

## **Roadmap to Water Management Synergy in the Americas**

A response to the proposal made by the Government of Brazil at the International Symposium on Integrated Water Management in Transboundary River Basins held in Lima, Peru, on May 18-20, 2005.



**By Juan Cruz Monticelli**  
**Office for Sustainable Development and Environment**  
**Organization of American States**

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Annex 1: Overview of Main Water Laws in Latin America and the Caribbean Region

## Introduction

In many different fora such as the Americas summits, the countries of the Hemisphere acknowledged the importance of water resources and agreed on the implementation of numerous measures to broaden the access to water.<sup>1</sup> The Governments recognized the need to redirect national plans and policies to ensure that all economic decisions fully took into account any environmental impact on water.

Although there is a much greater awareness of, and concern over, the growing scarcity of water, adequate legal frameworks for water resources management have not yet been implemented in most countries of Latin America and the Caribbean Region.<sup>2</sup> The actions necessary to protect water resources are the object of a wide consensus, but the supply of water for human consumption, production, and ecosystems conservation remains a challenge.<sup>3</sup> Furthermore, whereas water resources are an important topic of hemispheric dialogue, most countries have still not implemented sustainable long term water management programs.<sup>4</sup> It is therefore imperative that the countries of the Americas renew their efforts in order to ensure the fair and equitable access to safe water, protect human health from the adverse effects of any contamination of water intended for human consumption, and ensure that all economic decisions take into consideration any environmental impact on water.

A synergy in water legislation and management techniques among the countries of Latin America and the Caribbean Region would serve as a means to facilitate this objective.<sup>5</sup> A legal mechanism or instrument agreed upon by all countries of the Americas would allow for the convergence of governments and societies towards consistent sustainable water management practices. It is therefore essential to establish the nature of such mechanism or instrument, what aspects of water management it should take account of and what sort of political and institutional processes it should involve. Furthermore, before entering the final stages of a negotiating process where the countries would agree upon the material aspects of a convergence mechanism or instrument, the negotiation of a hemispheric mechanism for water resources management will entail a multi-stage process where the interested countries should first manifest their intent and readiness to negotiate, and subsequently consent to a framework agreement which would provide the guidelines for negotiation. This is a complex process which requires diligent care.

A first step towards the establishment of a negotiating framework would be to assess the current situation of water management laws in the Americas. The laws relating to water enacted by a country provide a clear view of what this situation is.

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<sup>1</sup> Brazil, *Estratégia comum para gestão da água entre os países da América Latina e Caribe*, at p. 2. Document submitted by the Government of Brazil at the International Symposium on Integrated Water Management in Transboundary River Basins held in Lima, Peru, on May 18-20, 2005.

<sup>2</sup> Id.

<sup>3</sup> Id.

<sup>4</sup> Id.

<sup>5</sup> Id.

## Analysis of the Legislation on Water across the Americas

Most nations of the Americas provide for some form of water legislation.<sup>6</sup> Annex 1 contains a chart providing a summary overview of the most important aspects legislated upon by the laws on water of the Americas. Although some of the analyzed laws do not provide for any regulation on certain categories included in the chart, this does not necessarily mean that the country in question chose not to regulate the issue. Sometimes these regulations are present in other bodies of law such as a presidential decree or an executive order. In other cases, a ministry may have issued a resolution on the matter. Furthermore, a general environmental law may regulate water related issues not included in the country's water law. The reason for these differences is mostly due to the countries' varying legislative practices and approaches. For instance, many countries choose to include provisions on easements or servitudes<sup>7</sup>, navigation, fishing, mining, the establishment of user associations, etc., in their water laws, whereas other countries choose to regulate these issues in different laws. It should also be noted that, although the most important problems relating to water are scarcity and contamination –these are topics dealt with by any water law of any country enacted at any point in time, a series of issues also arise which may vary from a country to another or from a region to another, depending on the geographical, climatic, cultural or economic circumstances of a nation.

In some cases, particularly in countries that follow the common law system, water laws include a chapter where certain terms used by the law are listed along with their meaning. This practice seems particularly useful given that water legislation may involve the use of technical terminology applicable to this special activity. In private international law, these definitions are fundamental in cases where an issue arises between or among countries and it is necessary to establish how each country construes its own legislation to the subject matter at hand. Whereas by using certain words a country may imply one thing, another might imply something totally different. Any document which intends to regulate an issue at the supranational level (e.g., transboundary basins) must characterize the terms it uses. Furthermore, this legislative practice allows the lay reader to grasp the meaning of the issues being regulated, thus facilitating public participation.

The survey of water laws in the Americas showed that almost no law applies an integrated approach to water resources management. Integrated water resources management should be conceived as a means to address a country's key water related development problems more effectively and efficiently than is possible using traditional approaches.<sup>8</sup> This approach implies moving away from fragmented approaches. It may involve integration of management laws and regulations on land and water, surface water and groundwater, quantity and quality, upstream and downstream water related interests,

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<sup>6</sup> It should be noted that El Salvador, Haiti, Nicaragua, Paraguay, Peru and Colombia are in the process of either reforming or enacting their water legislations.

<sup>7</sup> An easement or servitude is an interest in land owned by a person other than the landlord that entitles its holder to a specific limited use or enjoyment. The most common water easements are those for fire line and hydrant, sewage, cattle drinking, ship docking, etc.

<sup>8</sup> Global Water Partnership, *Current Status of National Efforts to Move towards Sustainable Water Management Using an IWRM Approach*, Version 1, April 2004, at p. 5.

etc.<sup>9</sup>

Therefore, a basic question faced by an initiative which intends to develop a common mechanism for water management among the countries of Latin America and the Caribbean Region is to determine what aspects of water it should regulate and what approach should it apply in doing so at the legislative and water resources management levels.

### **Current Trends on Integrated Water Resources Management**

As a starting point, it should be noted that water management involves countless cross-cutting issues. These include natural hazards, irrigation, user fees, health (water quality), energy production, user rights and fees, infrastructure, hydrology, meteorology, penalties and environmental liability, user conflicts, public participation and all sorts of financial and investment issues. The significant number of aspects relating to water make difficult the task of determining which should be the issues dealt with by a country's legal framework on water and how they should be dealt with.

A careful analysis of water legislation in Latin America and the Caribbean Region shows that most countries of the hemisphere do not have a national policy on water resources management nor do they conceive basins as technical planning units. Integrated water resource management techniques and approaches are not contemplated in legal frameworks either. In most cases, the countries' water resources legal framework is broad and easily misconstrued. Legislation having some effect on water management is fragmented. Several laws regulate different aspects of water and were enacted at different periods in time, thus taking into consideration shifting circumstances and priorities. In other words, varying water aspects are provided for by several discordant laws. Furthermore, several government agencies and ministries are in charge of administering and enforcing these laws, each one discharging its duties independently from the others and according to its own vision. The outcome is an unarticulated management of water resources where institutional mandates overlap.

In conclusion, although most countries of the Americas and the Caribbean Region are committed to integrated water resources management, many of them have either taken only some step towards more integrated approaches but need to increase their efforts, or remain at the initial stages of the process leading to more integrated approaches. The need for financial and technical support hinders the entry into force of necessary reforms.

### **Water Quality Standards Applied by Latin American Countries**

Standards relating to the quality of water intended for human consumption are usually established based on scientific and technological progress. Another important issue relates to the manner in which the standards should be implemented so as to ensure compliance. Case in point, the experience gained from the implementation of water standards by the EU member states has shown that, when several countries are involved

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<sup>9</sup> Id.

in the adoption of such standards, it is necessary to create appropriately flexible and transparent legal frameworks so that the countries may address failures to meet the standards and be free to add other parameters as well.

