



UNDP-World Bank
**Water and
Sanitation
Program**

Institutional Development of the Urban Water and Sanitation Sector in Chile

by Raquel Alfaro

These Urban Environmental Sanitation Working Papers have not been formally published and this is an opportunity to share this information more widely to:

- stimulate discussion and to broaden thinking within the sector, and in particular, to encourage dialogue within and among our clients in developing countries; and
- build more awareness of the Program among UES clients.

Working Paper produced in November 1997

Bringing Optimal Water and Sanitation Services to the Poor
Three Essays on the Experiences of EMOS
(The Municipal Works Company of Santiago, Chile)

In these three essays Raquel Alfaro, Civil Engineer and Master in Production Management of the University of Strathclyde, Scotland, recounts the successful policies and practices which led EMOS, Municipal Sanitation Company of Santiago, Chile to its position as a model among Latin American utilities. At the same time, Alfaro shares her personal vision of what a public utility should be - at once an enterprise guided by commercial principles of efficiency and a spirit of social obligation. Given her professional history with EMOS, of which she was General Manager from 1990 until her retirement in 1996, Alfaro knows very well the limits and possibilities of the utility companies. Her confidence in the capacity of other companies to match the achievements of EMOS should be encouraging to all readers interested in the water and sanitation sector.

The first essay: *Linkages between Municipalities and Utilities: An Experience in Overcoming Urban Poverty* explores the responsibilities of the utility companies and those of the local governments in extending services to the poor. Alfaro cites the reasons frequently given to explain why the poor are unserved that poor countries lack capital to invest in needed water and sanitation infrastructure, the poor

themselves live in circumstances which increase costs beyond their already limited capacity to pay tariffs. For a utility company, however, the right to use resources which are public goods also brings with it an obligation to meet the needs of all citizens. It should also seek to maximize its clientele as a matter of good business. When families cannot meet the costs of service, it is the responsibility of local government, not the utility, to make up the difference.

The second essay, *Institutional Development of the Water and Sanitation Sector in Chile*, traces the history of legal reforms which led to the present institutional environment. It emphasizes the importance of regulation, but also of liberating tariffs and links key reforms to increased service coverage and improved utility performance. In 1989 the General Law on Sanitation Services put public utilities on a footing similar to private ones, obliging them to organize as equity corporations and to bid for concessions from local governments. The Law and Regulations of Tariffs, passed in 1988 and 89 respectively establishes a five year period for applying and reviewing tariffs which must cover costs. The Superintendency of Sanitation Services, created in 1989 establishes an overall regulatory system.

The third essay, *Reaching the Poor with Water and Sanitation Infrastructure - Key Factors Not to Forget*, challenges the belief that the total cost of services is too high for the poor to pay arguing that good management, in particular reduction of losses, increasing the number of connections and maximizing efficiencies through use of a single operating system, can reduce costs and make full service effective.

Tova Maria Solo
UNDP/World Bank Water and Sanitation Program
July, 1997

Institutional Development Of The Urban Water And Sanitation Sector In Chile

Chilean Urban Water and Sanitation sector have been in continuous development since the middle of the 19th century. That is, when the first water and sewerage works started being built in the main cities of the country. The last two major institutional changes started at the end of 1970 decade and a third one is being foreseen shortly.

1. The situation of the urban water and sanitation sector at the end of the 1970 decade.

By the end of the 70th, a large number of public services delivered drinking water or collected wastewater in the main cities of Chile, whose urban population amounted to some 8.5 million people. The urban population of Santiago, the capital city, and the population of the environs' villages, was about 4 million people. This population was been served mainly, by a semiautonomous public drinking water enterprise, Empresa de Agua Potable de Santiago (EAPS). There was also a public sewerage service, Servicio de Alcantarillado de Santiago, and other small drinking water public services. A private company delivered drinking water and collected wastewater in the upper part of the city. The population served by this company was of some 250,000 people.

