

# Network for Cooperation in Integrated Water Resource Management for Sustainable Development in Latin America and the Caribbean



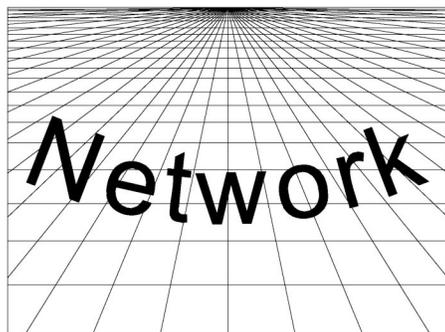
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The issue of planning is both crucial and complex, as it involves striking a balance between the security of the water rights of economic agents (so vital for promoting investment) and the *ex-ante*, and possibly *ex-post*, controls of private activity. Furthermore, if planning is not flexible, sticking to rigid plans in a global economy and amid changing conditions may lead to costly mistakes. Planning involves answering questions about: the resources subject to State control; how to manage quality and quantity; the extent of public control over water; the role of water planning and how this fits in with regional planning; and what process can facilitate a constant and dynamic review of plans.



Planning implies the need to integrate quality and quantity in water management, as well as surface water and groundwater, plus water supply and demand. Planning also implies supervising forms of use, including the cancellation of permits if there is inefficient use. In addition, planning includes identifying and correlating uses and extraction, so as to preserve sources, minimum flows and ecological demands.

Water rights must be able to be adjusted on the basis of planning objectives. Although the State may not functionally destroy rights, it can adjust them within certain limits, in accordance with requirements relating to the environment or the best use of water resources. In some systems, water-use permits are not permanent but rather are granted for a fixed period, which means they can be adjusted following a reasonable time for recovery of investment.

Planning also implies preparing emergency plans for extreme natural phenomena and disasters caused by humans. It includes the classification of users and the setting of priorities, based on the public interest. Some systems provide for analyses of projects and uses according to environmental, economic and social impact, as well as auditing, system rehabilitation, conservation, moratoria on the granting of new permits and possible suspension of certain uses.

Other important elements include the creation of specially managed areas and protected natural areas, establishing and maintaining ecological or minimum flows and managing competitive demands in a coordinated way. Certain systems demand that plans be drawn up before any substantial change to bodies of water and their banks can be approved.

Administrative fragmentation works against planning. Fragmentation often results from dividing water administration by different water uses, different manifestations of water in the hydrological cycle, and among the agencies involved in planning and day-to-day management. If administrative powers are not integrated, planning often leads to wasted resources. Many systems therefore have their plans approved in the form of a law, and the need to link them to the permit award system is also stressed.

There are some fundamental elements of planning processes. Although they offer no guarantee of success, planning is meaningless without them:

- Defining economic, environmental and social objectives.
- Formulating indicators to assess how they tie in with each plan, and performance thresholds under which a plan cannot be approved.
- Knowing how much water is available, who uses it, where and how. This implies the existence of administrative institutions, water rights, records, registers, and allocation and dispute settlement systems.

- Knowledge of the economics of water and its services to make the best use of the economies of scale and scope, and to achieve equity through efficiency.

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In this way, planning can begin to build the foundations of an effective water resources management system.



The ECLAC Natural Resources and Infrastructure Division has published a document entitled “*Servicios de agua potable*”

**y alcantarillado en la ciudad de Buenos Aires, Argentina: factores determinantes de la sustentabilidad y el desempeño**” (*Drinking water supply and sewerage services in the city of Buenos Aires, Argentina: determining factors of sustainability and performance*) (LC/L.2751-P, May 2007, *Natural Resources and Infrastructure Series* N° 126) by María Begoña Ordoqui Urcelay (available in Spanish only). The analysis of the experience of providing drinking water supply and sewerage services in the Buenos Aires metropolitan area, Argentina, is interesting because it offers lessons for the following two reasons:

- Deficient management of service provision by the State-owned enterprise made it easier to justify the process of sectoral transformation and privatization, which was characterized by its rapid pace and large scale.
- The performance of the private company was marked by breaches of contract, constant renegotiations, tariff increases and regulatory disputes, which eventually resulted in termination of the concession contract.

The case is therefore an illustrative example of sustainability problems of drinking water supply and sewerage services, when provided both by public-sector agencies and private companies.

The analysis of the conditions in which the drinking water supply and sewerage services were provided in the metropolitan area of Buenos Aires over the last 25 years makes it possible to identify the main factors that have affected the performance of service providers. The period under consideration covers two models that differ mainly in the ownership of the service providers. Between 1980 and 1992, services were provided by the State-owned enterprise, National Sanitation Works (OSN), while between 1993 and 2005, they were provided by a private company, Aguas Argentinas. The results have not always been the direct responsibility of the service providers, and the aim of the study has been to identify endogenous and exogenous factors that have affected their performance.

