

**Inter-American Water Day
5 October 2002
First Saturday of October**

**TENTH ANNIVERSARY OF THE
INTER-AMERICAN WATER DAY**

**WATER:
Waste Not, Want Not!**



Caribbean Water and Wastewater Association (CWWA)
Economic Commission for Latin America and the Caribbean (ECLAC)
Inter-American Association of Sanitary and Environmental Engineering (AIDIS)
Organization of American States (OAS)
Pan American Health Organization/World Health Organization (PAHO/WHO)
United Nations Environment Program, Regional Office for
Latin America and the Caribbean (UNEP/ROLAC)

PAHO/WHO

Health and Environment Division
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This year's theme *Water: Waste Not, Want Not!* was proposed by Mr. Errol Grimes, President of the Caribbean Water and Wastewater Association (CWWA).

Presentation

Caribbean Water and Wastewater Association (CWWA)

Human health and social development depend on freshwater supplies being adequate in both quantity and quality. Indeed in the Caribbean, especially in those islands that experience water shortages during severe dry seasons, this year's theme "Water: Waste Not, Want Not!" highlights the precious nature of water as a commodity and the need for its proper use and conservation, ensuring sustainability.

Water and development are intrinsically linked. Once viewed as an infinitely renewable and bountiful resource, water today defines and confines development aspirations. For instance, in Trinidad, as part of its integrated approach to water resources development, the largest reverse osmosis desalination plant in the Region of the Americas has been recently constructed.

This year we celebrate a milestone 10th anniversary of the IAWD initiative and we at CWWA welcome the many new organizations joining the fold in promoting this important annual event.

Errol Grimes
President, CWWA

Economic Commission for Latin America and the Caribbean (ECLAC)

Water management is equivalent to managing conflicts among human beings and between them and their surroundings. Society must learn to live with these conflicts and to face them adequately, knowing in addition that water shortages will increase constantly due to economic growth, social demands, environment impairment, and climatic changes. Competition between users will be more and more drastic, which will require governmental participatory systems with the power to make decisions and the capacity to apply regulations for the general good of all people, so as to manage water resources with an integrated approach. For this, it is necessary to prepare and promote standards, good practices, processes, and techniques in order to disseminate them among the actors participating in water management. In general, the countries of the Region lack these guiding elements and do not have capacity building systems for integrated water management that would guide on a large scale the harmony of economic, social, and environmental goals in each river basin or territory.

ECLAC maintains that today there is a crisis of governance in integrated water management matters. This is so because, on the one hand, there is an increasing number of conflicts owing to the use of water, and on the other hand, institutional systems are not preventing, avoiding, or solving them in an effective way. ECLAC, rescuing the positive advances and the application of best practices related to water management and regulation of public utilities, emphasizes in its regional work the implementation of activities oriented toward the systematization, analyses, and sharing of these experiences (political, legal, economic, environmental, social, financial, and managerial aspects). In this way, ECLAC has become one of the few, and in some issues, the only center or "clearinghouse," that captures, processes, systematizes, and redistributes information and the one that advises governments on issues of water management and regulation of public services.

Axel Dourojeanni
Director, Division of Natural Resources and Infrastructure, ECLAC

Inter-American Association of Sanitary and Environmental Engineering (AIDIS)

The history of humankind is marked by innumerable technological conquests, progress in relationships between people, and the creative capacity of human beings to overcome their challenges. However, from the prehistoric age until the present age, the development of civilizations has always had its passages defined through a critical factor: the presence or the absence of water. If it is present and in abundance, water represents the possibility of agricultural, social, industrial, sanitary, and quality of life improvements. On the other hand, absence or limited access to water resources leads to poverty, wars, diseases, and economic stagnation.

It is precisely because water is an essential resource to life and development that AIDIS joins the commemoration of the 10th anniversary of the Inter-American Water Day, to be held on 5 October 2002, with the title *Water: Waste Not, Want Not!* This year, in addition to the agreements already signed between CWWA and PAHO, we have the satisfaction of also receiving the support of the Organization of American States (OAS), the Economic Commission for Latin America and the Caribbean (ECLAC), and the United Nations Environment Program/Regional Office for Latin America and the Caribbean (UNEP/ROLAC).

We say no to waste, because we understand that water is a finite resource, susceptible to man's actions; the same man who needs to see that water is an essential commodity for his or her existence, survival, and progress.

We say no to scarcity, because we are aware of the need of water for life, health, development, and ecological sustainability. We need to formulate new public policies to protect water resources, intensify environmental education, and forge a culture promoting the wise use of water. Today, it is only with the strong participation of all that we can guarantee our survival in the future.

Carl-Axel P. Soderberg
President, AIDIS

Organization of American States (OAS)

The topic for this year's Water Day, "Water: Waste Not, Want Not," clearly emphasizes the economic, social, cultural, and ecological value of water.

Sadly, each day we waste millions upon millions of liters of water in activities that do not recognize its value. When we misuse water, not only are we neglecting our responsibility as citizens to prevent waste; most of all, we disrespect those who live in areas where water is not available to all. Some people must live with less than 50 liters of water a day, while others use over 500 a day.

Conserving water is a matter of respect for those people who do not have enough of it, and for the resource itself provided by nature. Nature has not given us water to waste it. Nature provides water as a resource. It is our duty to use it wisely, consciously, and sparingly.

The Organization of American States joins with governments, and governmental and nongovernmental organizations to organize and implement integrated water management systems, enlisting the participation of local communities, regional governments, and countries. Raising awareness of the importance of water and of ways to use it sparingly and respectfully is part of this process.

The results of our efforts can already be seen. Each day we see new initiatives geared toward discussion of problems and possible solutions to ensure an adequate supply of safe water for all. Still, we have a long and difficult road to walk before we meet our objectives.

"Water: Waste Not, Want Not" is a call to every citizen to contribute to this effort.

Richard A. Meganck
Director, Unit for Sustainable Development and Environment, OAS

**Pan American Health Organization/World Health Organization
(PAHO/WHO)**

Water is a fundamental good. Many consider that it is boundless since it is part of nature's cycles. Its abundance, however, is neither so certain nor imperishable.

Despite fulfilling an important role for health, agriculture, industry, and life itself, water is often underrated either because we waste it or because we do not duly take into account its treatment costs.

This 2002, upon completing ten years of the Inter-American Water Day initiative, we feel doubly committed to the IAWD objectives and with this year's slogan that emphatically says, Water: Waste Not, Want Not! We trust that this slogan will promote the active participation of different social actors, especially local authorities, educators, communicators, and the community to bring about better practices of water consumption day by day.