Supervision and control of the services were also under different government bodies that were responsible for water quality control, technical supervision of the services, and tariffs setting. Chilean quality standards for drinking water followed European and American standards and were closely controlled by the Ministry of Health. Thus, the quality of the water was considered fairly good, while the urban water coverage (table 1) was rather high for a developing country. EAPS, the main water company, had good qualified staff and a good level of technical and administration development. For instance, water meters coverage was near 100 %.

However, in all cities, including Santiago, sewerage coverage was low. In addition, there was no wastewater treatment and safe disposal of the sewage collected. The rate of enteric diseases (typhoid, hepatitis) all over the country was very high. This rate was even higher in the Metropolitan Region than in

other regions. This could be attributed to poor hygiene practices due to lack of sewerage in many crowded neighborhoods. Yet, it could be attributed also to untreated sewage discharges to natural water courses crossing the city and in turn feeding irrigation canals.

On the other hand, tariffs level was kept low. Thus, public water companies and services were kept financially supported by the government. Sewerage tariffs' level was extremely low. Companies and services hardly covered water and sewerage operational costs, and they do not covered capital cost at all. Government funds went to assist operational costs of some of the services, and to finance new water and sewerage infrastructure of nearly all of them. There was an annual increase of coverage because the bulk infrastructure was there, yet the annual amount of the investments decreased and systems become overcharged. In addition, the companies did not have funds to proper maintenance, rehabilitation and upgrading of aging systems.

Table 1 shows coverage and annual investment for the period 1965- 1980

**Table 1
National Urban Coverage and Annual Investments
1965- 1980**

Year	Water Annual %	Sewerage %	Investment million dollars
1965	53.5	25.4	80
1970	66.5	31.1	61
1975	77.4	43.5	58
1980	91.4	67.4	40

Source: Memoria Anual de la Superintendencia de Servicios Sanitarios, 1995
(Superintendency of Sanitary Services, Annual Report, 1995)

2. First Institutional Reform

The first important institutional reform was made by the year 1977. It had as a main objective the integration in one hand of water and sanitation activities to take advantage of scale economies and to optimize and enhance the systems. The new entities were designed to be working on a regional basis. Two semi-autonomous utilities were created, EMOS in the metropolitan region and ESVAL in the 5th region. Eleven regional services were also established, one in each of the remaining 11 regions of the country. EMOS integrated EAPS, Empresa de Alcantarillado de Santiago and the other public water services in the region.

A regulator body was instituted, SENDOS (Servicio Nacional de Obras Sanitarias), as a main division of the Ministry for Public Works. SENDOS was made responsible for central planning, financing and administration of the regional services and became the regulator and controller of services and utilities. SENDOS made tariff's proposal for being presented for approval to the Ministry of Economy.

However, tariffs' level was kept low in the regions and the regional services continued receiving financial assistance from central government. EMOS and ESVAL benefited from water and sewerage integration, had some tariff increases and started to use its own financial resources for investments. In 1980, EMOS received a 26 million dollar's loan from the World Bank to upgrade the water system according with a 70 million dollar's investment plan. This plan included the first master plan for wastewater treatment and safe disposal in the metropolitan region. It also included a master plan to extend the sewerage system. In 1986 EMOS received a 60 million dollar's second loan from the World Bank, to be applied in a 150 million dollar's new investment plan, that included the basic works for wastewater treatment.

By the same period SENDOS received a loan from IDB to upgrade regional services.

The missions of the World Bank had a positive influence in the already qualified staff of EMOS that applied the policies and recommendations of the Bank's officials. Operational activities were reinforced with new technologies and procedures. Unaccounted for water, for instance, started as a routine activity, while Planning and Financial activities were strengthened because of the Bank's periodical assessments. By the same time EMOS started to contract out not only designs and construction of

infrastructure works but also some maintenance activities. For instance, network maintenance and replacement, metering and bill's distribution, connection's maintenance and replacement, were contracted externally. New contractors and consultants brought new technologies and external developments to the utility. A computerized simulation model of EMOS's water system was made by French and Spanish consultants associated with Chilean consultants. A master plan for maintenance, repair, rehabilitation and replacement of EMOS water distribution system was made by the British Water Research Center associated with Chilean consultants.

