

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

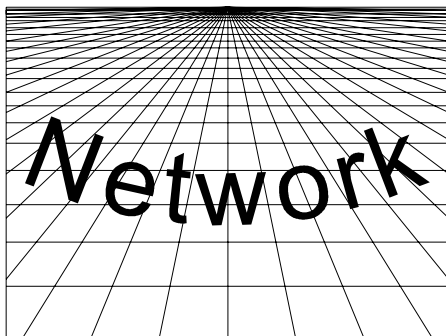


United Nations Economic Commission for Latin America and the Caribbean (ECLAC)

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Countries in the Americas have signed many trade- and investment-protection agreements. The way these agreements are applied is radically different from the application of agreements concluded in other parts of the world, such as the European Union. The main difference is that the European Union agreements are implemented within a system that takes into account, and attempts to strike a balance between, various perspectives including economic growth, environmental stability and social equity, while similar agreements in the Americas are focused on the sole objective of protecting investment and international trade.



Compared with agreements concluded by the European Union, those signed by countries in the Americas are not fully-fledged governance instruments, as their aims and beneficiaries are determined on a much narrower basis than the broad principles of structural governance. This means that issues that could alter social balance and equity are considered outside the framework and guarantees of public and constitutional law.

There is no way of knowing what repercussions the trade- and investment-protection agreements signed by the region's countries will eventually have on the ecological sustainability of water as a resource and service, and related social issues. Yet concerns have already been expressed about the use of such agreements to solve disputes.

For instance, a considerable number of experts are seriously worried about the way in which international arbitration systems set up

under the North American Free-Trade Agreement (NAFTA) and other trade- and investment-protection agreements affect countries' capacity to regulate public services and manage their natural resources. The reasons for this 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. Under constitutional common law (in countries such as the United States and the United Kingdom), there is a centuries-old precedent discrediting courts in which judges are paid on the basis of particular cases and their results.

In terms of concrete experiences, 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.

Some agreements include stabilization clauses that affect the State's ability to adopt regulations once the treaty has been signed. The combined effect of stabilization and most-favoured nation clauses can seriously erode public policy and hamper the protection of the public interest.

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.

In the drafting of international trade- and investment-protection agreements and contracts governing activities that can affect or be affected by environmental, social or

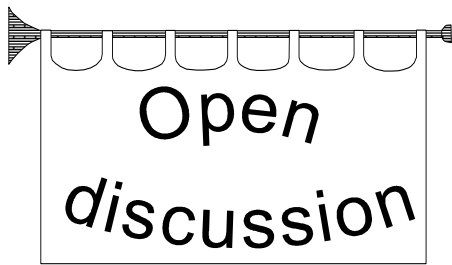
economic public interest, it is therefore vital to establish the appropriate checks and balances. These include applying the general principles of law accepted by civilized nations or the principles of domestic law applied by the companies' countries of origin. Contracts could also specify the law to be applied or exceptions to agreements.

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These agreements could also serve as an important invitation for States and companies to think responsibly by concluding contracts that can be reasonably adhered to. Another option is to introduce appropriate national legislation before agreements are signed. Other possibilities include insisting that certain issues or situations be examined by tribunals with specific specializations (in areas such as administrative law or macroeconomics), or certain qualifications, such as judges of high courts of countries renowned for their legal systems and use of precedents.

Miguel Solanes



In connection with the recent reform of the 1981 Water Code in Chile, a document on the meaning and scope of the reform has been produced by Humberto Peña, Director of the General Department of Water (DGA) of Chile and member of the South American Technical Advisory Committee (SAMTAC) of the Global Water Partnership (GWP).



Following 13 years of negotiations in the Chilean Congress, the amendment of the Water Code was recently approved by a wide consensus. The amendment is of great importance for Chile, given that the country's consistent growth in terms of the economy and exports (especially water-intensive products) and the social development witnessed over the past 20 years have resulted in various user sectors increasing their demand for water resources, which were already being used to their limit. Society's new environmental awareness has also generated increasing water demand for conservation purposes.

The reform was therefore a reflection of the need to review the legal and economic system regulating the use of water resources, with a view to promoting the efficient use of water by private individuals and society as a whole, within a framework of associated environmental protection. The reform process of the Chilean Water Code is also relevant to other countries in the region, given the interest sparked by the radical inclusion of market incentives for water management, which has no precedent in other national legislations.

1981 Water Code

The text that had been in force until now was adopted in 1981 when the authoritarian government regime attempted to adapt legislation to a neoliberal ideological and economic system. Accordingly, the new water legislation was aimed at generating "sound" water use rights, creating markets and reducing the role of the State.