This year is special for our Organization since we celebrate 100 years of service to international health. Our efforts serve men and women who speak French, Spanish, English, Portuguese, as well as native tongues, all of which are united in the Region by the same dream: improving our quality of life, expanding our opportunities, and diminishing inequity.

For this reason, we exhort our friends to stop and think what would happen if all of a sudden we do not have water at all. What would happen in our houses, our neighborhoods, our cities, and fields? How would we face such situations? The best response is to start the rational use of this vital resource, understanding its finiteness and vulnerability and, above all, that its availability depends on how we use it today.

Mauricio Pardón
Director, Health and Environment Division, PAHO/WHO

**United Nations Environment Program/
Regional Office for Latin America and the Caribbean
(UNEP/ROLAC)**

Our water resources are put under intensive use due to agricultural production and urban and industrial development. The Region of the Americas has important water resources, but we must understand that they have an unequal spatial distribution. That is to say, there are regions with lots of water, but scarcity in others. This must be taken into account when planning the development of societies and their economic activities. In addition, it is important to study the dynamics of river basins so that they do not affect people living downstream, as is the case of coastal zones where more than 60% of the worldwide population live. It has also been recognized that 70% of marine and coastal deterioration is produced by mainland activities, such as wastewater disposal and the construction of dams upstream of the river basin.

The Regional Office for Latin America and the Caribbean of UNEP enthusiastically joins the Inter-American Water Day initiative to promote water resources protection for the benefit of human health and ecosystems. Water: Waste Not, Want Not!

Ricardo Sánchez Sosa
Regional Director for Latin America and the Caribbean, UNEP/ROLAC

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Chapter I

The Ecological Value of Water

Concepts

Awareness of the three concepts involved in the expression *ecological value of water* is important to start reflecting on this issue:

- ' ' When talking about *value* we refer to some qualities that make a person or thing appreciated. This word is also used to refer to prices or money equivalencies, as well as to emphasize the extent or meaning of a fact or action.
- ' ' *Ecology* is the group of sciences dealing with the relationships of organisms to each other and to their physical surroundings. This interrelationship between organisms and their medium, rather than their individuality, is the most important feature of ecology. The basic unit of ecological studies is the *ecosystem*, i.e., the system¹ formed by species and their physical surrounding.
- ' ' Finally, we refer to *water*. Under typical temperature and pressure conditions, this extraordinary body is found in a liquid state. An atom of oxygen and two of hydrogen (H₂O) form its molecules. It can dissolve numerous solid, liquid, or gaseous substances, and may turn into solid and gaseous states. It freezes at 0 °C and boils at 100 °C under normal atmospheric pressure conditions.

When referring to the ecological value of water we have to review water characteristics from the ecosystem perspective, emphasizing its meaning and scope for humans, for the flora and fauna, and for life as a whole from a comprehensive and global approach.

The concept of value also implies to what extent we appreciate the role that water plays in our lives and how we express such an appreciation.

The Presence and Influence of Water

It is important to identify the places where water may be found; its routes; its influence on several ecosystems, both aquatic and terrestrial; its uneven distribution in space and time; and the role it plays in humans' life.

Water also plays an important role in soil by nourishing the flora and affecting the solids it contains. The quantity of water in plants ranges from 80% in leaves to 60% in woody tissues. Water quantity in fruits is greater; while grapes and tomatoes contain nearly

¹ A system may be defined as a group of related elements that act and depend on each other.

95% water, some other fruits, as nuts and dried fruits, may contain less water. Peanuts, for example, barely contain 5% water.

Water presence in fauna is also very significant. As for humans, nearly 70% of the bodyweight is water; saliva and sweat contain around 95% water and bones nearly 10%. It is well known that humans cannot live for more than three days without water, although it is possible to survive longer without any solid food.

Planet Earth has three clearly differentiated spaces: the lithosphere or solid part; the atmosphere or gaseous part; and the hydrosphere or liquid part. The latter comprises the oceans or continental waters, such as rivers, lakes or lagoons, and also groundwater found in subsoil.

The biosphere or life sphere is located precisely at the intersection of the three aforementioned spaces.

For life to exist on our planet, especially human life, oxygen, water, and terrestrial support are necessary.

The Water Cycle

Water is not only necessary as a support for fauna and flora, but also as a driving force for numerous cyclic renovation and transformation processes that form the so-called water cycle or hydrological cycle.

An interesting feature of water is its mobility; it changes from liquid into gaseous state, goes back to liquid state, changes again into solid state, and goes on in a permanent process related to energy.

Water is the master of recycling, autoconversion, and autopurification. Now let us see how this process occurs. Oceanic or continental waters turn into a gaseous state through evaporation owing to the solar energy they receive. Temperature conditions and the quantity of vapor or humidity contained in the surrounding air determine evaporation levels. An important part of evaporation comes also from plants through transpiration.

The process reverse to evaporation is condensation. Vapor turns back into liquid state as damp air absorbs more humidity from other substances or when there is a drop in the air temperature saturated with humidity. Vapor condenses in the air and generates droplets that form clouds.

Air containing clouds or vapor is conveyed by an act of wind from one place to another. This explains the importance of wind in determining the occurrence of rain in a specific place.

Since the tiny drops that form the clouds cannot fall over the land because of its small size, they are likely to turn back again into vapor. A million of these droplets are estimated to form a single raindrop; these are the raindrops that fall over the surface through

precipitation. According to weather conditions, sometimes these drops join ice crystals and form snowflakes that may turn into water as they fall over the earth or may precipitate as hail.

When it rains, water not only falls over the surface, but a part of it is absorbed by the soil. Whether the soil absorbs the water depends on several circumstances, like soil porosity, existing vegetation, and the number of impervious layers. In cities, for example, asphalt does not allow water to be absorbed by the soil. Throughout this process, natural reservoirs are also likely to be formed, especially when rain is held in rock layers.

Surface water can be found either flowing above the surface of the ground as rivers, or in a specific place such as lakes or wetlands.

Thus, the water cycle has several stages: evaporation or transpiration, condensation, conveyance, precipitation, infiltration, and the movement of surface waters or groundwater.

Throughout these stages, water represents a great ecological value since it provides the basis for life in ecosystems, either aquatic or terrestrial.

Let us explore some details:

- ' ' When oceanic waters evaporate, salt is eliminated from the resulting vapor; thus, a valuable transformation from salt water into freshwater is made. The latter is then conveyed to continental surfaces.
- ' ' Ecosystems need the energy flow and the essential nutrient cycles that water provides by dissolving and conveying them. Without water, the biological, geological, and chemical cycles that make life possible would not work.
- ' ' The presence of water balances the heat of our planet by conveying heat from one latitude to another, and lessens thermal variations.

