# International Rivers and Lakes

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# I. Calexico joins fight against canal project[1]

Calexico, California -- Illustrating strong cross-border ties, Calexico has sided with neighbouring Mexicali in opposing a canal-lining project that would boost deliveries to the San Diego region, but dry up irrigation water needed by Mexican farmers. Calexico argues that its economic and environmental interests were not taken into account in a multimillion-dollar plan to line the All-American Canal, which carries Colorado River water to the Imperial Valley.

The city is seeking to intervene in the federal lawsuit brought by U.S. conservation groups and Mexicali's Economic Development Council against the U.S. Department of the Interior and the Bureau of Reclamation. Businesses in Calexico, a city of 40,000, are heavily dependent on buyers from neighbouring Mexicali, with a population of more than 1 million. City officials fear that any detrimental effect on Mexicali could prove devastating to Calexico. "More than 90 per cent of our sales tax revenue comes in from Mexicali," Calexico Mayor Alex Perrone said. "We live on the retail from Mexico."

The lawsuit, filed in federal court in Las Vegas, seeks to halt a plan to replace an unlined and leaky, 23-mile stretch of the canal with a concrete-lined channel and send the saved water – enough to supply some 134,000 households – to San Diego County. The lawsuit alleges that the project will hurt Mexicali farmers who for decades have relied on seepage from the canal for their fields, and as a result have established rights to the water. It also says important wetlands in Mexico fed by the seepage will be harmed. Calexico's petition, filed on 31 October 2005, sides with Mexicali and the U.S. conservation groups against the project. It argues that the U.S. agencies failed to consider economic and environmental effects the project will have on the city.

"When they start building the new canal, just imagine the dust that goes into the environment," Perrone said. Calexico is not seeking to intervene on the water-rights question. "That's Mexicali's issue," the mayor said. Cash-strapped Calexico is counting on the Mexicali Economic Development Council to pay the costs of the lawsuit.

"The city is very concerned about this project, and is very fortunate that they can have someone pay their fees," said Jennifer Lyon, Calexico's city attorney. The council agreed. "Calexico and Mexicali are sister cities, and we're linked like twins," executive director René Acuña said.

Several Colorado River water users are also seeking to participate in the case, but unlike Calexico, they are supporting the All-American Canal project. They are: the Central Arizona Water Conservation District; the states of California and Nevada; the Southern Nevada Water Authority; the San Diego County Water Authority; the Imperial Irrigation District; the Metropolitan Water District of Southern California; and the La Jolla, Rincon, San Pasqual, Pauma and Pala Bands of Mission Indians.

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[1] Based on an article at U.S. Water News Online. November 2005.
http://www.uswaternews.com/archives/arcconserv/5calejoin11.html

John Liarakos, a spokesman for the San Diego County Water Authority, said the canal-lining project is moving forward and is in the construction-and-design phase. The Imperial Irrigation District, in charge of building the new link, expects to solicit bids early next year and complete the project by 2008.

## II. NAFTA and Canadian Water[2]

*The excerpts below are taken from a commentary written by former Alberta premier, Peter Lougheed. It was published by the Toronto daily* Globe and Mail *under the title "A Thirsty Uncle Looks North."*

I [Mr. Lougheed] predict that the United States will be coming after our fresh water aggressively within three to five years. We must prepare to ensure we are not trapped in an ill-advised response. It would be a major mistake for Canada to handle this issue badly. With climate change and growing needs, Canadians will need all the fresh water we can conserve, particularly in the western provinces; I was usually able to get support from the caucus – but not when it came to fresh water.

As Alberta premier, I travelled to Washington each spring to lobby U.S. senators for market access to our surplus oil and natural gas. I became friends with Senator Henry Jackson from Washington State, who was Chairman of the Senate's Energy Committee. He convinced me that it would be positive for Canada to take advantage of Section 21 of GATT and secure a free-trade agreement between Canada and the United States.