In March 2006, the Government of Argentina terminated the contract of Aguas Argentinas and transferred the operation to a State-controlled corporation. This heralds a new phase in how drinking water supply and sewerage services are organized in the metropolitan area of Buenos Aires, and a new regulatory and institutional framework will be created for that purpose. All those concerned, and particularly the population of areas with no coverage or low-quality services, hope that the lessons of the past ensure that the problems of providing drinking water supply and sewerage services in the Buenos Aires

metropolitan area can be solved equitably and efficiently.

This experience should also be examined to extract lessons on improving public policies in countries seeking solutions to deficient services. In this context, the analysis carried out has led to the conclusions and recommendations detailed below. This edition focuses on factors exogenous to the drinking water supply and sanitation sector and considers the determining factors of economic, social and environmental unsustainability (and sustainability) of providing services in the metropolitan area of Buenos Aires, in a way that can be applied to other countries of the region. Endogenous factors will be discussed in the next edition.

As part of the analysis, the following exogenous factors were identified as impacting the provision of drinking water supply and sewerage services in the metropolitan area of Buenos Aires:

- the macroeconomic context;
- the national investment policy for that sector;
- poverty and ability to pay;
- the quality of institutions;
- international arbitration; and
- the change of corporate strategy by the Suez Group.

Exogenous factors are, by their very nature, impossible to control directly, and the actors of the drinking water supply and sanitation sector are passively subjected to the conditions and decisions of the wider context. However, in the areas of policymaking and institutions, as well as in service management and business decisions, it is possible to take preventive measures to mitigate the impact of exogenous factors.

As stated in the ECLAC study **“La gestión de los recursos hídricos en América Latina y el Caribe”** (*Management of water resources in Latin America and the Caribbean*) (*Estudios e Informes de la CEPAL* N° 71, LC/G.1523-P) (available in Spanish only), “It must be recognized ... that many factors which impinge on operations are external to any reasonable definition of the area of direct responsibility of water system management. Nevertheless, the impact of many of these ‘external factors’ can be mitigated or magnified by management action. Only too commonly, management actions, or the lack thereof, have exacerbated rather than reduced the influence of unfavourable external conditions ... While management may be no more responsible for inflation than it is for wet or dry years, it nonetheless does have a responsibility to protect the water system from negative external impacts. All too often, however, water managers remain passive ... in the face of the threats posed by external

forces to the effective operation of the water systems for which they are responsible ... The existence of factors over which water managers have no direct control does not mean that management should be passive towards them. It appears to be true that the managers of water systems are rarely passive in response to the impact of natural events on water systems, although the damage caused is not always repaired. In the same way, management must not be passive in the face of disinterested or short-sighted government policies and decisions”.

### **Macroeconomic context, investment policy and poverty**

Throughout the period in question, the macroeconomic context did not contribute to the development of services. Recurrent crises, high economic volatility, a lack of economic growth, inflation, financial problems in the public sector and their impact on the social situation of the population were all conditions that had a negative effect both on the behaviour of political authorities and on the population’s ability to solve the problem by its own means.

During the public provision of services, repeated rises in inflation meant that, on many occasions, the State used utility tariffs as nominal price anchors, which affected the self-generation of resources. Furthermore, the financial crisis of the State meant that it could not contribute through Treasury funds or borrowing. Quite the opposite in fact, as public enterprises (and OSN in particular) were used as a source of external financing, this not only compromised the financial situation of such companies to an even greater extent, but also removed the transparency of their financial accounts. In the case of OSN, this lack of resources was reflected in a low level of maintenance expenses and the delay of works intended to improve levels of quality and coverage.

During the period of private-sector service provision, especially in the first few years, several factors combined to produce significant improvements in the management and results of service delivery. However, a fresh macroeconomic crisis gave rise to new complications in addition to the existing problems of the contract.

In order to overcome the limitations of the macroeconomic context and the policy on investment, the drinking water supply and sanitation sector would have to be made into a real priority (rather than simply declared a priority) within public policy, along with national and provincial legislation to validate the targets to be achieved by the sector. In the past, high-level political and economic authorities could be said to have ignored the impact of their decisions on the sector, and

sectoral authorities arguably failed to assess those impacts and were not firm enough to draw attention to the consequences (which required a certain level of independent judgement). This lesson should be taken into account for changing attitudes for the future.

Obviously, this attitude will not be sufficient if it remains a formality. It is vital for the relevant actions to be backed up by a participatory process with a high level of civil-society involvement. This is viable to the extent that there is significant dissemination and awareness-raising for the public and social organizations about how important drinking water supply and sewerage services are in terms of quality of life and a country's economic and social development. If this was validated by the community concerned, the authorities would have to meet the unsatisfied demand. In other words, if and when targeted surveys are carried out in areas of poverty and indigence, and drinking water supply and sewerage services are cited in the top three problems to be solved, they are more likely to be considered as a priority by the authorities and in the public budget.

The effects of poverty and "ability to pay" on service performance are closely linked to the aspects described above. However, one specific way of tackling the problem is through targeted subsidy mechanisms for low-income groups, both to facilitate or guarantee access and to provide help with payment of bills. It would be preferable for the subsidy to be financed with resources from the central government's budget, although the second option could be to use a cross subsidy awarded in a targeted way by selecting beneficiaries using a specially designed survey.

