

Reducing Regulatory Barriers to Private-Sector Participation in Latin America's Water and Sanitation Services

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The regulatory conditions that private operators of water and sanitation services look for in deciding whether to participate in a bid.

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Summary findings

The lack of an appropriate regulatory environment is a principal factor behind inadequate water and sanitation services in many parts of Latin America. Many governments recognize the need to improve cost recovery and accountability in services — and increasingly see private sector participation as a tool for improving efficiency and attracting commercial sources of investment finance.

Consultants interviewed representatives of private companies that recently contended for contracts to provide water and sanitation services in four Latin American cities (Buenos Aires, Caracas, Mexico City, and Santiago). These private operators identified the regulatory conditions they look for in deciding whether to participate in a bid. On the basis of the interviews, Richard and Triche identified nine conditions:

- Specify key terms and conditions of regulation in the contract, leaving little discretionary power to the regulating authority. In particular, specify the key aspects of regulation (such as price, quantity, and quality) in the contract.
- Spell out credible procedures for the fair resolution of disagreements about contractual or regulatory matters.
- Carefully specify credible technical objectives which the contractor will be expected to achieve under the contract.
- See that government tariff policies support the principle of cost recovery for water services — and that tariff adjustment formulas adequately reflect changes in costs, inflation, and the exchange rate.
- If historical collection rates do not indicate consumers' willingness to pay for services at tariffs that reflect the cost of service, allow an adequate period of time to phase in higher tariffs — and give the operator adequate protection from nonpayers (either the right to cut off service or recourse to another source of payment).
- Review public works law, contract law, and accounting practices and, if necessary, amend them in advance to ensure that they accommodate and protect any long-term investments foreseen under build-own-transfer or concession-type arrangements.
- Eliminate unnecessary and bureaucratic administrative requirements that make bidding expensive.
- Make a contract and expected profits big enough to warrant the high fixed cost of bidding.
- Provide the education and outreach needed to inform consumers and secure the support of labor interests.

In addition, the firms interviewed said that host countries would be better able to attract private-sector providers if they:

- Used reputable outside technical, legal, and financial advisors.
- Allowed local and foreign banks that finance investments to review and comment on proposed contracts and participate in negotiations.
- Reduced the cost of bidding for small contracts.

This paper — a product of the Water and Sanitation Division, Transport, Water, and Urban Development Department — is part of a larger effort in the department to formulate strategies for improving the efficiency of water supply and sanitation services. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Mari Dhokai, room S4-001, extension 33970 (19 pages). July 1994.

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Barbara Richard of Apogee managed the study, conducted interviews with European participants, and wrote Apogee's report to the Bank, on which this report is based. William O'Neil of Apogee conducted the interviews in Latin America.

This study was initiated by the Technical Department of the Latin American Regional Vice Presidency of the World Bank, under the task management of Luis Pereira, LATIE. In January, 1993, following a reorganization, responsibility was transferred to the Water and Sanitation Division of the Transport, Water and Urban Development Department in the Environmentally Sustainable Development Vice-Presidency. Thelma Triche, TWUWS, supervised the study and prepared the final report.

John Briscoe, Mike Garn, Augusta Dianderas, and Guillermo Yepes reviewed the revised study proposal, provided guidance throughout the study, and commented on Apogee's report. The authors would like in particular to thank Jerome Esmay, IFC, for reviewing the report and suggesting a number of improvements.

1.0 EXECUTIVE SUMMARY

1.1 The lack of an appropriate regulatory environment is a principal factor contributing to the absence of reliable water and sanitation services in many parts of Latin America. Many governments are recognizing the need to improve cost recovery and accountability in services, and there is a growing recognition that PSP may be a valuable tool for improving efficiency and enabling services to qualify for commercial sources of investment finance. One of the objectives of regulatory reform thus has been to create business environments which promote commercial viability and attract private sector participation. Another is to protect the consumers from private monopolistic behavior and ensure that they reap the benefits of efficiency improvements.

1.2 This study was prepared to provide policy makers and Bank staff with an assessment of the effect of the overall regulatory environment and specific regulatory practices on the willingness of private water services operators to participate in recent tenders for the provision of water and sanitation services in four Latin American cities: Buenos Aires, Argentina; Caracas, Venezuela; Mexico City, Mexico; and Santiago, Chile. The perspective is that of the private contenders for these operational contracts, and the authors have attempted to report that perspective objectively, without a detailed analysis of its merits. The authors do not necessarily endorse the private firms' opinions, but report them in an effort to inform governments so that sector officials will be in a better position to make decisions about private sector participation, formulate strategies for attracting bidders, and negotiate with potential private partners.

1.3 Private providers which were interviewed during this study identified a number of regulatory conditions that they look for in deciding whether to participate in a bid. Water sector officials and regulators in Argentina, Chile and Mexico were also interviewed to gain a better understanding of the situation in each country, and the public perspective on some of the issues which were raised.

1.4 The conditions identified by the participating firms have been grouped into nine categories. Some are more important than others, but each one would be an important element of an overall regulatory environment that would enhance commercial viability and fairness in contract enforcement. The nine conditions include:

1. All terms and conditions of regulation should be specified in the contract, leaving little discretionary power to the regulating authority -- private providers are reluctant to supply services unless the key aspects of regulation including price, quantity and quality are specified in the contract document;
2. Credible procedures for the fair resolution of disagreements over contractual or regulatory matters are very important. In the absence of a trustworthy judiciary system, firms prefer access to international arbitration;
3. Technical objectives of the arrangement should be carefully specified and

credible;

4. Government tariff policies should support the principle of cost recovery for water services, and tariff adjustment formulas should adequately reflect changes in costs and inflation and the exchange rate for local currency vis-a-vis a hard currency;
5. Historical collection rates should indicate the willingness of consumers to pay for services at tariffs that reflect the cost of service, and the operator must have adequate protection from non-payers, either the right to cut off non-payers or recourse to another source of payment;
6. Public works laws, contract law, and accounting practices should be reviewed and, if necessary, amended in advance to ensure that they accommodate and protect any long-term investments foreseen under BOT or concession-type arrangements;
7. Unnecessary and bureaucratic administrative requirements make the bidding process expensive and should be eliminated;
8. The size of a contract and expected profits should be large enough to warrant the high fixed cost of bidding;
9. Education and outreach to inform consumers and secure the support of labor interests is essential.