All this highlights the importance of keeping a good global water balance, since all the aforementioned processes permanently interact and influence each other. Thus, to manage water resources in a small community separately would not be worthy if activities in the surrounding areas are not being implemented accordingly.

Therefore, it is necessary to respect and take care of the entire worldwide water cycle considering the factors of its stages so as to ensure water as a permanent support for life.

One global approach to work on the water management issue is related to the concept of the watershed, those places in the terrestrial surface where waters converge at one point. Each basin has specific weather, features, and vegetation conditions that determine water cycle conditions. In addition, watershed management is part of a broader concept called *environmental land use planning*, which involves all the elements conceived for the management of ecosystems within a comprehensive vision toward sustainable development.

Basin management criteria lead us to work on an issue known as the *ecological unit*, where the water cycle is carried out. Therefore, a clear understanding of the multiple interactions within these units is important, since they affect appropriate water management and the possibility for us to relate adequately with this life-support system.

**Water is indispensable for the maintenance of ecosystems.
Let us manage it in an integrated manner!**

Let us think over the ecological value of water and act accordingly

Community:

- ❖ *Let us study the ecological role water plays in our community. How does the water cycle work in our city? Does it have problems? What is our basin? Do we attach importance to water and to its function in ecosystems? Let us act to value and appreciate water and to solve the current situation.*

Authorities:

- ❖ *Let us analyze the hydrographic basin of our city. Let us see if we are coordinating with other authorities to manage it with an integrated view. Let us plan our actions focused on this goal.*

Educators:

- ❖ *Let us study the water cycle with our students focusing on its ecological value. Let us propose activities that emphasize this value by disseminating messages by means of notices, posters, play performances, group readings, etc.*

Communicators:

- ❖ *Let us fully understand the meaning of the ecological value of water and disseminate it among different sectors of the population through interviews with people associated with water, as well as through clear and appealing communications.*

Chapter II

The Economical Value of Water

The Diamond-Water Paradox

During the 18th century, economist Adam Smith formulated the diamond-water paradox. The paradox occurs because water, although being useful for humans and essential for life, is underestimated and sold at an excessively low price, whereas diamonds, which are not at all essential for life and are valuable only as jewels, are sold at very high prices.

His reasoning goes like this: people can survive without diamonds, but if they were abandoned without water in the middle of a desert for three days, they would value a glass of water much more than all the diamonds of the world.

What happens is that the prices of diamonds are high owing to their high marginal utility (or satisfaction) related to their limited stock. As for water, its total utility is higher but it has less marginal utility owing to its relative abundance.

The conclusion of Smith's paradox is this: if demand determines the utility of a product, water should be more valued.

How much progress are we doing in this respect?

Traditionally, water is economically appreciated or we consider its cost according to its role in industrial or agricultural productive processes. We think of prices when water companies charge us for delivering it to our households, or when we have to buy it in drums owing to a lack of supply service. However, we need to have a broader vision.

In 1992, during the International Conference on Water and Environment, held in Dublin, four regulatory principles expressing the fundamental elements of the water and its relationship to the environment were approved. One of these principles explicitly considers the economic value of water. Let us review these principles:

Principle number 1 indicates: "Fresh water is a finite and vulnerable resource, essential to sustain life, development, and the environment."

This principle poses a very important issue, since the misconceived notion that water is available in abundant supply has led us to consider it as a good that we will unconditionally enjoy forever. Nevertheless, as we become aware of its scarcity, its economic value increases and even creates conflicts between regions and countries.

Mr. Kader Asmal, who was awarded the Stockholm Water Prize² in 2000, expressed the following statement: "Water is a catalyst for peace, and will not be the cause of wars."

In fact, water should encourage all countries of the world to share their limited resources and act jointly to preserve and recover threatened and impoverished springs.

Principle number 2 states: "Water development and management should be based on a participatory approach, involving users, planners, and policy-makers at all levels."

Indeed, water management, directly linked to economic processes and to development, should rely on the participation of all sectors of the communities interested in improving their living conditions.

Principle number 3 states: "Women play a central role in the supply, management, and safeguarding of water."

In all Latin-American countries, the experience of working with women in water management has demonstrated the importance of the woman's role to manage and protect water resources, as well as to improve supply. Undoubtedly, encouraging women to take an active role in this field ensures success and promotes development.

Finally, **Principle number 4** emphatically indicates: "Water has an economic value in all of its uses and should be recognized as an economic good."

To acknowledge the economic value of water is to recognize how environmentally important this resource is. It is well known that out of all the goods nature offers, water is chief among them. Water in particular has been underestimated, since water costs are not considered in budgets for development projects. Furthermore, most of the time, water and basin conservation costs are not included in feasibility studies as well as hydroelectric plants or drinking water systems. Moreover, wastewater treatment is not taken into account either.

Environmental Goods and Services

The process of introducing the concept of economic value of water in development actions is still too slow. Therefore, efforts already in place by some countries should be supported.

Water pricing is part of a broader issue being developed worldwide, which refers to the valuation of natural resources as environmental goods and as suppliers of environmental services as well.

² *The Water Prize is awarded since 1990 by the Stockholm Foundation based in Sweden. This was the 10th prize. The Great-Man Made River International Water Prize is another prize awarded by UNESCO since 1999 to acknowledge outstanding scientific works on water resources exploitation in arid and semi-arid areas.*

Water has an economic value as an environmental good, i.e., as a product provided by nature to be directly used by humans. Environmental services are defined in connection with the roles water plays in the ecosystem and its potential to be used for human advantage and planet Earth as a whole.

Water provides the following environmental essential services, among other things:

- ' weather regulation
- ' hydrologic regulation
- ' nutrient recycling
- ' recreation, etc.

Economic valuation is intended to assign a monetary value to environmental goods and services that sometimes lack market value. The concept of total economic value has been developed within this framework. It includes tangible goods and services, as well as environmental functions and values related to resource uses.

Costs and Tariffs

Water pricing requires the inclusion of social and cultural elements, in addition to the economic and financial issues traditionally applied, so as to better reflect conditions for sustainable human development, which will be referred to later.

Data on the Regional Report on the Evaluation 2000 in the Region of the Americas: Water Supply and Sanitation³ demonstrate that costs charged for household connections, easy-access facilities, sewerage, or on-site disposal vary much from country to country, even in different areas within the same country. The average investment cost for infrastructure is around US\$ 1,000 in Canada and US\$ 400 in Latin America and the Caribbean. Operation and maintenance costs are even more difficult to estimate owing to economic and social differences among the countries.