### Quality of institutions

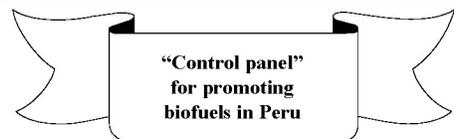
In terms of the quality of institutions, one way of mitigating its impact is to implement and improve social oversight systems, on the basis of transparency and the dissemination of performance information on service provision and aspects of service management, including the following: the business plan, any works and their progress, financial results, level and breakdown of borrowing, efficiency of costs and activities and details of procurement and contracts (bids, information on tenders and acquisitions, prices and suppliers). It would also be important to include information on the assets of the company's board members and employees linked to management, as well as a sworn declaration on links between directors or employees and suppliers, contractors and subcontractors of the company concerned. All such information should be available online and a summary periodically published in the mass media (press, radio and television), including reference to more information being available

on the relevant website. The system should probably be run by one or more non-governmental organizations selected by public tender based on institutional background, the team responsible for the system, proposed methodology, plan for tasks and equipment.

### International arbitration and change of corporate strategy by the Suez Group

These exogenous factors, international arbitration and the change of corporate strategy by the Suez Group are linked to the participation of the private sector as a service provider. Although the provision of services in the metropolitan area of Buenos Aires will not immediately be faced with this situation, past experience recommends that the legal framework of the contract should provide for local dispute settlement bodies, so as to avoid recourse to international arbitration. Furthermore, it is important to point out that regulation governed by a general legal framework (rather than by a specific contract) provides more protection to the concessioning authority in the face of disagreements that arise from changes to the legal framework. In terms of changes in the business strategies of the operating companies, it is essential to create mechanisms to discourage, prevent and penalize opportunistic conduct on the part of private companies seeking to generate conflicts that could result in a termination of the contract.

This study can be downloaded from <http://www.eclac.org/drni>.



The project on *State modernization, productive development and the sustainable use of natural resources* is being jointly implemented by ECLAC and the German Agency for Technical Cooperation (GTZ), and is financed by the Germany's Federal Ministry for Economic Cooperation and Development (BMZ). As part of this project, the Natural Resources and Infrastructure Division has published the following document "*Tablero de Comando para la promoción de los biocombustibles en el Perú*" ("*Control panel for promoting biofuels in Peru*") (Project documents N° 153, LC/W.153, October 2007), which was prepared by Fernando Sánchez Albavera with the support of Roxana Orrego Moya (in Spanish only).

The document offers an overview on how the biofuels market has been promoted in Peru. The idea is to analyse what has been termed the "control panel" of public management, including the institutional, energy, agricultural, economic, social, industrial and technological aspects involved. This assumes that developing the biofuels

market requires a central authority responsible for operating the "control panel". Given that the introduction of biofuels should encourage a sustainable diversification of energy consumption, the Ministry of Energy and Mines is the recommended central authority, as it will have to coordinate a comprehensive policy linking the public policies of all sectors involved. Below are the contributions of the document on the need for the more efficient use of water resources.

Given the scarcity of water for use on large crop areas, the effective management of water resources is a complex item on the agenda relating to the development of biofuels. Although there is considerable availability of water, it is very unevenly distributed. The shortage is most keenly felt on the coast, which is the area with the least water resources, the highest use of water, and is where the sugarcane crops are grown. These coastal crop areas could also be expanded as new land is prepared (if ethanol is considered a new investment opportunity). However, any such expansion would require managing the limited water resources in a way that combines a more efficient use of water with a change in current usage, as well as new works to extend water availability and the implementation of more effective irrigation techniques.

Besides the fact that water use is concentrated on the coast, there is also a high level of seasonal variability in the flow of rivers. This means that valleys are affected by serious droughts, with shortages in dry seasons and floods in wet spells. These factors make the coast vulnerable from an agricultural perspective, as irrigation is the main use of water resources. This is compounded by the fact that the use of water for irrigation is highly inefficient, with some resources also lost to the sea.

The total irrigated area in the coast covers approximately 1.7 million hectares. Of this, 59% has its own irrigation infrastructure and is situated in dry coastal areas, with production mainly geared towards exports. In other areas of the coast, farming land is being lost due to inefficient use of water for irrigation. That results in problems of drainage and salinity, which are then aggravated by the planting of crops with high water requirements such as rice and sugarcane.

This picture of inefficiency is the result of a combination of various factors including the reduced security or clarity of water rights; the lack of effective measurement of consumption; and a deficient payment control system. These factors have weakened and, in some areas, eliminated incentives to maintain and repair water-distribution systems. This does nothing to promote the replacement of

outdated gravity or flood irrigation methods, the implementation of more efficient irrigation techniques or the introduction of the sustainable and rational use of resources in an area of high water vulnerability.

It should be borne in mind that it is highly complex to develop the biofuel market, especially for ethanol, with competitive advantages based around the northern coast. Besides the inefficient use of water resources for irrigation, there are also major obstacles to integrated, effective and sustainable management, as current legislation does not recognize the multisectoral nature of water or the fact that water is an economic good. What is more, there are groundwater resources that are being underutilised (as in Piura).