1.5 In addition, the firms made three suggestions that are related to the process of selecting private operators. According to those interviewed, host countries could enhance their chances of attracting private providers by:

1. using reputable outside technical, legal, and financial advisors throughout the process;
2. allowing the local and foreign banks which would finance investments to review and comment on proposed contracts and participate in the negotiations process; and
3. reducing the cost of the bidding process for small contracts.

1.6 The Bank regards PSP as a potentially useful tool for improving the efficiency and effectiveness of water and sewerage services. Its role is to assist borrowers to determine whether PSP is a viable option, and to balance the interests of private operators with those of consumers while improving water services. For this borrowers need to be in a strong position vis-a-vis potential bidders. The findings of this study indicate that the strength of their position will depend, in part, on their ability to satisfy the conditions identified. Several of the conditions

are related to a common principle: that water supply and sewerage services should be treated as economic goods, and water companies as commercial enterprises. The Bank's expertise and experience in this issue area is well-established; and, through its policy dialog with borrowers, it has promoted economic and commercial principles. Some of the conditions have to do with preparation of the bidding and selection process for operational and investment contracts. In this area too, the Bank has also been a positive force, although some innovation is needed to develop selection procedures which reduce the cost of competitive bidding for small operational contracts. The remaining conditions have to do with the broader policy and institutional environments that prevail in developing countries: the credibility of the judiciary, and its experience in regulatory matters; the stability of political decisions dealing with regulatory principles and processes; uncertainty about consumer reactions. These are areas in which the Bank needs to focus more attention to establish expertise and develop the country dialog.

2.0 BACKGROUND

2.1 For the last 30-40 years, water and sanitation services in Latin America (LA) have been provided by the public sector. Prior to 1950, however, it was not uncommon to see private provision of these services. Private sector participation thus has some precedent in the region.

2.2 In 1990, 87 percent of the urban population in Latin America had access to drinking water and 79 percent of city dwellers were provided with sanitation services. In rural areas, 62 percent of the population had access to drinking water and only 37 percent had access to sanitation facilities.¹ Moreover, water is not treated properly: 95 percent of domestic and industrial waste waters are discharged without treatment.²

2.3 Even where water supply is available, systems have been severely degraded due to chronic under investment, resulting in extensive water loss through leakage, poor water quality, and unreliable flow. In some cases, withdrawals from aquifers in excess of recharge threatens the long term availability of fresh water.

2.4 Aside from the public health risk that these conditions impose, lack of acceptable water and sanitation services will have direct impacts on a country's economic health. To meet water and sanitation needs alone, LA countries will need to invest \$10 billion *per year* until the end of the decade; without an alternative source of financing, LA governments may not be able to

¹ *The Decade and Beyond: at a Glance*, Joseph Christmas and Carel de Rooy, Water International, 16 (1991) p.129.

² *Infrastructure Maintenance in LAC: The Costs of Neglect & Options for Improvement. Volume 2, Water Supply & Sanitation Sector*, Guillermo Yepes, Report No. 17, Regional Studies Program, Infrastructure & Energy Division, LAC Technical Dept., June 1992, p.1.

meet this investment challenge.³

2.5 The choices facing the sector are grim. Traditionally water supply and sanitation services have been supported through central government grants. Budget allocations to the sector, however, are being cut. Further, most sector agencies do not have the authority to set water and sewer tariffs. Because the sector has traditionally been grant-supported, government-set tariffs have not had to reflect the full cost of providing these services.⁴ This has resulted in significantly subsidized tariffs. Indeed, few environmental utilities in the region have been able to generate operating surpluses. Given the history of subsidization, central government tariff boards may be reluctant to raise tariffs by the amount necessary to finance required operations and maintenance expenditures, or debt service coverage for capital investments. Finally, borrowing is increasingly difficult. At the municipal level, government borrowing is often constrained by legal requirements. At the national level, some LA countries are still constrained by the legacy of the debt crisis of the 1980's.

2.6 In the search for investment finance and economic efficiency, many LA countries are turning their attention to the private sector. As investors, private firms would provide debt or equity capital. As service operators, their presence would allow LA governments to distance themselves from the increases in water and sanitation tariffs that must occur in some cases and to make these operations commercially viable.

2.7 Since the early 1970s, a strong effort has been made in some LA countries (Argentina, Chile, Colombia, and Mexico) to decentralize operations and, to a lesser degree, investment decisions to the regional or municipal level. Decentralization initiatives, however, are not always accompanied by effective devolution of authority; in some cases local agencies have been created without appropriate means to finance investments. At the same time, private sector participation is becoming increasingly accepted and promoted as an effective means to improve service quality and contain costs. It may also be a tool for strengthening the decentralization process, by making services more consumer responsive and oriented to local needs, and by making them commercially viable, and therefore less dependent on government finance.

3.0 OBJECTIVES OF THE STUDY

3.1 Several countries have recently attempted to arrange PSP in urban water supply services. The record of this process has been mixed -- some efforts have failed; others have been successful. The principal objective of this study is to provide policy makers in Latin American

³ *Infrastructure Maintenance in LAC.*, June 1992, p.1.