I took this idea up at my final first-ministers' conference in the spring of 1985, and proposed the concept to then Prime Minister Brian Mulroney, who quickly adopted the idea. The free-trade agreement was negotiated with President Ronald Reagan.

Fresh water was not included in the FTA. Had we been pressured, the Canadian strategy, as I recall, was to reject the inclusion of water, but we would have had to trade something else of major value in exchange.

Fast forward to today. I spend time in Arizona and observe the dryness, the barren riverbeds and the constant concern about water shortage there and in neighbouring states, including California. I talk to a lot of people about water. My political instincts tell me that some time soon water availability is going to rise to the top of the U.S. domestic agenda and someone will say: "What about Canada? They have lots of excess water and we have the free-trade agreement. Let's demand they share their water with us."

With the population and political shift from the U.S. northeast to Texas, Arizona, Nevada and California, what has not been on the agenda soon will be. My strongly-held view is we Canadians should be prepared to respond firmly with a forceful "No. We need it for ourselves!"

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[2] Based on "A Thirsty Uncle Looks North," by Peter Lougheed for the *Globe and Mail*, 11 November 2005, Toronto. Published with permission of the author, who holds the copyright.
http://www.theglobeandmail.com/servlet/ArticleNews/TPStory/LAC/20051111/COLOUGHEED11/TPComment/TopStories

*Why should we not export fresh water?*
There are many compelling reasons. Water is essential to our life and its supply is not always certain. Water is essential to our food production, and why increase our dependence on foreign food supplies? Water can be a determinant in job location; let's bring good jobs to Canadians.

*So, how can Canadians prepare for this thirst for our water?*
1. Governments and their departments of environment must put out current, reliable data and encourage the exchange of data across Canada. We must include the entire 49th parallel as well as the Great Lakes, which have their own important water issues.

2. The federal government House Leader should join with other house leaders to hold a special water debate in the House of Commons no later than next spring.

3. The provincial governments through their premiers should move the water issue to the forefront and prepare for legislative debates next spring.

4. Private sector research groups across Canada should pick up on the Canada West Foundation's January 2005 report 'Balancing Act: Water Conservation and Economic Growth.'

5. Environmental groups and business associations should form an alliance to pressure political parties to make the water issue a priority.

## III. Water Dependencies and Interstate Behaviour: The Basis for Cooperation or Conflict[3]

Africa's shared river basins cover approximately 63 per cent of the surface area of the continent, contain 78 per cent of the human population and, more significantly, hold over 90 per cent of the continent's surface water resources. While far less information is available on the water contained in shared aquifer systems, or the precise extent to which countries in the more arid regions of Africa rely on these systems, they represent critically important sources of water for the countries located in Africa's desert and semi-desert areas. Similarly, many major cities and towns across Africa rely heavily on groundwater resources to meet the needs of domestic and industrial water users. Clearly, a full understanding of the strategic nexus between water and security in sub-Saharan Africa requires a sound knowledge of the role of international river basins and shared aquifers in the current and future development plans of each country.

Several recent social and economic studies have highlighted the pervasive poverty and low human development index (HDI) values of many countries in sub-Saharan Africa. In

[3] This is an excerpt from a larger work by Peter Ashton and Anthony Turton on: "Water and Security in Sub-Saharan Africa: Emerging Concepts and their Implications for Effective Water Resource Management in the Southern African Region". *In* Brauch, H. G. et al, Eds., forthcoming (March 2007), *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts.* Berlin, Springer-Verlag. The permission has been granted by Springer Verlag who holds the copyright.

these countries, problems caused by a shortage of 'first-order resources' (water) are accentuated by the shortage of 'second-order resources' (infrastructure, institutions, money and skills), impeding their ability to achieve sustainable social and economic development. Typically, 'poor' states seldom achieve sustained security of water supply because of their inability to mobilize sufficient economic, human and technological resources. Conversely, relatively 'rich' states can more easily deploy a wide variety of resources to resolve their water supply problems.