With regard to tariffs, water supply and sanitation services in the Region range from US\$ 30 monthly per service connection in urban areas of developed countries to US\$ 1 per household in poor areas of developing countries.

In short, the economic value of water is not only related to its direct application in productive processes, but also the roles it plays for ecosystem maintenance, health, and the survival of living beings in accordance with its role as an environmental good and based on the environmental services it offers. Obviously, the economic value analysis is also

³ See document on <http://www.cepis.ops-oms.org>

associated with water supply, its costs, and its rates. All the above should be estimated utilizing a global and integrated approach.

**Let us give economic value to water as an
environmental good and life support system!**

Let us think over the economic value of water and act accordingly

Community:

- ❖ *Let us study the relation between economy and water in our community. In which activities is water involved? Do we appreciate water in all cases? When do we undervalue water? Are there proper organizations for water management? Let us meet together to improve the situation and value water in a comprehensive way.*

Authorities:

- ❖ *Let us think over water costs related to the project we undertake. Are we taking into account water costs in all development projects? How could we do it? Let us ask experts and call on other sectors to discuss this issue.*

Educators:

- ❖ *Let us study at school the economic value of water and the concept of environmental goods and services. Let us give the students the task of making a list of all the environmental roles that water plays in the community. This will lead to several activities with the community to explain such roles.*

Communicators:

- ❖ *Let us make an alliance with teachers to fully understand the meaning of environmental goods and services and the need to value water. Let us create modes of communication to disseminate these concepts in the community.*

Chapter III

The Value of Water for Health and Our Right to Water

The Right to Water

Insofar as the constitutions of our countries refer to the right of the population to health and a clean environment that enables development, the right to water will arise as a fundamental right for guaranteeing life.

Indeed, water guarantees our possibility for survival; therefore, it should be regarded as a common heritage to humankind. Since the right to water is not guaranteed in all countries, the conquest of this right will offer opportunities for progress in this field and lead to improvements in the living conditions of the population.

To ensure that water actually support the promotion of health and welfare, it is necessary to achieve an adequate quantity and quality of water supply to satisfy human needs. Thus, the right to water articulates the need for receiving water in sufficient quantity, and with adequate quality, for ensuring life and health.

The Charter of Montreal⁴ on water supply and sanitation, signed in 1990, makes the following assertion:

“Given that access to water is a condition for survival, we affirm that all persons have the right to sufficient water supplies for meeting their essential needs. Consequently, priority must be given to the billion and a half people who do not have access to drinking water.

The right to drinking water and sanitation cannot be dissociated from other human rights. It cannot be subject to discrimination and implies a respect for everyone. We must ensure that water supply and sanitation are managed equitably and efficiently, using durable systems, and in such a way as to strengthen the autonomy of the populations concerned.

Ensuring water supply for everyone demands special efforts for the preservation of this vital resource on our planet, in terms of quantity and quality. This responsibility concerns all countries without exception, all milieux, all sectors from agriculture to industry, and all levels from individual and community to national and international.”

⁴ See this document on <http://www.i-s-w.org/chartee.htm>

Water and Diseases

Health, diseases, and water are closely linked and have multiple dimensions:

- ' Waterborne diseases. These diseases are caused by contaminated water containing human or animal wastes or chemical substances. The most frequent waterborne diseases are cholera, dysentery, typhoid fever, poliomyelitis, meningitis, and hepatitis A and E.

Improved environmental sanitation and safe water supply are necessary conditions to prevent these diseases.

- ' Water-based diseases. The agents of these diseases are aquatic organisms that live one part of their vital cycle in the water and another part in animals as parasites (worms and the like). Some of these diseases are schistosomiasis, dracunculosis, and others.

To prevent these diseases, it is necessary to wash vegetables thoroughly with clean water, cook food properly, and avoid bathing in polluted rivers or lakes.

- ' Diseases whose vectors are related to water. Vectors are insects (mosquitoes, flies) and other animals that can transmit infections and are bred or live near polluted or clean waters. Among these diseases are malaria, yellow fever, dengue, etc.

In order to prevent these diseases, it is necessary to eliminate the agent insects. However, we have to carefully choose the pesticides to be used, since they could contaminate water sources threatening human life. It is highly recommended to extensively use natural predators, to avoid the presence of puddles, and to apply control biological methods.

- ' Diseases related to lack of water and hygiene. Tuberculosis, whooping cough, diphtheria, and tetanus are among the diseases related to lack of water, hygiene, and environmental sanitation, which create propitious conditions for such diseases.

The only way to overcome these diseases is to improve safe water supply and, consequently, to increase the daily practice of hygienic habits.

Integrated Health

The concept of health not only refers to the absence of disease, but to a broader vision of human beings' welfare. In this regard, water plays a fundamental role related to the welfare of people and other living beings.

Water, as part of the landscape, also provides recreation, serenity, and harmony. Water sources are linked to human life owing to its direct usefulness, but they also represent nature's foundation to support life.

The current Executive Director of UNEP, Mr. Klaus Töpfer, recently pointed out, within the framework of the World Water Day celebrations: "The water crisis unlike the energy crisis is life threatening. The level of suffering and misery represented by these statistics is almost beyond comprehension. As water is an absolutely vital resource, at the center of life itself, it is a key integrating factor in the environment. Without sustainable water management to ensure that there are sufficient supplies of clean, safe water, the health of ecosystems and those who depend on them, especially people, suffer."

In the Report GEO 2000⁵ on global environment prospects, we can find information about the magnitude of the problem worldwide:

- ' · Three million people die every year from diarrheal diseases (such as cholera and dysentery) caused by contaminated water.
- ' · Polluted water affects the health of 1.2 billion people every year and contributes to the death of 15 million children under five every year.
- ' · Vector-borne diseases, such as malaria, kill another 1.5 to 2.7 million people per year, with inadequate water management as the key cause of such diseases.

