



# Board of Executive Directors

For consideration

On or after: 18 July 2007

PR-3171

3 July 2007

Original: English

**To:** The Board of Executive Directors  
**From:** The Secretary  
**Subject:** Chile. Proposal for a loan for a rural sanitation program

**Basic Information:**

Loan type	.....	Performance-Drive Loan (PDL)
Borrower	.....	Republic of Chile
Amount	.....	up to US\$100,000,000
Sources	.....	Single Currency Facility of the Ordinary Capital

The proposal calls to utilize the resources of the Conditional Credit of Line for Investment Projects (document PR-3121), approved pursuant to Resolution DE-170/06.

**Inquiries to:** Mr. Christopher Jennings (extension 1418)

**Remarks:** As reported to the Board of Executive Directors at its meeting on 10 August 2006, the Office of the Secretary is distributing simultaneously a document (PR-3171-1) containing the text of the electronic links of the above-referenced document.

**References:** GN-1838-1(7/94), DR-398-5(5/03), PR-3121(11/06), DE-170-/06

**Other distribution:** Representative in Chile

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**CHILE**

**RURAL SANITATION PROGRAM**

**(CH-L1025)**

**LOAN PROPOSAL**

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Electronic Links and References	
Basic Socioeconomic Data	<a href="http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata">http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata</a>
Status of Loans in Execution & Loans Approved	<a href="http://ops.iadb.org/approvals/pdfs/chcn.pdf">http://ops.iadb.org/approvals/pdfs/chcn.pdf</a>
Tentative Lending Program	<a href="http://opsgsl/ABSPRJ/tentativelending.ASP?S=CH&amp;L=EN">http://opsgsl/ABSPRJ/tentativelending.ASP?S=CH&amp;L=EN</a>
Information available in the files of RE1/EN1	<a href="http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=978282">http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=978282</a>

# ABBREVIATIONS

	Full text	English text used in document
APR	<i>Agua Potable Rural</i>	Rural Potable Water Program
CCLIP		Conditional Credit Line for Infrastructure Programs
CGR	<i>Controlaría General de la República</i>	Office of the Comptroller General
CONADI	<i>Corporación Nacional de Desarrollo Indígena</i>	National Corporation for the Development of Indigenous People
CONAMA	<i>Comisión Nacional del Medio Ambiente</i>	National Environmental Commission
CORFO	<i>Corporación de Fomento de la Producción</i>	Chilean Corporation for the Development of Production
DIPRES	<i>Directorio del Presupuesto</i>	Budget Director's Office, part of the Ministry of Finance
FNDR	<i>Fondo Nacional de Desarrollo Regional</i>	National Fund for Regional Development
INACAP	<i>Instituto Nacional de Capacitación</i>	National Training Institute
MIDEPLAN	<i>Ministerio de Planeamiento</i>	Ministry of Planning
PDL	<i>Préstamo en Base de Resultados</i>	Performance Driven Loan
PMB	<i>Programa de Mejoramiento de Barrios</i>	Neighborhood Improvement Program
RS	<i>Recomendación técnica sin condiciones</i>	Certificate of technical recommendation without conditions
SECI	<i>Sistema de Evaluación de Capacidad Institucional</i>	Assessment of Institutional Capacity
SERPLAC	<i>Secretario Regional de Planificación y Coordinación</i>	Regional Secretariat for Planning and Coordination
SIGFE	<i>Sistema Integrado de Gestión Financiera del Estado</i>	Integrated State Finance Management System
SISS	<i>Superintendencia de Servicios Sanitarios</i>	Superintendent of Sanitary Services
SUBDERE	<i>Subsecretario de Desarrollo Regional y Administrativo</i>	Sub-secretariat for Regional Development and Administration
UF	<i>Unidad de Fomento</i>	UF (Currency unit constant with inflation, currently UF1 = US\$34)

**PROJECT SUMMARY**  
**CHILE**  
**RURAL SANITATION PROGRAM**  
**(CH-L1025)**

Financial Terms and Conditions <sup>1</sup>					
This will be the second individual operation financed under the CCLIP (CH-L1018). (See paragraph 1.24)					
Borrower: Republic of Chile			Amortization Period:	10 years	
			Grace Period:	5 years	
Executing Agency: SUBDERE			Disbursement Period:	5 years	
Source	Amount (US\$)	%	Interest Rate:	Adjustable	
IDB (OC)	100.000.000	50	Supervision and Inspection Fee:	0%	
Local	100.000.000	50	Credit fee:	0.25%	
Total	200.000.000	100	Currency:	US\$ from the Single Currency Facility	
			Conversion to Chilean Pesos	Local Currency Facility as set out in CCLIP (PR-3121) (See paragraph 3.22)	
The Project at a Glance					
<b>Program objective:</b>					
The goal of the Rural Sanitation Program is to improve quality of life in rural areas. The specific objective of the program is: “reduce the deficit in the coverage of potable water supply and sewerage with adequate wastewater treatment and disposal for rural areas with solutions that are cost efficient and sustainable”.					
<b>Dimensioning:</b>					
The proposed loan amount was increased from US\$50 million to US\$100 million during the analysis of the program.					
<b>Program description:</b>					
The Program will be supported by a Performance Driven Loan (PDL), and will achieve 9.000 new potable water connections for rural households; 45.300 new sewerage connections for rural households; and 60 existing wastewater treatment plants repaired, rehabilitated or replaced.					
Areas eligible for financing will comprise: (i) the construction of rural potable water supply projects and rural sewerage projects; (ii) the repair, rehabilitation and replacement of existing wastewater treatment plants, (iii) support activities to ensure the participation of the community in the development of the projects, and (iv) activities to support Program implementation.					
<b>Special contractual clauses:</b>					
Evidence that the Operations Manual for the Neighborhood Improvement Program (PMB) has been updated for the Program will be a condition precedent to disbursement of the loan. (See paragraph 3.17)					
Evidence of an effective contract between SUBDERE and a firm of independent performance assessment consultants will be a condition precedent to release of the first performance-based disbursement. (See paragraph 3.20)					

**Exceptions to Bank policies:**

As established in the CCLIP (PR-3121), the currency substitution clause of the Local Currency Facility is not applicable to this individual operation. (See paragraph 3.22)

In addition, and to expand the borrower's financing possibilities, local currency conversion of the disbursements would be subject to two other financial conditions in addition to those in the Local Currency Facility: (i) more flexible repayment profiles for disbursements in local currency and described in Section 2(a) of Annex II of document PR-3121; (ii) pricing based on actual funding costs incurred by the Bank if sourced through bond issues, in keeping with Section 2(b) of the same Annex.

<b>Project consistent with Country Strategy:</b>			YES <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Project qualifies for:</b>	SEQ <input checked="" type="checkbox"/> PTI <input checked="" type="checkbox"/>	Sector <input checked="" type="checkbox"/>	Geographic <input type="checkbox"/>	Headcount <input checked="" type="checkbox"/>

**Procurement:** Procurement will be as established by the Bank for PDL operations (GN-2278-2).

**Program reviewed by CESI on:** March 16<sup>th</sup>, 2007

<sup>1</sup> The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendations. In no case will the credit fee exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount (\*)

(\*) With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

## **I. BACKGROUND**

### **A. Introduction**

- 1.1 The population of Chile already enjoys high levels of water and sewage service. Those living in the semi-concentrated and dispersed rural areas are the exception; there has been a steady increase in coverage over the years, but 200,000 rural inhabitants still do not have potable water services, and 500,000 do not have wastewater disposal services. The Chilean government intends to expand coverage to all rural inhabitants, providing them with the same level of service as their urban neighbors. The Secretariat for Regional Development and Administration (SUBDERE), through the Directorate of the Budget of the Finance Ministry, has requested an IDB loan of US\$100 million, to be matched with US\$100 million in counterpart financing, to contribute towards their present aim of providing potable water and sewage services to 75% of the rural population. This document describes a Performance Driven Loan (PDL) to respond to this request, which would be the second operation financed by the US\$400 million CCLIP approved for SUBDERE in December 2006.