Coverage continued increasing throughout the country. However, the low level of tariffs still did not allow all services and utilities to grow in terms of maintenance of the new systems and in terms of maintenance, rehabilitation and replacement of old systems. This was an important constraint for efficient service delivery. There also was no fund allocation to reinforcement of the storage infrastructure, in order to cope with an increasing scarcity of fresh water as cities and population grew. Moreover, the capacity of the water systems to face droughts, big emergencies or not expected local demand increases, was very weak. In the regions, SENDOS's responsibility as a regulator body was mixed with its responsibility as a regional operator.

Table 2 shows national urban coverage and annual investment for the period 1980-1990.

Table 2
National Urban Water and Sewerage
Coverage and Annual Investment
1980-1990

Year	Water %	Sewerage %	Annual Investment million dollars
1980	91.4	67.4	40
1985	95.2	75.1	79
1990	97.4	81.8	65

Source: Memoria Anual de la Superintendencia de Servicios Sanitarios, 1995.

3. Second Reform

By the end of the 80th decade (1988- 1989) a second important institutional reform was applied to the Chilean water and sanitation sector. Its main objective was to give financial stability to water and sanitation activities, while reinforcing the regulatory capacity of the government. A set of law and regulations were passed and a regulatory body, totally separated from operational activities, was created. The reform also included laws that allowed the selling of EMOS and ESVL to private sector. A summary of the new laws is given below :

Ley General de Servicios Sanitarios, 1989 (General law for sanitary services)

Its main features were:

* The law establishes the concession's system. That is, a right granted by the government to public or private companies, to perform water and sanitation activities for an indefinite period of time. Nevertheless the concession right can be lapsed if the concessionaire incurred in the faults contemplated in the law. Four types of concessions were granted: water production; water distribution into a geographical zone; wastewater collection into the same geographical zone (although this concession can be granted to a different concessionaire) and wastewater treatment and safe disposal . Concessions have to be applied for, and are granted after a bidding procedure. A transitory article of the law granted concessions to the companies and services that were performing or that had on going projects for performing water and sanitation activities. Concessions' rights can be sold and transferred.

* Concessionaires have to organize themselves as equity societies. They must have and apply an approved development plan, must charge approved tariffs and meet quality standards and norms. Concessions for water distribution and sewerage collection implies obligatory service within the geographical zone.

Ley de Tarifas , 1988 y Reglamento, 1989. (Tariffs law and regulation of the law)

* Tariffs are set for a period of five years, with adjustments for inflation and other variation of macro-economic indicators, during this period. Charges are calculated according to formulae which follow "long run marginal cost methodology". Tariffs are adjusted to financial viability , that is to cover the companies operational and capital cost during a period of at least 15 years ahead, taking into account a capital cost of at least 7 % (2 higher points than the normal interest rate in credit instrument investments). Parameter and variable values considered in the calculation are defined by the regulator for a "model of efficiency" theoretical enterprise. The regulator takes into account the different conditions of the services production and delivery, and the development plan of each company.

* Tariff structure consists of a fixed charge and a variable charge for water and the same for sewerage. Water charges have an overprice for over consumption during the peak of demand (summer period). Fixed charges are intended to cover connections and secondary network maintenance costs; and billing and money collection costs. These costs are considered independent of consumption in the short and in the long term. Variable charges are intended to cover all current and capital cost considered variable in the short and in the long term. (Fixed charges represent about 20 % of a typical water and sewerage monthly bill)

* There are no gratuities, nor differences in prices for different type of client. The existing cross subsidy for the first 10 m3 of monthly consumption was eliminated and replaced by a government subsidy targeted in low income families. Companies make a discount to eligible customers, to be reimbursed by municipalities with the funds provided by central government. Municipality qualifies the law income situation.

Ley que crea la Superintendencia de Servicios Sanitarios (SISS), 1989 (Law that creates the Superintendency of Sanitary Services,SISS).

The main responsibilities given by this law to the regulator body are:

- * The implementation and supervision of the concessions system, including concession transfers, bidding and lapsing.
- * The implementation and supervision of the tariff system, including tariff's setting and control.
- * The setting of technical standards for design, construction and exploitation of water and sanitation works and control of standard's compliance.