Water legislation provided for the market to play a crucial role in two areas: (i) reallocation of water among private

individuals; and (ii) original allocation of water rights. In terms of the first issue, the 1981 Code established that, although water would still be considered national property for public use, the rights to use water would have characteristics of property under civil law and would be the main object of rights, rights in themselves and not accessories to any other rights, and would be freely transferable. With reference to the second aspect, original water use rights would be allocated by the State free of charge, without any priorities, permanently and without any limit on the quantity demanded, to all private individuals that requested them. In addition, users do not have to justify the quantity requested, as the public authority is obliged to grant their request subject to availability (third party rights remain unaffected). In the event of two or more requests for the same water and insufficient availability to grant them all, rights must be allocated through auctions.

The legislation also established that right holders would have no obligation to use the water, on the basis that the market would function by generating an opportunity cost for rights used inadequately, which should provide sufficient incentive. The aim of these amendments was to lay the foundations for a water rights market and to generate incentives for increasing the efficiency of water use.

This method of allocating water resources did not have the expected results, however, as the auction mechanism was hardly ever used in practice, and the allocation of water rights without any limits and restrictions gave rise to various situations that were detrimental to the country, such as the accumulation of water rights for hoarding and speculation, as barriers to entry for competitors in various markets and in order to preclude allocation of water rights for those who really needed them. One example was in the area of water rights for non-consumptive use (hydroelectricity), where 50,000 m³/second were requested, an amount that is out of all proportion given that it could not possibly be put to use during the present century. Another request committed the water resources for an area of 2.5 million hectares, thereby artificially preventing the allocation of water rights for other activities.

Notwithstanding such limitations, there is widespread national consensus regarding the benefits of using the market to reallocate existing water rights and the need to maintain the guiding principle of current water legislation, namely the establishment of property rights over water use rights to provide legal certainty to water-related investments and to enable the market to reallocate water resources. In keeping with this, the draft reform proposed by the Executive was mainly aimed at resolving the obvious distortions generated by the original allocation of water rights, rather than at

altering the essential characteristics of water use rights as established by the Code.

The reform process

The Water Code reform was the subject of a long and difficult debate between what were publicly presented as completely opposing views. The origin of the debate lay in the purpose of the reform, which was to strike a balance (in the light of 21st century problems) between issues that were delicate for Chilean society and on which opinions were varied. This included the need to reconcile, in practice: water as a national property for public use with the guarantees of property rights over water use rights; economic incentives and competition with protection of the public interest; and the State's role in managing a complex resource so crucial to development with the promotion of private initiative and management transparency.

The difficulty in reaching agreement on such issues mainly resided in the production sector's mistrust and the ideological charge surrounding the government proposals which, beyond the specific reforms, were seen as a threat to private property. Another contributing factor was the widespread lack of familiarity with the specifics of water resources among many opinion leaders, which was often replaced by simplistic attitudes based on general economic principles that do not reflect the concrete reality of water management.

After such a drawn-out process, it seems appropriate to examine the general significance of the adopted reform, particularly in its more controversial aspects, such as the new balance between the social, productive and environmental dimensions of water resources, and the roles assigned to the State and private individuals in relation to water management.

Productive, environmental and social dimensions of water resources in the new legislation

As stated above, the 1981 legislation had the merit of firmly incorporating the economic dimension and market incentives into water resources management. This was acknowledged in the text of the reform, and the Executive did therefore not propose amending the articles relating to the nature of water use rights. On many different occasions, the Government stated that free commercialization of water use rights tends to be an appropriate way of achieving more economically efficient water use and allocation.

The real challenge was therefore to reconcile these production benefits with the social and environmental aspects that were

completely absent from the 1981 Water Code. It was also vital to enhance market incentives in those areas where they were completely applicable but not always fully applied in practice.

The aim was therefore to refine the current system and, while recognizing the latter's advantages, to ensure that the new legislation would strike a balance in terms of the following:

- Recognition by the Constitutional Court that the establishment of a water use right corresponds to the exercise of a regulated prerogative of the authorities, which may encompass all aspects of common interest associated with water as a resource; and that the rights of private individuals to access all kinds of goods under the private property system can only be enforced once the State has established the property to be appropriated (the water use right).
- Accordingly, as part of the process of establishing new water rights, the President has the authority to protect the public interest by excluding water resources from economic competition when they need to be reserved for public supply in the absence of other means of obtaining water or, in the case of non-consumptive rights, in the event of exceptional circumstances of national interest.
- Similarly, the legislation states that the DGA is obliged to consider environmental aspects in the process of establishing new water rights, especially in terms of determining ecological water flows and protecting sustainable aquifer management.
- Recognition of the social responsibility associated with private ownership of water use rights, which is understandable given that a private individual is being authorized to exclusively use economically and strategically important national public property. A licence fee must therefore be charged for unused water rights (not using water being at odds with a concession's *raison d'être*), to act as a deterrent against hoarding and speculation. A licence fee is charged in cases where there are no water abstraction works and will be governed by a table of areas, given that water is scarcer and therefore more expensive in the north of the country.
- It is also obvious that granting private individuals more water than they actually need for their activities compromises the public interest (and much more if the private individual engages in speculation). Rules have therefore been established to limit requests to genuine project needs. This means that all incoming requests will have to include an explanatory note (in a

simple predetermined format) for applicants to explain (from certain volumes upwards) how the water will be used. The authorities have the power to limit the amount requested if this does not correspond to the intended use (on the basis of a pre-established table of uses and demands).