### **B. Water and Sanitation in Chile**

#### **1. Urban water and sanitation**

- 1.2 Urban population account for approximately 87% (14 million) of the total population of 16 million. Since 1990, potable water coverage in urban areas has grown from 97.4% to 99.8%, and wastewater collection has grown from 81.8% to 94.9%. Only 10% of domestic wastewater was treated in 1990, a figure which had increased to 73.3% by 2005. Private companies operate the potable water and sewerage systems subject to concessions, which give them exclusive rights to provide the services in defined urban areas. The Superintendent of Sanitary Services (SISS) was created under law number 18.902 to regulate these concessions. The Ministry of Public Works is responsible for policy and planning. The country is a good example of what can be achieved with a well thought out development plan for the sector, implemented gradually, with the political commitment to back it up.

#### **2. Rural water and sanitation**

- 1.3 Only 2,000,000 (13%) of the total population of 16,000,000 live in rural areas. Of those, the approximately 1,500,000 that live in so-called concentrated rural areas with a relatively high housing density, already enjoy the same coverage levels as urban dwellers. By contrast, only 60% of the population that lives in small semi-concentrated or dispersed communities has a secure, piped water supply. A national survey carried out in 2005 showed that 85,000 rural households lack a potable water supply, and 279,000 rural households lack a safe means for disposing of wastewater.



- 1.4 Wastewater disposal may be either individual or communal. The most common individual solution is a latrine over a cesspit, but where a dwelling has an internal bathroom, a septic tank may be used. Some communities have septic tanks treating the wastewater from several families, but where sewerage exists, an electro-mechanical wastewater treatment plant has generally been constructed. A study of 242 wastewater treatment plants constructed with public financing outside the areas served by the urban concessionaires, concluded that effluent discharged by 25% of these plants does not comply with national standards defined by the National Environmental Commission (CONAMA), and that a further 15% need repairs to electro-mechanical equipment.
- 1.5 Water services outside the areas of the urban concessions are provided by municipalities or community-based organizations. The number of municipalities that operate rural systems is very small, and community-based organizations operate most of the nearly 1,500 rural water systems. Ministry of Public Works data show that 76% of the systems provide services to communities with less than 250 households, and only 8% serve communities with more than 500 households. Approximately 70% of the systems meet the relevant technical standards, and the Ministry of Public Works estimates that 75% have the financial capacity to meet operating and maintenance costs, and 17% generate enough income to provide genuinely sustainable services, including financing expansions.

<b>Table 1: Characteristics of Water Committees and Cooperatives</b>	
<u>Water Committees</u>	<u>Cooperatives</u>
Created as set out in law 19.418, which defines neighborhood committees and other community organizations	Created under Decree 502, the General Law of Cooperatives
Community organization established to provide water and sanitation services for members	Association created for the mutual benefit of members
Non commercial	Fully autonomous entities with characteristics of commercial enterprises
Non-profit	For profit or non-profit
Not liable for corporate taxes	Liable for corporate taxes
Legal status gained from registration with local municipality	Legal status from entry into national registry of cooperatives
Unregulated Municipality requires annual audited accounts.	Regulated by the Department of Cooperatives of the Ministry of Economy
Members are not shareholders and have no obligations for liabilities	Members are shareholders, with one vote each, share in profits proportional to equity participation, and liabilities up to value of equity participation
Administration by members	Permits professional management

- 1.6 The community-based organizations are either Water Committees or Cooperatives. Water Committees predominate, operating 90% of the systems. Larger communities tend to favor Cooperatives; although they operate only 10% of the rural systems, they account for 20% of connections. The principal institutional characteristics of Water Committees and Cooperatives are compared in Table 1.

- 1.7 Most of the water and wastewater systems operated by Cooperatives and Water Committees have been constructed using public funds, but neither organization may own assets constructed with public funds. In both cases the state, which might be central, regional, or municipal government, passes on the right to the indefinite free use of the infrastructure in the form of a bailment.
- 1.8 Cooperatives are the more solid organizations from the financial point of view. They are formally regulated, may be professionally managed, and have the financial substance to make them creditworthy. In fact, CORFO extends credit to Cooperatives but not to Water Committees. However, both Cooperatives and Water Committees benefit from a clear institutional framework and both enjoy the same rights of use of water and sewage systems constructed with public financing. Cooperatives will be favored in the future (see paragraph 1.15), but Water Committees provide an institutionally sustainable solution for small communities with no commercial pretensions.
- 1.9 The Ministry of Public Works is the most prominent organization in the rural water sector, with diverse responsibilities for policy and planning; it finances capital projects to expand and improve services; and it has a budget, allocated by the Central Government, to provide technical assistance to Water Committees and Cooperatives in support of operation and maintenance. The Ministry of Public Works has an explicit mandate to establish policy for potable water policy in rural areas, but not for wastewater disposal. The CONAMA establishes general standards for discharges. SUBDERE, with the collaboration of the Ministry of Public Works, the CONAMA and the Ministry of Health, has prepared guides for the design of wastewater collection, treatment and disposal to resolve the inadequacies noted in paragraph 1.5.
- 1.10 The Ministry of Health regulates both potable water and effluent discharge quality. The SISS has no role in the regulation of rural water and wastewater services. When necessary, it is required to certify that a community does not fall within the area of a water concession, and is thus outside SISS jurisdiction.
- 1.11 The Ministries of Public Works, Health, Housing and the Interior Ministries all finance rural water and sanitation projects. The Ministry of Public Works had been the principal actor; its Rural Potable Water program (APR) has been used to finance such projects for over forty years. The Government has invested over US\$400 million in the APR Program, US\$305 million of which were committed during the ten years between 1994 and 2005.

### **3. Tariffs and subsidies**

- 1.12 In Chile, tariffs are set at full cost recovery. In urban areas and areas under concession, tariffs are proposed by the operator and it is the Superintendent of Sanitary Services (SISS) who oversees compliance with technical and economic standards, and has a specific responsibility to review consumer tariffs. The SISS uses the marginal cost of production of a hypothetical utility to regulate tariff levels.

- 1.13 To ensure that the poor do not suffer financial hardship from paying tariffs that reflect the true cost of providing these services, the government instituted a system of subsidies to consumption for low-income families defined in law number 18.778 of 1990. The subsidies, which may cover from 25 to 85% of the monthly bill up to 15m<sup>3</sup> of consumption, are calculated to make sure that no family pays more than 3% of income on water and sanitation services. In the case of low-income families that qualify for the *Chile Solidario* program, the subsidy covers 100% of the monthly bill up to 15m<sup>3</sup> of consumption.
- 1.14 In rural areas, however, the SISS has no role in the regulation of water and wastewater services and no such model exists to review tariff levels. Hence, tariffs are system specific and cover operation, maintenance, and replacement costs. However the government has a long-standing policy that the same water and sanitation standards that enjoy urban dwellers should be extended to their rural counterparts. The substantial economies of scale in the provision of services in areas of low population density, as is the case in rural areas, leads to high unit costs on small scales. With revenues limited by the payment capacity of the beneficiaries, revenues may be insufficient to cover total costs (investment and maintenance) of supplying the service with the subsidies to consumption alone. Consequently, in water and sanitation systems in rural areas, a subsidy to investments can also be granted under law number 18.778. This subsidy would be equivalent to an amount that covers the difference between the system's costs and the amount that the beneficiaries can finance based on their payment capacity.