LEYES QUE CREAN LAS SOCIEDADES ANONIMAS (S. A) EMOS, ESVAL Y 11 EMPRESAS REGIONALES (Laws that create EMOS S.A., ESVAL S.A and 11 regional equity companies)

These laws created public corporate equity companies. The laws that created EMOS and ESVAL did not set limit to the sale of the shares of these companies. The laws that created the other regional public companies established that at least 51 % of the shares should be kept in the government's hands.

The democratic government in power in 1990 did not sell the public water and sanitation utilities. They were transformed in commercial oriented public corporations affiliated to CORFO (government body) to whom the majority of the shares were entrusted. The companies follow regulations applied to private companies, although their annual budget has to be approved by the Finance Ministry.

With the new orientation and the funds coming from fair tariffs, public companies started a period of enhancement and high investments. The first five year tariff's period began in 1990, and considered a gradual annual raise until to reach the legal limit. This meant, on average, a total increase of about 70 % in real terms, that is without taking into account adjustments for inflation. The second five year tariff's period started in 1995. The average tariff's raise was now about 6 % and was to be maintained until 1999. EMOS in its main system had a water tariff

reduction of about 2 %. In 1992 a revision was made in the tariff subsidy system, to facilitate accessibility and to take into account regional differences in tariffs and in average family income. In 1995, central government paid 23 million dollars on this subsidy, but now the government had not need to give financial assistance to any public company. On the contrary, some of the companies as EMOS, were paying shares' dividend to the government. The growth of public utilities infrastructure was outstanding. New tanks, mains, collectors, water treatment plants, etc., were built in every region. Urban water and sewerage coverage reached the highest levels of Latin America. EMOS, the main utility put special emphasis in water conservation and water resource management to cope with the demand increase. The demand for water and sanitation was increasing as a result of urban developments in the metropolitan region, and because of the extension of water and sanitation systems to poor neighborhoods. EMOS activities for unaccounted for water were reinforced by macrometering, telemetering and telecontrol in strategic points of the water production and distribution system. Rehabilitation and replacement of deteriorated installations, contributed to the reduction of unaccounted for water.

The first works for wastewater treatment and safe disposal started to be built and operated by the beginning of the 1990th.. EMOS and ESVAL initiated the construction of wastewater discharges interceptors (big collectors). In 1992 the first wastewater treatment plant, a pilot non conventional plant, was built in Santiago. The definitive plan for wastewater treatment in the metropolitan region was completed in 1994. In 1995 the decision of building three large plants was taken, to reach a sewage treatment coverage of about 70 % within 15 years. In other regions, wastewater collectors, non conventional wastewater treatment plans and marine out-falls for safe sewage disposal were designed, and started to be built and to be operated. Cholera was controlled in Chile as a result of emergency measures taken by the Ministry of Health. Yet, it is important to take into account the rise in sewerage coverage and the initiation of the basic works for wastewater treatment and safe disposal in the metropolitan region and in other regions. Other waterborne diseases, as typhoid, decreased from 6,700 cases in the year 1989 to 1,400 in the year 1995. The decrease of typhoid cases was even more important in the metropolitan region, from 4,100 cases in the year 1989 to 390 cases in the year 1995.

Public companies started also a new style of work. Long term regular planning for infrastructure development, working in a coordinated way with municipalities, communities and government bodies was a new managerial feature applied for EMOS and other companies. Comprehensive approach to management and participant and multi-disciplinary work was also part of the new style of work. Water conservation should be understood not only by the company's staff but also by clients, particularly when tariffs were rising. Public companies led by EMOS began a full campaign for client education in water conservation and appropriate utilization of water and sewerage infrastructure. Public companies also oriented low income families towards government subsidy, and helped municipalities in the administrative tasks of its implementation. Collective bargaining was now an obligation imposed by the new legal status of the companies. To develop new systems for human resource management, motivation and compensation, was a requisite that the new companies had to face.