⁴ Reliance on grant financing also has resulted in distorted investment allocation decisions. The Buenos Aires water supply system, for example, operates with excess capacity, yet neighboring areas have no access to water supply.

countries and Bank staff with an evaluation of lessons learned recent efforts to attract private sector participation for the provision of water and sanitation services in Mexico, Argentina, and Chile. By incorporating these lessons learned into Bank lending and technical assistance activities, the Bank will be able to more effectively help governments improve the efficiency of the sector. It was not the intent of this study to evaluate the arrangements themselves, or even to analyze in depth the merits of the private firms' opinions. Rather the purpose was to collect practical information that would be of use to Governments which want to attract private partners to the sector.

3.2 The lack of appropriate institutional and regulatory frameworks is a major contributory factor in the absence of reliable water and sewerage services in many parts of Latin America. Many governments are recognizing the need to improve cost recovery and accountability in services, but policy changes alone are meaningless without the institutional changes to implement -- and sustain -- them. PSP may be a valuable tool for introducing institutional change and promoting greater commercial viability and consumer orientation. Well-designed PSP is usually associated with greater autonomy for the operator, more systematic mechanisms for promoting accountability and better cost recovery.

3.3 The Bank could play an important role in supporting the evolution of appropriate sector institutional and regulatory frameworks, but experience with PSP in the water and sewerage sector is limited and somewhat fragmented. The Bank has provided and financed technical assistance for several of the recent PSP arrangements. Now that several of these are in place, it is useful to evaluate the experience that has been gained and draw lessons for future efforts. In this study the private firms which were involved in these recent privatization experiences were asked to identify factors that acted as barriers as well as those which facilitated their participation.

4.0 METHODOLOGY

4.1 This report examines the link between regulation of the water and sanitation sector in selected Latin American countries and their capacity to attract private providers of these services. It takes as given the premise that regulatory barriers to private sector participation exist. The study thus seeks to identify what the critical barriers are, and what steps might be taken to mitigate them.

4.2 While the term "privatization" may be used to describe several types of public-private arrangements, this report focuses primarily on long-term operational contracts, such as concessions and lease contracts. This is the model which has been used for recent arrangements and, with some exceptions, it seems unlikely that existing large-scale water and sanitation facilities will be sold to the private sector in the very near future.

4.3 Representatives of several private water and sanitation providers were interviewed at length to determine the economic regulatory conditions that they needed to be satisfied to attract

their interest and participation, based on the regulatory barriers they have encountered in the past. Regulatory officials, country officials, and city officials from three host countries also were interviewed to better understand the public perspective on regulatory conditions necessary to attract private providers of water and sanitation services.

4.4 Five European water companies agreed to participate in this research effort. All five are currently active in Latin America and have expressed interest in expanding their activities there. These included, from the UK: Thames Water Plc, and Severn Trent Plc; from France: Compagnie Générale Des Eaux, and Lyonnaise Des Eaux Dumez, and from Spain: Sociedad General de Aguas de Barcelona. In addition, the director of Aguas Argentinas, the group which won the water supply concession in Buenos Aires, Argentina, was interviewed.

4.5 Company representatives were asked questions about their experience in public offering bids for water and sewerage services in four Latin American cities: Buenos Aires, Argentina; Caracas, Venezuela; Mexico City, Mexico; and Valparaiso, Chile. However, as budgetary considerations limited the study scope to three country visits in Latin America, a decision was made to interview sector officials in Buenos Aires, Mexico City, and Valparaiso. In all three, the effort to attract the private sector had resulted in actual contracts, but the conditions in each were different, and the process used to attract the private sector was different, especially between Buenos Aires and Mexico City, so that different lessons could be learned by examining and comparing them. In addition, it was felt that the lessons of the Caracas effort had already been analyzed, and that a visit there would yield few new insights.

4.6 Signing a long-term contract requires a significant display of "goodwill" on the part of a host government, to assure the contractor that the letter and spirit of the contract and related laws will be complied with in a consistent and credible way, with the effect of reducing actual and perceived risk. The firms interviewed were asked to identify steps or actions that host country officials could take to create this "goodwill", or confidence.

4.7 Section 5 briefly describes actual or proposed contractual arrangements for private participation in the provision of water and sanitation services in the four cities. Section 6 examines the barriers which representatives of the private companies identified in the context of their experiences in the four cities. Section 7 relates observations drawn from the private sector interviews to responses of officials in the three Latin American cities that were visited. Implications for the World Bank's role are considered in Section 8.

5.0 THE APPROACH TO PRIVATE SECTOR PARTICIPATION IN FOUR CITIES

The four cases that provided the experiences for this study are described briefly below.

Buenos Aires, Argentina

5.1 Prior to announcing its intention to arrange a private concession for water services in

Buenos Aires, the Government of Argentina had successfully privatized numerous private enterprises, and initiated privatization of a number of public utilities such as railways, ports, power, telecommunications and natural gas.

5.2 Responsibility for water and sewerage services was decentralized to the provinces in 1980. However, the central government retained control over services in the capital city. Today, the greater Buenos Aires metropolitan area has a population of nine million, of which about six million have access to piped water supply and about five million to sewerage services. Four to five million people remain without one or both services. One of the main objectives of the effort to introduce private sector participation was to expand water and sewerage services to the unserved population in the absence of adequate public financial resources. In May 1993, following competitive bidding, the federal government awarded a 30-year concession contract to Aguas Argentinas, a consortium led by Lyonnaise des Eaux Dumez (France) and including Sociedad General de Aguas de Barcelona (Spain), Anglian Water Plc (U.K.), Compagnie Générale des Eaux (Spain), Sociedad Commercial del Plata (Argentina), Banco de Galicia y Buenos Aires, and Meller. Under this arrangement, Aguas Argentinas assumed full responsibility for the entire water supply and sewerage system, including commercial and technical operations and maintenance of all components, and must finance and execute investments necessary to achieve service targets as specified in the contract. The contractor assumes all commercial risk and may disconnect users who do not pay their water bills. At the end of the period, all capital works will revert to the federal government.