### **C. Government of Chile Strategy for the Rural Water and Sanitation Sector**

- 1.15 The sector functions well, coverage is expanding, and operations are generally sustainable. The Ministry of Public Works has developed a strategy to consolidate the existing institutional framework to ensure long-term sustainability. The main points of the strategy will: (i) confirm the communities themselves as the principal actors in providing their water and sanitation services, promoting community-based operators; (ii) mandate sustainable tariffs that cover administration, operation, maintenance and replacement; (iii) formalize a framework for providing technical assistance to support operation and maintenance; (iv) define a policy-making framework for wastewater collection, treatment and disposal, as well as potable water supply; (v) set out a clear regulatory framework for rural water and sanitation services which will define specific roles for the SISS, the Ministry of Health and the Department of Cooperatives of the Ministry of the Economy; (vi) establish an advisory body made up of the Ministries involved in rural water services: the Ministries of Housing, Health, Public Works, SUBDERE and MIDEPLAN; and (vii) define sources through which public financing for rural water projects will be channeled. The Ministry of Public Works is currently drafting a law, which it expects to present to the national legislature before the end of 2007, to formalize this strategy.

#### **D. Previous Bank experience in the sector**

- 1.16 SUBDERE was created to contribute to regional development; increase the capacity of Regional governments; and lend cohesion in the decentralization process. SUBDERE has managed various water and sanitation programs, but the main effort has been through the ongoing Neighborhood Improvement Program (PMB), a social program initiated in the early 1980s to improve the well-being of the poorest members of Chilean society.
- 1.17 The PMB finances basic service infrastructure for the poor, including potable water and sewerage systems, stormwater drainage, electricity and road paving. For each household that does not have an internal bathroom or kitchen, the PMB finances a “sanitary cubicle<sup>1</sup>” comprising a flushing water closet, shower, washbasin and cooking area. To be eligible for the PMB: 90% of the community must be poor; the project must be included in an urban planning instrument; the services must be feasible; the Regional Secretariat for Planning and Coordination (SERPLAC), of the MIDEPLAN, must demonstrate its socio-economic viability; and each family must have contributed between US\$100 and US\$270, in cash, to the cost of the project. The SUBDERE jointly manages the PMB with the regional and municipal governments. The municipalities design projects based on a diagnosis of a community’s needs, promote the organization of the community and collect the beneficiaries’ down payments. The municipalities forward details of projects to the SERPLAC for socio-economic review. When the SERPLAC issues a certificate of technical recommendation without conditions (RS), the Regional government assigns a priority to the project for financing with funds from the PMB, which are allocated to the regions in the annual budget. The municipalities implement the projects, contracting the necessary construction and supervision. Once a water and sanitation project is complete, operation and maintenance passes to the relevant authority. In urban areas, this is the urban water concessionaire. Otherwise the municipality would assume responsibility. If the community that has benefited from the project has created a Water Committee or Cooperative, the municipality sometimes provides technical assistance to support operation and maintenance. The SUBDERE has a comprehensive Operations Manual, which includes detailed procedures for the PMB and other operations. The Operations Manual, and the relevant procedures are included in the list of electronic references at the beginning of this document ([IDBDOCS 978282](#)).
- 1.18 The SUBDERE has implemented several programs with Bank loans, four of which were specifically for the PMB and are detailed in Table 2. The Project Completion Report for the most recent loan, 771/OC-CH, notes that the capacity of SUBDERE as the executing agency, as with previous stages, had contributed to the success of the PMB. The Project Completion Report for the previous loan (577/OC-CH) classified the operation as totally satisfactory. For each previous loan to the PMB: (i) development objectives were met, (ii) the conditions of the

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<sup>1</sup> *Caseta sanitaria.*

loan contract were met, and (iii) all financial statements were submitted and accepted by the Bank without reservations.

<b>Table 2: IDB loans for the PMB</b>					
<b>Loan no.</b>	<b>Approval</b>	<b>Completion</b>	<b>Loan (US\$)</b>	<b>Counterpart (US\$)</b>	<b>Total (US\$)</b>
115/IC-CH <sup>a</sup>	1982	1988	40,500,000	49,500,000	90,000,000
223/IC-CH	1986	1991	40,500,000	49,500,000	90,000,000
577/OC-CH	1989	1994	70,000,000	30,000,000	100,000,000
771/OC-CH <sup>a</sup>	1993	1999 <sup>b</sup>	16,500,000	33,500,000	50,000,000
<sup>a</sup> These loans partially financed various programs. The amounts given are those dedicated to the PMB.					
<sup>b</sup> Since 1999, the PMB has been financed exclusively by the national treasury without external sources.					

- 1.19 The PMB is winding down as water and sanitation coverage reaches high levels in the urban and concentrated rural areas. SUBDERE now wish to use the model developed for the PMB to increase coverage in rural areas, defined as those areas not covered by one of the urban water and sewerage concessions, and whose communities are not included in a strategic urban development plan for the relevant municipality<sup>2</sup>.

#### **E. The Bank's country and sector strategy**

- 1.20 The aim of the IDB's 2006-2010 country strategy with Chile (GN-2431) is to help the country pursue growth while improving equality of opportunity and social inclusion. The Bank country strategy is closely aligned with the new administration's priorities. The three main actions are: (a) lend support to reduce the opportunity gap, (b) reduce the competitiveness and income gaps with respect to developed economies, and (c) make government more efficient and bring it closer to the public. The proposed program is consistent with the first and third actions in the Bank's strategy. It will reduce the potable water supply and wastewater disposal deficit in rural areas with cost efficient and sustainable solutions. The country strategy proposes targeting territorial and subnational development. The program will increase the capacity of regional and municipal governments in a way that is consistent with the Bank's Subnational Development Strategy (GN-2125-3). It will also strengthen the communities' roles in the preparation, execution and operation of water and sewerage projects.
- 1.21 The IDB's strategy in the water sector in Chile is based on cutting the coverage deficit in poor rural communities without water and sanitation. The support is also based on the good practice learned from rural water projects in Chile, and other countries, including: (i) the participation of the members of the community in the decision-making; (ii) having a formally constituted, community-based, operator responsible for the technical and commercial administration of the system; (iii) activities to support communities so that they understand the implications of having a water and sanitation project, and their participation is effective; and (iv) setting tariffs to cover operation, maintenance and replacement costs. Under the

<sup>2</sup> *El Plan Regulador.*

provisions of the Water Initiative being launched by the IDB, the Bank and the country will develop a joint sector Business Plan, which would guide the activities of the Bank in support of the government and its development goals. For rural water, the Business Plan would have two lines of action: (i) investments to expand water and sanitation services with projects that meet the particular needs of rural communities, and (ii) support for the consolidated institutional framework to be defined in the law being prepared by the Ministry of Public Works. The new program proposed in this document will finance projects in approximately 180 communities as a contribution towards meeting this objective.

## **F. Program conceptualization**

- 1.22 The Rural Sanitation Program described in this document has been conceived to tackle the problems of coverage deficit described in paragraph 1.4, and the adequacy of the wastewater treatment plants described in paragraph 1.5. Consequently, the program is structured to finance investment in rural water supply and wastewater disposal infrastructure. The program will provide roughly half of the financing necessary to reach SUBDERE's goal of increasing rural potable water and sanitation coverage to 75% in all regions of the country. To ensure services that are comparable with those in urban areas, the individual projects will provide connections to water and sewage services, as well as a sanitary cubicle. The program will also finance the repair, renovation or replacement of the small wastewater treatment plants that do not meet discharge quality standards. In addition, the program will also support the beneficiary communities so that they can organize themselves; participate in decision-making relating to the design and construction of individual projects; understand the value of water, the need to protect raw water sources and avoid losses, and the importance of paying tariffs to ensure sustainability; and understand their rights to subsidies. Employees of the Water Committees and Cooperatives will receive formal training in the operation and administration of water and sanitation projects. The formal training will include environmental responsibility, especially relating to catchment protection. Community-based Water Committees or Cooperatives will operate the works once constructed.
- 1.23 The Rural Sanitation Program is viable under the existing legal framework, but to ensure long-term sustainability, it has been specifically designed to be compatible with, and promote the principles of, the new legislation proposed by the Ministry of Public Works (see paragraph 1.15). The communities will be central, both as clients and beneficiaries of the program. As most of the communities will be small, one will not be favored over the other (see paragraph 1.8). The municipalities will own the new infrastructure, passing on the right to its free use to the relevant Water Committee or Cooperative by means of a formal transfer agreement, which requires that the Water Committee or Cooperative maintains the infrastructure in fully functioning condition and charges a tariff to the users that covers its costs of operation, maintenance and replacement. The law permits municipalities to operate the services, and the Program will allow this if it is explicitly requested by the community, in which case this will be stated in the

formal transfer agreement. The communities, by definition, will be outside the areas of the urban concessionaires. Water Committees, Cooperatives or municipalities can enter into appropriate service contracts with the concessionaires, or any other private company. Tariffs will be set to cover the cost of operation, maintenance and replacement, which is a requirement of MIDEPLAN, as well as a specific requirement of the program. The community-support activities financed by the program will include back up for Water Committees or Cooperatives that have problems with operation and maintenance.