Given the extent and importance of shared water resources in Africa, purely inward-looking strategies offer few dependable prospects of long-term national water security and several countries would likely suffer considerable hardship were they to adopt such strategies. This is clearly illustrated by South Africa and Zimbabwe, where efforts were concentrated on national rather than regional priorities and supply-side options were used to meet the growing demands for water. The outcome of the so-called "hydraulic mission" of these states is clearly visible in the number of large-scale water storage reservoirs and inter-basin transfer schemes. Whilst these schemes provide sufficient water to meet national needs, they increase the pressure on shared water resources and emphasize disparities with neighbouring countries that cannot afford such options.

The extent to which African countries rely on shared surface and groundwater resources heightens the need for states to look beyond purely national priorities and harness the region's collective social, economic and technological resources to attain a common goal, that of assuring long-term water security. In strategic terms, this challenge presents African countries with the opportunity to shape and secure a variety of shared benefits with implications far beyond those of national and regional water security. Most notable amongst these are the promotion of political and economic stability across the continent.

Earlier studies evaluated the number and types of agreements between countries that shared trans-boundary water resources. These authors concluded that the available evidence indicated low levels of inter-state collaboration and that this represented a potential "risk" of future conflict between the states concerned. However, more recent studies have revealed a widespread preference amongst Southern African states to cooperate in the management of their shared water resources. This view has been strengthened by the interim results of a study of the scope and intent of international agreements that South Africa has entered into with its neighbours. This study revealed that South Africa has entered into 59 international water-related agreements with neighbouring states and the international community.

## IV. Water policy: European Commission takes legal action against Italy, Spain and Greece over key directive[4]

The European Commission has sent final warnings to Italy, Spain and Greece for not complying with basic provisions under the EU Water Framework Directive.

[4] Reference: IP/05/1302. Brussels, 18 October 2005.
http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/1302

The timely designation of their river basin districts, which should have been done already in June of last year, is one of the important building blocs needed to achieve good quality of all water resources. The Commission has also sent first warnings to Italy and Greece for failing to submit environmental studies on the current state of their water resources.

These actions are part of a series of environment-related infringement decisions against several Member States which the Commission is now announcing. Commenting on the decisions, Environment Commissioner Stavros Dimas said: "European citizens are entitled to clean water and a healthy environment. Proper and timely implementation of this ambitious directive will help Italy, Spain and Greece to manage their precious water resources better. I expect these countries to fulfil their obligations under the Directive in a speedy manner."

*The Water Framework Directive*

The Water Framework Directive,[5] the cornerstone of EU water policy, establishes a European framework for the protection of all water bodies in the European Union – rivers, lakes, coastal waters and groundwater. Its objective is that all water resources should be of good quality by 2015. This is to be reached through curbs on pollution and cooperative management of water resources within each river basin.

The Directive requires Member States to set up river basin districts, which can include several individual river basins, aquifers and coastal waters. These management units are to be the basis for a series of measures, including analyses and reports on the conditions of water bodies. The Water Framework Directive operates with clear deadlines for the various steps required to move toward sustainable water management in Europe with each step building on the previous.

*Clarifying river basin districts and who will manage them*

By 22 June 2004 at the latest, Member States were required to have designated river basin districts and provided the Commission with detailed information on the authorities they had appointed to manage them.

This requirement was intended to provide a clear picture of the administrative arrangements put in place to meet the directive's ambitious goals. Information is especially important where water bodies are shared by different Member States, but also for citizens, water users and stakeholders who need to have water-management arrangements clarified. Italy, Spain and Greece have yet to provide all of the necessary information and so they have been sent a final written warning. Failure to respond adequately may lead the Commission to take action before the European Court of Justice.

*First environmental studies of current situation*

By 22 March 2005 at the latest, each Member State was required to report to the Commission on the results of detailed environmental studies carried out on the current state of each river basin district lying within its territory.

[5] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy

The studies themselves were supposed to have been finalised by 22 December 2004. By making clear what needs to be addressed through future anti-pollution measures, these studies represent a further important step towards the goal of achieving good water quality, serving as a first basis for filling gaps in knowledge, identifying priorities and preparing broad public consultation.