5.3 Selection of the concessionaire followed a two-phased process. Five firms were prequalified on the basis of their technical, administrative and financial capacity. Two French firms subsequently joined forces, reducing the original pool to four bidders. During the technical appraisal, one firm, which proposed to employ an innovative water treatment technique that was judged to be too risky, was eliminated. For the price competition, a baseline tariff was specified and the contenders were asked to submit a price bid expressed as a percentage above or below the reference tariff. Aguas Argentinas won the price competition by a small margin, with a bid which would reduce residential user tariffs by about 27 percent.

5.4 The process, from bid preparation to award, took about two years: a staff of 30 Argentinean and foreign consultants worked for nine months to assess the system, develop a core investment plan and prepare bid documents. Approximately one year passed between prequalification and award of the contract.

5.5 As part of its preparation to establish a public-private arrangement for the provision of water and sanitation services in the greater Buenos Aires area, the Argentinean government also decided to enhance the role of the municipal and provincial governments in the oversight of services. A tripartite regulatory agency, ETOSS, was formed with representatives of the three levels of government that would be affected by the anticipated public-private arrangement: the federal government, the Province of Buenos Aires, and the municipality of Buenos Aires. ETOSS, has the responsibility of enforcing the conditions of service, investment plans and allowable tariffs as specified in the contract.

5.6 Specific parameters describing water quality standards are set out in the Regulatory Framework Law (Marco Regulatorio) which also defines the regulatory authority of ETOSS. The details of rate making, however, are described in the concession contract. Fourteen operating cost components are used to calculate a cost index by which tariffs may be adjusted. By holding actual cost changes below the index, the contractor can increase its return. Every five years ETOSS adjusts the index to account for new investment and its effect on operating costs. Current monetary policy maintains a one-to-one ratio between local currency and the US dollar, eliminating, for now, exchange rate risk.

Caracas, Venezuela

5.7 In 1990, the Government of Venezuela launched a program to reorganize the water supply and sewerage sector. The objective was to decentralize control, create autonomous and financially self-sufficient operating companies, and encourage private involvement through long-term concession contracts. However, the proposed reorganization was only partially implemented and, as a result, the structure of the sector has remained complex and chaotic. A proposed new regulatory agency is not yet functioning. In the ten-year period, 1982 to 1991, tariffs declined in real terms from about \$.58/m³ to \$.04/m³. A new tariff law adopted in 1993 increased tariffs to reflect operating costs and provided for regular adjustments to reflect inflation, but charges are still far from compensatory.

5.8 Against this background, in 1991, the Government announced its intention to grant a 25-year concession to a private operator for water and sewerage services in Caracas, a metropolitan area with a population of about 4.3 million people that incorporates 23 municipalities. The concessionaire would have been responsible for investments necessary to achieve specified service quality and coverage targets. An association of the affected municipalities in the Caracas metropolitan area would have had regulatory authority over the concession. A two-part bidding process, similar to that used for the Buenos Aires concession, was adopted. Five international consortia prequalified, but when the deadline passed in August, 1992, none submitted a responsive bid.

Mexico City, Mexico

5.9 Two objectives characterized the decision to invite the private sector to participate in Mexico City's water supply services: to reduce physical leakage and to improve cost recovery. Little was known about the condition of the asset base but the government of the Federal District (Distrito Federal, or DF) was aware that significant water losses were occurring, losses which were intolerable in light of the scarcity of water resources available to the city. The population of the entire Mexico City metropolitan area is about 15 million, of which about eight million reside in the DF. Overexploitation has begun to seriously strain the area aquifers, creating dangerous sinkholes, and the cost of developing new water sources is extremely high. At the same time, the record for tariff collection is low -- it is estimated that only about 18-20 percent of users actually pay their bills. In some cases bills are not even sent out and metering is almost non-existent. Hence users have little financial incentive to conserve water.

5.10 In Mexico City, the private operators are involved in distribution and commercial activities, but not in production. The arrangement is characterized by some unique features. The city was divided into four zones and contracts were awarded to a different contractor for each zone. The arrangement is structured in three phases, so that the private companies gradually assume more responsibility. During the first two phases, the contractors are compensated on a fee-for-service basis. They would begin to assume commercial risk only in the third phase.

5.11 In March 1993, general contracts were awarded by the Federal District Water Commission (la Comisión de Agua del Distrito Federal, or CADF) for a ten year period which may be extended. Awards were based on a competitive bidding process. Several firms pre-qualified and six submitted bids. The Government had intended to award at least two contracts to ensure ongoing competition, but the number of attractive bids made it possible to award contracts to four groups, made up as follows: Bufete Industrial, Bancomer, Lyonnaise des Eaux Dumez, and Anglian Water Plc; Gutsa and North West Water International; Industrias del Agua, Socios Ambientales de Mexico and Severn Trent Plc; Servicios de Agua Potable, ICA, Banamex, and Compagnie Général des Eaux. Each contractor signed a general contract with the CADF under which it has the right to negotiate specific contracts to conduct the work planned for Phases I, II, and III in one zone of the DF. The city retains ownership of all facilities.