- Without prejudice to environmental considerations and the reserving of water resources in accordance with the public interest, the allocation criterion for choosing between various requests will tend to be strictly economic, in practice, given that it is in the country's interest to allocate scarce water resources to those activities with the highest productivity per cubic metre of water. The reform therefore includes the need to increase levels of competition by increasing the number of cases involving allocation through bidding and improving levels of information and raising the number of participants. Unlike in other countries, there is a general consensus in Chile that it would be unwise to give preference to the requirements of a particular user sector, on the basis that this would encourage inefficiency and fail to signal to users the relative scarcity of the resource.

Public and private roles

The reform also provided an opportunity to review whether the provisions of the 1981 Code governing the steps private individuals could theoretically take to protect their interests were realistic, given that experience showed they were unable to implement such measures due to limited access to information and little opportunity to study the complex issues involved. The reform remedies this and establishes various new obligations for the administration in terms of representing the common interest.

As stated earlier, one such example is limiting the water flows granted to private individuals if the amount is unjustified, on the basis that the resource is not rendered worthless by a lack of other interested parties and therefore should not be allocated in limitless quantities. In a similar vein, the administration also has new authority to: directly prevent unauthorized construction of works in water courses, impose restrictions on aquifer exploitation in the interests of sustainability and generate databases of water rights as a way of promoting the creation of an active water market. The newly approved legislation also gives the State new powers in the event of critical situations such as drought.

The legal reforms also seek to strengthen the role of users by increasing the involvement of user organizations in public decisions. One example is users' participation

in identifying water use rights for which licence fees should be charged and in creating a database of existing rights. The new legislation also broadens the scope of activity of private individuals by authorizing the creation of groundwater user organizations and granting legal personality to the country's many water communities.

In conclusion, now, with a State vision, a sound and stable balance has been achieved between the public interest and the rights of private individuals; between social and productive demands; and between both types of demands and environmental considerations. This balance is an accurate reflection of the development of Chilean society, and specifies realistic roles for the public and private sectors that are in keeping with the functioning of the economic system. In this sense, the reform cannot fail to contribute to the institutional framework of the water sector in terms of social support and governance.

For further information on the reform of the Water Code, visit the website of the DGA at <http://www.dga.cl>, and also that of the Library of the Chilean Congress at http://sil.congreso.cl/cgi-bin/sil_proyectos.pl?876-09.



One of the main issues in national debates on reforming the legal framework of the water sector is the institutional design of the administrative system for water management. A series of analyses of water resources administration in the region has concluded that these systems are characterized by an essentially sectoral approach.

In the current conditions of growing water scarcity, rising externalities, increasingly drastic and ruthless competition between users and the resulting interest in demand management, this approach is leading to ever-more disputes and inefficient water use that are mainly a result of the following:

- a lack of objectivity and impartiality, and often absence of technical criteria in the decisions-making process related to water resources; and
- a separation of management functions that does not reflect the physical characteristics of water and its optimum use, thereby making it difficult to achieve an integrated vision of resources.

Many countries of the region are therefore interested in adapting the administrative organization of the water sector to the integrated water resources management approach. The Natural Resources and Infrastructure Division of ECLAC recently

published the document “*Administración del agua en América Latina: situación actual y perspectivas*” (*Water administration in Latin America: current situation and outlook*) by Maureen Ballester, Ernesto Brown, Andrei Jouravlev, Ulrich Küffner and Eduardo Zegarra (see “*Publications*”).

The document consists of four case studies produced by regional experts working for SAMTAC and GWP Central America. The aim is to examine the current situation and outlook for water administration in Chile, Ecuador and Peru, and more briefly in Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. The main conclusions are as follows:

- In almost all of the countries analysed, the administrative structure of the water sector is an obstacle to achieving integrated management. In addition, the State has little real capacity to regulate water use and enforce rules, and this in turn is aggravated by the widespread breakdown of institutions. Administration systems are often highly fragmented, fraught with management failings and vulnerable to the politicization of technical activities.
- On a more positive note, since 1969 Chile has maintained a clear separation of roles in the institutional structure of the State. This has avoided distortion of the regulatory function and has generated a system that gives clear signals about the relative scarcity of water. From the point of view of administrative design, the principal problems in this case relate to institutional dispersion, a lack of real autonomy and limited operational capacity. Many reforms have been attempted in the other countries analysed, although the (often non-existent or obsolete) regulatory framework of the water sector has yet to adapt to the current problems of water use and the prevailing ideas and practices in today’s society.
- The case studies, especially Ecuador, provide an illustrative example of the problems of seeking broad social consensus on the reform of water legislation, especially when: the proposals are based on the vision of external actors and do not respond to the real needs of the sector; there is a reductionism of criteria that do not necessarily correspond to the subject at hand; certain interests are excluded from the discussion or a small group has a disproportionate influence; and when the supposed aim has more to do with circumstantial problems of user sectors than with achieving integrated water resources management. Hence the importance of processes that foster dialogue and consensus at the national level, with the full involvement of all sectors of society.

- The case studies, especially Ecuador and Peru, once more confirm that a natural resource that is so economically, socially and environmentally important, capable of multipurpose and sequential use, and that is needed for almost all economic activities should not be managed by sectoral administrative bodies, but should have its own organization independent of sectoral perspectives (as is the case of Chile).
- One of the main features of the management system set up as a result of the Chilean 1981 Water Code was the reduced role of the State in water-related matters, which strengthened property rights and transferred functions to users and user organizations. This situation and the increasingly intense and complex impact that society has on water resources have given rise to many conflicts concerning water. It has not been possible to resolve these conflicts through existing user organizations or negotiations between parties. This proves that users cannot govern themselves and that user organizations cannot replace the State. Many such conflicts have ended up in ordinary courts, the results of which have not been particularly effective due to a lack of technical capacity and expertise. One important lesson to be gleaned from the Chilean experience is that, given the technical complexities of water management, it is advisable to respect the administrative criteria in matters that require specific professional knowledge.
- All of the case studies, particularly in Peru and Central America, point to a growing awareness of the need to promote water resources planning. This is linked to the Plan of Implementation for the World Summit on Sustainable Development (26 August to 4 September 2002, Johannesburg, South Africa), which calls for the development of “integrated water resources management and water efficiency plans”. This planning should be understood as a participatory exercise and indicative in nature, aimed at identifying main problems (gaps between water supply and various user demands, and institutional and governance shortcomings); coordinating the State’s management and promotion activities and the private sector; and providing clear signals to water users with a view to maximizing the economic, social and environmental benefits of water resources in the long term. This implies, *inter alia*, the need for economic, social and environmental criteria and procedures for assessing public decisions relating to water resources, such as the granting of subsidies and guarantees or project financing. These procedures should be objective, compulsory and applied across the board.

- In many countries, there is a trend towards attempting to establish governance capacities over naturally defined areas such as river basins and aquifers, which do not correspond to traditional forms of government over political administrative entities such as countries, provinces and municipalities. These bodies —which are usually mixed, collegiate and comprised of representatives of various levels of government, users and other relevant actors— are responsible for coordination and collaboration at river basin level. The case of Chile shows that, even if such entities are not provided for in legislation, there are always initiatives aimed at encouraging more integrative management bodies, either because of the interest of the water authority, or on account of user needs. This process is predictably long and difficult, mainly due to the lack of appropriate legal support. The case of Peru confirms that, without a good national water administration, it is difficult to establish sustainable bodies at the river basin level. River basin bodies should not be created before or instead of sound water authorities at the national level.
- Lastly, it should be borne in mind that a water management administrative system with an appropriate institutional design is not sufficient, in itself, to eliminate disincentives to the incorporation of water into the productive system that result from general macroeconomic policy. Macroeconomic factors are crucial in eliminating such barriers, as they define the functioning environment for sectoral institutions. Although many factors affecting the incorporation of water resources into the productive system bear no relation to what could reasonably be considered the mandate of a water authority, it is nonetheless true that its institutional design and, above all, its attitude can either reduce or magnify the effects of many external factors.



Members of SAMTAC and GWP itself have decided to transform SAMTAC with a view to

strengthening and institutionalizing its network of stakeholders and informal members throughout South America. The process involves transforming this *ad hoc* regional advisory group of experts selected for their personal or institutional qualities into a body comprised of representatives of institutions.

The end result will be the *South American Water Forum*, which will be a regional coordination entity comprised of representatives of South American countries democratically elected by the members of the GWP networks in each country and a group of regional bodies involved in promoting the water agenda in the region. This phase should be completed by the end of the year. The process includes broadening SAMTAC membership and formalizing the participation of national and regional actors in the network. Those interested should send their membership applications directly to SAMTAC or GWP.

For further information on the SAMTAC transformation process and membership application forms, please visit <http://www.eclac.org/dnri/proyectos/samtac>.