In Latin America, although the World Health Organization (WHO) Guidelines for Drinking-water Quality (GDWQ) are not mandatory, the countries usually follow them to determine their own water regulation and management practices. Table 1 shows the microbiological standards of drinking-water of several Latin American countries. Although most countries follow the standards set by WHO, sometimes the natural and socio-economic differences between the countries of the region detract from the adoption of the WHO guidelines laid down in the GDWQ. Hence, a country may opt for a less stringent standard in order to facilitate monitoring, analysis, and the actions to redress failures, all of which are implemented at the national or local level. It should also be noted that both the WHO and the EU recommend the same standards.

**Table 1**  
**Microbiological Standards of Drinking-water**

Country	Year	<i>E. coli</i> (UFC/100mL)	Total Coliforms (UFC/100mL)	Heterotrophic bacteria (UFC/100mL)
<b>WHO Standards</b>	1995	<b>0</b>	<b>0</b>	<b>No guideline</b>
<b>EU Standards</b>	1998	<b>0</b>	<b>0</b>	<b>No guideline</b>
Argentina	1994	0	3	Not mentioned
Bolivia	1997	0	0	Not mentioned
Brazil	1990	0	0	Not mentioned
Colombia	1998	0	1	Not mentioned
Costa Rica	1997	0	Not mentioned	Not mentioned
Chile	1984	0	1	Not mentioned
Ecuador	1992	Not mentioned	1	Not mentioned
El Salvador	1997	0	0	100
Guatemala	1998	2.2	2.2	Not mentioned
Mexico	1994	0	2	Not mentioned
Nicaragua	1994	0	4	Not mentioned
Peru	1999	0	0	500
Dominican Rep.	1980	0	Not mentioned	Not mentioned
Uruguay	1996	0	0	500
Venezuela	1998	Not mentioned	Not mentioned	Not mentioned
Honduras	1995	0	3	Not mentioned
Panama	1999	Not mentioned	Not mentioned	Not mentioned
Paraguay	2000	0	3	Not mentioned

### Models for Standard Harmonization

Most countries of the Americas enacted legal frameworks on drinking-water aimed at protecting human health. Through these, the governments establish water quality standards and define the duties of the authorities, users and service providers. Along with the framework legislation on water, most countries enact rules on drinking-water Quality that implement the laws on safe drinking-water. The Rules on Drinking-water Quality are crucial because they regulate specific aspects of water which may not be adequately contemplated by a framework law. The Rules are particularly useful in determining how water contaminants and pollutants should be regulated and setting maximum water

contaminant levels (i.e., the level of a contaminant in drinking-water below which there is no expected health risk). WHO's Guidelines for Drinking-water Quality (GDWQ). These recommendations help regulators and water service providers maintain and improve the quality of their drinking water. Furthermore, by proposing a standard of water quality which was voluntarily adopted by many countries in the Americas, the WHO achieved some degree of harmonization in matters relating to safe levels of pollutants and contaminants in drinking-water in the Region.

In Europe, since the mid-1970s the European Union has been working on the development of legal and financial policies and directives for drinking-water. Early European water legislation began with standards for rivers and lakes used for drinking-water abstraction, and followed with the enactment of binding quality targets for drinking-water. In October 2000, the European Parliament adopted the EU Water Framework Directive establishing a plan of action for water policy. This management model applies the single water system approach, or natural geographical and hydrological unit approach, instead of limiting itself to administrative or political boundaries. It involves the cooperation and joint objective-setting across EU member states borders and, in some cases, even non-EU territory. Several member states already apply the river basin approach. It should also be noted that the EU particularly emphasizes public participation in water resources management for two main reasons; first of all, in a river basin management plan, the decisions on the most appropriate measures to achieve the objectives will involve balancing the interests of various groups. Secondly, the greater the transparency in objectives, measures, and standards setting, the greater the care member states will take in implementing efficient legislations, and the greater the power of the citizens to influence environmental protection. The tables below summarize the parameters on water quality set by the WHO and the EU.

**Table 2**  
**Parameters on Water Quality**

Parameters	WHO standards	EU standards
Suspended solids	No guideline	Not mentioned
COD	No guideline	Not mentioned
BOD	No guideline	Not mentioned
Oxidisability		5.0 mg/l O <sub>2</sub>
Grease/oil	No guideline	Not mentioned
Turbidity	No guideline <sup>(1)</sup>	Not mentioned
pH	No guideline <sup>(2)</sup>	Not mentioned
Conductivity	250 microS/cm	250 microS/cm
Color	No guideline <sup>(3)</sup>	Not mentioned
Dissolved oxygen	No guideline <sup>(4)</sup>	Not mentioned
Hardness	No guideline <sup>(5)</sup>	Not mentioned
TDS	No guideline	Not mentioned
Acrylamide	Not mentioned	0.0001 mg/l
Benzene (C <sub>6</sub> H <sub>6</sub> )	Not mentioned	0.001 mg/l
Benzo(a)pyrene	Not mentioned	0.00001 mg/l
Chlorine dioxide (ClO <sub>2</sub> )	0.4 mg/l	
1,2-dichloroethane	Not mentioned	0.003 mg/l
Epichlorohydrin	Not mentioned	0.0001 mg/l
Pesticides	Not mentioned	0.0001 mg/l
Pesticides - Total	Not mentioned	0.0005 mg/l
PAHs	Not mentioned	0.0001 mg/l
Tetrachloroethene	Not mentioned	0.01 mg/l

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Trichloroethene	Not mentioned	0.01 mg/l
Trihalomethanes	Not mentioned	0.1 mg/l
Tritium (H3)	Not mentioned	100 Bq/l
Vinyl chloride	Not mentioned	0.0005 mg/l

Sources: EU Directive 98/83/EC, WHO Website, and Lenntech Water Treatment and purification

(1) Ideally, median turbidity should be below 0.1 NTU for effective disinfection. Changes in turbidity are an important process control parameter.

(2) Desirable: 6.5-8.5

(3) Desirable: 15 mg/l Pt-Co

(4) Desirable: less than 75% of the saturation concentration

(5) Desirable: 150-500 mg/l

**Table 3**  
**Specific Parameters on Cations**

Parameters (Cations - positive ions)	WHO standards	EU standards
Aluminium (Al)	0.1/ 0.2 mg/l	200 µg/l
Ammonium (NH <sub>4</sub> )	No guideline	0.50 mg/l
Antimony (Sb)	0.005 mg/l	0.005 mg/l
Arsenic (As)	0.01 mg/l	0.01 mg/l
Barium (Ba)	0.3 mg/l	Not mentioned
Berillium (Be)	No guideline	Not mentioned
Boron (B)	0.3 mg/l	0.001 mg/l
Bromate (Br)	Not mentioned	0.01 mg/l
Cadmium (Cd)	0.003 mg/l	0.005 mg/l
Chromium (Cr)	0.05 mg/l	0.05 mg/l
Copper (Cu)	2 mg/l	2.0 mg/l
Iron (Fe)	No guideline <sup>(1)</sup>	0.2 mg/l
Lead (Pb)	0.01 mg/l	0.01 mg/l
Manganese (Mn)	0.5 mg/l	0.05 mg/l
Mercury (Hg)	0.001 mg/l	0.001 mg/l
Molibdenum (Mo)	0.07 mg/l	Not mentioned
Nickel (Ni)	0.02 mg/l	0.02 mg/l
Nitrogen (total N)	50 mg/l	Not mentioned
Selenium (Se)	0.01 mg/l	0.01 mg/l
Silver (Ag)	No guideline	Not mentioned
Sodium (Na)	200 mg/l	200 mg/l
Tin (Sn) inorganic	No guideline	Not mentioned
Uranium (U)	1.4 mg/l	Not mentioned
Zinc (Zn)	3 mg/l	Not mentioned

Sources: EU Directive 98/83/EC, WHO Website, and Lenntech Water Treatment and purification

(1) Desirable: 0.3 mg/l

**Table 4**  
**Specific Parameters on Anions**

Parameters (Anions - (negative ions)	WHO standards	EU standards
Chloride (Cl)	250 mg/l	250 mg/l
Cyanide (CN)	0.07 mg/l	0.05 mg/l
Fluoride (F)	1.5 mg/l	1.5 mg/l
Sulfate (SO <sub>4</sub> )	500 mg/l	250 mg/l
Nitrate (NO <sub>3</sub> )	(See Nitrogen)	50 mg/l
Nitrite (NO <sub>2</sub> )	(See Nitrogen)	0.50 mg/l