5.12 Under Phase I, which is expected to last about 2 years, contractors will map the distribution system, determine its condition, measure the quantity of unaccounted for water, identify repairs required to prevent water losses, identify illegal connections, and install meters for all users. In Phase II, contractors will develop and implement a billing and collection system. To protect the contractors, investments in the first two phases are underwritten by BANOBRAS, the Mexican public works bank. BANOBRAS has opened a line of credit to the DF which it could use to pay the contractors, in the event of liquidity problems. Phase II is a trial period to gauge the response of users to metering and rigorous billing and collection. Depending on consumer acceptance, the CADF may go forward with, delay or cancel Phase III, under which the contractors would purchase bulk water from the city and take on full responsibility for distribution and commercial activities, including maintenance and rehabilitation of the distribution network. It is envisioned that compensation would be linked to tariff collections. Ultimately, however, the Mexican law on water services would have to be amended to make it possible for private providers to take a commercial position as envisioned for Phase III.

Valparaiso, Chile

5.13 Prior to 1988, publically owned water and sewer services in Chile were managed by a central government agency. There were in addition, several small private water companies. Between 1988 and 1989, new legislation decentralized responsibility for the publicly owned services by creating autonomous regional service companies. The national government owns the majority of the shares in the water and sewerage companies through its Corporacion de Fomento (CORFO). By law, tariffs are set to reflect long-term marginal cost, including a guaranteed

return on capital. A national regulatory agency, the Superintendencia de Servicios Sanitarios (SSS) was created to regulate both public and private water and sewerage services.

5.14 It is important to note that under Chilean law, all water services companies, whether public or private, are structured as stock corporations (with the exception of very small systems), and they exist and operate by virtue of concessions granted by the Ministry of Public Works. The term concession has a very specific meaning in the Chilean context. Concessions are granted for an indefinite period of time, and are transferable in their entirety only with the authorization of the SSS and approval of the Ministry of Public Works. However, water companies may contract with third parties for the execution of any of the functions that fall within their concessions, without the approval of the SSS or the Ministry. These arrangements may include limited services such as meter reading; more extensive responsibility for overall management and investments; or the construction, operation and transfer of a specific component. Such PSP arrangements in water supply are being encouraged by CORFO to improve service efficiency. In addition, CORFO plans to sell shares in some regional companies and to sell completely other regional companies. In the case of a sale of assets, the concession would be transferred to the new owners.

5.15 In June 1993, ESVAL (Empresa de Obras Sanitarias de Valparaiso) entered into a contract for the operation and maintenance of water and sewerage services, and the financing and execution of an agreed investment program in a part of ESVAL's jurisdiction, the Litoral Sur, over a 35 year period. The Litoral Sur is a resort area on the Western Coast of Chile with a permanent population of 100,000 and a summer population of about 300,000. This was thus a much smaller operation than in the other three cities. While three European firms pre-qualified technically to operate the ESVAL facility, none submitted bids. A Chilean firm, Aguas Quinta Region, formed by the regional electric power company and a real estate company, submitted the only bid. Following negotiations, during which it improved its offer, Aguas Quinta Region was awarded a contract under which it will retain 95.6 percent of the tariff revenues. Consistent with the framework described above, ESVAL remains the concessionaire for the services, and SSS continues to regulate ESVAL and, indirectly, the contractor. However, SSS cannot override the conditions of the contract.

6.0 CONDITIONS OF PSP IDENTIFIED BY PRIVATE PROVIDERS

6.1 The conditions which the private firms identified have been grouped into nine categories for the purpose of exposition. While not all of the following were necessarily emphasized equally by all the firms, a broad consensus emerged on the importance of the following:

1. All terms and conditions of regulation should be specified in the contract, leaving little discretionary power to the regulating authority -- private providers are reluctant to supply services unless the key aspects of regulation including price, quantity and quality are specified in the contract document;

2. Credible procedures for the fair resolution of disagreements over contractual or regulatory matters are very important. In the absence of a trustworthy judiciary system, firms prefer access to international arbitration;
3. Technical objectives of the arrangement should be carefully specified and credible;
4. Government tariff policies should support the principle of cost recovery for water services, and tariff adjustment formulas should adequately reflect changes in costs and inflation and the exchange rate for local currency vis-a-vis a hard currency;
5. Historical collection rates should indicate the willingness of consumers to pay for services at tariffs that reflect the cost of service, and the operator must have adequate protection from non-payers, either the right to cut off non-payers or recourse to another source of payment;
6. Public works laws, contract law, and accounting practices should be reviewed and, if necessary, amended in advance to ensure that they accommodate and protect any long-term investments foreseen under BOT or concession-type arrangements;
7. Unnecessary and bureaucratic administrative requirements make the bidding process expensive and should be eliminated;
8. The size of a contract, and expected profits should be large enough to warrant the high fixed cost of bidding;
9. Education and outreach to inform consumers and secure the support of labor interests is essential.

Details of the discussions with the private firms on each of these conditions follow. Steps that host governments took, or might have taken, to mitigate barriers are also examined.

Specification of Regulatory Terms and Procedures in The Contract

6.2 One of the major barriers to PSP is uncertainty over how services will be regulated. Since most countries lack a credible track record in regulating public utilities, private providers want parameters governing price, quantity and service quality to be specified in the contract document. The private sector is wary of regulatory bodies with wide discretion over such matters.

6.3 If no independent regulatory agency exists prior to the public-private arrangement, private operators favor using the contract as the basis of regulation. Under this approach, regulatory procedures and parameters and the institutional arrangements for regulation are specified in

detail in the contract. In situations, such as in the case of Chile, where a national regulatory agency already exists prior to the contract, or where it is established concurrently with the privatization, as in the case of Buenos Aires, the power and authority of the agency with regard to the contractor needs to be articulated in the contract.