The document "*Políticas y regulaciones de agua: condiciones para reconocer los derechos indígenas de agua*" (*Water policies and regulations: conditions for recognizing indigenous water rights*) has been produced by Miguel Solanes, ECLAC Regional Adviser on Water Legislation and Public Service Regulation and member of the GWP Technical Committee (TEC) as part of the Water Law and Indigenous Rights Project (WALIR), which is being jointly implemented by ECLAC and the University of Wageningen in the Netherlands (see Circular N° 18).

In social terms, water in the Andes region is community property, and communities have established rights and obligations for its use. Water management at the community level also creates cohesion, while individualist privatization of water rights limits community influence on its members and may contribute to social breakdown and fragmentation.

Given that governments have not always formally recognized indigenous rights (communal or otherwise), such rights risk being eliminated if water rights are formally allocated to individuals or corporations. This risk is particularly high if the rights are allocated to corporations covered by foreign-investment-protection treaties. These treaties are at the top of the legal ladder and investors responsible for *de facto* infringements on customary use would have the advantage in

arguing that indigenous people have no such rights and that, in any event, the absence of legal provisions or administrative documents recognizing or certifying such rights means that they, the corporations, could not have known of their existence beforehand.

It is therefore essential to implement a strategy for obtaining recognition for indigenous water rights and management within national legislation and to design and simplify the procedures for establishing and registering those rights on the ground. This should be done in clear unambiguous terms to avoid ignorance that could lead to hesitation and uncertainty that could lead to vague and encroachable boundaries. In this sense, Latin America is way behind other countries such as the United States of America, Canada, New Zealand and Papua New Guinea in terms of protecting indigenous water rights. The following are the minimum requirements in terms of legislation:

- Water laws must recognize customary water use, including water as part of a stable living environment and an environmental service. This obviously includes uses that require diversions, use of flows and the wider role of water as part of a stable and sustainable habitat.
- In terms of management, this strategy is closely linked to integrated river basin management and the regulatory instruments needed to prevent destruction of water sources and production due to mismanagement of land and forests.
- If national projects are going to affect indigenous customary rights, these should be promptly and appropriately compensated in a way that takes into account the loss of an asset, effects on way of life and cancellation of environmental services.
- Indigenous communities and individuals should be able to request registration and recognition of indigenous rights at any time. Paper rights that affect indigenous water use must be annulled. If the contested rights are not annulled, indigenous users should receive compensation. Compensating for the indigenous uses affected should be the responsibility of the new right holders, the government and the water authority management. The right to request registration of indigenous uses should not be subject to expiry or forfeiture of the right.
- Any member of a community, or its head, on behalf of the community should be able to exercise the right to request registration and recognition of indigenous uses. Individual claims can only be made by the beneficiary of a claim, or the head of

his/her community, on her/his behalf and benefit.

- At indigenous community locations, water authorities must examine, recognize and register diversions, use of flows and water rights *ex officio*. Should the water authority neglect to do so, this shall constitute failure by the head of the water agency to carry out his/her public duties, thereby making him/her liable for criminal charges and civil liability.
- Procedures for implementing indigenous water policies and examining and registering water rights and uses should ensure that the opinions of the communities and individuals involved are heard and that they are given the opportunity to participate in a timely way. They should also be able to submit evidence to support their claims, uses and rights. In case of doubt, decisions should favour the indigenous party.

Information on the WALIR project, its activities and documents is available at <http://www.eclac.cl/dnri/proyectos/walir>.



A new study by the ECLAC subregional headquarters in Mexico, "*Recursos hídricos y agricultura en el Istmo Centroamericano*" (*Water resources and agriculture in the Central American Isthmus*) (LC/MEX/L.658, 22 April 2005) emphasizes the important role of irrigation in economic and social development, particularly at a time of opportunity for increasing Central American participation in world trade. Agriculture accounts for a large proportion of Central American countries' GDP, and the need to diversify production for agricultural exports requires the expansion and optimization of irrigation systems.

The results obtained using the panel data analysis to identify common characteristics among Central American countries in terms of the link between irrigation and agricultural improvements reveal that irrigation is indeed an important factor in explaining total production performance for a given country.

The conclusions of the study indicate the need for agricultural and investment policies to attach greater importance to irrigation, as it is a determining factor if agricultural exports and production are to be increased. Especially when targeted at the poorest farmers, irrigation helps to reduce poverty and increase food security in rural areas.

The document can be downloaded from the website of the ECLAC subregional headquarters in Mexico <http://www.eclac.org/mexico>.