For several years, there have been discussions on a new Water Act, which would eliminate the sectoral approach and assign an economic value to water resources, with a view to increasing the efficiency of water use. Meanwhile, the country has a National Water Resources Strategy and a National Irrigation Strategy, and the main watersheds have been assessed with a view to producing consensual plans to act as guidelines for river basin management.

These plans are most urgent, as the ineffective administration of water has generated and continues to generate a series of conflicts between institutions and users of the same river basin belonging to different jurisdictions. These conflicts are often due to ignorance of formal institutional arrangements (stoppages, blockages, etc.) and confrontations between water users from different sectors who have proof of or perceive that certain users could be affecting the quantity, quality and suitability of the water used by others.

This study can be downloaded from <http://www.eclac.org/dmi>.



**Monopolistic practices hamper the development of countries**

Monopolistic practices affect competitiveness and welfare by maintaining high tariffs and prices for goods and services. Such distortions, which are common in Mexico and

Central America, are partly the result of a lack of adequate legal and institutional framework for competition during the processes of privatization, mergers and acquisitions in the 1990s. This has had particularly serious repercussions for the public utility service monopolies.

The book "*Centroamérica y México: políticas de competencia a principios del siglo XXI*" (*Central America and Mexico: competition policies in the early 21<sup>st</sup> century*) (available in Spanish only) presents a detailed analysis of circumstances observed in the most seriously affected sectors. The book, which was coordinated by Claudia Schatan, Head of Industrial Development and International Trade at the ECLAC office in Mexico, and researcher Eugenio Rivera, includes a comparative analysis of the competition policies and conditions in Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.

The aim of the book is to analyse the distortions in the region's markets, as well as the legal and institutional instruments on which competition policy is based, and those instruments that could be created to resolve such distortions. The book outlines the difficulties faced by institutions set up to regulate competition. Certain institutions answer to government ministries and are financed by an often underfunded budget. Some of the main challenges for countries are related to the difficulties that courts face in trying to settle cases of monopolistic practices. Judges often lack training in competition issues.

The authors recommend that national competition authorities should stop abusive practices of public and private monopolies that are made possible through the lack or weakness of an appropriate regulatory framework. Such barriers increase the cost of doing business, thereby limiting the entry and exit of companies in the market. The authors also advise that improving market functioning requires regional cooperation and the protection of competition. They also point out that the lack of regulation is one of the reasons why economic reform failed to achieve the expected results, particularly in economic terms.

The publications of the ECLAC subregional headquarters in Mexico on competition and regulatory institutions can be downloaded at <http://www.cepal.org/mexico/competencia>.

**Promoting private investment in irrigation projects**

In Peru, Legislative Decree N° 994 of 12 March 2008 aims to promote private investment in irrigation projects to push back

the agricultural frontier, and declares it a matter of national interest and public necessity to develop private investment projects to irrigate uncultivated land suitable for farming, so as to expand the agricultural land area. The Decree seeks to regulate the special regime for promoting private investment in projects to irrigate State-owned uncultivated land suitable for farming, by establishing the corresponding normative framework.

The text of the Decree can be found at <http://www.elperuano.com.pe>.

**Reduction of infant mortality in Latin America and the Caribbean**

The sixth edition of *Challenges*, a four-monthly bulletin on childhood and adolescence published jointly by ECLAC and the United Nations Children's Fund (UNICEF), features an article "*Reduction of infant mortality in Latin America and the Caribbean: uneven progress requiring a variety of responses*" by Maren Jiménez, Fabiana Del Popolo, Guiomar Bay and Dirk Jaspers-Fajjer.

Prior to 1970, one out of every 12 children born in the region died before reaching the age of one. In 6 of the 37 countries comprising Latin America and the Caribbean, the rate of infant mortality exceeded 100 deaths per 1,000 live births and, in two countries, it approached or exceeded 150 deaths per 1,000 live births. In the subsequent decades, the infant mortality rate dropped noticeably throughout the region: from 81 deaths per 1,000 live births in 1970-1975 to 38 per 1,000 in 1990-1995, and it is expected to drop to 22 per 1,000 for the 2005-2010 period. To a greater or lesser extent, all countries have experienced a significant reduction.

This reduced risk of death among children occurred despite conditions of persistent poverty and inequality, as well as the recurrent economic and political crises experienced in Latin America over the last decade. Indeed, the most recent decreases in infant mortality rates are not directly related to economic growth levels. Nevertheless, infant mortality remains an important indicator of social development, reflecting, in particular, access to and use of healthcare, nutritional and sanitation conditions, and social protections (principally in regard to children and adolescents), thus mirroring society's recognition and exercise of the most fundamental human right: the right to life and health.

The progress achieved in this area is due to a combination of factors, including the provision of high-impact, low-cost primary

care (mass vaccination programmes, oral rehydration therapy, breastfeeding, and wellness care for children), sustained socioeconomic and demographic changes, such as increased coverage of basic services (particularly drinking water supply and sanitation services), rising educational levels and falling fertility rates. In this context, sanitation and waste management, as well as access to drinking water supply, are critical in controlling various infectious diseases. Children's environments are a determining factor in local mortality rates due to diarrhoea and other preventable diseases.

