III ("The Program").
 9. The financial statements of the program, audited by the Contaduría General de la Nación, shall be submitted to the Bank each year during the period of execution of the program.
- B. The loan contract shall include an annex substantially of the tenor of Appendix III ("The Program").

THE PROGRAM

(Annex A to the Loan Contract)

I. Objectives and targets

- 1.01 The objectives and targets of the fifth stage of the Potable Water Program are as follows:
- (a) to increase the coverage of the potable water system in rural and semiurban areas, by bringing service to approximately 400,000 persons living in about 130 communities throughout the country, with populations ranging from 100 to 15,000; and
 - (b) to cooperate in the process of institutional strengthening of the SNAP and the SPAPs.

II. Description

- 2.01 The program shall consist of the construction of approximately 110 potable water supply systems, including new works and the expansion and upgrading of existing systems.
- 2.02 Each water supply system will consist of catchment works, intake and supply lines, treatment units, stand-by tanks, and distribution systems using household service connections, most of which will have meters. Flow regulators will be used in several systems, and public taps will be installed in a few cases. Meter masters will be installed in all of the systems. Plastic and malleable iron pipes will normally be used. If asbestos-cement tubes are to be used, a full evaluation and justification must be presented, including information to show that such tubes will be appropriate in the conditions in which they will be used and an indication of the risks, if any, for users.
- 2.03 The program will also provide for the following: (a) assistance to the SNAP in the financing of potable water and sanitary sewerage studies; (b) training to improve the capabilities of the intermediate-level employees of the SPAPs and the participating communities who are in charge of supervising construction of the new systems and operating and maintaining them; and (c) support for the strengthening of the financial and accounting information system, the economic analysis of the projects, and the review and drafting of technical standards for studies and designs of waterworks and sewerage systems.

III. Cost

- 3.01 The total cost of the program is estimated at the equivalent of US\$140,000,000 according to the following breakdown by investment category and source of funds:

COST OF THE PROGRAM BY INVESTMENT CATEGORY
AND SOURCE OF FINANCING

(in US\$000 equivalents)

<u>INVESTMENT CATEGORY</u>	<u>IDB FINANCING</u>		<u>LOCAL CONTRIBUTION</u>	<u>GRAND TOTAL</u>	<u>%</u>
	<u>FOREIGN EXCHANGE</u>	<u>LOCAL CURR.</u>			
I. <u>ENGINEERING AND ADMINISTRATION</u>	<u>554</u>	<u>2,163</u>	<u>13,917</u>	<u>16,634</u>	<u>11.9</u>
1.1 Studies and designs	-	2,163	2,169	4,332	3.1
1.2 Construction supervision	554	-	7,365	7,919	5.7
1.3 Administration of the program	-	-	4,383	4,383	3.1
II. <u>DIRECT COSTS</u>	<u>46,719</u>	<u>7,304</u>	<u>49,266</u>	<u>103,289</u>	<u>73.8</u>
2.1 Construction and expansion of systems	46,719	7,304	49,266	103,289	73.8
III. <u>ASSOCIATED COSTS</u>	<u>1,034</u>	<u>3,239</u>	<u>5,341</u>	<u>9,614</u>	<u>6.9</u>
3.1 Land and easements	-	-	170	170	0.1
3.2 Operating and maintenance equipment	728	873	875	2,476	1.8
3.3 Technical support - training	306	-	1,924	2,230	1.6
3.4 Preparation of new projects	-	2,366	2,372	4,738	3.4
IV. <u>FINANCIAL EXPENSES</u>	<u>7,693</u>	<u>1,294</u>	<u>1,476</u>	<u>10,463</u>	<u>7.4</u>
4.1 Interest	7,133	1,154	-	8,287	5.9
4.2 Credit fee	-	-	1,476	1,476	1.0
4.3 Inspection and supervision	560	140	-	700	0.5
GRAND TOTAL	<u>56,000</u>	<u>14,000</u>	<u>70,000</u>	<u>140,000</u>	<u>100.0</u>
Percentage	40.0	10.0	50.0	100.0	

IV. Selection criteria

4.01 The basic selection criteria for the projects are as follows:

- (a) The project must have been prepared after the first half of 1987, and at the time of its preparation the population of the community must have been between 100 and 15,000.
- (b) There must be an assured source of water that will be sufficient, in terms of flow, to satisfy the demand during a design period of 20 years following the acceptance of the works. The quality of the water must be such that it does not require complicated special treatment. Legal instruments must exist to guarantee that the water supply source may be used during the aforementioned period of time.
- (c) The community must be able to contribute funds covering at least 10% of the cost of the water supply system.
- (d) An agreement must have been signed between the province and the participating community containing, inter alia, the users' commitment to pay for potable water service through rates to be charged for such service.
- (e) For those projects entailing the upgrading or expansion of systems already in operation, it must be demonstrated that in the last year the operating revenues received from the application of rates will cover operating and maintenance costs, or that such revenues are covering those costs as of the date of the agreement between the province and the participating community.
- (f) The community must, insofar as possible, have other public utilities and roads that are readily accessible at all times of the year.
- (g) The internal economic rate of return of the project, calculated in the course of an evaluation using a methodology acceptable to the Bank, must be at least 12%.