Meetings

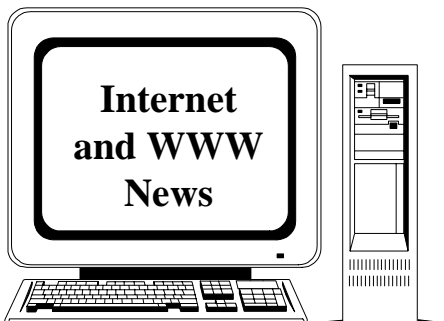


Second Chilean National Workshop

On 6 and 7 December 2004, the *Second Chilean National Workshop: Towards a Water Resources Management Plan* was organized by DGA, GWP and ECLAC in Santiago, Chile. This was the sequel to the first workshop held on 10 and 11 December 2003. The aims of the second workshop were to: (i) build on the analysis of certain aspects of water resources management in Chile that were dealt with in 1993 and changed due to subsequent relevant events (such as the reform of the 1981 Water Code (see “*Open discussion*”), progress in drafting the national biodiversity policy and in establishing secondary standards for environmental quality for freshwater and changes to the regulatory framework of the electricity sector; and (ii) discuss issues that had not been considered at the first workshop.

To facilitate discussions, a document was produced entitled “*Marco General y Estrategias para un Plan Nacional de Gestión de Recursos Hídricos*” (*General framework and strategies for a national water resources management plan*). The document was aimed at stimulating working group discussions on: institutionalization, efficient water use, water and the environment, groundwater, drinking water and sanitation, disposal and drainage of urban rainwater, management of natural water courses, generation of hydroelectricity, and research and public education and information.

Reports from both workshops are available at the SAMTAC website: <http://www.eclac.org/drmi/proyectos/samtac/samtac.htm>.



Some of the web sites worth visiting for information on water resources management

and use and related subjects include the following:

- In resolution 58/217 of 23 December 2003, the United Nations General Assembly proclaimed the period from 2005 to 2015 the *International Decade for Action, "Water for Life"*, to commence on World Water Day, 22 March 2005. The goals of the Decade are a greater focus on water-related issues at all levels and on the implementation of water-related programmes and projects, while striving to ensure the participation and involvement of women in water-related development efforts, and the furtherance of cooperation at all levels, in order to help to achieve internationally agreed water-related goals contained in Agenda 21, the Programme for the Further Implementation of Agenda 21, the United Nations Millennium Declaration and the Johannesburg Plan of Implementation, and those identified during the twelfth and thirteenth sessions of the Commission on Sustainable Development (CDS). For further information on this and other United Nations activities in water-related matters, we invite you to visit <http://www.un.org/depts/dhl/water/index.html>.
- The aim of the *ECLAC web portal on the Millennium Development Goals in Latin America and the Caribbean* (http://www.eclac.org/mdg/default_en.asp) is to bring together: (i) documents and links relating to the United Nations Millennium Summit; (ii) Millennium Development Goals in the context of Latin America and the Caribbean; (iii) regional follow-up to indicators for monitoring the Millennium Development Goals; (iv) ECLAC documents, projects and databases linked to the follow-up of the Goals; and (v) joint studies and initiatives between ECLAC and other bodies.
- ECLAC recently launched the new *Database of Environmental Statistics and Indicators for Latin America and the Caribbean* (BADEIMA), which provides the public with information on almost 70 environmental variables from countries in the region (<http://www.eclac.cl/bdatos/BadeimaDepe.asp>). The database was developed by the Network of Institutions and Experts on Social and Environmental Statistics (REDESA), which was set up by ECLAC in conjunction with countries and experts from Latin America and the Caribbean.
- In September 2000, the governments of 189 countries adopted the Millennium Development Goals, committing themselves to take concrete steps toward eradicating extreme poverty and hunger, making primary education universal, promoting equality between the sexes, improving infant health care, reversing environmental damage, and fostering worldwide cooperation for development. Now, countries all over the world are assessing their progress. ECLAC and the other United Nations agencies with offices in the region have prepared a document evaluating the progress made in Latin America and the Caribbean. This study is entitled “*The Millennium Development Goals: A Latin American and Caribbean Perspective*” (LC/G.2331, 10 June 2005), and its overarching theme is the persistent inequality in the region—the most inequitable in the world—that continues to limit the countries’ chances of meeting the Millennium Development Goals and their respective targets. The United Nations plans to hold a world summit in New York this September to present a report on the progress made worldwide towards the Millennium Development Goals. This inter-agency report will serve as a contribution to the deliberations at that event. It can be downloaded from <http://www.eclac.org/publicaciones/secretariaejecutiva/1/lcg2331/lcg2331.pdf>.
- The *Regional Committee on Water Resources* (CRRH) is a technical intergovernmental agency of the Central American Integration System (SICA) that is specialized in meteorology and climate, hydrology and water resources. CRRH website (<http://www.aguayclima.com>) includes detailed information on its activities and a library of many interesting documents such as “*Plan de Acción para el Manejo Integrado del Agua en el Istmo Centroamericano*” (*Plan of action for integrated water management in the Central American Isthmus*).
- The Grupo Hidro-ecológico Nacional (GHeN) (see Circular N° 19) is offering a *course for environmental guardians* over the Internet. Further information is available from http://es.groups.yahoo.com/group/capacitacion_ghen or by e-mailing Juan Nicolás Faña at j.n.fana@verizon.net.do.
- The website of the Colombian Ministry for the Environment, Housing and Development includes the *draft water act* that is currently the subject of discussions (<http://www.minambiente.gov.co>). The water act aims to: (i) strengthen the role of river basin as the ideal geographical area for water resources planning, with a view to ensuring adequate levels of availability and quality; (ii) indicate the conditions in which access to water resources is permitted, and the requirements for discharging wastewater into national water bodies in accordance with the environmental objectives set for each one;