Sources: EU Directive 98/83/EC, WHO Website, and Lenntech Water Treatment and purification

**Table 5**  
**List of Microbiological Parameters**

Microbiological Parameters	WHO standards	EU standards
<i>Escherichia coli</i>	Not mentioned	0 in 250 ml
Enterococci	Not mentioned	0 in 250 ml
<i>Pseudomonas aeruginosa</i>	Not mentioned	0 in 250 ml
<i>Clostridium perfringens</i>	Not mentioned	0 in 100 ml
Coliform bacteria	0 in 100 ml	0 in 100 ml
Colony count 22°C	Not mentioned	100/ml
Colony count 37°C	Not mentioned	20/ml

Sources: EU Directive 98/83/EC, WHO Website, and Lenntech Water Treatment and purification

The models provided by the WHO and the EU show varying degrees of, and different approaches to, harmonization both from a quantitative and policy perspective. From the quantitative perspective, the tables above show that based on scientific and empirical facts, the WHO may recommend or the EU may mandate a higher standard than that set by the other organization and vice versa. Furthermore, in some instances one of these organizations may choose not to issue any guidelines for certain substances, whereas the other does. From the policy perspective, a first step towards harmonization implies converging toward uniform water standards such as those of the Guidelines for Drinking-water Quality of the WHO, which the countries may freely and voluntarily adopt. However, a step further would involve the coordination of national management efforts across national borders such as those mandated by the EU Water Framework Directive, geared towards achieving integrated water resources management and requiring the commitment of participating states regarding a set of rules and principles included in an agreement. Hence, the adoption of one set of water quality guidelines or the other implies not only the implementation of standards representing different values, but also and foremost, the adoption of a different policy on water resources management.

### **Implementation of National Legal Frameworks for Integrated Water Resources Management**

When a country endeavors the challenge of applying an integrated approach to its water resources management, it may choose to do so either by enacting a law or by implementing a policy based on this approach. Whatever the chosen path is, it will have to enact a legal framework that includes every aspect relating to water. For instance, countries have usually dealt with the process of deforestation by enacting a forest act or other sorts of specific laws or policies regulating the economic exploitation of forestlands. However, because the loss of protective vegetation cover also has an impact on a region's water cycle, then a country intending to apply an integrated approach to water management will have to include provisions on deforestation in its water law or policy.<sup>10</sup> Although this approach is highly desirable since it entails the integrated

<sup>10</sup> This is the case for Costa Rica, Panama and Saint Lucia, who contemplate deforestation in their water laws, thus providing for a more integrated water resources management approach. In Saint Lucia, under the Water and Sewage Authority Act, if it appears to the water authority that deforestation is threatening the capacity of any gathering ground to store water, it may request the Chief Forest Officer to take appropriate action under the Forest Soil and Water Conservation Ordinance to prevent or regulate such deforestation.

management of water resources, it means that the whole legal or policy framework must adapt to this new approach; otherwise overlapping capacities may arise between legislations or policies and authorities.

A common mechanism for water management jointly decided upon by the countries of Latin America and the Caribbean would facilitate the task. The experiences of each country in this field could be shared with others with a view towards improving knowledge and reaching appropriate solutions to common problems. It would encourage the reform of legal frameworks and policies for water resources management making them more efficient and allowing the incorporation of innovative principles and trends geared towards integrated water resources management.<sup>11</sup>

### **Convergence**

The promotion of a coordinated movement toward the uniformity, or convergence, of water resources management at the hemispheric level would ensure that common objectives of sustainable water usage are met taking into account human consumption, production and ecosystem protection requirements.<sup>12</sup> The issue is whether convergence should be focused on either legal or policy framework aspects. The answer will vary depending on the approach selected to address water resources management. It should be noted that no matter what is the approach (i.e., legal frameworks or policy frameworks), a convergence process focused on the reform of legal frameworks will involve some policy changes and, conversely, a convergence process focused on policy changes will involve some legal reforms.

Although both processes are means to achieve the same ultimate goal (i.e., providing sufficient safe water to the people of the Americas), their main difference may be characterized by two aspects:

1. The entry into force, or reform, of a country's water legislation involves primarily actions executed by the legislative branch of government, whereas a change in policy requires the action of the executive branch of government.
2. A legal framework tends to be more rigid, its rules are of mandatory nature and imposed upon all branches of government and the community, whereas a policy framework is usually more flexible, its provisions are of discretionary nature and far less demanding in terms of compliance.

Based on the issue at hand and taking into consideration these two approaches, it seems that there are two options. The first option –law-oriented– would consist in

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Costa Rica (Law N° 276, Section 145) and Panama (Decree Law N° 35, Section 31) have similar provisions.

<sup>11</sup> The World Conservation Union (IUCN), the Water and Nature Initiative (WANI). Available at <http://www.sur.iucn.org/wani/solainiciativa.htm>

<sup>12</sup> Brazil, *Estratégia comum para gestão da água entre os países da América Latina e Caribe*, at p. 12. Document submitted by the Government of Brazil at the International Symposium on Integrated Water Management in Transboundary River Basins held in Lima, Peru, on May 18-20, 2005.

*By Juan Cruz Monticelli*

Office for Sustainable Development and Environment of the OAS

negotiating a Convention for Integrated Water Resources Management. The second option –policy-oriented– would entail the preparation of a Policy Framework for Integrated Water Resources Management. The drafting of either a convention or a policy framework would involve a consultation and negotiation process in which all countries of Latin America and the Caribbean Region should be involved.

### **Option 1: An Inter-American Convention for Integrated Water Resources Management**

A convention or treaty is a binding agreement in writing negotiated by two or more States under international law. The ultimate goal in enacting a convention dealing with integrated water resources management would be a legally binding international convention that should include the following elements:

- (1) A preamble that clearly states the mission of the convention, the reasons why inconsistent and non-integrated water practices are inherently detrimental to the environment at the national and regional levels, particularly in terms of sustainability, efficiency and conservation, and what needs to be done to develop consensus as well as nurture an inter-American norm regulating integrated water resources management.
- (2) Enforceable and verifiable provisions proscribing and regulating water management. These provisions should require the following:
  - Commitments to transfer, technology, experiences, professional knowledge and practices, as well as supply data, statistics and information on water resources;
  - Pledge to develop legal frameworks advancing the goals of the convention or convention, and;
  - A framework for the sustainable and efficient use of water resources for water supply purposes and other commercial, scientific or experimental uses.
- (3) Management measures that address water security and scarcity concerns of all hemispheric nations. These measures should include guidelines on:
  - Conception of basins as technical planning units as a fundamental principle in all processes dealing with integrated water resources management;
  - Action plans in the event of water related natural hazards and public emergencies;
  - Irrigation, thus enabling the countries to enact adequate irrigation laws in their countries;
  - Water usage fees, water quality standards and policies, and aquifers and

subterranean waters regulation;

- Usage of water to generate energy and other types of commercial, scientific and experimental uses;
  - Construction and investment initiatives impacting on water resources, such as dams, cofferdams, water course diversions, flood protection structures, dewatering work sites, hazardous material control, water filled barriers, water storage, etc;
  - Sources of revenues and financial support, thus allowing the countries to enact institutional and legal frameworks promoting adequate water infrastructure development;
  - The establishment of national water information systems containing data on water quality, public water systems, drinking-water regulations, treatment techniques, monitoring and reporting requirements to ensure that water systems provide safe water, etc. In the long term, national information systems could be consolidated into a decentralized water information system for Latin America and the Caribbean Region;
  - Creation of an inter-American mechanism for conflict resolution in transboundary basins; and
  - Public participation in order to create, strengthen, and support opportunities and mechanisms for public participation in which integrated water resource management issues are discussed and decided upon.
- (4) Establishment of a Secretariat to promote and facilitate the enforcement of the convention and the sustainable use of water resources;
- (5) Fair and equitable verification mechanisms and terms for entry into force.