The *Challenges* bulletin is available, in English and Spanish, at <http://www.cepal.org/dsd/desafios>.

**Externalities in urban projects**

The ECLAC Sustainable Development and Human Settlements Division has published the document “*Externalidades en proyectos urbanos: saneamiento de aguas servidas y del ferrocarril metropolitano en Santiago de Chile*” (*Externalities in urban projects: sanitation of waste water and the metropolitan railway in Santiago, Chile*) (LC/L.2807-P, December 2007, *Environment and Development Series* N° 135) by Sergio Galilea, Mario Reyes and Camila Sanhueza (available in Spanish only). As part of their development, cities require a significant proportion of public resources. Accordingly, there is a series of urban public policies, in which environmental considerations are increasingly important. The significance attached to environmental and urban externalities in the context of infrastructure projects, both *ex-ante* and *ex-post*, is therefore a growing concern for governmental decisions. This study attempts to categorize and measure the (essentially positive) urban and environmental externalities that are associated with large-scale infrastructure projects. One example is Santiago, Chile, over the last decade. The two flagship projects analysed are the expansion of the metro lines and the waste-water treatment plants.

The analysis of these projects as examples of public policy reveals the institutional, political and economic context in which the investment took place. This was particularly relevant because changes in infrastructure management generate a financing framework well suited to the State assuming such responsibilities. The situation is also conducive to the State transferring responsibilities to private operators in a strict regulatory framework and an agreed investment programme.

Analysis of decision time provided significant but partial information on the

social benefits or externalities that the investment generated for the community. Nonetheless, the data pointed to a reduction in air pollution, a significant fall in road congestion, gains in “time availability” for people and productive activities and improvements in public health and in farming land near the city.

In conclusion then, the significance of these environmental and urban benefits is probably higher than the considerations contained in *ex-ante* analysis of government decisions to invest in the projects. The vast majority of urban and environmental considerations raise the social rate of return of any such investment.

The document then sets out some measurements and the way indicators were constructed for the benefits in question. Space is also given to describing the financing structures of these projects, in which fiscal risk has been limited. Conclusions reached include the need to construct an environmental assessment methodology for urban macroprojects to highlight the urban externalities and environmental benefits. These factors can then be used alongside considerations of financing and fiscal risk in the governmental decision-making process.

This study can be downloaded from <http://www.eclac.org/dmaah>.

**Environmental cooperation in free trade agreements**

The conclusion of trade agreements has become a mainstay of trade policy, as well as a vital ingredient in the development strategies of the region's countries. Since the North American Free Trade Agreement (NAFTA), environmental issues have been included in similar trade treaties with major repercussions for trade and the environment. Trade agreements that the United States has recently signed with Central America, Dominican Republic, Colombia, Peru and Panama include an environmental chapter, as well as a parallel environmental cooperation agreement.

Including the environmental aspect in trade agreements is a challenge for the region's countries, as they are undertaking commitments that must be fulfilled, and failure to do so will have financial and trade consequences. Above all, it is well known that these countries find it difficult to guarantee effective compliance with environmental legislation and the appropriate use of natural resources.

In addition, these countries are also experiencing ongoing environmental

degradation, with the serious environmental, economic and social ramifications that this entails, especially considering the high dependency of the region's economies on wealth generated by exploiting natural resources. Environmental cooperation in the framework of these agreements thus becomes a significant aspect of their effective implementation, as well as a way of achieving a positive relationship between trade and the environment.

The study “*La cooperación ambiental en los tratados de libre comercio (versión preliminar)*” (*Environmental cooperation in free trade agreements. Preliminary version*) (LC/MEX/L.840, 14 December 2007), by Carlos Murillo (available in Spanish only), consultant on international trade and industrial development for the ECLAC subregional headquarters in Mexico, aims to learn lessons from the environmental cooperation experiences of Chile and Mexico in the context of trade agreements, as well as to link multilateral trade-assistance initiatives with environmental cooperation within trade agreements. The document analyses the environmental cooperation efforts made under the Dominican Republic – Central America – United States Free Trade Agreement (CAFTA-DR), and examines the mechanisms, actors and programmes established to implement the agreement and improve the capacity of those countries to comply with environmental legislation and develop opportunities in this area.

The study can be downloaded from <http://www.eclac.org/mexico>.

**Meetings**

**Law on the Superintendency of Public Works**

One key factor in the socioeconomic development of Chile has been the infrastructure investment policy aimed at narrowing the “gaps” that were inherited from the end of the 1980s. Besides the active State policy, such progress has also been made possible by the alliance between the private and public sectors. At the same time, citizens and all types of service users are increasingly aware of their rights and obligations, and expect (public and private) service providers to provide them with quality service,

including real mechanisms for them to have their rights enforced.