V. Ex post evaluation

5.01 The reports to be provided in compliance with recommendation 8 of Appendix II will contain at least the following information:

- (a) In the initial report:
 - (i) a list of the communities comprising a representative sample for the program, which shall include: (1) all projects in communities having a population of more than 10,000 in 1987; and (2) 12 projects selected at random from the rest of the program, no more than three of which may be chosen from the ex-ante representative sample;

- (ii) baseline data for each community selected, defined using the same methodology that was applied in the ex-ante appraisal; and
 - (iii) a description of the system that is to be used to compile and process data for the periodic comparisons referred to below.
- (b) In the report containing comparative annual data, for each project in the representative sample:
- (i) investment costs by expenditure category (materials and equipment, skilled and unskilled labor, land, etc.);
 - (ii) annual administrative, operating, and maintenance costs of the systems, by expenditure category;
 - (iii) number of families and number of persons connected to the water supply system; number and type of nonresidential customers connected to the system;
 - (iv) volume of water produced and consumed, and water unaccounted for; water quality at the source and when distributed; and
 - (v) average and marginal rates in effect, and revenues obtained.
- (c) In the ex post evaluation report:
- (i) an ex post cost-benefit analysis of each project in the sample, using the SIMOP methodology;
 - (ii) an analysis of any substantial design changes, construction delays, or any other factors which have led to changes in the original investment cost plan;
 - (iii) an analysis of the distributive impact of the program;
 - (iv) an analysis of any other sociocultural repercussions, particularly in the health area; and
 - (v) conclusions and recommendations.

VI. Procurement and contracts

- 6.01 When the goods or services which are to be purchased or for which contracts are to be let are financed in whole or in part using foreign exchange from the financing, the procedures and the specific bidding conditions for the call for bids or other form of purchase or letting of contracts must permit the free competition of goods and services originating in the Bank's member countries, including those relating to any means of transport. Accordingly, no conditions may be imposed in such procedures or specific bidding conditions that might limit or

restrict the offering of goods or the participation of contractors from those countries.

VII. Consulting services

- 7.01 (a) In the selection and hiring of consultants whose services are to be financed in whole or in part using the foreign-exchange resources of the financing: (i) the procedures agreed upon with the Bank shall be followed, and (ii) no conditions may be imposed or provisions made that would preclude or restrict the participation of consultants from the Bank's member countries.
- (b) When consulting services are to be financed with the local counterpart resources and local-currency resources of the Bank, the borrower shall submit to the Bank for approval, before finalizing any consulting contract, the names of the individual consultants or consulting firms selected, the terms of reference for their appointment, and the fees agreed upon.

VIII. Maintenance of the systems

- 8.01 The reports referred to in recommendation 3(d)(ii) of Appendix II shall contain at least the following information:
- (a) details of the maintenance work carried out on the water supply systems over the previous year, the operating efficiency achieved, and the state of repair of the systems at the end of the previous year, including up-to-date statistics on production, water quality at the source and at the distribution stage, operating costs, operating revenues and, to the extent possible, water consumption; and
- (b) for projects using asbestos-cement pipes, statistics on water quality, to demonstrate, using the appropriate acidity index, the pH balance of water delivered to customers, including monthly average values and critical values.

IX. Rates

- 9.01 The depreciation costs of rural systems may be excluded for purposes of satisfying the requirements set forth in clause 8(d) of Appendix I. A rural potable water system will be understood to be one which supplies communities of 3,000 or fewer inhabitants.

WPC/AR0176
AR-0117
Original: Spanish
Appendix IV

PROPOSED RESOLUTION

ARGENTINA. LOANS 114/TF-AR, 302/SF-AR, 14/IC-AR, 526/SF-AR,
83/IC-AR AND 661/SF-AR TO THE NACION
ARGENTINA

(Amendment of Resolutions DE-101/65, DE-81/71,
DE-161/77, DE-162/77, DE-145/81 and DE-146/81,
respectively)

The Board of Executive Directors

RESOLVES:

That Clause 7(d)(ii) of Resolution DE-101/65 of August 12, 1965, Clause 9(d) of Resolution DE-81/71 of July 28, 1971, Clause 8(f) of Resolution DE-161/77 of November 3, 1977, Clause 7(f) of Resolution DE-162/77 of November 3, 1977, Clause 8(d) of Resolution DE-145/81 of October 8, 1981, and Clause 7(e) of Resolution DE-146/81 of October 8, 1981, are amended to read as follows:

"The borrower shall take appropriate measures acceptable to the Bank in order that the rates for the supply of water in the systems specifically related to the financing produce revenues at least sufficient to cover all operating expenses of those systems, including those related to administration, operation, maintenance, and depreciation. By way of exception, depreciation may be excluded for certain specific systems."