#### **A. Institutional Arrangements**

A governing body could be created in order to advance the implementation of the Convention through decisions made at periodic meetings, establish a process to review the operations of the Convention, and set out a program of work. Its activities would include:

- Periodically examine the obligations of the Parties and the institutional arrangements under the Convention;
- Promote and facilitate the exchange of information on measures adopted by the Parties to address integrated water resources management;

- Facilitate the coordination of measures adopted to address the management of basins as technical units, particularly in transboundary areas;
- Assess the implementation of the Convention by the Parties and the overall effects of the measures taken pursuant to the Convention;
- Consider and adopt regular reports on the implementation of the Convention;
- Make recommendations on matters of essence to the implementation of the Convention;
- Mobilize financial resources and seek technical assistance from competent international organizations and intergovernmental and non-governmental bodies.

A permanent secretariat could be set up with the objective of assisting the governing body in its operations. The secretariat would report to the governing body, its activities would include arranging for, and provide support to, the meetings of the governing body and perform any function mandated by the governing body.

## **B. Potential Places of Venue**

The Summit of the Americas process would provide the most logical venue for negotiations on such an inter-American convention, given the prominent role it plays in the promotion of important inter-American mandates in the field of sustainable development, disaster management, health, development financing, etc. The Summit of the Americas would also lend legitimacy to such an undertaking, as its membership is fully representative of the Americas in both political and geographical terms. The main concern is whether the prospect for bringing negotiations for such a convention to a speedy conclusion is realistic.

A second alternative would be the Organization of American States, where one state or a core group of states could take the lead in sponsoring an inter-American convention on water. Instead of following the conventional path for treaty negotiation, including discussions concerning agenda-setting and other procedural complexities, such a convention could begin with a draft or a description including its scope of coverage, provisions and steps for achieving set goals, questions of enforceability and verification mechanisms.<sup>13</sup> A deadline could be set concerning the time allowed to reach agreement, and all the technical details should follow and facilitate rather than stand in the way of what the final product might aim to accomplish.<sup>14</sup>

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<sup>13</sup> Foreign Affairs Canada, *Towards an International Treaty: Eventual Goals and Interim Steps*, Available at <http://www.dfait-maeci.gc.ca/arms/MTCR/page9-en.asp>, last accessed July 2005.

<sup>14</sup> *Id.*

### C. Timeline of Events from Preparation to Entry into Force<sup>15</sup>

As an estimate based on prior international agreement negotiation experiences, the entry into force of an Inter-American Convention on water may take from two and a half to six years counting from the day when the preparatory process is initiated. The process would include the following steps:

#### 1. Preparatory Process (6-18 months)

A survey prepared by the Global Water Partnership (GWP) showed that the countries that have made the most progress towards adapting and reforming their water management systems towards more sustainable water management practices have often started by focusing on specific water challenges.<sup>16</sup> Taking this result into account, during the preparatory phase the Ministers responsible for water resources should establish identify and examine existing water-related concerns in their own countries with a view to identifying issues of, and approaches to, negotiations. Each Ministry assesses its water landscape in terms of institutions, laws, stakeholders, areas of concern, contamination, etc. Ministerial meetings may take place during the preparatory phase or after the formal launch of negotiations.

#### 2. Formal Negotiation Process (1-2½ years)

The negotiating process is the most complex formulation step. It should be transparent –the results of negotiations could be made available to the public– and take into account the varying levels in development and size of the hemispheric nations in order to facilitate meaningful participation by all countries. An agreement should be reached regarding a structure under which the negotiations would be conducted, including the creation of negotiating groups dedicated to different issues dealt with by the convention. The site of the negotiations, as well as the Chairs and Vice Chairs of the negotiating groups and other committees may rotate among participating countries. A deadline may be fixed for the conclusion of negotiations.

#### 3. Drafting of the Agreement (6-12 months)

The Ministers should instruct their respective negotiating teams to conclude negotiations and prepare draft texts of the chapters negotiated. An official version of the agreement negotiated among the parties is submitted to each Minister.

#### 4. Entry into Force (3-12 months)

The Convention enters into force a number of days (e.g., 90) after the date of deposit of a certain quantity (e.g., 10) of instruments of ratification, acceptance, approval or

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<sup>15</sup> Based on the work schedule designed for the negotiation of the Free Trade Area of the Americas (FTAA).

<sup>16</sup> Global Water Partnership, Current Status of National Efforts to Move towards Sustainable Water Management Using an IWRM Approach, Version 1, April 2004, at p. 3.

accession.

## 5. Implementation Phase

The implementation of a convention on integrated water resources management requires different approaches depending on varying national contexts.<sup>17</sup> Such factors as existing laws and regulations, civil society and the strength of government institutions all affect the implementation of a convention and should be reviewed and considered.<sup>18</sup> In addition, bilateral and multilateral agencies should provide technical assistance and financial support to the states seeking to implement and follow up on the Convention.<sup>19</sup>

### **D. Arguments in Favor of a Convention or Treaty**

The creation of an inter-American convention on water would greatly encourage the promotion of more efficient legal and institutional frameworks and practices on water. It would create a mechanism by which the actions of all the parties would be geared to specific objectives consistently organized towards achieving the ultimate goal of providing sufficient safe water to the people of the Americas.

Because a convention is previously negotiated by, and legally binding upon, the parties, its signatories would be committed to its mandates and obliged to abide by its terms. Its terms are discussed prior to entry into force, giving the opportunity to the parties to set a realistic set of objectives which they will be able to honor in the future. Furthermore, a treaty would most likely maximize the efforts of the parties because it would establish with great precision guidelines which the parties will follow in the enactment of newer, more efficient, water policies and legal frameworks. The convention could also include a timetable for implementation which would allow the countries to progressively abide by its terms.

Finally, the assistance of an international organization can aid negotiations by decreasing transaction costs and providing a fora for bargaining, in-country national focal points and a negotiation structure.

### **E. Arguments against a Convention or Treaty**

It seems that a convention would be an efficient means to promote the convergence of water policies and legal frameworks. However, this approach may have some disadvantages.

The first concern is whether the prospect for bringing negotiations for such a convention

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<sup>17</sup> Organization of American States, Inter-American Strategy for the Promotion of Public Participation in Decision Making for Sustainable Development (ISP), CIDI/RES. 98 (V-O/00), CEPCIDI/RES. 55 (LVII-O/99), at p. 13, available at <http://www.ispnet.org/Documents/INDEX.html>, last accessed July 2005.

<sup>18</sup> Id.

<sup>19</sup> Id.

to a speedy conclusion is practicable. Many actors will sit at the negotiating table of an inter-American Water Convention. They will represent numerous contrasting interests. Given that a treaty is binding and enforceable, the negotiating parties will be reluctant to include clauses which might compromise their national interests. Furthermore, integrated water resource management involves the treatment of basins as technical units. Sovereignty issues may arise in the negotiation of clauses dealing with transboundary basins, which could bring treaty negotiations to a halt if satisfactory options are not presented.

The second concern is whether the functioning of a water resources convention is financially sustainable. Its entry into force will entail the creation of a governing body that should meet periodically to lead the implementation of the convention and a permanent secretariat that should assist the governing body in its operations. The task of ensuring that sufficient funding is available for this mechanism to function properly may prove to be challenging.