In this context, the Ministry of Public Works of Chile has considered it essential for the State to have a highly competent and independent institution to ensure that high levels of service are met in all infrastructure works once they become operational. This role will be fulfilled by the Superintendency of Public Works, which will also ensure transparency in infrastructure-related matters. The initiative, the bill for which was presented to the Chamber of Deputies last year, is part of a more ambitious project to reform the institutional structure of the Ministry of Public Works.

Precisely because of the significance of this initiative and its conceptual foundations, the Ministry of Public Works and the Natural Resources and Infrastructure Division organized a *Specialized Seminar on the Law on the Superintendency of Public Works: Citizens' Rights and the New Institutional Arrangements for Public Infrastructure in the 21st Century*, which was held at the ECLAC headquarters in Santiago, Chile, on 17 December 2007.

The presentations made at the seminar are available at <http://www.eclac.org/drni>.

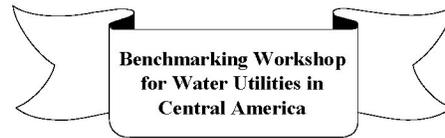


The *Latin American Conference on Sanitation* (LatinoSan 2007) was held from 12 to 16 November 2007 in Cali, Colombia, to contribute to improving the health, well-being and dignity of the inhabitants of Latin America. The meeting sought to support the protection and preservation of the environment and water resources, while also promoting values such as peace and conflict resolution.

The specific aims of the meeting were as follows: (i) helping to improve the health, well-being and dignity of the inhabitants of Latin America, with emphasis on the most vulnerable sectors of the population and the achievement of full and harmonious development for all boys, girls and adolescents; (ii) contributing to peace and conflict resolution as a result of improvements in well-being and economic and social development; and (iii) presenting progress and challenges for achieving the Millennium Development Goals in the 16 countries of the region through a document called the Cali Declaration. The Natural Resources and Infrastructure Division presented two contributions by Andrei Jouravlev, Economic Affairs Officer: "*Impactos económicos y sociales del saneamiento*" (*Economic and*

*social impacts of sanitation*) and "*Corrupción: sus formas y medidas de control*" (*Corruption: the forms it takes and how it can be controlled*).

More information on this event is available at <http://www.latinosan2007.net>.

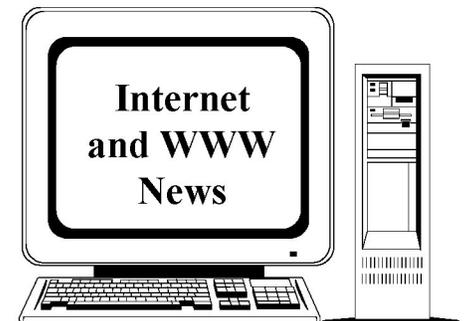


In San José, Costa Rica, on 15 and 16 October 2007, the Public Utility Research Center (PURC) and the Inter-American Development Bank (IDB) held a *Benchmarking Workshop for Water Utilities in Central America*. As a result of discussions, experts identified factors having an impact on data quality, data collection, benchmarking methodologies, and possible policy and regulatory implications of performance rankings:

- There must be an understanding between operator and regulator. They must work together on common projects and targets. Benchmarking should not be seen as merely a formal exercise.
- The operator must be convinced that it is not simply a matter of reporting to the regulator, but that the data requested are also useful for its own business management.
- Data should be clearly, objectively and consistently defined, so that they have the same meaning for all parties.
- Information should be available to the public. This promotes accountability and strengthens consumer confidence in public utility services and generates positive incentives for politicians and company management alike.
- The implementation of benchmarking should begin with simple data that are essential both for the company and the regulator. It should be seen as a continuous process of improvement, in which the availability and quality of information are gradually improved.
- Each operator must have an information system that ensures the ongoing collection of consistent, reliable and timely data for decision-making. This system should make it possible to assess progress towards targets based on operational and financial indicators, while at the same time providing accountability in a framework of transparency.
- Better operational data collection procedures are needed.
- To improve decision-making, it is vital to have disaggregated data and time series.
- It is preferable to use centralized information collection systems. It is essential to avoid duplication in data presentation and collection.

- Information technology is necessary but not sufficient for sound management.
- Information systems should link financial, commercial and operational information.
- Managers can only manage what they measure.
- Benchmarking is a tool that can help reduce costs and identify areas of operation and management that require priority attention.
- Benchmarking is an important means of continually improving service, management, regulation and public policy, as well as setting tariffs.
- It is vital to use different methodologies to assess operator performance.
- Factors external to the operator (such as the availability of maps and censuses) may affect the collection and storage of data.

More information on the workshop is available at <http://www.cba.ufl.edu/purc>.