Failure to provide these studies on time might seriously hamper follow-up steps leading to good quality of all European waters by 2015. The Commission has sent Italy and Greece a first warning for not forwarding these studies in time.

*Legal Process*
Article 226 of the Treaty gives the Commission powers to take legal action against a Member State that is not respecting its obligations.

If the Commission considers that there may be an infringement of EU law that warrants the opening of an infringement procedure, it addresses a "Letter of Formal Notice" (first written warning) to the Member State concerned, requesting it to submit its observations by a specified date, usually two months. In the light of the reply or absence of a reply from the Member State concerned, the Commission may decide to address a "Reasoned Opinion" (final written warning) to the Member State.

This clearly and definitively sets out the reasons why it considers there to have been an infringement of EU law, and calls upon the Member State to comply within a specified period, usually two months. If the Member State fails to comply with the Reasoned Opinion, the Commission may decide to bring the case before the Court of Justice. Where the Court of Justice finds that the Treaty has been infringed, the offending Member State is required to take the measures necessary to conform.

Article 228 of the Treaty gives the Commission power to act against a Member State that does not comply with a previous judgement of the European Court of Justice. The article also allows the Commission to ask the Court to impose a financial penalty on the Member State concerned.

## V. Tribunal hands down jurisdictional ruling in Bechtel-Bolivia arbitration[6]

*Quasi-private arbitration tribunals are increasingly active in water-related matters. Although the subject of the arbitration below does not relate to international waters, the mechanism will, sooner or later, be utilized by investors in relation to waters shared by more than one country. The article below illustrates the increasing role of arbitration tribunals in investment policy.*

[6] Luke Eric Peterson. Investment Treaty News, 2 November 2005.
http://www.iisd.org/pdf/2005/investment_investsd_nov2_2005.pdf

A tribunal at the International Centre for Settlement of Investment Disputes (ICSID) has found jurisdiction to examine the merits of a claim by Aguas del Tunari in its investment treaty arbitration against the Government of Bolivia.

According to the website of the ICSID facility, the decision was rendered on 21 October 2005. The proceedings remain pending. The decision comes after a notable wait, with hearings on jurisdiction having been held in February 2004.

The Aguas del Tunari investment consortium, led by a subsidiary of US-based Bechtel Enterprises, alleges that Bolivia has violated investor protections contained in the Dutch-Bolivia bilateral investment treaty. The firm seeks unspecified damages for losses arising out of the alleged mistreatment of its investment in the water system of Cochabamba, Bolivia's third largest city.

Aguas del Tunari signed a concession contract to operate that water service in September 1999. However, decisions to raise prices charged to households led to political outcry, and, eventually, to heated public demonstrations in early 2000. The Government imposed martial law to rein in demonstrations, company officials were forced to flee the country, and the contract was eventually cancelled by the government.

Responding to a request for comment from Investment Treaty News, a media relations spokesperson for Bechtel, said: "The shareholders of Aguas del Tunari welcome the decision of the ICSID tribunal and hope it will contribute to the amicable resolution which they have sought since the beginning of this investment dispute."

## VI. States which share Colorado River water agree to plan for drought[7]

Phoenix, Arizona -- The seven states that share Colorado River water have agreed on a plan to deal with drought issues and future water shortages. However, a dispute over whether Arizona and Nevada can tap in-state tributaries remains unresolved. Nevada has nearly exhausted its Colorado River apportionment and wants to draw water from the Virgin River, a tributary of the Colorado. States on the upper river object to the plan. But to avoid a showdown on that issue, the states pledged to work on finding alternative sources of water that could replace the Virgin River supply.

Those alternatives would have to be in place by 2012, when Nevada says it will run out of existing resources. If the dispute lands in court, it will drag Arizona with it, jeopardizing as much as half of the water that flows to Phoenix and Tucson through the Central Arizona Project Canal. The upper river states have also raised questions about Arizona's use of tributaries – in-state rivers that, like the Virgin, flow into the Colorado. "We've got to back away from the tributary issue," said Herb Guenther, director of the Arizona Department of Water Resources.