### **Option 2: An Inter-American Policy Framework for Integrated Water Resources Management<sup>20</sup>**

A policy framework would consist of a long term plan of action designed to achieve a particular goal by means of a legal framework and a set of coordinated recommendations for action linking water resources management goals with the actions required to achieve them. The general objective would be to direct the efforts of the hemispheric nations toward the formulation and implementation of policies and legal frameworks that will promote efficient integrated management in every aspect of water resources nationally and, in the case of transboundary basins, in coordination with neighboring nations. A Policy Framework for Integrated Water Resources Management should include:

- (1) A listing of principles providing the foundation of attitudes and approaches upon which the subsequent water plan recommendations rest, which are identifiable from the commitments on integrated water resources management assumed by the countries of the Americas, and the concomitant implementation practices undertaken at the regional and national level.
- (2) A core Policy Framework, to be considered for adoption by the nations involved in its drafting and by all those wishing to adhere to it subsequently. The Policy Framework contains the basic principles, goals, and policy recommendations for integrated water resources management. The specific objectives of the policy framework would be:
  - To integrate the conception of basins as technical planning units in all

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<sup>20</sup> This section is based on the Inter-American Strategy for the Promotion of Public Participation in Decision Making for Sustainable Development (ISP). Organization of American States, approved by the Inter-American Council for Integral Development [CIDI/RES. 98 (V-O/00)] and the Permanent Executive Committee of the Inter-American Council for Integral Development [CEPCIDI/RES. 55 (LVII-O/99)], available at <http://www.ispnet.org/Documents/INDEX.html>, last accessed July 2005.

By Juan Cruz Monticelli

Office for Sustainable Development and Environment of the OAS

processes of planning, decision-making, follow-up, and assessment of integrated water resources management at the regional, national and subnational levels through legal and regulatory mechanisms;

- To ensure integrated water resources management at regional, national and subnational levels by strengthening institutional structures, policies, and procedures;
  - To encourage the dedication of financial resources to integrated water resources management;
  - To encourage the creation, development and maintenance of national water information systems containing data on water quality, public water systems, drinking-water regulations, treatment techniques, monitoring and reporting requirements to ensure that water systems provide safe water, etc. throughout Latin America and the Caribbean Region. Communication mechanisms allowing countries to exchange necessary information and experiences should also be promoted; and
  - To encourage the adoption of effective mechanisms allowing for civil society participation in integrated water resources management.
- (3) A technical set of Recommendations for Action, intended for consideration by both government and civil society, which implement the policy recommendations; and
- (4) Examples of concrete steps or practical experiences and lessons gathered throughout the hemisphere, which implement the Policy Framework.

#### **A. Institutional Arrangements**

The objective would be to implement the policy framework (principles) and recommendations for action (practices) proposed to implement such policies. To advance this objective, regional organizations with the capacity to support the countries' efforts in integrated water resource management could create a water partnership program for technical advising and support on policy framework implementation. The Water Partnership Program could be established with assistance from participating countries and bilateral and multilateral funding agencies.

A hemispheric organization could be in charge of coordinating the efforts of donors and other partners around a common program, ensuring a synchronized response in meeting the challenges, and facilitating a harmonized approach to policy framework implementation. Such organization could also establish a Water Coordinating Committee

to provide the Secretariat functions for the implementation of the various initiatives.<sup>21</sup>

## **B. Potential Places of Venue**

Both the Organization of American States and the Summit of the Americas process would provide excellent venues for the launching of an inter-American Policy Framework for integrated water resources management. They would also lend legitimacy to the initiative, as their membership is fully representative of the Americas. The inter-American Dialogue on Water Management could also be an appropriate venue for the discussion and launching of a policy framework on water.

## **C. Timeline of Events from Preparation to Approval<sup>22</sup>**

Based on the OAS experience in developing the Inter-American Strategy for the Promotion of Public Participation in Decision-Making for Sustainable Development (ISP), the design of a policy framework on water would take from two to three years counting from the day when the initiative is launched. The process would include the following steps:

### **1. Consultation Process (18-24 months)**

A hemispheric organization or agency would take the lead in developing an inter-American policy framework for integrated water resources management. A broad array of government and civil society representatives from throughout the hemisphere would participate in a consultation process aimed at assessing the countries situation in terms of water management and deciding a course of action to address their main concerns. An advisory structure would ensure that the Policy framework itself is open to continual input from governments and that it supports the ongoing work of the hemispheric organization or agency leading the initiative.

National Focal Points, playing the role of government liaisons, would serve as communication channels between the initiative and the public for information on inputs and national level civil society consultations. A Project Advisory Committee could provide advice on the initiative's work program and findings.

### **2. Drafting of the Policy Framework (3-6 months)**

The Ministers should conclude discussions and prepare draft texts of the policy framework and recommendations for action. An official version should be circulated among the Ministers.

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<sup>21</sup> Water Initiatives, African Development Bank Group, available at [http://www.afdb.org/pls/portal/PORTAL.www\\_media.show?p\\_id=305189&p\\_settingssetid=19&p\\_settingsiteid=0&p\\_siteid=313&p\\_type=basetext&p\\_textid=305190](http://www.afdb.org/pls/portal/PORTAL.www_media.show?p_id=305189&p_settingssetid=19&p_settingsiteid=0&p_siteid=313&p_type=basetext&p_textid=305190)

<sup>22</sup> Based on the experiences gathered by the Organization of American States during the formulation of the Inter-American Strategy for the Promotion of Public Participation in Decision Making for Sustainable Development (ISP), CIDI/RES. 98 (V-O/00), CEP/RES. 55 (LVII-O/99).

3. Hemispheric Approval of, or Adherence to, the Policy Framework (3-6 months)

The countries of the hemisphere, through their competent Ministers or their representative at an inter-American gathering, should approve, adopt or in any other way, show their adherence to the policy framework. This act would lend legitimacy to the policy framework and facilitate the task of seeking funds for the implementation phase.

4. Implementation Phase

A hemispheric organization should endeavor the task of developing a water partnership program for the promotion of the policy framework and securing the funding necessary to give impulse to the adoption of the policy framework.

**D. Arguments in Favor of a Policy Framework**

The creation of a policy framework for integrated water resources management would be a flexible means to encourage and promote a change in attitude towards, and policy of, water resources management. The prospect for bringing the making of a policy framework to a speedy conclusion is practicable.

Given that a policy framework will include a series of recommendations for actions, its adherents will not endure the pressures of complying with the more strict mandates of a convention. The policy framework and recommendations for actions will be consulted with both government and civil society actors, resulting in a realistic plan of action based on the needs of the communities of the Americas, their visions and their concerns.

Finally, a policy framework will always be nurtured with new experiences accumulated over time by countries working on its implementation. Because of the flexibility of a policy framework, its recommendations will always be alive and enriched with new, innovating and ground-breaking theories, actions, and practices.

**E. Arguments against a Policy Framework**

Given that a policy framework would not be a binding instrument, it will not be as efficient as a convention in promoting the convergence of water policies and legal frameworks. Furthermore, because it is not binding, the parties involved in the making of the policy framework might be tempted to include statements or recommendations that are too ambitious or ambiguous.

Some aspects dealing with transboundary basins might not be contemplated in a policy framework because the countries might not feel it adequate to deal with those issues in a document which might compromise their position in the future. Another concern is financial sustainability of the implementation mechanisms.

## Conclusions

The importance of water has been recognized worldwide by governments and international organizations. In the Guidelines for Drinking-water Quality, the WHO states that “Access to safe drinking-water is essential to health, a basic human right and a component of effective policy for health protection.” The countries of the Americas acknowledged this message and faced the challenge of improving the management of their water resources. Most nations of the region followed the WHO Guidelines for Drinking-water Quality, changed their water regulations or sought financial and technical support from different sources. These commendable efforts are the proof that the region is moving forward in promoting the fair and equitable access to safe water. However, the supply of drinking-water remains a challenge, adequate legal frameworks have not yet been implemented in most countries, and most countries still haven’t implemented sustainable long term water management plans. Another pressing issue relating to water management is that, thus far, the countries have concentrated most of their efforts on improving water management within their borders only. Yet, to be as efficient and effective as possible, water management techniques require an approach based on the natural, geographical, and hydrological characteristics of water resources. For instance, the jurisdiction of a country finishes where that of another starts. On the other hand, in most cases a basin is not confined to a nation’s administrative or political boundaries, but rather lies on the territory of two or more nations. This is why, from the natural resources management perspective, it is sounder to focus on single water system approaches which involve the cooperation of two or more nations across their borders. Some Latin American countries have already enacted water laws that mandate the implementation of the river basin approach within their jurisdictions, thus prompting the water agencies and authorities to adopt action plans consistent with this legislation. Nevertheless, the countries of the Americas must take a step further; the region needs to join efforts and coordinate actions to protect human health from the adverse effects of any contamination of water intended for human consumption and to ensure that all economic decisions take into consideration any environmental impact on water. Whatever is the chosen path towards convergence and/or harmonization (e.g., a convention, a policy framework, or any other instrument or mechanism for integrated water resources management), emphasis on public participation should be put in order to balance the interests of various groups and promote greater transparency in objectives, measures, and standards setting. This is the challenge that lies ahead for the Americas; success will be determined by the ability of the region to adopt new approaches and models that include integrated management and public participation.