6.4 In the case of Chile, a foreign company which qualified but did not submit a bid, felt confident that the existence of SSS was not problematic as its authorities are very narrowly defined in the governing laws. Further, the powers of the SSS were also delineated in the contract. The only concern voiced in this regard was the provision that the operator could not negotiate tariffs with the SSS directly. Negotiations with the SSS would have to be carried out through ESVAL.

6.5 In the case of Buenos Aires, a member of the winning consortium felt that the delineation of authority was sufficiently clear, and that clauses in the contract that shield the operator from arbitrary decisions by public authorities and local governments, in particular, established adequate protection. Members of the consortium admitted to some uncertainty over the powers of ETOSS and the fact that it now includes officials who had not been directly involved in arranging the concession.

6.6 In the case of Caracas, although the regulatory framework was clearly specified in writing, the proposal to create a regulatory agency composed of municipal representatives lacked credibility because the local governments had never reached any agreement on the arrangement; indeed their relations were fraught with tension.

Resolution of Conflicts

6.7 Operational contracts in the water and sewerage sector often span 10 to 20 or 30 years. While significant efforts are generally made to foresee future conditions and requirements as they relate to investments or costs, forecasting 20 years in the future is difficult. Population growth, economic and demand conditions, and the evolution of environmental and health regulations may vary considerably from projections and expectations. Long-term contracts routinely include clauses allowing the parties to renegotiate terms in this event of a significant unexpected change. In the event of disagreement, arbitration in the courts or through third parties is generally foreseen. Several firms considered the use of courts or third party arbitrators as a last resort and stressed that even though efforts to account for all possible contingencies is a time consuming and difficult exercise, in many cases third parties are not credible as unbiased decisionmakers. International arbitration is often preferred to local sources. One firm was uneasy about the provision for local arbitration in Valparaiso, but in the case of Buenos Aires, confidence was expressed that Argentina's courts could be counted on to treat the concessionaire fairly.

Specification and Credibility of Technical Objectives

6.8 It was stressed that bidding documents and the subsequent contract must clearly specify

the water quality and level of service standards sought, including specification of levels of flow and acceptable levels of leakage. Wastewater goals must be similarly specified with dates by which those goals are to be obtained. Firms also stated that the amount and nature of investments required must reflect standards that can be achieved given the condition of the asset base. In the absence of clear, well-defined goals, standards, dates for goals to be reached, and evidence that the objectives are reasonable, firms stressed that they cannot make a rational decision on whether to bid, and can provide neither a credible technical nor financial offer if they do bid. Some firms interviewed had faced such a situation in Caracas, and one expressed the opinion that this had been one of the key reasons for the failure of the Caracas effort to attract responsive bids. Finally, firms supported the use of a "double envelope" method of conducting the bidding process -- with technical bids submitted and evaluated first and price bids submitted second -- as was done in Buenos Aires. This structure was felt to enhance transparency in the selection process.

6.9 Ensuring that technical objectives are clear and well specified can be facilitated by using external advisors to assist with preparation of the terms of reference. A team of accountants, lawyers, and engineers were brought together by an external consulting engineering firm which assisted the Argentineans to develop terms of reference. In Mexico City, two of the bidders provided similar services in the initial phases of developing a public-private strategy. While their role was less visible than that of the consultants in the case of Argentina, their involvement helped ensure that technical objectives were clearly stated, complete, and reasonable. Firms also stressed that the use of outside advisors streamlined and simplified the terms of reference and contract documents.

6.10 To ensure that technical objectives can be met, given the condition of the asset base, the host country should have adequate information on the existing asset base, or provide a way for bidders to compile that information. In Argentina, the public sector had expended considerable effort to learn the condition of the water supply and sanitation facilities, and all records were made available for bidders to review. Personnel also were available to answer questions regarding plant and equipment. One firm stressed that free access to any and all records, as well as staff, prior to bid submission was critical.

6.11 In Chile, bidders were given complete access to all company records, operating history, regulatory structures, and physical plant. Records were well-organized and computerized.

6.12 In Mexico City, very little was known about the asset base. In order to overcome this problem, the contract was structured so as to allow the contractors to develop the information systems and be paid on a fee-for service basis for doing so.

Tariff Policies and Adjustment Mechanisms

6.13 Several points were made on the issue of the tariffs charged for water services. One of the central points that was emphasized by the participants was the importance they placed on official commitment to the principle that water is not a free good. Chilean law was cited as an

example of such a commitment. Laws, such as those in Mexico, that prohibit cutting off service to delinquent accounts are a barrier to private sector participation, even if the host government shares the risk.

6.14 The tariff adjustment methodology should adequately reflect changes in operating costs and debt service. The firms' major concern was with changes in the exchange rate that might erode their ability to service debt. There was no consensus on the question of rate-of-return vs. price-cap approaches to tariff adjustments.

Confidence That Tariffs Will Be Paid

6.15 To take on commercial risk, firms must be confident that tariffs can be collected. In sum, firms stated that tariffs should not rise dramatically or suddenly; and the historical experience in the collection of tariffs, as well as government policies and the law, should support the operator's right to collect payment for service.

6.16 Firms expressed concern over political resistance to the tariff increases that might accompany privatization. In addition, they are well aware that the demand reductions that result from metering and tariff increases may depress revenues. All stressed the importance of phasing-in tariff increases. If dramatic increases are required to provide adequate cost recovery, a five- to ten- year transition period, during which service is improving, is desirable. Operators want to avoid having to cut-off water supply to poor households because of non payment. Subsidy policies and practices should not threaten the viability of the operator or place it in a politically difficult position. Direct subsidy programs such as that of Chile, in which subsidies for low income are paid to the operator, rather than to subsidized households, were favored. The firms did not comment on the implications of cross subsidies.