**The fulfillment of the right to water
will undoubtedly be the most effective mechanism
to prevent diseases and to achieve health conditions
that will allow sustainable development on a human scale.**

⁵ See the Report GEO 2000 on <http://www.orpalc.unep.mx>

Let us think over the value of water for health and act accordingly

Communities:

- ❖ *Let us study the link between health and water in our community. What are the prevalent diseases related to water identified in our community? Have preventive measures been taken? Do we have sufficient and adequate quality of water for human consumption? Is our right to water taken into account? Let us meet with the authorities to analyze the situation and look for solutions.*

Authorities:

- ❖ *Let us analyze together with health promoters the general conditions of our population and its relation to water supply and hygienic habits. Let us establish the necessary measures for a permanent monitoring and improvement of these conditions.*

Educators:

- ❖ *Let us study the value of water for health at school and examine with students if we practice basic hygiene habits as a means to keep good health in the community. Is our right to water taken into account? Let us jointly review the condition of toilet facilities and let us propose activities to improve them.*

Communicators:

- ❖ *Let us get information about the state of health in the population and its relation to water supply conditions. Let us analyze these results to disseminate them to the community.*

Chapter IV

Water and its Contribution to Sustainable Human Development

Water, Part of the Environment

If we see the environment as the group of natural and social elements interacting in a given space and time, we would understand that all natural elements (the universe, our planet and its natural resources: water, air, soil, fauna and flora, the weather) coexist in a permanent relation with social elements (humans, man-made outputs, and actions). This perspective needs to be considered when dealing with activities aimed at development.

In this sense, interactions are produced between society and nature, and vice versa, and are carried out in a given place: in a street, within our houses, at an urban center, at the countryside, in the mountains, seas, rivers, forests, or deserts. They also occur at a given moment, i.e., either at this very moment, a future projection, an occasional instance, or an event from the past.

Thus, the environment refers to everything surrounding us, but not only that. It also includes human beings and the relations between ourselves and nature. As a result, the environment is not static; we are changing it every day in the different places of the planet.

The relationship between human beings and nature produce impacts –whether positive or negative. They can be positive and favorable to humans and other living beings when actions are respectful and consider natural laws. Otherwise, they may cause serious changes and interrupt important cycles severely affecting natural elements and humans. In cases such as these, environmental problems arise.

Nature permanently interacts with society providing human groups with resources to support development and welfare. In general, nature seems to be calm and generous. But at times, it may be menacing and powerful demanding respect by producing phenomena such as hurricanes, earthquakes, landslides, and floods that alter societies' normal life.

Even though these phenomena are known as *natural disasters*, they are not always actually "natural", since its occurrence may be favored by a great number of human actions, for instance, when houses are built near rivers, when forests are destroyed, or when nature is polluted.

As contradictory as it may seem, Latin America and the Caribbean, a Region known worldwide for its biodiversity and rich natural resources, suffers problems such as poverty in rural and peri-urban areas, deterioration of resources, and poor conditions that threaten chances for sustainable development.

Use of pesticides, deforestation, desertification and the like are environmental problems that seriously affect agricultural and livestock in the Region. Therefore, there are less chances of achieving a good and diversified production to support the development of our communities. Nevertheless, we want development to be sustainable. What does that mean?

Sustainable Development and Water

Sustainable development on a human scale focuses on meeting the population's basic needs by improving their quality of life through rational management, conservation, recovery, and adequate use of natural resources. It also encourages participatory processes and local and regional efforts so that present and future generations may enjoy natural resources, and have the possibilities to ensure the survival of humans and the planet as a whole.

The following items all of which relate to one other can be regarded as determining factors for the sustainable development concept:

- ' ' Meeting the population's basic needs and well-being
- ' ' Rational use of natural resources
- ' ' Better economic conditions, including the integrated valuation of environmental factors
- ' ' Equity within and among generations, genders, and ethnic groups
- ' ' Use, adaptation, and development of technologies and environmentally sound processes
- ' ' Social participation in all stages of development
- ' ' Acknowledgement of cultural diversification and lifestyles
- ' ' Acknowledgement of biodiversity and its potential.

In the United Nations Conference on Environment and Development (UNCED)⁶, held in Rio de Janeiro in 1992, several historical documents were signed. One of them is the Rio Declaration or General Principles for Sustainable Development, whose first principle states that all human beings are at the center of concerns for sustainable development and that they are entitled to a healthy and productive life in harmony with nature.

Principle 5 of the declaration asserts that all States and all people shall cooperate in the task of eradicating poverty as an indispensable requirement for sustainable

⁶ See UNCED documents on: <http://www.rolac.unep.mx>

development. Principle 7 proclaims that all States shall cooperate in the spirit of global partnership to conserve, protect, and restore the health and integrity of the Earth's ecosystem.

Participation of all citizens, men and women, is strongly emphasized in Principle 10, which expresses that environmental issues are best handled with participation, public awareness, and making information widely available.

In Part 2 of Agenda 21⁷, which was also approved in this historical conference, resource conservation and management is stressed as an essential requirement to achieve sustainable development.

From chapter 9 to 22, related to these issues are key actions proposed for the protection of the atmosphere, such as: soil management; the fight against deforestation, desertification, and drought; sustainable development of mountainous regions; sustainable agriculture and rural development; biodiversity conservation; the management of biotechnology; the protection and management of oceans and freshwaters; the adequate use of toxic products; and the management of solid, liquid, and radioactive hazardous wastes. Reference to water and its ecological value for all ecosystems is the pervasive topic throughout these chapters.

Beyond what has already been mentioned, water and environmental sanitation seem to be closely linked with the social and economic aspects of sustainable development (Part I of Agenda 21), since they promote human health (Chapter 6), fight against poverty (Chapter 3), and foster positive changes in consumption patterns (Chapter 4), among other things.

The new inventory of world's freshwater resources, examined during the special session of the United Nations General Assembly in New York in 1997, confirmed that if present water resource use schemes continue, almost two third of humanity might suffer from a moderate to serious water shortages before 2005.

If the fight against poverty, social promotion, encouragement of economic activities, and environmental protection are conditions for sustainable development, then it is obvious that water is one of the main elements to be taken into account.

In the International Conference on Water and Sustainable Development⁸, held in Paris in March 1998, the following proposals were made:

' ' Satisfy urban and rural populations' needs for good quality drinking water to improve hygiene and health and to prevent large outbreaks of disease.

⁷ Ibid.

⁸ See documents of this conference on: <http://www.oieau.fr>

- ' ' Ensure food self-sufficiency for local, regional, and world populations by way of a sustainable development of agricultural production that relies on appropriate irrigation.
- ' ' Develop harmonious modes for industry, energy production, leisure, and, in certain sectors, tourism and shipping via waterways.
- ' ' Increase the production of fish farming for feeding.
- ' ' Prevent and combat pollutants of all nature and origin, with the goal of ensuring optimal resource reuse and biodiversity preservation.
- ' ' Prevent natural disasters, erosion, floods and drought hazards, while taking into account water and ecosystem management.