The web sites worth visiting for information on water-related issues include the following:

- The overall objective of the *Integrating Watershed and Coastal Area Management in Small Island Developing States of the Caribbean* (IWCAM) Project is to strengthen the commitment and capacity of the participating countries to implement an integrated approach to the management of watersheds and coastal areas (<http://www.iwcam.org>).
- The *Water and Environmental Sanitation Centre* (CASA), which is part of the Science and Technology Faculty of the San Simón University (UMSS), Bolivia, works in the area of water and soil, through the development of research related to the training of human resources. The centre also provides analysis services for water treatment and diagnosis, soil pollution, as well as technical assistance to public and private institutions and the population at large (<http://casa.fcyt.umss.edu.bo>).
- There is a very close link between the integrated approach, good water governance and financing but, to date, there has been little discussion about this relationship. A paper published by the Global Water Partnership (GWP), "*Water financing and governance*" by Judith Rees, James Wimpenny and Alan Hall,

- aims to bring together these different strands so that a more coordinated, coherent approach to water financing is adopted (<http://www.gwpforum.org>). It focuses on the need to fund the water resources functions that are essential for security and sustainability and to examine the relationship between the different governance and organisational structures in the sector and their ability to secure funding for essential goods and services.
- The **Institute for Water and the Environment** in Peru is a non-profit civil association set up in 2001 in response to the importance of such a vital resource and the limitations that arise due to problems of its quality and availability, and in order to help raise awareness around sustainable development and the environment (<http://www.institutodelagua.org>).
  - In Argentina, the **Patagonian Association of Landowners** (ASSUPA) is a non-governmental organization set up to maintain and protect the environment, as well as to protect the rights of landowners, land-holders and occupiers of land in terms of its preservation as a natural resource suitable for human development and living and realization of productive activities (<http://www.assupa.org.ar>).
  - The following publication is now available: “**La gestión del riesgo de desastres hoy: contextos globales, herramientas locales**” (*Disaster risk management today: global context, local tools*), developed by the United Nations Secretariat of the International Strategy for Disaster Reduction (ISDR), Regional office for the Americas (<http://www.eird.org>). The publication presents the state of the art in reducing the risk of disasters in Latin America and the Caribbean. Special attention is paid to sustainable local development, land planning and risk management at the municipal level. This publication is part of a collaborative framework of activities on local management and risk and vulnerability reduction, fostered by the International Development Research Centre (IDRC) of Canada and the UN/ISDR in the region.
  - Due to wide variations among countries in survey tools and methods, comparison between different household surveys and censuses is difficult. To help resolve these comparability problems, the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation has developed a set of harmonized survey questions, “**Core questions on drinking-water and sanitation household surveys**” (<http://www.wssinfo.org>). Including the harmonized questions in national surveys and censuses will help countries gain more systematic information on the drinking water supply and sanitation needs of their population.
  - The **Environmental Protection Agency of the Autonomous City of Buenos Aires**, Argentina, set up by Law N° 2.628 of 13 December 2007, aims to protect the quality of the environment through the planning, programming and implementation of actions needed to comply with the environmental policy of the City of Buenos Aires (<http://www.agenciaambiental.gov.ar>). In accordance with Law N° 2.628, the environment is defined as a series of highly complex relationships between the following two subcomponents: the natural (water, air, soil, biota, natural heritage) and the human (social, economic and cultural dimensions). Any variation in one factor triggers a chain reaction that alters the balance. Environmental policy means the series of management instruments for protecting the health and environment of the inhabitants of the City of Buenos Aires. Environmental policy should also be considered a State policy for the purposes of sustainable and long-lasting development. The instruments of environmental management include: evaluation of environmental impact, a system to control the development of human activities, environmental education, producing and implementing clean production plans for the regulated community, an environmental information and diagnosis system and the economic regime for the promotion of sustainable development.
  - A new WHO publication, “**Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health**” by Annette Prüss-Üstün, Robert Bos, Fiona Gore and Jamie Bartram, summarizes the evidence and information related to water and health in a broad sense, encompassing drinking water supply, sanitation, hygiene, and the development and management of water resources (<http://www.who.int>). It collects the ingredients that support policy decisions, namely the disease burden at stake, the effectiveness of interventions, their costs and impacts, and implications for financing.
  - The mission of the **International Boundary and Water Commission** (IBWC) (<http://www.ibwc.state.gov>) is to apply the rights and obligations which the Governments of the United States and Mexico assume under the numerous boundary and water treaties, and to do so in a way that benefits the social and economic welfare of the peoples on the two sides of the boundary and improves relations between the two countries. Those rights and obligations include: distribution between the two countries of the waters of the Rio Grande and of the Colorado River; regulation and conservation of the waters of the Rio Grande for their use by the two countries by joint construction, operation and maintenance of international storage dams and reservoirs and plants for generating hydroelectric energy at the dams; regulation of the Colorado River waters allocated to Mexico; protection of lands along the river from floods by levee and floodway projects; solution of border sanitation and other border water quality problems; preservation of the Rio Grande and Colorado River as the international boundary; and demarcation of the land boundary.
  - **Watershed News** (<http://www.epa.gov/owow/watershed/>) is a publication of EPA’s Office of Wetlands, Oceans and Watersheds. It is designed to provide timely information to groups working at the watershed level.
  - In the Province of Corrientes, Argentina, the **Corrientes Institute for Water and the Environment** (ICAA) is responsible for applying the following provincial laws: Water Code, Law on the Evaluation of Environmental Impact, Law on the Settlement of State Lands and the Law on Mining (<http://www.icaa.gov.ar>).
  - In 1997, the Canadian Dam Safety Association (CDSA) amalgamated with the Canadian National Committee on Large Dams (CANCOLD) to form the **Canadian Dam Association** (CDA). CDA provides a forum for the exchange of ideas and experiences in the field of dam safety, public safety and protection of the environment. It is concerned with technical, environmental, social, economic, legal, and administrative aspects of dams and their safety (<http://www.cda.ca>).
  - The **Association for the Conservation of the Amazon Basin** (ACCA) is a non-profit Peruvian organization that aims to contribute to the understanding of biodiversity, ecosystems and the management of natural resources for their use by society (<http://www.acca.org.pe>).
  - The **Institute for the Conservation of Aquatic Ecosystems** (ICEA) of Bolivia (<http://www.iceabolivia.org>) is a non-profit institution with a mandate to contribute to the management and preservation of aquatic and wetland ecosystems, with emphasis on areas and sites protected by the Convention on Wetlands of