6.17 A dilemma arises when tariffs are extremely low and gradual increases will not generate adequate revenues to support a concession or operational contract. In such cases, supplementary sources of revenue are needed during the transition. This was not a problem in Buenos Aires where tariffs were about \$.40/m³ prior to the concession and, as a result of the competitive bidding process, were actually reduced. However, in Caracas, tariffs were extremely low, at about \$.04/m³. The proposed concession plan called for a gradual change in tariffs that did not reflect the investment schedule, and would have left contractors financially exposed. In this regard, the firms agreed that the use of respected external advisors was critical to creating confidence in pricing formulas and investment schedules. They compared the use of a wide range of external advisors in Buenos Aires to the extremely limited use of outside advisors in the Case of Caracas.⁵

⁵Authors' note: The dilemma which existed in Caracas is by no means unusual. Tariffs are extremely low in many places. An innovative approach to resolving this problem was designed when a private operator was awarded a ten-year lease contract in the West African country of Guinea. In that case, the foreign costs of operations have been financed on a declining basis by

6.18 The historical experience in the collection of tariffs as well as government policies and the law should support the operator's right to collect payment for services. In Argentina, officials were able to provide a reasonable historical record of tariff payment (with a collection rate of about 80 percent of those actually billed), though the billed percentage was admittedly low. But the firms also considered the collection rate in other industries, such as power, as an indication of consumer willingness to pay for services. Finally, the contractor is allowed to disconnect users who do not pay their bills. Taken together, these characteristics of the environment gave prospective operators confidence that they would be able to collect bills and would be protected in the event of non-payment.

6.19 In Chile, 98 percent of users are metered and the contractor has the right to cut-off water supply in the event of nonpayment. ESVAL also provided evidence that delinquent accounts had been disconnected in the past.

6.20 The story was quite different in Mexico City since there the billing record was not good. The three-phase contracts are designed to improve cost recovery and build confidence in the government's commitment to create commercially viable services. Phases I and II are designed to improve collection. The city government continues to collect tariffs and assume responsibility for revenue shortfalls. The contractors will install a metering and billing system that will provide clear indicators of who consumers are and how much they are consuming. This will provide prospective operators a better feel for the market and for future demand potential. The fee-for-service arrangement continues through the second phase, making it possible to gauge public response to contractor activities and the onset of metered billing for water before the contractors assume any commercial risk.

6.21 It is envisioned that the city agency responsible for water and sanitation will eventually be dependent on tariff collections for its budget, giving it a financial incentive to improve the collection rate. In anticipation of Phase III, in which the contractors will first take on commercial risk, a separate water commission, la Comisión de Agua del Distrito Federal (CADF), was established to administer water supply and sanitation services. The CADF is currently financed as an agency of the DF and it administers the four contracts for city water supply. Under Phase III, it is not currently envisioned that the four contractors will be allowed to cut-off the water supply of users who do not pay. The CADF will reserve the right to terminate water supply. In the event of non-payment, the contractor will be paid by the CADF.

an IDA credit, and debt service on preexisting loans was assumed by the State, also on a declining basis -- allowing the tariff increases to be phased-in gradually over ten years. Even so, tariffs have increased more rapidly than initially projected, due to higher than expected local inflation, while service improvements, that depend on the procurement of inputs by a State entity, have been somewhat delayed. The higher tariffs and the initiation of metered billing have led to demand reductions. From an economic point of view, demand management through tariffs that reflect the true cost of service is desirable, but uncertainty over the revenue effects of tariff increases is naturally worrisome to private operators.

Because, however, the city itself has a poor reputation for paying its bills, the DF created a visible and credible incentive scheme to ensure that the CADF will pursue rate payment once Phase III begins: the CADF's budget will be separated from the city government and the CADF will depend on payment of tariffs, sending a strong signal that the Mexicans are serious about improving collections.

Public Works Laws, Contract Laws and Accounting Conventions

6.22 Aspects of the broader legal and regulatory environment for public works may also act as significant barriers to PSP and especially private investments in water supply and sewerage.

6.23 A firm that expressed an early interest in participating in the Valparaiso concession felt that Chile's current accounting practices might have prevented adequate representation of investments made by the contractor under the sub-concession arrangement. The firm could not come to an understanding with city officials in Valparaiso and officials from ESVAL as to how its investment would be recorded on ESVAL's books, and was concerned that, in the event of an early termination of the contract, it would not be able to recoup its investment due to a lack of clarity in the way it would be recorded. Existing laws appear to be more relevant for short-term construction contracts, for which reimbursement takes place over a short period and the issue of how the investment appears on the books is irrelevant. In the case of Valparaiso, reimbursement would take place over a longer period. The firm suggested that accounting laws might need to be amended to accommodate capital investments made under longer-term operational contracts.

6.24 A similar observation was made in the case of Mexico City. The existing Mexican law created problems for all of the contractors involved. In this case there was no way to allocate R&D costs or particular overhead costs, such as computer investments for the billing system. These experiences suggest that public works laws which focus on shorter term construction contracts may be inappropriate for longer term service contracts and that public works laws and conventions should be reviewed and, if necessary, modified in advance of contract negotiations.

6.25 Tied to the problem of acknowledging a significant investment made by the contractor in a visible way on the company books, was the more general observation that an understanding of the financing constraints facing the private sector was lacking. One firm suggested that the local banks that finance the private providers be brought into the process to make clear to the host government that the contractors primarily debt finance their investments through local banks and are therefore bound by the terms and conditions of those loans. It was felt that the presence of the bankers would facilitate the negotiation process.