Annex 1: Main Issues Legislated Upon by the Laws on Water of the Americas

<b>Natural Hazards and Public Emergencies:</b> Does the law provide for contingency plans or actions in the event of water related natural hazards or water shortages.	<b>Irrigation:</b> Does the law provide for irrigation areas, authorities, requirements, fees, licenses, permits, quotas or any other kind of regulation pertaining to land irrigation.	<b>Water Use Fees:</b> Does the law establish the payment of fees, a schedule of rates or public auction or licensing mechanisms for the use or abstraction of public waters.	<b>Water Quality Standards and Policies:</b> Does the law establish guiding principles on water quality to be followed as guidelines by the water authority such as turbidity, levels of contamination or pollution, etc.
<b>Aquifers and Subterranean Waters:</b> Does the law contemplate use and management activities of aquifer and subterranean waters.	<b>Use of Water to Generate Energy:</b> Does the law contemplate the use of a public water course for the generation of energy by means of any physical structure.	<b>Water Use Rights:</b> Does the law establish what are the rights of individuals regarding the use of public waters. Is there a public record of rights. Are they vested on the state and assignable to private parties.	<b>Investment in, and Construction of, Water Infrastructures:</b> Does the law contemplate in any way private sector activities involving the construction of structures built on water banks, deviating water courses, etc.
<b>Sources of Revenues and Financial support:</b> Does the law establish what are the sources that the authority should use to finance water activities and how it recovers its investment. Does the authority provide any sort of financial support.	<b>Water Information System:</b> Does the law establish the creation of a system to collect and store data on water resources that is open to the public and can be used in decision-making.	<b>Fines, Penalties and environmental liability:</b> Does the law provide for the enforcement of its provisions by any coercive means.	<b>Conflict Resolution Mechanisms:</b> Does the law provide for alternative means of conflict resolution such as mediation, conciliation, arbitration, or any means other than ordinary judicial remedies.
<b>Public participation:</b> Does the law provide for any mechanism for the promotion of public participation such as stakeholder meetings, publication of decisions, availability of public documents for comments or suggestions, etc.			

Country	Law	Provides for, or Legislates on:												
		Natural Hazards and Public Emergencies	Irrigation	Water Use Fees	Water Quality Standards and Policies	Aquifers and Subterranean Waters	Use of Water to Generate Energy	Water Use Rights	Investment in, and Construction of, Water Infrastructures	Sources of Revenues and Financial support	Water Information System	Fines, Penalties and environmental liability	Conflict Resolution Mechanisms	Public Participation
Antigua and Barbuda	Watercourses and Water Works (1945)	No	No	Yes. General water rates or water service rates may be made to apply in service areas.	No	No	No	Water courses and water works vest in the Crown.	Yes. Such responsibility belongs to the Director of Public Works.	Yes. Expenses are met out of funds provided annually by the Legislative Council.	No	Yes. Provides a list of different types of offenses.	No	No
Argentina	National Law 25.688. Environmental Water Management (2002)	No	No	No	Yes. The national authority is in charge of establishing water quality standards.	Yes	No	Yes	No	No	No. However, the sub Secretariat of Water Resources established the National Water Information System	No	No	No
The Bahamas														
Barbados	Barbados Water Authority Act (1980) and Underground Water Control Act (1953)	No	No	Yes. The Authority may recover any rates or charges from the owner and occupier jointly or severally.	No	No. The Underground Water Control Act applies.	No	No	No	Yes. Funding includes amounts allocated by the government and accrued from operations or borrowed by the water authority.	No. However, the water authority must obtain, analyze and disseminate information on water and maintain records of the total water resources in Barbados.	Yes. Fine or imprisonment for persons swimming, bathing, impairing the quality or unduly diminishing the amount of a source of public water supply.	No	No
Belize	Water Industry Act (2001)	Yes. The Minister controls the country's water supply during a state of emergency.	No	No. Grants power to the PUC to determine "just and reasonable" fees through byelaws.	Yes. The Ministry of Health is in charge of controlling water quality and must follow and relevant international health and sanitation standards, including those set by the World Health Organization. Section IV Chapter V specifically discusses fluoridation.	No	No	Yes. Water Use Rights are determined by the Public Utilities Commission and granted through a license. Licenses are obligatory for any abstraction from a watercourse or construction of any waterworks.	Confers power upon licenses to construct water and sewerage works upon consent of the landowner (or, for government property, the Commissioner of Lands).	Yes. Amounts appropriated by the Consolidated Revenue Fund. The PUCK must also pay all such revenues from licensing fees into this Fund.	No. However, the Authority may require "relevant information" from licensees under written request and can publish any information it sees fit to protect consumers.	Yes. Fines or conviction for cases where any source of water used for human consumption or domestic purposes is polluted or false information is given to the authority. Fines also apply for non compliance with Authority's orders, waste or misuse of water, etc...	Yes, as determined by the Arbitration Act. Also, Any person aggrieved by a license suspension or revocation can appeal the Minister's decision at the Supreme Court.	No
Bolivia	Water Law (1906)	Yes. Aspects relating to emergency and preventive works.	Yes	No	No	Yes	No	Yes. Establishes the rules to determine water ownership and right of use and how should certain works be funded.	Yes. Local authorities may allow or disallow construction of certain works.	No	No	No	No. Only judicial remedies.	Yes. Local community may be heard regarding the construction of infrastructure works
	Law No. 2878 for the Promotion and support of the Irrigation Sector (2004)	No	Yes	No	No	No	No	Yes. Assignment of water irrigation rights is recorded in a public registry.	No	Yes	Yes. Creates the Departmental System of Irrigation Information (Sistema Departamental de Información de Riego - SDIR)	No	No	No