- 1.24 The Rural sanitation program would be the second operation to be financed by the Conditional Credit Line for Investment Projects (CCLIP) of US\$400 millions approved by the IDB in December 2006 (CH-L1018). The CCLIP is designed to support Chile's decentralization process and regional development through individual investment projects, institutional strengthening activities and studies. The first loan made under the CCLIP, and approved at the same time, was for an operation to strengthen municipal and regional capacity.
- 1.25 The loan would be a Performance Driven Loan (PDL). Its characteristics and focus on results directly linked with the operation's goal create an appropriate framework for justifying the use of a PDL. The Program is consistent with the rationality and criteria established in the PDL policy (GN-2278-3). Chile has a level of institutional organization that ensures the methodical selection, analysis and implementation of projects, and a stable legal framework to ensure competition, economy, transparency, equity and due process in public sector procurement, thus Government efforts are oriented towards development effectiveness. Accordingly, each performance-based loan disbursement will occur once specific targets are met (Annex I), which will contribute to increased water and sewage service coverage. The first disbursement will be an advance of 20% of loan proceeds that will become effective once pertinent conditions are met. The remaining four disbursements will be performance-based, released for eligible expenditures when the appropriate targets are met. These targets are explained in the next section. The Bank's experience with rural water and sanitation programs in Latin America and the Caribbean will allow it to work with the SUBDERE, adapting and perfecting the procedures and mechanisms used for the PMB, to ensure the incorporation of best sector practices in the Program.

## II. THE PROGRAM

### A. Program objective and scope

- 2.1 The goal of the Rural Sanitation Program is to improve quality of life in rural areas. The specific objective, or purpose, of the Program is: “Reduce the deficit in the coverage of potable water supply and sewerage with adequate wastewater treatment and disposal for rural areas with solutions that are cost efficient and sustainable”.

### B. Program Areas

- 2.2 The Program will include: (i) the construction of rural potable water supply projects and rural sewerage projects; (ii) the repair, rehabilitation and replacement of existing wastewater treatment plants, and (iii) activities to support participation of the community to ensure the sustainability of the projects.

#### 1. Global results targets

- 2.3 Results targets for the Program are 9,000 new household potable water connections operating; 45,300 new household sewerage connections operating; and 60 wastewater treatment plants repaired, rehabilitated or replaced. Advance in Program execution will be measured against these targets, and they are used to establish the interim targets given in the Performance Matrix, Annex 1. It is anticipated that, in complying with the results targets, the Program will finance the construction of 30 potable water supply projects and 150 sewerage projects. To measure the sustainability of the projects it is necessary to review performance at least one year after completion. Accordingly, the Program adopts as additional results targets that, prior to final disbursement, 20 potable water and 100 sewerage projects have been operating sustainably for a minimum of twelve months.

Table 3: Results and Indicators	
Results	Indicators
Sustainable operation of rural water and wastewater services	Water supply projects operating sustainably for a minimum of twelve months.
	Sewerage projects operating sustainably for a minimum of twelve months.
Reduce deficit in coverage of potable water in rural areas	New household potable water connections operating
Reduce deficit in coverage of sewerage in rural areas	New household sewerage connections operating
Improve wastewater treatment and disposal	Wastewater treatment plants repaired, rehabilitated or replaced



## **2. Indicator definition**

- 2.4 A “new household potable water connection operating”, is understood to be a household that has a potable water faucet and water meter, on the household property, connected to a system providing potable water to national standards. The means of verifying compliance will be by the formal transfer agreement between the municipality, and the Water Committee or Cooperative that will operate the system, which gives a schedule of each of the connections.
- 2.5 A “new household sewerage connection operating”, is understood to be a household connection to a system providing treatment and disposal of wastewater to national standards, which might be a communal or individual system. The means of verifying compliance will be by the formal transfer agreement between the municipality, and the Water Committee or Cooperative that will operate the system, which gives a schedule of each of the connections.
- 2.6 A “wastewater treatment plant repaired, rehabilitated or replaced”, is understood to be an existing wastewater treatment plant that has been repaired, rehabilitated or replaced, is fully operational and is producing effluent that complies with national discharge standards with respect to Biochemical Oxygen Demand (BOD). The means of verifying compliance will be a certificate of compliance with effluent standards from the Ministry of Health.
- 2.7 A “potable water or sewerage project operating sustainably for a minimum of twelve months” is understood to be a project for which, 12 months after formal transfer from the municipality to the Water Committee or Cooperative: (i) the Water Committee or Cooperative is charging tariffs that cover operation, maintenance and replacement; (ii) 85% of users are not less than two months in arrears in their tariff payments; and (iii) the ratio of operating income to costs is greater than, or equal to, 1.10. The means of verification will be a formal report, issued by the regional community development team, after an inspection visit to the project, twelve months after formal transfer from the municipality to the Water Committee or Cooperative. The report will have, as an annex, the audited financial statements of the Water Committee or Cooperative.
- 2.8 All of the documents required for verification of compliance will be held by SUBDERE in a central database (see paragraph 3.19).

## **C. Eligible cost areas**

- 2.9 Eligible costs for IDB funds under the Program can be conveniently divided into following four cost areas: Program administration and support for project implementation; potable water and sanitation projects; wastewater treatment plant rehabilitation projects; and community support and training. A detailed schedule of eligible costs is given as Annex II.

## D. Program cost and financing

- 2.10 The Program will be financed by an IDB loan of US\$100 million, which will be supplemented by counterpart financing of US\$100 million to cover the estimated cost of the Program of US\$200 million. The loan will be a PDL in accordance with IDB policy (GN-2278-3). The Bank will make the financing available as Ordinary Capital. Table 4 shows the approximate breakdown of the cost.

<b>Table 4: Estimated Breakdown of Program Costs</b> (US\$ million)	
Program administration: support for project implementation	16
Potable water, sanitation and wastewater treatment plant rehabilitation projects	159
Community support and training	10
Financial costs	15
<b>TOTAL COST ESTIMATE:</b>	<b>200</b>