The above-mentioned conference stressed the importance of discussing all of these issues from an overall and integrated perspective. It highlighted that if corrective and preventive actions were not taken in a timely manner, water shortage might become, in the coming decades, a serious hindrance to economic and social development.

**Let us be aware and act accordingly before it gets too late.
Let us work for sustainable development on a human scale!**

Let us think over the value of water in sustainable development and act accordingly

Communities:

- ❖ *Let us study the meaning of sustainable development in our community. How do natural resources relate to development? Do we think about the future when we work with existing resources? What role does water play in our community in connection with sustainable development? Let us study all uses of water of our community to determine whether they are sustainable or not. If the answer is negative, let us suggest solutions.*

Authorities:

- ❖ *Let us analyze the kind of development in our locality and its relationship to water. Have we sought alternatives for sustainable development? Have we planned a local Agenda 21? Let us meet to study and plan future actions on this topic.*

Educators:

- ❖ *Let us study with our students, girls and boys, the meaning of sustainable development and observe the importance of water in this process. Let us propose activities aimed at clarifying the meaning of sustainable development and its relationship to water. Let us prepare class activities using several modes, such as notices, posters, performance of plays, and group readings.*

Communicators:

- ❖ *Let us raise awareness of the sustainable development concept and its relationship to water. What are the differences with common expressions on development? How could these features be differentiated in communication processes? Let us disseminate this concept among several sectors of the population and through several media.*

Chapter V

Availability, Shortage, and Waste of Water

Availability

Water availability refers both to water supply in a given place and during a specific period of the year, the possibility of having water in adequate quantity and quality. In this regard, availability is directly related to water sources existing in some regions. Nonetheless, there are additional determining factors that lead to situations changing notably from place to place, such as:

- ' geographical distribution
- ' population density
- ' weather conditions
- ' services
- ' forms of water use, etc.

Although 70% of our planet is covered by water, a very high percentage (97.5%) corresponds to seawater, and only 2.5% is fresh water. A portion of this quantity lies in polar and glacial caps located in remote polar areas. Only 1% of the water of our planet is available to human beings, though not entirely since some of this remaining amount is either found as vapor, in deep aquifers with difficult access, or is part of living organisms.

Despite so many limitations, this amount would be enough to meet human needs if it were managed and distributed adequately among the world's population. We all know, however, that while water may be so abundant in some areas to the point of producing catastrophes, shortage may be dramatic in desert areas.

Moreover, there has been an ever growing increase of water demand in recent years and its overuse by some groups are a problem. Additionally, many water sources are lost owing to pollutant processes.

More than 30% of the freshwater that exists in the world is in the American continent. Latin America is one of the regions with large water resources owing to its average rainfall of 1,500 mm; i.e., 50% more than the estimated average worldwide. The resulting runoff is estimated to be 370,000 cubic meters per year. It means that 31% of the regional freshwater reserves reach the oceans every year⁹.

⁹ See: CEPAL, "Los recursos hídricos de América Latina y el Caribe y su aprovechamiento". (LC/G.1358). Santiago, 1985.

South America has abundant rivers and important water resources compared to the rest of the world. There are, however, many differences from region to region within the Americas. Greater availability is found in the rain forest, in the Amazon basin, but there are also extensive desert areas with serious problems.

Despite being a finite resource, water is permanently recycled on an on-going basis through the hydrological cycle. Nevertheless, this remarkable feature has wrongly led some to assume water is a never-ending public good available to all. Facts demonstrate the opposite: we face a shortage.

Shortage and Water Crisis

When do we consider that water is running short? It is said that there is water scarcity when a country has less than 1,000 cubic meters per capita a year. Figures ranging between 1,000 and 1,700 cubic meters per person would indicate water-stressed countries. In our Region, two countries face such a water stress: Haiti and Peru.

There are other countries and regions in America that also experience complex situations regarding this valuable resource. For instance, the Chaco region shared by Argentina, Bolivia, and Paraguay is undergoing serious desertification. Despite two big rivers (Pilcomayo and Paraguay rivers), water is one of the scarcest resources in this region. Mexico City is also another country facing hardship and water may become a difficult issue to deal with in the near future. North America's largest aquifer, the Ogallala, is being depleted at a rate of 12 billion cubic meters a year¹⁰.

The world water crisis was the central topic of the Water Conference held in Bonn (Germany) in 2001, attended by ministers and authorities from 120 countries. This meeting aimed at discussing how to overcome the water crisis that affects 1.2 billion of people all over the world.

Estimated figures for the future are not encouraging. In fact, if proper actions are not taken, two out of three people will suffer from water scarcity by the year 2025.

In 1995, Haiti barely had 1,544 cubic meters per person a year. In that same year, Peru was faced the threshold figure: 1,700 cubic meters a year¹¹. Estimates for 2025 are frightening for these two countries since they could only reach 879 and 1,126 cubic meters, respectively, taking into consideration population growth projections.

The Regional Report on Evaluation 2000 in the Region of the Americas: Water Supply and Sanitation¹², prepared by PAHO, examines the state of the entire Region's

¹⁰ See *World Water Crisis reports on:*
http://news.bbc.co.uk/hi/english/static/in_depth/world/2000/world_water_crisis/default.stm

¹¹ See the table on water scarcity increase in the site of Population Reports:
<http://www.jhuccp.org/pr/m14/m14table.stm#top>

¹² See <http://www.cepis.ops-oms.org>

water supply and sanitation services. This document estimates that the Region's total population (including 48 countries or territories) is 790 million inhabitants 73% urban and 27% rural.

Approximately 76.5 million inhabitants in the Region have no access to safe water and 53.9 million obtain water through easy access systems, which represent for the most part a significant risk for health, principally for the most vulnerable populations.

Even though Canada and the United States have for the most part solved their water supply and sanitation supply problems, they still have to cope with the renewal of infrastructure, the deterioration of water resources, and, especially, the excessive consumption of water.

Latin American and Caribbean countries have not yet achieved total coverage in these services. What is more, they face serious difficulties in water quality and protection, as well as water losses.

To overcome the water crisis, it is crucial to promote substantial changes in various aspects: containing the demand for water (owing to population growth, and increasing use of resource by industry and agriculture; putting a halt to excessive consumption; improvement and expansion of supply systems; minimization of water losses; sustainable management of basins; and designing better distribution systems, among other things.

The main task to be undertaken throughout the Region is to prevent waste and to reduce water consumption to rationalize the use of this valuable resource.

Water Waste and Consumption

Waste is that act whereby we squander, misuse, or lose something. Therefore, when we talk about wasting water, we are referring to a series of actions and processes carried out by humans, which results in unsustainable practices.