Annex 1: Main Issues Legislated Upon by the Laws on Water of the Americas

Country	Law	Provides for, or Legislates on:												
		Natural Hazards and Public Emergencies	Irrigation	Water Use Fees	Water Quality Standards and Policies	Aquifers and Subterranean Waters	Use of Water to Generate Energy	Water Use Rights	Investment in, and Construction of, Water Infrastructures	Sources of Revenues and Financial support	Water Information System	Fines, Penalties and environmental liability	Conflict Resolution Mechanisms	Public Participation
Brazil	Law 9433. Creates the National Policy for Water Resources and establishes the National System for Water Resources Management (1997)	No	No	Yes	Yes. Classification of bodies of water to ensure levels of water quality compatible with each use and reduce the cost of combating water pollution.	Yes. Rights of use are subject to government award.	Yes	Yes. Subject to Government award, except use of water to meet needs of small rural populations and diversions, catchments, discharges and impoundments of small volumes of water.	No	No	Yes. Establishes the National Water Resources Information System.	Yes	Yes	Yes
Chile	Decree Law No. 1.122 (1981)	Yes. Cases of extreme drought.	No	Yes. Water use rights may be auctioned by the General Water Office.	No	Yes	No	Yes. Establishes the rules to determine water ownership and right of use and the Registry of Water Rights.	Yes. The General Water Office may allow or disallow construction of certain works.	No	No	Yes. Violator may also be ordered to modify or destroy a water work which causes a nuisance or is dangerous.	Yes. The General Water Agency may rule on controversies. Judicial remedies also available.	Yes. Third parties opposed to an auction or certain water works may be heard.
Colombia	Law 9 Enacting Sanitary Measures (1979)	Yes. Provides for a title where it fully legislates on natural hazards in general.	No	No. However, certain activities may require the issuance of a permit or license.	Yes. Regulates sanitary monitoring and establishes a hierarchy of uses applied to it.	Yes	No	No	No	No	No	No	No	No
Costa Rica	Law No. 276 on Water (1942) Reformed by Laws 2332 (1959), 5046 (1972), 5516 (1974) and 7593 (1996).	Yes. Fires, floods and other disasters.	Yes	Yes	No	Yes	Yes. Also regulated by Law N° 258 (1941)	Yes. Establishes rules to determine rights of use. Special uses of public waters must be authorized. Creates the Registry of Concessions.	Yes. The administration may suspend construction and request restoration of prior condition.	No	No	Yes. Sanctions include prison time and detention for violators.	Yes. Inspección Cantonal de Aguas created by Decree No.15 of 1923).	Yes. Third parties aggrieved by an assignment of water rights may oppose it..
Dominica	Water and Sewerage Act (Act No. 17 of 1989).	Yes. In the case of a deficiency of water supplies, the Minister may make any provisions he deems necessary until the deficiency has been removed.	No	Yes	Yes. The Company must keep under constant review the quality, reliability and availability of water supplies and report that information to the Minister, who is responsible for the control of the quality of water.	Yes. The document specifically defines groundwater as one type of water resource	No	Yes. Non-domestic water use rights are conferred only through a license provided by the Minister.	No	Yes	Yes. The Minister shall collect and publish information on the actual and prospective demand for water.	Yes. Fine of \$1,000 and 12 months imprisonment for an offence under this act.	Provisions for arbitration in case of a dispute between the Minister and the Company.	No
Dominican Republic	Law No. 5852 on Ownership of Superficial Waters (1962)	No	Yes. Establishes the creation of irrigation districts.	Yes. The law includes a payment chart applicable to the issuance of water permits and titles.	No	Yes	No	Yes. Provides for ownership of different types of waters and special uses such as greenhouses, fish farming and industry. Prospective water users must obtain a water title first. A permit is required for the construction of water works.	Yes. Provides for works of protective nature against public waters.	No	No	No. Creates the water police in charge of inspecting water structures and enforce authority decisions.	No. It only provides for judicial remedies and no special mechanism.	No. However, irrigation users may create irrigation associations with several responsibilities relating to water management.
Ecuador	Supreme Decree No. 369 (1972), Law No. 2004-31 (2004) and Decree 1836 modifying the General Regulations of the Water Law (2001)	No	Yes	Yes	Yes. CNRH, the Ministry of Health and other government entities implement the water contamination policies.	Yes. May be used subject to CNRH authorization.	Yes	Yes. Subject to government grant. Establishes a hierarchy of uses. Uses that benefit the country's socio-economic interests are privileged. Assignments must be registered by CNRH.	Yes. Responsibility of the Regional Development Corporations. No compensation available for implemented works if user rights are revoked.	Yes. The government recovers from the beneficiaries the investments it makes in irrigation canals for agriculture. Private users fund the system management, operation and maintenance.	No	Yes	Yes. Establishes the jurisdiction of CNRH and the Consultative Council of Water. Subsequent judicial appeal available.	Yes. The requests and assignments of water use rights must be published and may be opposed to by the public.
El Salvador	There is no general law on water	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Annex 1: Main Issues Legislated Upon by the Laws on Water of the Americas

Country	Law	Provides for, or Legislates on:												
		Natural Hazards and Public Emergencies	Irrigation	Water Use Fees	Water Quality Standards and Policies	Aquifers and Subterranean Waters	Use of Water to Generate Energy	Water Use Rights	Investment in, and Construction of, Water Infrastructures	Sources of Revenues and Financial support	Water Information System	Fines, Penalties and environmental liability	Conflict Resolution Mechanisms	Public Participation
	Law No. 153 on Irrigation and Drainage (1970)	No	Yes. Legislates on distribution of water for irrigation; irrigation works, permits, rights, districts, etc.	Yes	No	Yes. A permit is required for its use, which may not be conflictive with other existing uses.	No	Water resources belong to the nation. The use of national waters in irrigation may be allowed by means of a permit or concession only.	Yes. The state shall contribute with at least 40% of the costs for the construction of irrigation and drainage works.	Yes. Provides for some tax exemptions applicable to investments in irrigation works.	No	Yes. Applies fines and imprisonment.	Yes. The Irrigation District Steering Committees may decide on conflicts among users or between a user and the District Chief, arising from the application of the law.	Yes. The users of national waters not included in water districts may form irrigation associations aiming at improving water usage and distribution.
Grenada	Water Supply Act (1969)	No	No	Yes	Yes. Water quality is controlled under the Minister through the Department of Public Health	No	No	No	Yes. Discusses the reservation of catchments areas and protocol for the acquisition of property, etc.	Yes. Water usage rates fixed to a level that allows for appropriate system maintenance and loan repayment.	No	Yes, for polluting the water supply or improperly abstracting or wasting water. Sanctions of up to \$250 fine and three months in prison.	No	No
Guyana	Water and Sewage Act (2002)	Yes. Establishes a water and climate database for safety and disaster management and an early warning system. Drought provisions.	No	Yes. Includes an annual administration fee and an annual abstraction fee based on the annual maximum water volume usable by the licensee.	Yes. The Public Utilities Commission is responsible for monitoring, regulating and enforcing service quality and dealing with customer complaints.	Yes	No	Yes. All water ownership and rights are vested in the State and may be licensed for no more than 25 years to citizens of Guyana who apply for a license.	No	No	Yes. The Hydrometeorological Department monitors the availability, quality and use of water.	Yes. Includes the suspension or cancellation of water licenses.	No	Yes. Public may comment on the water policy proposed by the Minister. Water license applications may be opposed.
Haiti	There is no general law on water	N/A	N/A	N/A	N/A	N/A	N/A	Water resources are in the public domain.	N/A	N/A	N/A	N/A	N/A	N/A
Honduras	Law on Use of National Waters (1927)	No	Yes	No	No	Yes	Yes	Yes. Establishes quotas for potable and non-potable water use.	Yes	No	No	No	No	Yes. Applications for the use of water in irrigation may be opposed.
	Framework Law of Potable Water and Sanitation (2003) Decree No.118-2003	No	No	Yes. Establishes principles applicable in determining water fees.	Yes	No	No	Yes. Establishes rights and obligations for both service users and providers.	No	No	No. However, information on different aspects of service must be produced by the Regulatory Entity and service providers.	Yes	Yes. The Regulatory Entity of Potable Water and Sanitation acts as conciliator.	Yes. Potable water and sanitation services can be community operated.
Jamaica	The Water Resources Act (1996)	Yes. The Minister may declare emergency areas if the supply of water becomes insufficient or unsuitable or both to satisfy the requirements of all licensees (e.g., drought).	No. The Irrigation Act (1949, last reformed in 2003) legislates on this issue.	Yes	Yes. The Minister may establish Water Quality Control Areas.	Yes	No	Yes. No person shall abstract or use water or built works except under and in accordance with a license for the purpose granted by the Authority.	No	Yes. The authority may borrow funds to meet its obligations and discharge its functions.	No, however, the authority may obtain, compile, store and disseminate data concerning the water resources of Jamaica.	Yes. Fines are applied and, if unpaid, imprisonment with or without hard labor for up to two years. Licenses may be suspended or revoked.	No. Only judicial remedy before a Resident Magistrate's Court.	Yes. The Minister's National Water Resources Master Plan is available for inspection on payment of a fee.
Mexico	Law on National Waters (1992, last reformed in 2004)	Yes. The Commission may declare and classify areas according to their flooding risks.	Yes. Establishes the creation of irrigation areas and units.	Yes. Includes fees for the discharge of residual waters.	Yes. Federal and state governments may coordinate activities to comply with water quality standards and establish liability for environmental torts.	Yes	Yes. The Commission may authorize the Federal Electricity Commission to use water to generate energy.	Yes. Establishes the National Registry of Water Rights.	Yes. The Water Authority may provide technical assistance.	Yes. Provides baseline support to integrated water management actions at the national level.	Yes. The National Water Commission is in charge of the National Water Information System.	Yes. The persons responsible for dumping residual waters may be ordered to perform works in order to remove such contaminants.	Yes. Also provides for administrative remedies such as appeals and complaints.	Yes. Establishes the Consultative Council on Water composed of civil society members.