International Importance. The Convention was signed in Ramsar, Iran, in 1971 and is an intergovernmental treaty that provides a framework for national action and international cooperation in support of the conservation and rational use of wetlands and their resources.

- In Argentina, the **River Basin Committee for the Río Salí Dulce** was set up in 1971 by the then Secretary for Water Resources and ratified by the governments of the Provinces of Córdoba, Santiago del Estero and Tucumán, which were subsequently joined by the Provinces of Catamarca and Salta (<http://www.hidricosargentina.gov.ar/riosali.html>). In 1967, before the Committee was created, an Interjurisdictional Agreement was signed between the provinces of Córdoba, Santiago del Estero and Tucumán, to define water distribution quotas following the opening of the Río Hondo dam. In 2007, the governors of the five Provinces of the river basin and the Minister of the Interior, the Minister of Federal Planning, Public Investment and Services and the Head of the Cabinet of Ministers signed a new Interjurisdictional Treaty, which was used to approve a new statute. The statute establishes the creation of a Technical Commission, whose main function will be to implement the management plan.
- Almost half of the population in Peru have no access to basic sanitation services. Given this situation, the initiative a “**Alternative Pro-poor Sanitation Solutions in Peru**” seeks to stimulate the development of local, quality sanitation markets for low-income groups in five pilot areas in the country (<http://www.perusan.org>). With the main aim of increasing access to quality sanitation, the initiative is based on: a population that prioritizes sanitation and demands quality products and services; a local competitive, articulated and

profitable supply that can provide quality products and services; a microcredit system to boost the local market; and a group of key local actors committed to sanitation management and the promotion and regulation of the market.

- The **Caribbean Water and Wastewater Association (CWWA)** is committed to the advancement of the science, practice, and management of water supply and waste disposal for the benefit of Caribbean people through the development of human resources, public education, and professionalism, as well as promotion of appropriate technologies in the water, wastewater, and solid waste sector (<http://www.cwwa.net>).
- The **New South Wales Dams Safety Committee** is a Statutory Corporation of the New South Wales Government, in Australia. Its main function is to ensure the safety of dams within the state.

## Publications



Recent publications of the Natural Resources and Infrastructure Division on water-related issues:

- “**Revisiting privatization, foreign investment, international arbitration, and water**” by Miguel Solanes and Andrei Jouravlev (LC/L.2827-P, November 2007, *Natural Resources and Infrastructure Series* N° 129) (available in English only). A subject relevant to the governance of water resources and related public services is the effect that international trade and investment agreements may have on

national capacities to manage natural resources and to regulate public services. As a consequence of globalization, many services are provided and water rights held by companies within foreign investment protection systems or special conflict resolution regimes, which means that external jurisdictions can intervene in local matters. The reasons for concern include the secret nature of procedures, the lack of obligatory precedent, the absence of principles of public interest, and the fact that the tribunals are *ad hoc* bodies comprised of members paid by the parties involved. The decisions of international arbitration tribunals tend to restrict the power of government to act in the public interest and in that of local communities. This is clearly relevant for water-related environmental matters, informal local customary interests and public service issues. Serious questions are being raised about the functioning of international arbitration tribunals. However, it is unrealistic to expect international investment- and trade-protection treaties or arbitration mechanisms to be abolished, as they form an important part of the world economy. It is therefore necessary to think of ways to ensure that their principles and procedures are adjusted to their impact on countries’ governance and on national environmental, social and economic sustainability. This paper is a first step in this direction.

The publications of the Natural Resources and Infrastructure Division are available in two formats: (i) *electronic files* (PDF) which can be downloaded from <http://www.eclac.org/drni> or requested from [Andrei.JOURAVLEV@cepal.org](mailto:Andrei.JOURAVLEV@cepal.org); and (ii) *printed (hard) copies* which should be requested from the ECLAC Distribution Unit, either by e-mail to [publications@eclac.cl](mailto:publications@eclac.cl), by fax from (56-2) 210-20-69, or by mail to ECLAC Publications, Casilla 179-D, Santiago, Chile.

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