### III. PROGRAM EXECUTION

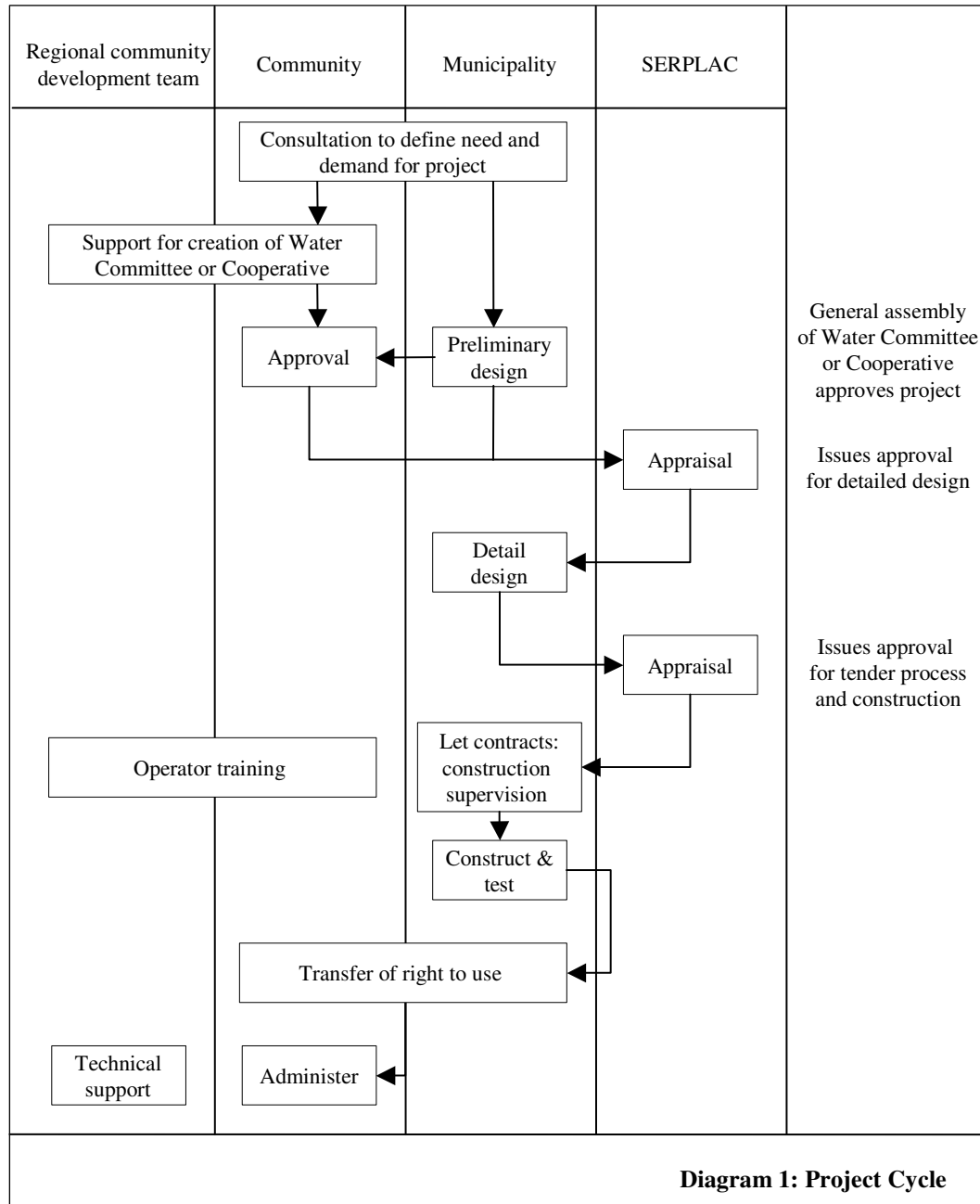
#### A. The borrower and executing agency

- 3.1 The Republic of Chile will be the Borrower. The Minister of the Interior through SUBDERE will be the Executing Agency. The Program will be implemented by the SUBDERE at national and regional levels, together with the Regional Governments, the municipalities within which the projects will be constructed, and the beneficiary communities.

#### B. Project execution and administration

- 3.2 SUBDERE's Regional Development Division, through the Department for the Management of Regional Investment, will be responsible for global Program Management, and will draw up the overall plan for implementation, which will include: a timetable, budget, and scope. Through its Regional Control Units, the SUBDERE will monitor and coordinate the activities of all actors involved. Apart from its global responsibilities for program management, the SUBDERE will also have the following specific responsibilities: (i) it will be responsible for publicizing the Program to all communities without potable water and sanitation services, and (ii) while no other public authority is responsible for setting standards and guidelines for the design and sizing of wastewater treatment plants, SUBDERE will assume that role.
- 3.3 The Regional Governments will be responsible for forming the regional community development teams to accompany the communities throughout the implementation of the projects, until a date twelve months after transfer to the Water Committee or Cooperative.
- 3.4 The Municipalities, through their Technical Units, will implement the individual projects from conception to formal transfer of the project to the Water Committee or Cooperative. The projects will be appraised and given priorities using the rules established in the National Investment System (SNI). Accordingly, the municipal technical units will submit the projects for the formal appraisal of the SERPLAC: firstly following preliminary design and the selection of an appropriate alternative, after which SERPLAC issues a certificate of technical recommendation without conditions (RS) permitting the municipality to proceed with the detailed design; and secondly following detailed design, after which the SERPLAC issues an RS permitting the municipality to proceed with the tender process for construction and construction itself.
- 3.5 Each community that benefits from the Program will create a Water Committee or Cooperative to be responsible for the commercial and technical administration of their project once transferred from the municipality. The communities will participate in the preparation and implementation of the projects with accompaniment from the regional community development teams. They will approve their projects at a meeting of the General Assembly of the relevant Water Committee or Cooperative.

- 3.6 The cycle for the development and implementation of each project is shown in the following diagram.



- 3.7 To incorporate a project in the Program, SERPLAC will require that: (i) 90% of the population is formally classified as poor; and (ii) the project is not incorporated in a strategic urban development plan.
- 3.8 The SERPLAC requires the following information prior to issuing an RS to proceed with the detailed design: (i) information on the preliminary study,

selected project, and terms of reference for detailed design, all approved by the Ministry of Health; (ii) identification of the Water Committee or Cooperative; (iii) a workplan and budget for project development and implementation; (iv) permission to use, or explore for, groundwater, as appropriate; and (v) the minutes of the General Assembly of the Water Committee or Cooperative detailing community participation. To issue an RS to proceed with construction, the SERPLAC requires: (vi) evidence of the project's technical, financial, economic and environmental viability; (vii) copies of all land titles and licenses, water rights, and environmental licenses; (viii) evidence that the tariff to be charged covers operating, maintenance and replacement; (ix) a detailed budget and schedule of investments, as well as a workplan for implementation; and (x) evidence that each household has contributed between US\$100 and US\$270, in cash, to the cost of the project, the amount depending on the household's benefit received from other government programs.

- 3.9 It will also be a requirement of the Program that projects comply with the cost-efficiency criteria listed in Table 5.

<b>Table 5: Cost-efficiency limits/Connection by Type of Project</b>	
Type of Project	Cost-efficiency limit/connection (US\$)
Potable water system	2,100
Sewerage system (where treatment facilities already exist)	1,030
Sewerage system (including a wastewater treatment plant)	2,680
Wastewater Treatment Plant Rehabilitation	600

- 3.10 In appraising each project, the SERPLAC employs the National Investment System, a methodology developed by MIDEPLAN, which is used to appraise all publicly financed investment projects. The methodology ranks the viability of projects in terms of socio-economic return, ensuring the most efficient economic allocation of resources. The appraisal involves a rigorous socio-economic evaluation similar to, and compatible with, that used by the Bank
- 3.11 When construction is completed, the municipality and the relevant Water Committee or Cooperative will enter into a formal transfer agreement which provides for: (i) the Water Committee or Cooperative to have free use of the infrastructure, which remains the property of the municipality; (ii) the Water Committee or Cooperative to maintain the infrastructure in fully operational condition; and (iii) the Water Committee or Cooperative to charge a tariff that covers the cost of operation, maintenance and replacement. The regional community development team will continue to monitor operation and maintenance for a twelve month period after the transfer of the project. The team will be available for consultation for any operating and maintenance problems. The regional community development team will pay a formal visit to the project a minimum of twelve months after the transfer of the project. On this visit the team will certify that the project is operating sustainably as set out in paragraph 2.7.