When we waste something, we not only deny its value, but we also express lack of a vision for the future since we are not preserving a resource that we need in order to live. Thus, to waste water indicates no clarity regarding the fundamental importance this resource has for our survival.

Waste is even more serious if we consider that water is a limited resource and that its loss can take us to critical situations of scarcity. We need to fight against water shortages and eliminate situations in which we waste.

There are various forms of consumption in which water is used:

· human or domestic use

agricultural use

industrial use

recreational use.

Water for domestic or human use is employed for cooking, personal hygiene, household cleaning, washing utensils or clothes, washing cars, and watering gardens. The average consumption of water is around 120 liters daily per person, but this quantity depends on household conditions and institutions or facilities in which we carry out these activities.

The daily average consumption of water per person is estimated as follows:

Typically a person uses 36% in the toilet; 31% in personal hygiene; 14% to wash clothes; 8% to water the garden, wash the car, clean the house, and leisure activities; 7% to wash utensils and dishes; and 4% in drinks and food.

Since the greatest quantity of water is used in the toilet, low-consuming devices should be employed to discharge as little water as possible.

People accustomed to receiving running water at home, sometimes do not realize its true value and importance and forget that a leakage and poor conditions of sanitary facilities could originate great water waste and, consequently, significant economic loss. The estimates of daily and monthly losses are as follows:

- *A leaky tap wastes 80 liter of water daily –equivalent to a loss of 2.4 cubic meters monthly.*
- *A thin streak of water, 1.6 mm of diameter, leads to losses of 180 liters daily; or 5.4 cubic meters monthly.*
- *A thicker streak of water, 3.2 mm of diameter, leads to losses of 675 liters per day; or 20.3 cubic meters per month.*
- *A toilet in bad conditions loses 5,000 liters of water daily; 150 cubic meters are lost monthly.*
- *Leaky cisterns or tanks lose 12,000 liters of water daily; 360 cubic meters are lost monthly.*
- *In highly deteriorated storage tanks, the average loss is 10,000 liters daily; which represents 300 cubic meters monthly.*

Summing up the losses owing to deterioration and bad habits, waste related to domestic consumption can be very high if effective corrective measures are not undertaken, both with regard to habits as well as facilities management.

Agricultural activity is among the greatest consumers of water. It accounts for nearly 70% of all water withdrawn from rivers, lakes, and aquifers; as such, its potential for waste has some of the most serious consequences.

On occasion, irrigation systems waste large amounts of water. Typically, only between 15 and 50% of the water withdrawn for irrigation ever reach the crop zones. The water is lost by evaporation, infiltration, or leaking.

Industrial activity is also a very water-intensive activity, especially in developed countries, where industries use from one-half to three-quarters of all water withdrawn, compared with about one-quarter for the global average¹³.

In industry, there are determined productive processes requiring great volumes of water. For instance, making one ton of steel can consume as much as 300 tons of water. Pulp and paper industry, along with the chemical industry, are also great consumers of water, among others.

Very often, consumption is related to refrigeration or transportation activities, which is why industrial technologies and processes are being redesigned to minimize water use and reuse it.

The following percentages of consumption correspond to the three principal categories of freshwater use, with regard to annual water extractions:

agricultural use	69 %
industrial use	23 %
domestic use (personal, household, and municipal)	8 %

**Let us be careful about how we use water,
as well as when and how we waste it,
and how we could reuse and save it!**

¹³ See reports "*Saving Water in Industry*" and "*How Water is Used*" on: <http://www.jhuccp.org>

**Let us think over the availability, scarcity,
and waste of water and act accordingly**

Community:

- ❖ *Let us analyze the availability of water in our community. How are we using it? When are we wasting it? Let us study when water is lost and look for alternatives to avoid it from happening.*

Authorities:

- ❖ *Let us analyze if water availability in our locality permits a good supply for all human, agricultural, and industrial activities. Which activity is more water-intensive? Is water wasted? What actions can authorities take to prevent waste? Let us know the situation so we can take corrective measures to avoid shortages.*

Educators:

- ❖ *Let us study water availability in our region. Is there enough water in school? Do we waste water? Let us analyze the situation together and undertake an educational campaign to prevent waste.*

Communicators:

- ❖ *Let us identify the basic issues related to water availability in our locality, as well as the main causes of waste. Let us prepare messages to alert the population about scarcity, the situations where water is wasted, and alternatives for overcoming this problem.*

Chapter VI

Saving Water: A Guarantee for Life and Development

The Habit of Conservation

Conservation is a good habit. We all agree about this when we are talking about saving money, mainly because we think that it provides a safety net for our life and the future of our families. Money savings, therefore, symbolizes a hedge for difficult times.

Water is a good that represents a guarantee of life for humanity and for all forms of life. How come water conservation is neglected?

To start thinking on this issue, it is suitable to remember Benjamin Franklin's famous phrase: "When the well is dry, we know the worth of water."

The challenge of conservation implies that we should not wait for our wells to be dry to start taking proper actions aimed at preventing scarcity. Conservation is the key to good management.

This topic is directly related to reflections presented in previous chapters. An integrating and comprehensive vision of water and its management is necessary to incorporate all of the elements that make it possible for a rational and sustainable management. Towards this end, water, considered a limited resource, should be supplied according to a sound economical approach. Moreover, considerations on equity are required to ensure that all human beings have the right to access this valuable resource for the sustenance of their lives. Finally, ecological criteria showing the value of water in all life cycles should be incorporated as the basis for sustainability to be truly holistic and harmonious.

All these aspects, policies, and instruments should clearly express the feasibility of social processes toward a rational, ethical, and sustainable use of water.

Conservation and Good Habits

If negative habits related to the waste of water were changed, saving water at home, school, farms, industries, and so forth would be possible. To overcome the waste of water we need to practice good habits when using water. Let us see some simple tips that would allow us to save a great amount of water:

Regarding personal and household use:

- Washing hands, brushing teeth, and shaving. Do not let the tap run when water is not being used.
- Toilet use. Flush the toilet only when necessary.
- Bathing and washing hair. Turn off the faucet while you are soaping or shampooing.
- Washing kitchen utensils. First, soap everything and then rinse. Do not let water run unnecessarily.
- Washing clothes. Use the washing machine at its highest capacity to save water and energy. When washing by hand, clothes should first be wet, rubbed, and then rinsed. Do not let the water run unnecessarily.
- Cooking. Use only the necessary amount of water. Do not waste broth.
- House cleaning. Use a bucket to measure and control the amount of water to be used for cleaning floors and other places. Do not use hoses since they misuse water.
- Watering the garden. Avoid using drinking water, and employ water that has been used for other purposes instead. Try to water when it becomes dark and then only use the water necessary for facilitating water absorption by the ground, and there will not be much evaporation. Redesign gardens with plants that require little water.
- Car washing. Do not use hoses; use a wet cloth and a bucket to control the quantity of water used. These simple measures will allow the conservation of many liters of water as well as a great amount of money.