New tariffs and increases in efficiency allow many of the companies to elevate its internal rate of return while performing new activities, intensifying others, taking new responsibilities and elevating wages and salaries to market's price. The average profit after taxes of these companies, referred to fixed assets, rose from a negative value of (0.76) % in 1989 to a positive value of 6.3 % in 1995 (data from SISS). EMOS raised its rate of return, from 5.7 % in 1989, to 11.0 % in 1995. It is important to point out that according to international standards the level of EMOS's tariffs is fairly low (0.40 US\$ /m³, water and sewerage). Because of its sound financial situation, EMOS was able to treble its annual investments, to pay dividends of shares to the government its main shareholder, and to paid in advance the first loan with the World Bank. . EMOS also decided not to withdraw entirely the second loan with the World Bank.

BOOT contracts were thought to be awarded to the private sector for building and operating the future wastewater treatment plants.

Table 3 shows coverage and annual investments for the period 1990-1995. In this table it is included wastewater coverage in 1989 and in 1995.

Table 3
National Water and Sanitation Urban
Coverage and Annual Investments
1990- 1995

Year	Water %	Sewerage %	Wastewater treatment	Investments million dollars
1990	97.4	81.8	8.0 (1989)	65
1991	97.6	83.6		107
1992	97.5	84.7		151
1993	98.0	86.4		182
1994	98.5	87.9		195
1995	98.6	89.2	14.0*	204

Source: Memoria Anual SISS, 1995 (Annual Report SISS, 1995)

* Include marine out-falls.

Third Institutional Reform.

Although most of these public companies are well run, some of them lack business administration capacity, and technological development. On the other hand, large infrastructure investments, yearly increasing, are required. The main investments are required for providing service to new urban population, for upgrading deteriorated systems, for building wastewater treatment plants, for developing new raw water sources, etc. It is required also, new procedures and methods, and new policies and organizational developments. Competition normally leads private companies to constant growth to survive in an always changing business environment. Public companies lack enough flexibility to face a continuous situation of advancement and renewal. Political interference could be also a menace to modern management of public companies. Thus, the sale of the public water and sanitation companies to the private sector, could be an advisable government policy..

By the middle of 1995, the government presented the Congress a proposal of modification of the current law. The government conditioned the sale of public companies to the pass of the new law.

The main aims of the proposal were: to join in one legal document the different laws in action; to prevent power concentration (majority of shares of many sector companies in one hand); to ensure that urban development is supported by water and sanitation infrastructure; and to protect and introduce some forms of competitiveness. The proposal has had many changes as a result of the discussion between the government and the Congress. The government and the Congress have introduced many new articles. The main features of the new law, after the Senate amendments are:

* SISS is being given the power to extend concession zones in order to make them coherent with government plans for urban development. (Development plan, and tariffs if required, would be modified)

* Public bidding is introduced as an obligation for contracting acquisition of goods and services over 150,000 dollars value.

* Power concentration is restricted by limiting the number of shares in one hand according to the quantity and size of the companies.

* Production concessionaires are being given the right to use, with due compensations, the water transport system of a different distribution concessionaire. They are also being given the right to build its own system to transport water to large final consumers. (That is, introducing in the water sector the multicarrier concept)

The main reforms presented by the government and rejected by the Senate are:

* To keep in the hands of the government, at least 35 % of the companies' shares.

* To transfer public companies' water rights to CORFO, to be administrated for this entity.

The law project has to follow the constitutional procedures that consider new discussion in the chamber of Deputies and the Senate. The government can also insist in its rejected proposals.

Summing up, the third institutional reform is being aimed to ensure the sustainability of a business model that has proved successful in the Chilean sanitary sector. Going further to corporate and commercial public companies, the government is considering its privatization. However before that, the government wants to take all the measures to ensure that this new reform allows the country to have its entire urban population served by sound and efficient water and sanitation companies.

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1990- may 1996)
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Institutional Development Of The Urban Water And Sanitation Sector In Chile

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Its main features were:

* The law establishes the concessions system. That is, a right granted by the government to public or private companies, to perform water and sanitation activities for an indefinite period of time. Nevertheless the concession right can be lapsed if the concessionaire incurred in the faults contemplated in the law. Four types of concessions were granted: water production; water distribution into a geographical zone; wastewater collection into the same geographical zone (although this concession can be granted to a different concessionaire) and wastewater treatment and safe disposal . Concessions have to be applied for, and are granted after a bidding procedure. A transitory article of the law granted concessions to the companies and services that were performing or that had on going projects for performing water and sanitation activities. Concessions' rights can be sold and transferred.