- 3.12 The SUBDERE will update the Operations manual with the procedures specific to the Program. **Evidence that the Operations Manual has been updated will be a condition precedent to the advance of 20% of the loan (see paragraph 3.17).**
- 3.13 SUBDERE and the other actors involved in the implementation of the Program will follow procedures established by Chilean legislation and regulations. This includes procedures for evaluating and selecting individual projects; mechanisms for environmental, land-use and water-use permissions or licenses; and standards for the construction of small works. All of these procedures are acceptable to the IDB.
- 3.14 The procurement of goods and services for the Program will be in accordance with the provisions for PDL (GN-2278-2).
- 3.15 The financial management of the project will be divided into: (i) the management of financing for activities prior to construction (pre-investment) and (ii) the management of financing for construction (investment). SUBDERE will advance pre-investment financing directly to the municipalities for specific contracts or activities. Financing for investment is via transfers from the SUBDERE to the Regional Governments. The Regional Governments, against certification by the municipality, make the payments directly to the relevant suppliers of goods and services. The transfer of funds to the Regional Governments is reflected in the annual budget approved for the SUBDERE.
- 3.16 The Regional Governments and the SUBDERE currently use the Integrated State Finance Management System (SIGFE). To improve the transaction and payment recording process, and facilitate its use for tracking eligible expenses, the SUBDERE is working with the SIGFE to add a new module for recording expenses related to IDB financing. The new model will enhance the internal control structure of the Regional Governments and the SUBDERE as well as reduce transaction costs for all involved.

### C. Disbursements

Table 6: Disbursement schedule (US\$ million)						
	Advance	Performance-based disbursements				Total
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
Disbursement amount	20	20	20	20	20	100
Expenditures to be verified	-	25	25	25	25	100

- 3.17 The schedule of disbursements is given in Table 6. The Bank will release the funds from the loan in five equal disbursements, comprising an advance and four performance-based disbursements, of US\$20 million each. The advance, which will be made once the loan contract enters into force, the Bank's standard conditions precedent have been met, and SUBDERE has updated the PMB Operations Manual, will cover the approximate costs that will accrue before the first performance-based disbursement is released. The four performance-based disbursements will be released against compliance with results targets given in the Performance Matrix, Annex I. The SUBDERE must support each request for

disbursement with: (i) the report of the firm of independent performance assessment consultants (see paragraph 3.19), and (ii) a breakdown of costs and eligible expenditures being submitted for disbursement. For each disbursement to be released in full, SUBDERE would have to demonstrate that eligible expenses accrued are equivalent to US\$25 million, being the amount of the disbursement plus a proportional amount for the advance.

- 3.18 The Program is intended for disbursement over five years, and it is estimated that there will be a single disbursement each year between 2007 and 2011, inclusive.

#### **D. Monitoring and Evaluation**

- 3.19 The Regional Governments will channel the documentation that is required to verify compliance with the results targets to a central database maintained by SUBDERE's Regional Development Division. The documents in the database will be: the formal transfers agreements between the relevant municipality and Water Committee or Cooperative, giving details of each household connection, for each project; Ministry of Health certificates testifying to the quality of effluent discharge for each wastewater treatment plant repaired, rehabilitated or replaced and; the formal reports of the regional community development teams, testifying to each project's sustainability, twelve months after transfer.
- 3.20 The SUBDERE will contract a firm of independent performance assessment consultants, with recognized expertise in rural water programs, to verify compliance with the results targets defined for each disbursement. The firm of independent performance assessment consultants will be required to produce a report prior to each disbursement, which includes: (i) an opinion of the accuracy of the information used to support evidence of compliance with the results targets; (ii) verification that the targets for the relevant disbursement have been met; and (iii) verification that expenditures are eligible under the program. SUBDERE must accompany each request for disbursement with a Results Target Compliance Report produced by the firm of independent performance assessment consultants. The SUBDERE will also contract an independent firm of consultants to undertake a final evaluation of the Program after the third performance-based disbursement. At this stage, more than 50% of the projects will have been operating for a significant amount of time, and it will be possible to judge their sustainability. The final evaluation will pay special attention to aspects of the Program that might affect sustainability, such as the appropriateness of the projects in operational and financial terms; and the effectiveness of the community support activities. **Evidence of an effective contract between SUBDERE and a firm of independent performance assessment consultants, and the verification of compliance with the relevant results indicators, will be a condition precedent to release of the second disbursement.**

**E. Financial audits**

- 3.21 In accordance with its legal mandate, the Office of the Comptroller General of the Republic will conduct a formal financial audit of the Program every year.

**F. Currency**

- 3.22 This second individual operation of CCLIP CH-L1018 (PR-3121) will draw on resources from the Ordinary Capital of the Single Currency Facility in U.S. Dollars and would be subject to the Local Currency Facility (LCF) (document GN-2365-2 of November 4th 2005). To minimize exchange risk, the government of Chile has the right under the LCF to have disbursements and outstanding balances for individual operations included in the CCLIP be converted for disbursements in Pesos. To increase financing options for borrowers, conversion of disbursements and outstanding balances into local currency for individual operations would be subject to two financial conditions in addition to those stipulated in the LCF: (i) more flexible repayment profiles for disbursements in local currency and described in Section 2(a) of Annex II of document PR-3121; (ii) pricing based on actual funding costs incurred by the Bank if sourced through bond issues, in keeping with Section 2(b) of the same Annex. The conversion into local currency of disbursements and outstanding balances for individual operations included in the CCLIP will require an exception to the LCF, in as much as the currency substitution clause is inapplicable (see Annex II, Section 3 of PR-3121).



## **IV. VIABILITY AND RISKS**

### **A. Institutional Viability**

- 4.1 The SUBDERE is winding down the implementation of the PMB, and will use the same team in the Department for the Management of Regional Investment to implement the Rural Sanitation Program. The assessment of the capacity of this team to implement the Program is based on an analysis of the implementation of the PMB, which is similar in scope. The SUBDERE received four IDB loans to support the PMB, each of which was successful (see paragraph 1.18). Since the time the PMB was first implemented, SUBDERE has maintained an average annual rate of over 13,000 water or sewerage connections. This is approximately 30% higher than the rate that will be required to implement the Program in 5 years as planned.
- 4.2 SUBDERE has a Regional Control Unit in each of the state capitals, which has a technical team responsible for coordinating the projects in the respective region. These teams have been responsible for coordinating PMB projects since 2002. The Regional Control Units in Regions 1, 3, 4 and 9 will be strengthened by adding a sanitation specialist. Every municipality in Chile has implemented PMB projects, and has experience with all of the activities necessary for projects to comply with the requirements of the program, as well as those of MIDEPLAN and CONAMA. Where the Technical Unit within a municipality requires assistance on a specific point, which is usually legal or technical, SUBDERE makes funds available for contracting the specialists necessary. In calculating the cost of the Program, SUBDERE have made an allowance for any technical assistance that might be necessary.
- 4.3 The preparation of the CCLIP for the Program for the Support of Sub-national Development (CH-L1018), included an Assessment of the Institutional Capacity (SECI), which showed SUBDERE to be a competent executing agency in multiple sectors. The assessment classified SUBDERE as an executing agency with low risk. It noted that, although there existed aspects that should be improved, SUBDERE qualified to assume the functions necessary to implement that operation. The scope of the first loan made under the CCLIP includes actions to strengthen the areas for improvement noted in the SECI. The original SECI has been expanded to take into account the requirements of the Rural Sanitation Program. It demonstrates the SUBDERE has the institutional capacity to implement the Program.

### **B. Socioeconomic Viability**

- 4.4 A socioeconomic analysis was performed to determine cost-efficiency limits (cut-off points) per connection at which water and sanitation projects are no longer feasible. Three types of analysis were used to ascertain the socioeconomic viability of the Program: (i) benefit-cost analysis to determine cost-efficiency limits, (ii) analysis of alternatives to evaluate least-cost solutions to sanitation systems, and (iii) sensitivity analysis to determine confidence levels. These

analyses were performed on a sample of 27 projects, 7 for water and 20 for sanitation that have been submitted to MIDEPLAN. The benefits and investment, operation and maintenance costs considered in the analysis are expressed in efficiency prices.