[7] Based on an article at U.S. Water News Online. September 2005.
http://www.uswaternews.com/archives/arcconserv/5statwhox9.html

"If we hang up on that, there's only one way to solve it and it's through litigation." Representatives from the states signed the agreement in San Diego and sent it to U.S. Interior Secretary Gale Norton, who has told the states she will impose her own plan if talks among them fail. The plan is filled with promises to continue working on various issues and lays out ideas ranging from lining canals and creating new storage basins to cloud-seeding and weed removal. It addresses key concerns of the upper river states – Colorado, New Mexico, Utah and Wyoming – and those on the lower river – Arizona, Nevada and California.

The upper basin states want assurances that they will not be forced to give up water from their reservoirs to meet the needs of the lower basin states if a shortage occurs. The lower basin states want to settle how treaties with Mexico would be handled in times of drought. Guenther said the final agreement includes the three basic elements that have been discussed for months – better management of the river's two largest storage reservoirs, Lakes Mead and Powell; improving efficiency among users, mostly farmers who order water almost daily; and augmenting the river's flow.

## VII. U.S. Federal Judge rejects Oregon farmers' water claim[8]

*Although not strictly related to international waters, the article below provides input for the ongoing discussion about the nature and extent of rights on water.*

Portland, Oregon -- A federal judge has rejected a $100 million claim by Klamath River Basin irrigators in Oregon who argued the government owed them compensation for water diverted from agriculture in 2001 to protect salmon.

U.S. Court of Federal Claims Judge Francis M. Allegra called the claim 'unrealistic' and a 'fantasy' in a 52-page opinion issued in Washington, D.C. He said the irrigators had no property rights to the water, rejecting their argument that diverting it for salmon amounted to an unconstitutional 'taking' of private property by the government.

"This ruling is important because it rejects a pretty extreme view of property rights and water law," said Todd True, an attorney for Earthjustice, an environmental law firm involved in the case. Roger Marzulla, the attorney for the association, which represents about two dozen irrigators, said an appeal was likely. "What's wrong with this decision is it reverses 100 years of reclamation law," Marzulla said. He said the ruling gives the federal government "absolute authority and control over all irrigation in the West" – control that is "a very scary prospect for farmers."

One of the farmers leading the battle also called it a bad decision. "I would give you a bigger perspective that it is bad for America when citizens are deprived of the ability to make a living," said Lynn Long, a member of the Klamath Water Users Association

[8] Based on an article at U.S. Water News Online. September 2005.
http://www.uswaternews.com/archives/arcrights/5judgreje9.html

board of directors. He said courts have been too liberal in interpreting property rights laws, causing problems for farmers and areas of the country that rely heavily on agriculture. “We don’t have a water crisis in America; we have a judicial crisis,” Long said.

True, however, said the ruling reflects a more mainstream legal view about property rights. “Water is a resource that has to be shared and does not belong to one group,” True said. “And there has to be a fair balance about how it is used.” Deciding how to manage and allocate water has been a difficult problem in the Klamath Basin ever since the Klamath Project to reclaim farmland was first authorized by Congress in 1905.

The U.S. Bureau of Reclamation must balance the needs of endangered sucker fish in Upper Klamath Lake and threatened coho salmon in the Klamath River with more than 1,000 farms in the Klamath Reclamation District, a sprawling area which lies in the dry highlands east of the Cascade Range along the California border. Allegra ruled that fishermen and American Indian tribes also had to be considered by federal water managers, along with fish and wildlife – key arguments by the government and the Pacific Coast Federation of Fishermen’s Associations, which was allowed to intervene in the case and represented by Earthjustice.

The federation and Earthjustice also argued that requiring payment for water used to protect threatened or endangered species could undermine the Endangered Species Act by making it too costly to enforce. Allegra said the irrigators may have a contractual claim to the water, but suggested the case was weak and they “face an uphill battle.”