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- * The implementation and supervision of the tariff system, including tariffs setting and control.
- * The setting of technical standards for design, construction and exploitation of water and sanitation works and control of standards compliance.

LEYES QUE CREAN LAS SOCIEDADES ANONIMAS (S. A) EMOS, ESVAL Y 11 EMPRESAS REGIONALES (Laws that create EMOS S.A., ESVAL S.A and 11 regional equity companies)

These laws created public corporate equity companies. The laws that created EMOS and ESVAL did not set limit to the sale of the shares of these companies. The laws that created the other regional public companies established that at least 51 % of the shares should be kept in the government's hands.

The democratic government in power in 1990 did not sell the public water and sanitation utilities. They were transformed in commercial oriented public corporations affiliated to CORFO (government body) to whom the majority of the shares were entrusted. The companies follow regulations applied to private companies, although their annual budget has to be approved by the Finance Ministry.

With the new orientation and the funds coming from fair tariffs, public companies started a period of enhancement and high investments. The first five year tariffs period began in 1990, and considered a gradual annual raise until to reach the legal limit. This meant, on average, a total increase of about 70 % in real terms, that is without taking into account adjustments for inflation. The second five year tariff's period started in 1995. The average tariff raise was now about 6 % and was to be maintained until

1999. EMOS in its main system had a water tariff reduction of about 2 %. In 1992 a revision was made in the tariff subsidy system, to facilitate accessibility and to take into account regional differences in tariffs and in average family income. In 1995, central government paid 23 million dollars on this subsidy, but now the government had not need to give financial assistance to any public company. On the contrary, some of the companies as EMOS, were paying shares dividend to the government. The growth of public utilities infrastructure was outstanding. New tanks, mains, collectors, water treatment plants, etc., were built in every region. Urban water and sewerage coverage reached the highest levels of Latin America. EMOS, the main utility put special emphasis in water conservation and water resource management to cope with the demand increase. The demand for water and sanitation was increasing as a result of urban developments in the metropolitan region, and because of the extension of water and sanitation systems to poor neighborhoods. EMOS activities for unaccounted for water were reinforced by macrometering, telemetering and telecontrol in strategic points of the water production and distribution system. Rehabilitation and replacement of deteriorated installations, contributed to the reduction of unaccounted for water.

The first works for wastewater treatment and safe disposal started to be built and operated by the beginning of the 1990th.. EMOS and ESVAL initiated the construction of wastewater discharges interceptors (big collectors). In 1992 the first wastewater treatment plant, a pilot non conventional plant, was built in Santiago. The definitive plan for wastewater treatment in the metropolitan region was completed in 1994. In 1995 the decision of building three large plants was taken, to reach a sewage treatment coverage of about 70 % within 15 years. In other regions, wastewater collectors, non conventional wastewater treatment plans and marine out-falls for safe sewage disposal were designed, and started to be built and to be operated. Cholera was controlled in Chile as a result of emergency measures taken by the Ministry of Health. Yet, it is important to take into account the rise in sewerage coverage and the initiation of the basic works for wastewater treatment and safe disposal in the metropolitan region and in other regions. Other waterborne diseases, as typhoid, decreased from 6,700 cases in the year 1989 to 1,400 in the year 1995. The decrease of typhoid cases was even more important in the metropolitan

region, from 4,100 cases in the year 1989 to 390 cases in the year 1995.

Public companies started also a new style of work. Long term regular planning for infrastructure development, working in a coordinated way with municipalities, communities and government bodies was a new managerial feature applied for EMOS and other companies. Comprehensive approach to management and participant and multi-disciplinary work was also part of the new style of work. Water conservation should be understood not only by the company's staff but also by clients, particularly when tariffs were rising. Public companies led by EMOS began a full campaign for client education in water conservation and appropriate utilization of water and sewerage infrastructure. Public companies also oriented low income families towards government subsidy, and helped municipalities in the administrative tasks of its implementation. Collective bargaining was now an obligation imposed by the new legal status of the companies. To develop new systems for human resource management, motivation and compensation, was a requisite that the new companies had to face.