# 1. Cost-benefit Analysis

- 4.5 Water supply projects. The public work simulation model (SIMOP) developed by the Bank was used for the cost-benefit analysis of the projects. The benefits were calculated on the basis of the consumer surplus and were analyzed using the price elasticity of demand for water, average water consumption per household, and operation and maintenance costs of the systems (opportunity cost of supplying water without restrictions). To that end, a demand curve was constructed using: (i) price elasticity of demand estimated by MIDEPLAN and (ii) future demand point (price/quantity) obtained from the project reports. The current demand point was also obtained from the project reports. Projected water demand was based on population growth statistics and an average consumption of 100-liters/person/day (minimum provision required by law).
- 4.6 These data, combined with the investment and operation and maintenance costs obtained from the project reports, made it possible to evaluate the economic feasibility of the projects in the sample and establish economic indicators (cost-efficient limit of the cost/connection) to determine the eligibility of the project for reimbursement by the program. The results are shown in Table 7.

Table 7: Economic feasibility of potable water projects				
Cost per connection (US\$)	Feasibility	Action	Eligible	Cost-efficiency
<2,100	Yes	Accept	Yes	Cost efficiency limit ( IRR >12)
2,100-3,300	Marginal	Revise technical solution and perform specific evaluation using SIMOP or a similar model to analyze the assumptions used before the project is submitted to MIDEPLAN for final approval.	Yes	12>IRR>10
>3,300	No	Reject	No	IRR<12

- 4.7 Sanitation Projects. To determine the cost-efficiency limits, a cost-benefit analysis of projects with sanitation networks was performed. The benefits of the projects included in the sample were calculated using the willingness to pay (WTP) for the service. The values of WTP used in the analysis were determined by MIDEPLAN from contingent valuation studies performed by the Universidad Católica de Chile in 1999 and 2002, and updated to December 2006 prices. Only the costs of networks and connection are included in the cost-benefit analysis. Costs of treatment plants were excluded, since they were evaluated using the least-cost method, for a given required level of effluent quality (see paragraph 4.6). Demand projections are based on the rate of growth of the population, 2%. The average WTP values used are US\$12/family/month for sanitation networks and collection.

The period of analysis is 20 years. The 20 projects in the sample were evaluated to determine the economic feasibility of the projects in the sample and establish economic indicators (cost-efficient limit of the cost/connection) to determine the eligibility of the project for reimbursement by the program. The results are shown in Table 8.

<b>Table 8: Economic feasibility of sanitation projects</b>				
<b>Cost per connection (US\$)</b>	<b>Feasibility</b>	<b>Action</b>	<b>Eligible</b>	<b>Cost-efficiency</b>
<1,030	Yes	Accept	Yes	Cost efficiency limit ( IRR >12)
1,030-1,800	Marginal	Revise technical solution and perform cost-benefit analysis	Yes	12>IRR>10
>1,800	No	Reject	No	IRR<12

- 4.8 Analysis of Alternatives. For sanitation projects with costs/connection of US\$1,030 or below, sanitation networks are a feasible alternative, and the costs of treatment plants for these solutions were evaluated using the least-cost method, for the given required level of affluent quality determined by CONAMA (US\$1,650/connection for new plants and US\$600/connection for plants to be rehabilitated). From the analysis it was determined that projects with costs/connection between US\$1,030 and US\$1,800 were marginally feasible and a different technical solution should be evaluated.

- 4.9 An environmentally viable alternative, in some locations, is the use of septic tanks, being these individual or condominium systems. A least-cost analysis was performed to determine the maximum cost/household for these solutions. The analysis shows that the cost per household will be US\$970. In fact, given the WTP used to evaluate sanitation projects, the cost per household that will still be justified would be US\$1075.

## 2. Sensitivity Analysis

- 4.10 Given the probability of error and the uncertainties of the many assumptions and coefficients used in the analysis, a Monte Carlo simulation was used to perform a sensibility analysis on the viability of the projects, as well as the variation on the cost-efficiency limits with respect to changes in investment costs (10%), changes in operation and maintenance costs (20%), and changes consumer surplus (benefits elicited from cost savings 15% and increasing consumption 20%). Similarly to water projects, an analysis of sensibility of the sanitation projects was performed to determine probability if the projects' viability with respect to changes in investment costs (10%), changes in operation and maintenance costs (20%), and changes in WTP estimates (30%). The results are shown in Table 9.

<b>Table 9: Results of sensitivity analysis</b>		
<b>Potable water systems</b>		
Likelihood of a project being feasible a cost per connection equal or less than US\$ 2,100	<b>Probability</b>	
	90%	
90% likelihood that the true cost-efficiency per connection limits lies within the confidence interval	<b>Low</b>	<b>High</b>
	US\$1,950	US\$2,510

Sanitation systems		
Likelihood of a project being feasible a cost per connection equal or less than US\$ 1,030	Probability	
	70%	
90% likelihood that the true cost-efficiency per connection limits lies within the confidence interval	Low	High
	US\$256	US\$1,201

- 4.11 The analysis shows that water projects have a low sensitivity to changes in costs and benefits elicited from increased consumption and cost saving from switching to an alternative source of water supply. Conversely, the analysis of sanitation projects is sensitive to changes on costs and WTP estimates. This result is not surprising if it is considered that the WTP estimate defines all benefits elicited from having sanitation service and changes in this estimate will have great impact on the feasibility of a project.

### C. Benefit and Beneficiaries

- 4.12 The potable water projects will benefit 36,000 rural dwellers and the sanitation projects will benefit 180,000 rural dwellers. These people will have household connections to both potable water supply and wastewater disposal. The benefits will accrue principally in the form of health benefits and time saved by not having to fetch water from a more remote source. The repair, rehabilitation and replacement of the treatment plants will benefit 36,000 who will enjoy improved environmental conditions.
- 4.13 The communities, their Water Committees and Cooperatives, will benefit from an increased understanding of the implications of owning and operating a water and sanitation system as a result of the community support activities. Individual families will also benefit financially if, as a result of these activities, they apply for the subsidies available. All will benefit from the higher levels of service that will be offered as a result of operator training.
- 4.14 The SUBDERE teams and the municipal technical units to be strengthened, as well as the regional teams to be created for the community support, will increase the management capacity of regional administrations.

### D. Poverty Target and Social Sector Classification

- 4.15 The Program qualifies as a social-equity enhancing project (SEQ) as defined in the Report on the Eighth General Increase in the Resources of the IDB (document AB-1704, August 1994). The Program also qualifies as a Poverty Targeting Investment (PTI), as set out in Review of Poverty Classification of IDB Loans under the Eighth Replenishment (document GN-1964-3, June 1997), based on headcount. To qualify for financing under the Program, 90% of the project beneficiaries must be formally classified as poor.

### E. Social and environmental impact

- 4.16 The individual projects in the Program will have a net positive social and environmental impact as they will improve the beneficiaries' quality of life and that of the environment. The Program is designed to make sure that the

communities are fully informed about the implications of the projects, and that they are involved in decision-making during the design and implementation of the project. The community support provided under the Program will ensure that the regional community development teams help low-income families in applying for the subsidies. None of the projects is likely to require relocation of population groups. If during Program execution the need for resettlement became evident, this would be done according to the Bank's OP-710.

- 4.17 The National Corporation for the Development of Indigenous People (CONADI) has reviewed the Program and confirmed that it is consistent with their policy of community participation. They asked that, for indigenous communities, contact with the community be made through the traditional leaders.
- 4.18 The National Investment System requires that all projects comply with the national environmental legislation. For water and wastewater projects involving more than 2,500 inhabitants, an Environmental Qualifying Resolution is issued in terms of the Environmental Impact Evaluation System (SEIA). According to the environmental law (law 19.3000 of 1994) and its SEIA Rule (DS 95/2001), all projects entering the SEIA require an Environmental Impact Declaration and some might require an Environmental Impact Evaluation issued by either a Regional Environmental Commission (COREMA) or the National Commission for the Environment (CONAMA). The SEIA establishes the procedures by which the environmental impact of projects will be evaluated, and thus the mitigation measures necessary. Most of the projects that will be implemented under the program will be under the threshold for entering into the SEIA. For these projects, the program will require an environmental management plan in accordance with existing SUBDERE environmental guidelines for water and sanitation projects.
- 4.19 The Environmental Analysis of the Program, which was made available through the Public Information Center on April 19, 2007 shows that: (i) projects executed by the SUBDERE in the PMB were carried out in accordance with Chilean legislation and regulations; (ii) the range projects proposed under the Program are environmentally and socially viable and (iii) Chilean legislation and regulations are consistent with the requirements of the IDB's Environment and Safeguards Compliance Policy. In the case of projects for less than 2,500 inhabitants the requirements of the Chilean legislation are supplemented by the Program's requirements for the participation of the communities. In those cases, the in country systems will be complemented by a Program requirement of community consultation and participation for all projects [see 3.8 (v) and 4.16], independent of community size. Given the nature of small water and wastewater projects, construction and operation will be marked by small and temporary impacts related to: construction noise; dust and odor; construction and operation waste; waste generation, traffic interference and accident risk. This will be mitigated by commonly used environmental impact control measures within the construction contracts and the corresponding environmental management plans.