- (iii) manage water resources in accordance with the conceptual model set out in current legislation, on the basis of the model provided for in the National Environmental System (integrated management of renewable natural resources including water); (iv) clarify the responsibilities in the field of groundwater investigation, prospecting and exploitation; (v) strengthen the role of the State in the integrated management of risks associated with water management; (vi) designate responsibilities for the appropriate development and management of urban drainage in accordance with the principles of sustainability; (vii) strengthen financial instruments for the management of the country's river basins; and (viii) consolidate the Environmental Information System as a tool for providing reliable and timely information for decisions relating to water resources planning and administration.
- The **Department of Renewable Natural Resources (DGRNR)** of the Ministry of Cattle, Agriculture and Fisheries in Uruguay is responsible for promoting the rational use and management of renewable natural resources, with a view to achieving sustainable development in the agricultural sector and contributing to the preservation of biological diversity. Its website (<http://www.mgap.gub.uy/renare>) includes interesting information on the use and management of water for irrigation, including the Irrigation Act, its regulations and those of the Regional Irrigation Advisory Boards (see Circular N° 21) and the decree on systematizing competing organizational responsibilities in water-related matters.
 - The Water Quality Information Center at the National Agricultural Library, Agricultural Research Service, United States Department of Agriculture, has made available an improved version of its database of **online documents covering water and agriculture** at <http://grande.nal.usda.gov/wqic>.
 - The implementation of the **Iberoamerican Water Information System (SIAGUA)** was approved as a result of the first Informal Meeting of Iberoamerican Director Generals of Water and the first Meeting of Latin American Technical Representatives in the field of water, held in Cartagena, Colombia, at the Iberoamerican Training Centre (CIF) of the Spanish Agency for International Cooperation (AECI) (part of the Spanish Ministry of Foreign Affairs), from 10 to 12 July 2001. SIAGUA is intended to be a gateway for information from member countries on freshwater resources, and its structure can be broken down into: institutions, documentation, training and events, information, and research and development projects. The SIAGUA website (<http://www.siagua.org>), features interesting documents such as those presented at the Conferences of Iberoamerican Directors General for Water.
 - The **Historical Water Archive (AHA)** in Mexico was launched in February 1994 as the result of a cooperation agreement between the National Water Commission (CNA) and the Centre for Research and Higher Learning in Social Anthropology (CIESAS). AHA is intended as a facility for study and research into the history of water use in Mexico, and is made up of historical records of the CNA that were produced by its predecessors: the federal departments that managed national water resources prior to the establishment of the CNA. The Archive's document sources may be consulted at the following website: <http://www.archivohistoricodelagua.info>.
 - The **National Association of Drinking Water Supply and Sewerage Companies and Institutions (ANESAPA)** in Bolivia is implementing coordination and exchange mechanisms in order to promote institutional improvement among its members, human resource development, technical exchanges and sectoral documentation and information management (<http://www.anesapa.org>).
 - The report of the **Meeting on Plans for Integrated Water Resources Management in Latin America** (Buenos Aires, Argentina, 28 and 29 July 2004), organized by ECLAC, GWP/SAMTAC and the Inter-American Development Bank (IDB) (see Circular N° 21), can be downloaded from <http://www.eclac.cl/dni/proyectos/samtac/drsam00805.pdf>.
 - The documents presented at the fourth international seminar of CYTED XVII, "**An integrated approach for sustainable water management. Experiences in water management and valuation**", held from 29 to 31 March 2004 in San José, Costa Rica (see Circular N° 20), are available at <http://www.cytmed.agua.uba.ar>. The website also includes other documents of interest such as "**El agua en Iberoamérica: acuíferos, lagos y embalses**" (*Water in Iberoamerica: aquifers, lakes and reservoirs*) and "**El agua en Iberoamérica: aportes para la integración entre los organismos de gestión y los centros de investigación**" (*Water in Iberoamerica: contributions to the integration of management bodies and research centres*).
 - The **Interjurisdictional Authority for the Limay, Neuquén and Negro River Basins (AIC)** in Argentina was set up in 1985 on the basis of an agreement between the governors of the provinces of Neuquén, Río Negro and Buenos Aires, with a view to deal with the management, use and conservation of the above-mentioned river basins. Its website (<http://www.aic.gov.ar>) includes detailed information on its activities, responsibilities, structure, history and various documents of interest.
 - **Gateway to International Best Practices and Innovations** (<http://www.epa.gov/innovation/international>) of the United States Environmental Protection Agency (EPA) is a gateway to information on innovative environmental projects and programmes from around the world. This site provides the following resources: (i) international government agencies and non-governmental organizations that develop and share innovative environmental policies and programmes; (ii) information on innovative international programmes and practices (by topical area); (iii) information on innovative international programmes and practices that apply cross-cutting approaches to environmental issues; (iv) a collection of partnership experiences that the United States entities have had with foreign counterparts on sharing best practices and innovations in environmental policies; (v) opportunities for learning from abroad and past success stories; and (vi) environmental programme evaluation information and resources in the United States and abroad.
 - **Global Map of Irrigated Areas:** the Land and Water Development Division of Food and Agriculture Organization (FAO) of the United Nations and the Johann Wolfgang Goethe Universität, Frankfurt am Main, Germany, are currently cooperating in the development of a global irrigation mapping facility. The objective is to develop global GIS coverage of areas equipped for irrigation (<http://www.fao.org/ag/agl/aglw/aquastat/irrigationmap/index.stm>)
 - "**Mercados (de derechos) de agua: experiencias y propuestas en América del Sur**" (*Water (rights) markets: experiences*)