New tariffs and increases in efficiency allow many of the companies to elevate its internal rate of return while performing new activities, intensifying others, taking new responsibilities and elevating wages and salaries to market price. The average profit after taxes of these companies, referred to fixed assets, rose from a negative value of (0.76) % in 1989 to a positive value of 6.3 % in 1995 (data from SISS). EMOS raised its rate of return, from 5.7 % in 1989, to 11.0 % in 1995. It is important to point out that according to international standards the level of EMOS tariffs is fairly low (0.40 US\$ /m³, water and sewerage). Because of its sound financial situation, EMOS was able to treble its annual investments, to pay dividends of shares to the government its main shareholder, and to paid in advance the first loan with the World Bank. EMOS also decided not to withdraw entirely the second loan with the World Bank.

BOOT contracts were thought to be awarded to the private sector for building and operating the future wastewater treatment plants.

Table 3 shows coverage and annual investments for the period 1990-1995. In this table it is included wastewater coverage in 1989 and in 1995.

Table 3
National Water and Sanitation Urban
Coverage and Annual Investments
1990- 1995

Year	Water %	Sewerage %	Wastewater treatment	Investments million dollars
1990	97.4	81.8	8.0 (1989)	65
1991	97.6	83.6		107
1992	97.5	84.7		151
1993	98.0	86.4		182
1994	98.5	87.9		195
1995	98.6	89.2	14.0*	204

Source: Memoria Anual SISS, 1995 (Annual Report SISS, 1995)

* Include marine out-falls.

Third Institutional Reform.

Although most of these public companies are well run, some of them lack business administration capacity, and technological development. On the other hand, large infrastructure investments, yearly increasing, are required. The main investments are required for providing service to new urban population, for upgrading deteriorated systems, for building wastewater treatment plants, for developing new raw water sources, etc. It is required also, new procedures and methods, and new policies and organizational developments. Competition normally leads private companies to constant growth to survive in an always changing business environment. Public companies lack enough flexibility to face a continuous situation of advancement and renewal. Political interference could be also a menace to modern management of public companies. Thus, the sale of the public water and sanitation companies to the private sector, could be an advisable government policy..

By the middle of 1995, the government presented the Congress a proposal of modification of the current law. The government conditioned the sale of public companies to the pass of the new law.

The main aims of the proposal were: to join in one legal document the different laws in action; to prevent power concentration (majority of shares of many sector companies in one hand); to ensure that urban development is supported by water and sanitation infrastructure; and to protect and introduce some forms of competitiveness. The proposal has had many changes as a result of the discussion between the government and the Congress. The government and the Congress have introduced many new articles. The main features of the new law, after the Senate amendments are:

* SISS is being given the power to extend concession zones in order to make them coherent with government plans for urban development. (Development plan, and tariffs if required, would be modified)

* Public bidding is introduced as an obligation for contracting acquisition of goods and services over 150,000 dollars value.

* Power concentration is restricted by limiting the number of shares in one hand according to the quantity and size of the companies.

* Production concessionaires are being given the right to use, with due compensations, the water transport system of a different distribution concessionaire. They are also being given the right to build its own system to transport water to large final consumers. (That is, introducing in the water sector the multicarrier concept)

The main reforms presented by the government and rejected by the Senate are:

* To keep in the hands of the government, at least 35 % of the companies shares.

* To transfer public companies water rights to CORFO, to be administrated for this entity.

The law project has to follow the constitutional procedures that consider new discussion in the chamber of Deputies and the Senate. The government can also insist in its rejected proposals.

Summing up, the third institutional reform is being aimed to ensure the sustainability of a business model that has proved successful in the Chilean sanitary sector. Going further to corporate and commercial public companies, the government is considering its privatization. However before that, the government wants to take all the measures to ensure that this new reform allows the country to have its entire urban population served by sound and efficient water and sanitation companies.

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