Administrative Barriers

6.26 Cumbersome administrative requirements for bid documentation were cited as a major barrier to conducting business in Venezuela. For example, in Venezuela, a requirement that documents be notarized by embassy officials added cost and delay to the process. While some

notarization was felt to be justified, the requirement that documents such as resumes be notarized was considered unnecessary and bureaucratic.

Contract Size

6.27 Several firms commented on the high fixed costs associated with bidding, establishing a contract, and carrying out service provision, including the costs of uprooting and transferring personnel. As a result, the overall contract must be large in order to attract private providers - both foreign and domestic. It also pointed out that the costs of negotiating a contract directly are significantly lower than those of competitive bidding and suggested smaller contracts be awarded on a negotiated basis.

6.28 In the case of Mexico City, high fixed costs partially explain why the three phases of the contract had to be linked together, so that if a firm won a general contract initially, it would be able to negotiate specific contracts for the three phases, without re-bidding each time. Had the three phases not been linked, several of the firms would not have considered bidding, since the first two phases are small fee-for service contracts of limited profitability. On the other hand, bidding for just the third phase in the absence of reliable information on the asset and user bases would have entailed too much risk. The combination of the three phases made the arrangement attractive.

Securing Public Support

6.29 The four contractors in Mexico City realized after they signed the contracts that they would need to engage in an aggressive public relations exercise to educate the public about the social and economic importance of water, water conservation and contractor activities, such as meter installation and bill distribution which require door-to-door visits. Since the contractors' budgets did not include funds for public outreach activities, the four contractors jointly established the Fundación para la Conservación del Agua en Mexico, a non-profit water conservation fund, to pursue these public relations activities.

6.30 Gaining the support of labor groups may be equally important. The involvement of labor representatives in preparation was a key feature of the arrangement in Buenos Aires. Initially, the government and the union agreed to a total of about 1800 lay-offs. Following award of the contract, the concessionaire established a good working relationship with the union and negotiated further reductions in return for improvements in conditions of employment for those who were retained. As a result, the original workforce of 8000 has been reduced to 4500. All those laid off have received severance benefits.

7.0 HOST COUNTRY RESPONSES

7.1 The interviews with public officials in Argentina, Chile and Mexico provided a better understanding of the bidding processes and the contracts. In some instances regulatory and

government officials expressed views that were contrary to those of the private company representatives. These are summarized below.

Chile

7.2 When asked why only one firm submitted a bid for the operation of the system officials of ESVAL and the SSS suggested that the other bidders saw legal problems with the regulatory structure, and that most of the issues could have been resolved with better communication. ESVAL added that in the initial concession announcement certain procedures were not acceptable to bidders. For example, initially, the contractor was to collect all revenues and turn them over to ESVAL, which would then reimburse a percentage to the contractor. This was changed in the course of the competition so that the contractor could keep the revenues and turn over to ESVAL its required percentage. ESVAL suggested that perhaps the foreign bidders were not fully informed of the changes and were therefore unaware that their objections had been resolved. Officials from CORFO agreed and attributed this poor communication to the fact that some bidders did not maintain a local office. The issue of "who reimburses whom", was not mentioned by the private providers as a barrier, either in Chile or in Mexico City, where this issue will need to be dealt with under Phase III.

7.3 ESVAL recognized that there had been a problem with the way the required investment would be recorded, and that this had been one reason bidders had withdrawn. In light of this, Chilean officials are considering a different strategy for attracting PSP in a second facility on the north coast where more substantial investments are needed. In this case they believe a direct sale of the assets to the private sector would overcome the problem.

7.4 CORFO and the SSS raised one issue not mentioned by the European firms. It was suggested that the SSS is understaffed and does not currently have the capacity to review investment plans and set tariffs throughout the country and that this could hamper efforts to introduce private sector participation.

Mexico

7.5 In its consideration of the issue of political resistance, the CADF focused on the labor force, both civil servant administrators and the unionized workers. The CADF had thought labor might resist the change but determined it was not a barrier. While in this respect, the contractors and the CADF are in agreement, the contractors recognized that there is a difference between education/outreach activities aimed at the general public and actions that could be taken to gain acceptance by union groups. The contractors determined that education/outreach activities are, in fact, necessary to ensure the success of the venture. The CADF stated that the goal of the contract was to preserve and protect the public interest even though they did not participate in the process of contract negotiations. There is a distinct difference in the two groups in how they view the role of the consumer -- it appears that the CADF felt that the intention to protect the public was sufficient, and did not consider education/outreach activities necessary.

8.0 CONCLUSIONS: AN AGENDA FOR THE WORLD BANK

8.1 The findings of this study demonstrate that the World Bank could play an important role in assisting governments to prepare for and attract PSP to the water and sewerage sectors. Some of the areas in which the Bank's assistance is needed are those in which a reputation for effectiveness has been established either through direct policy dialog or through Bank-financed technical assistance. These include:

1. Promotion of the principles of commercial viability through adequate cost recovery;
2. Preparation of background documents and studies of both technical and market conditions as a basis for the bidding process;
3. Elaboration of feasible coverage and service quality standards to be achieved;
4. Study of the legal framework to identify areas that need revision; and
5. Structuring of the contract itself and of the selection process to ensure transparency and efficiency.

Additional areas in the World Bank is not currently considered a leader but in which it could usefully strengthen its own capacity and stimulate the development and dissemination of new approaches include:

1. Judicial reform and other mechanisms for promoting the fair enforcement of contracts, taking into account the political and cultural context of each country;
2. The development of credible regulatory approaches which take into account the political and cultural realities of each country;
3. The development of mechanisms for reducing the cost of bidding for PSP contracts;
4. Consumer representation and involvement in the processes of defining standards and regulating services.

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