The Klamath Water Users Association originally had claimed irrigators were owed $1 billion in compensation for the diversions water that sent about a third of their allotted water to help threatened coho salmon in 2001. The association later reduced that claim to $100 million.

## VIII. Meaning and scope of Water Code reform in Chile[9]

*While the reform of a domestic law is in principle a domestic matter, the Chilean Water Law has been a hot issue within the international water community. Its reform sheds light on the shortcomings of an ideological, “no-government is the best government,” approach to water as well as the needs of the greater public. 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).*

[9] Humberto Peña, August 2005. The Circular of the Network for Cooperation in Integrated Water Resource Management for Sustainable Development in Latin America and the Caribbean, no. 22. Available at http://www.eclac.org/drni/noticias/circulares/4/22044/Carta22es.pdf (Spanish) and http://www.eclac.org/drni/noticias/circulares/4/22044/Carta22in.pdf (English).

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 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.

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 to reality, 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 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.

*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.

- 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. For example, the administration 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.[10]

[10] For 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

## IX. Mexico's Rio Grande water debt repaid[11]

Harlingen, Texas -- A long-standing Rio Grande water debt that pitted drought-stricken South Texas farmers against Mexico appeared resolved recently when Texas Governor Rick Perry announced the debt was paid in full.

"Our farmers, ranchers and cities will have 100 per cent of the water they are entitled to, not just for the rest of this year, but for all of 2006," Perry said in a statement. "Now that the debt is paid, both countries must continue to work in good faith to meet the water demands of citizens on both sides of the Rio Grande for years to come."

A 1944 water-sharing treaty dictates that Mexico allow a certain amount of water from the Rio Grande and its Mexican tributaries to reach South Texas. In return, the United States releases Colorado River water to Mexico.

Mexico fell behind on its obligations in the 1990s, and at the height of a mutual drought owed the United States enough water to cover 1.5 million acres a foot deep. By 2002, some South Texas farmers were going under, seething as satellite photos showed lush green spots suggesting healthy Rio Grande irrigation in Mexico.

U.S. Senator John Cornyn of Texas, said Texas representatives ultimately had to pressure Washington and travel to Mexico to bring attention to the issue. "(It was) very, very, very tense," he said. "When you can't irrigate your crops it obviously has an impact on production... There was also the suspicion that water was not being released so farmers in Mexico could use it for their own crops – that would then be sold in the United States."

Earlier this year, Perry announced an agreement calling for the debt to be eliminated by 30 September 2005. It has now been officially eliminated. In March, Mexico transferred more than 210,000 acre-feet of water and began making additional water available. Mexico also made "paper transfers" of water already in jointly controlled reservoirs.

A study commissioned by Texas agricultural officials estimated that South Texas farmers lost the equivalent of $1 billion because they were unable to irrigate their crops.

Abundant rains during the past few years helped Mexico repay the debt without having to tap its irrigation storage, which bothers Mercedes irrigation manager Jo Jo White. "This debt was basically paid off because of rainfall," White said. "They did not actually release any water to pay this deficit from the interior reservoirs. We are not convinced that the bigger problem had been solved."

White manages one of 17 irrigation districts that, along with a water supply company and 29 farmers, sued for damages of up to $500 million from Mexico under the provisions of

[11] Based on an article at U.S. Water News Online. October 2005.
http://www.uswaternews.com/archives/arcglobal/5mexiriox10.html

the North American Free Trade Agreement (NAFTA). Arbitration in that suit was set to begin in October 2005.

Carlos Marin, acting U.S. Commissioner of the International Boundary and Water Commission, a binational agency that oversees Rio Grande water usage, said the two nations were working on a plan to prevent future deficits.

He observed that three wet years now had him worried about Rio Grande floods. “That’s what normally happens,” he said. “You go from a drought to a flood situation. It’s just Mother Nature doing her thing.”