Annex 1: Main Issues Legislated Upon by the Laws on Water of the Americas

Country	Law	Provides for, or Legislates on:												
		Natural Hazards and Public Emergencies	Irrigation	Water Use Fees	Water Quality Standards and Policies	Aquifers and Subterranean Waters	Use of Water to Generate Energy	Water Use Rights	Investment in, and Construction of, Water Infrastructures	Sources of Revenues and Financial support	Water Information System	Fines, Penalties and environmental liability	Conflict Resolution Mechanisms	Public Participation
Nicaragua	General Law of National Waters (2005)	Yes. The government may declare a state of water emergency. Legislates on emergency works in case of flood.	Yes. Creates irrigation districts.	Yes. Discharge of residual waters also requires the payment of fees.	No	Yes	Yes. Must be authorized by ANA or the Regional Basin Agency..	Yes. Creates the a public registry of water rights where the rights of all users of national waters are recorded. Discharge permits are necessary to discharge residual waters.	Yes. Fiscal and economic incentives are used to support water plans, programs and projects and improve water quality.	Yes. Funds generated by perceived fees and contributions are applied to water management and planning. Includes a detailed title on the economic management of water. Creates the National Water Fund.	Yes. Establishes the National Water Resources Information System. The law provides that water information is public.	Yes. Water polluters must pay reparation costs and clean users receive incentives which may be fiscal. Fines are also established for violators	Yes. The Nicaraguan Water Authority acts as arbitrator.	Yes. People have the right to participate in water management through basin committees and user associations. Recognizes the right of indigenous people to use the water within their communal lands.
Panama	Decree Law No. 35 Use of Water (1966)	No	Yes. The authority may irrigate areas in order to determine fees and improve use.	Yes. Supply of water by means of works paid for by the State may not be free. The authority establishes the applicable fees. License is also required for discharge of residual waters.	Yes. Establishes rules for water hygiene and safety of water used by human settlements.	No	Contemplated but not regulated.	Yes. Water resources are in the public domain and may be used by anyone. The National Council for the Environment must keep records of water permits and concessions. The right to use water may be obtained by means of a license or concession only. Licenses may be unlimited in time.	Yes. Legislates on irrigation works and how these should be supported by the beneficiaries.	No	Yes. The National Council for the Environment must keep an inventory of national waters.	Yes. Polluters may be requested to correct water management deficiencies. In case of non-compliance, license may be suspended or revoked.	Yes. Complaints may be filed with the National Council for the Environment.	No
Paraguay	There is no general law on water	N/A	N/A	N/A	N/A	N/A	N/A	The Civil Code provides that waters are in the public domain of the State and, as such, private persons may use them.	N/A	N/A	N/A	N/A	N/A	N/A
Peru*	Decree Law No. 17752 General Law of Waters (1969)	Yes. In case of water scarcity or contamination the authorities will dictate appropriate measures or dictate a state of emergency.	Yes. Includes fees applicable to irrigation districts.	Yes	No	Yes	Yes. Water may also be used in mining and industrial activities.	Yes. Water resources belong to the State and cannot be owned privately. With the exception of basic needs, in order to use a water resource, private persons, public sector entities and local governments need a permit, an authorization or a license. Dumping of contaminant residues is prohibited.	Yes. The government may modify, restrict, restructure or prohibit works attempting against water conservation. Includes a detailed chapter on works for the use of water.	Yes. User fees charged for irrigation cover water exploitation and distribution costs. Funds raised through fines are applied to water use improvement studies and works.	No	Yes. Violators may be fined or ordered to demolish a work performed in violation of the law. Licenses may be revoked.	Yes. If an administrative act causes a loss, the aggrieved persons may file a claim before the administrative authority.	Yes. Irrigation district users may form boards to participate in the preparation of crop and irrigation plans.
Saint Kitts and Nevis	Water Courses and Waterworks (1956)	No	No	Yes	No	No	No	No	No	Yes. Revenues through water usage fees (for the public use of the island). Financial support through funds provided annually by the legislative council.	No	Yes, for diverting or polluting the water supply. Sanctions of up to \$100 fine or six months in prison.	No, only judicial remedies.	No
Saint Lucia	Water and Sewerage Authority Act (1984)	No. Provides that there is no charge for water used by the St. Lucia Fire Services in case of fire.	No	Yes. Unpaid rates and charges are a lien and charge against the premises in respect of which the debt is incurred.	Yes. The Government must promote a national policy for water and discharge its functions in agreement with it.	No	No	No	No	Yes. Funding includes water and all other sums and loans. The authority may borrow funds and apply for and accept grants in aid.	No. However, the Ministry of Finance and Planning must publish information from which assessment can be made of the water resources and their demand.	No	No	No
Saint Vincent and the Grenadines														
Suriname														

Annex 1: Main Issues Legislated Upon by the Laws on Water of the Americas

Country	Law	Provides for, or Legislates on:												
		Natural Hazards and Public Emergencies	Irrigation	Water Use Fees	Water Quality Standards and Policies	Aquifers and Subterranean Waters	Use of Water to Generate Energy	Water Use Rights	Investment in, and Construction of, Water Infrastructures	Sources of Revenues and Financial support	Water Information System	Fines, Penalties and environmental liability	Conflict Resolution Mechanisms	Public Participation
Trinidad and Tobago	Water and Sewage Act (1965) amended in 1969, 1970, 1978 and 1979.	No	No	Yes. The authority may grant a license authorizing any person to acquire water rights.	No	Yes. No person may built or expand works to abstract underground water without a license, unless it is applied to domestic use or authorized by law.	No	Yes. Water use rights for abstraction of water for any industrial purpose may only be acquired by means of a license.	Yes. A licensee has the power to built and maintain all necessary works for the purpose of using water acquired under a license.	Yes. Legislates on the funds, resources and revenue of the water authority.	No	Yes. Violators may be fined, imprisoned or ordered to restore to prior condition.	Yes. Any person aggrieved by a decision of the authority to grant a license may appeal to the Minister who may decide the issue himself or appoint an arbitrator.	No
Uruguay	Decree Law No. 14.859, Water Code (1979)	Yes. In case of water drought, the authorities may suspend the supply of water to certain categories of users.	No	No. However, the conditions of a permit may require the payment of a fee.	No	Yes	No	Yes. Concession of use rights over public waters are made by means of a permit for not more than 50 years. Water rights must be recorded by the authority in a registry.	Yes. Structures built during a concession will belong to its owners. They may be expropriated with just compensation.	No	The authority is in charge of creating a technical data national water resources inventory.	Yes. Applicable where substances that may endanger human or animal health, harm the environment or cause damages are dumped in public waters.	No. Only judicial remedies.	Yes. Requests for the concession of use rights over public waters must be published in the gazette and may be opposed to at a public hearing.
Venezuela														

Although fishing and navigation are fundamental activities to bear in mind when analyzing water legislation, they were not included as a category in this charter. The reason for this is that all countries have a separate legal body which provides very specific and precise legislation and regulation on these activities.  
 \* The Government of Peru is debating the enactment of a new law on water. A draft law proposal was submitted to Congress in 2003.