**F. Risks**

- 4.20 The main concern relating to the Program is the possible shortage of technical capacity at regional and municipal level to implement the Program. This concern has been diminishing over time as the SUBDERE has increasingly decentralized responsibility for the implementation of projects. Loan CH-L1018 for the Program for the Support of Sub-national Development, the first operation approved under the CCLIP, is designed to strengthen regional administration. In addition, the Program makes the costs of strengthening the regional community development teams, the SUBDERE regional technical teams, and the municipal technical units all eligible expenses under the Program.

**CHILE**  
**Rural Sanitation Program (CH-L1025)**  
**Performance Matrix**

There will be 5 disbursements of US\$20 million

The 1<sup>st</sup> disbursement will be released against evidence of compliance with conditions precedent.

The 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> disbursements will be released when the following results targets are met.

Objective	Result indicator	Target 1 <sup>st</sup> performance -based disbursement <sup>a</sup>	Target 2 <sup>nd</sup> performance- based disbursement	Target 3 <sup>rd</sup> performance- based disbursement	Target 4 <sup>th</sup> performance- based disbursement
Sustainable operation of rural water and wastewater services	Water supply projects operating sustainably for a minimum of twelve months.	-	-	-	20
	Sewerage projects operating sustainably for a minimum of twelve months.	-	-	-	100
Reduce deficit in coverage of potable water in rural areas	New household potable water connections operating	2,250	2,250	2,250	2,250
Reduce deficit in coverage of sewerage in rural areas	New household sewerage connections operating	11,325	11,325	11,325	11,325
Improve wastewater treatment and disposal	Wastewater treatment plants repaired, rehabilitated or replaced, fully operational and producing effluent that complies with national discharge standards for Biochemical Oxygen Demand (BOD).	15	15	15	15
<sup>a</sup> The first disbursement will be an advance made once conditions precedent have been met.					

Technical descriptions of the target indicators, and means of verification are given below.

Indicator	Definition	Verification
New household potable water connections operating	A potable water faucet and water meter, on the household property, connected to a water system delivering system providing potable water to national standards, constructed with Program financing.	Formal transfer agreement between the municipality and Water Committee or Cooperative.
New household sewerage connections operating	A household sewerage connection a system providing treatment and disposal of wastewater to national standards, constructed with Program financing.	Formal transfer agreement between the municipality and Water Committee or Cooperative.
Wastewater treatment plants repaired, rehabilitated or replaced	An existing wastewater treatment plant that has been repaired, rehabilitated or replaced, is fully operational and is producing effluent that complies with national discharge standards with respect to Biochemical Oxygen Demand (BOD), taking into account the type of receiving water and the dilution factors.	Ministry of Health certificate of test results
Potable water or sewerage project operating sustainably for a minimum of twelve months	A project operating as designed 12 months after formal transfer from the municipality to the Water Committee or Cooperative; for which the Water Committee or Cooperative is charging tariffs that cover operation, maintenance and replacement; that 85% of users are not less than two months in arrears in their tariff payments; and that the ratio of operating income to costs >1.10.	A formal report, issued by the regional community development team, after an inspection visit to the project, twelve months after formal transfer from the municipality to the Water Committee or Cooperative. The report will have, as an annex, the audited financial statements of the Water Committee or Cooperative.



**CHILE**  
**Rural Sanitation Program (CH-L1025)**  
**Schedule of Eligible Costs**

Eligible costs for IDB funds under the Program can be conveniently divided into four cost areas:

Program administration: support for project implementation

Eligible costs will include: (i) SUBDERE's personnel and consultant costs, both in headquarters and regional offices, for executing the Program. This will include technical staff at headquarters related to the design of wastewater treatment plants and environmental management. (ii) SUBDERE's costs for global studies and projects to support the Program. This will include the costs of global studies to evaluate and justify the Program. It will also include the preparation of manuals and guidelines such as the Guidelines for the Design of Rural Wastewater Treatment Plants. (iii) The costs of campaigns and other activities to publicize the Program. (iv) The costs of municipalities' technical units in the preparation of individual projects. The cost will include the cost of a project engineer for the duration of project development and implementation who will also be responsible for managing the environmental aspects of the projects. (v) The costs of monitoring and evaluation, including the costs of independent performance assessment consultants. (vi) Financial costs relating to the IDB loan.

Potable water and sanitation projects

Eligible costs will include: (i) The direct costs of third party consultants to prepare feasibility studies and evaluations to justify individual projects and to prepare information to submit projects to MIDEPLAN. (ii) The direct costs of third party consultants, contractors and suppliers for detail design; construction; equipment supply and installation; and the operational start-up of: wells or surface water intakes; water and wastewater treatment plants; pumping stations; reservoirs; potable water distribution and wastewater collection networks; meters; and household connections. (iii) The direct costs of third party consultants for the supervision of construction, including environmental supervision, equipment supply, installation and start up. (iv) The direct costs of the installation of sanitary cubicles for households with no internal bathroom. (v) The direct costs of individual sanitation solutions.

Wastewater treatment plant rehabilitation projects

Eligible costs will include: (i) The costs of third party consultants to prepare feasibility studies and evaluations to justify individual projects and to prepare information to submit projects to MIDEPLAN. (ii) The costs of third party consultants, contractors and suppliers for design; refurbishment; construction; equipment supply; installation and operational start up for the repair renovation or replacement of wastewater treatment

plants so that their discharges comply with prevailing environmental regulations. (iii) The direct costs of third party consultants for the supervision of refurbishment; construction; equipment supply; installation and operational start up.

#### Community support and training

Eligible costs will include: (i) Salary costs of personnel and fees of consultants for providing community support, specifically members of the regional community development teams. (ii) The indirect costs of the regional community development teams, including office equipment, transport, accommodation and messing costs for field trips. (iii) The direct costs incurred by the regional community development teams in information, education and consensus-building activities to promote community participation in the water and sanitation projects; the implications of choosing either a Water Committee or a Cooperative; the benefits of water and sanitation; the value of water and cost of losses; the rights of households to subsidies; and the obligations of households to pay tariffs to ensure sustainability. (iv) The costs of creating and registering Water Committees and Cooperatives. (v) The costs of institutional strengthening for the Water Committees or Cooperatives. (vi) The costs of acquiring land property or use rights. (vii) The costs of training courses for Water Committee and Cooperative directors and staff in the administration and operation of water and sanitation projects, including environmental responsibilities, especially related to catchment protection. (viii) The direct costs of the regional community development teams in providing technical assistance to the Water Committees and Cooperatives for the twelve months following the transfer from the municipality.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION

Chile. Individual Loan \_\_\_\_/OC-CH to the Republic of Chile  
Utilization of the resources of the Conditional Credit Line for  
Investment Projects established by Resolution DE-170/06  
Rural Sanitation 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 utilize the resources of the Conditional Credit Line for Investment Projects approved pursuant to Resolution DE-170/06, by entering into such contract or contracts as may be necessary with the Republic of Chile, as Borrower, for the purpose of granting financing for an individual operation for cooperating in the execution of a rural sanitation program in Chile. Such financing will be in the amount of up to US\$100,000,000, from the resources of the Single Currency Facility of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.