Publications



Recent publications of the Natural Resources and Infrastructure Division related to water resources management and water utility regulation in Latin America and the Caribbean:

- "**Mercados (de derechos) de agua: experiencias y propuestas en América del Sur**" (*Water (rights) markets: experiences*)

and proposals in South America) (LC/L.2224-P, November 2004, *Natural resources and infrastructure series* N° 80) by Guillermo Donoso, Andrei Jouravlev, Humberto Peña and Eduardo Zegarra (available in Spanish only). Many Latin American and Caribbean countries are in the process of drafting new water legislation or amending existing laws. One of the main, and most controversial, topics of discussion is the institutional design of the system for allocating and reallocating water resources. There is widespread dissatisfaction with conventional water allocation procedures and increasing attention is being paid to water (rights) markets as an attractive and modern option that promises a more economically efficient use of available water resources. The document includes three studies carried out on behalf of SAMTAC by renowned Latin American experts and assesses: (i) the outcome of the water market set up under the 1981 Water Code in Chile; and (ii) the possibility of setting up a water market in the Peruvian institutional system on the basis of historic and current conditions and the outlook for water management in Peru. The document closes with some conclusions on water rights, water markets and the administrative system for allocating and reallocating water resources.

- *"Drinking water supply and sanitation services on the threshold of the*

XXI century" (LC/L.2169-P, December 2004, *Natural resources and infrastructure series* N° 74) by Andrei Jouravlev. Translation into English of the document *"Los servicios de agua potable y saneamiento en el umbral del siglo XXI"* (see Circular N° 21).

- *"El desarrollo productivo basado en la explotación de los recursos naturales"* (*Productive development based on the exploitation of natural resources*) (LC/L.2243-P, December 2004, *Natural resources and infrastructure series* N° 86) by Fernando Sánchez Albavera (available in Spanish only). This document provides a general overview of the availability and exploitation of natural resources in the countries of the region and is an initial contribution to reflection within the Natural Resources and Infrastructure Division on productive development and the sustainable management of natural resources and patrimony within the framework presented by ECLAC at its thirtieth session in San Juan, Puerto Rico (28 June - 2 July 2004). The document begins by specifying the conceptual aspects that are fundamental for designing public policies and posits the working hypothesis that productive transformation strategies should consider natural advantages as dynamic factors not fixed in time, partly because the knowledge of natural patrimony is a relative concept in terms of history and time. The document moves on

to an analysis of the natural patrimony situation of the countries of the region by assessing the state of the land, forests, water resources, biodiversity and mineral and energy resources. Each case includes an analysis of the availability of resources and the exploitation processes involved in their use. The document concludes by describing reforms and public policies of the 1990s in the context of the new paradigm of sustainable management of natural resources and patrimony.

- *"Administración del agua en América Latina: situación actual y perspectivas"* (*Water administration in Latin America: current situation and outlook*) (LC/L.2299-P, March 2005, *Natural resources and infrastructure series* N° 90) by Maureen Ballester, Ernesto Brown, Andrei Jouravlev, Ulrich Küffner and Eduardo Zegarra (see *"Open discussion"*) (available in Spanish only).

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

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