Maintenance and Review of Productive Processes

The issue of infrastructure maintenance associated with water supply is essential since poor facilities conditions are the cause of major water losses. It is also common that deficiencies in agricultural and industrial processes originate in waste and excessive expenses.

Maintenance

Good personal habits are not the only things that contribute to conservation. Maintenance of facilities related to water is also important. For instance, the good condition of pipes, showers, toilets, storage tanks, taps, and related devices allow significant savings and prevent the volume of waste mentioned in the previous chapter. In general, the simple

repair of a faucet or the sealing of joints in a pipe could prevent considerable losses of water and money.

Maintenance should be done by all sectors of the population, from the individual user up to those responsible for large companies, municipal authorities, and other groups involved in social and economic life. Maintenance is a shared responsibility to prevent deterioration owing to irresponsible management.

Agricultural productive processes

In Latin America, there are interesting experiences in the creation and operation of user's boards or committees of farmers using the same water source. These organizations can become fundamental instruments for putting into motion processes of balanced distribution and the rational use of water.

The review of deficient irrigation systems, whose significant inefficiencies have caused great losses, is necessary for promoting conservation. Putting into motion the application of better irrigation techniques, water conservation, reforestation policies, and other similar measures can help diminish the overuse and waste of water, as well as the deterioration of water sources.

Considering the amount of water used in agriculture, it is the key sector we should put our attention on.

Industrial productive processes

The use of industrial water can be remarkably reduced if it is recovered and recycled during various moments of production. By reviewing their processes, great industries, as well as small and medium sized enterprises, can achieve important water savings.

The implementation of environmental management systems (EMS)¹⁴ is an excellent alternative for the industrial sector. Several elements are included in these systems, among other things:

- Reviewing procedures used in industrial production and their impact on water, air, and soil, the generation of noise and odors, and its influence on the landscape; the analysis of management, recycling, and disposal of wastes; and the management and storage of raw materials; etc.
- Implementation of a management program aimed at the rational use of resources, which includes conserving supplies, water, and energy, and the control and prevention of polluting processes, among other things.

¹⁴ ISO 14000 guides describe the basic procedures and requirements for this type of management and are internationally accepted.

- The transformation of deficient productive processes to conserve water and energy, and reduction in the use of raw materials and polluting processes, while improving quality production.

In so doing, industries can begin (there are important examples related to this issue on a global level) preventive, organizational, and rational management that, in addition to allowing a considerable saving it also allows for improvements in productive processes.

It is necessary for these initiatives to have an increasing presence in our Region. There are some examples of these processes promoted by the Pan American Network for Sanitary Waste Management (REPAMAR)¹⁵, particularly in the textile industry. This Network is a regional initiative, coordinated by PAHO/CEPIS, whose aims are to minimize waste generation, improve environmental management, and contribute to sustainable economic development.

Municipal Level Management

Water should be properly and efficiently managed at the local level. This issue not only deals with the utilities in charge of water supply services, but also with the proper management of water resources as a whole, in the respective basin.

At the municipal level, water supply and demand should be balanced to offer an efficient and controlled service. It is known that at the local level, great losses of water are attributable to leaky main pipes and illegal connections.

A survey¹⁶ carried out in 15 Latin American cities found out that municipal systems lose between 40% and 70% of their water. Solutions to this problem will permit greater water savings and a higher efficiency in service.

In cities where a regular provision of water is available, the population tends to overuse water; therefore, users must be encouraged to cut their level of consumption, and restrictive actions must be applied to those who overuse it.

Joint efforts from the various consuming sectors of water would enable us to achieve great savings, and will also permit us to overcome the grave threat of water scarcity for this valuable resource.

Water conservation guarantees life and development!

¹⁵ For further information see: <http://www.cepis.ops-oms.org/bvsare/e/quees.html>

¹⁶ See references in the document "Municipal Conservation" on: <http://www.jhuccp.org>

Let us think over the saving of water and act accordingly

Community:

- ❖ *Does our community save water? Have we sought community alternatives to improve water management in our locality? Let us evaluate possibilities to act jointly and save water in our usual activities.*

Authorities:

- ❖ *Is an integrated water management being implemented in our locality? Have we talked with most water-intensive sectors to facilitate measures focused on conservation? Let us call a meeting to promote the review of the water management system and propose maintenance mechanisms, as well as a review of processes, and further alternatives for conservation.*

Educators:

- ❖ *Are we promoting a water conservation culture in our school? Let us analyze our habits in our educational community to adopt proper actions and improve possibilities for water conservation at school.*

Communicators:

- ❖ *Let us identify basic topics related to water conservation in our locality and habits that would allow us to overcome our main problems. Let us develop a communication campaign directed to several sectors, aimed at conserving water in social and economic activities.*

Chapter VII

Celebrating 10 Years of the Inter-American Water Day (IAWD) Initiative

The IAWD Commemorates 10 Years

In 2002, the Inter-American Water Day (IAWD) Initiative commemorates its 10-year anniversary. This will be a very significant event. Celebrations will be very special because the Pan American Health Organization (PAHO/WHO) also celebrates 100 years, representing a century dedicated to the health of America's population.

The Inter-American Water Day was officially created in 1992, during the XXIII Inter-American Congress of Sanitary and Environmental Engineering held in Havana, Cuba.

The proposal was based on the idea that community participation is a key element for successful environmental sanitation programs. Therefore, mobilization of organized groups and the possibility for accessing information on the topic were considered as driving forces to put water in the public arena.

During the span of these ten years of celebrating the Inter-American Water Day, several issues related to water and participation have been raised. In the first celebration, links among water, life, and health were observed; then water and the environment were emphasized; in 1995, water was viewed as a patrimony that should be preserved. Subsequently, celebrations stressed themes carrying the message that we should take care of water, for it is as valuable as life itself. The theme for 1997 focused on drinking water quality and health; in 1998 attention was given to the importance of the participation of all to have safe water; in 1999 the theme highlighted the right of children to water; in 2000 the theme *Every drop counts* expressed the need to rationalize the use of water; and finally in 2001, the strategic link between water and health for life was the center of concern.

This year, when we celebrate the initiative's first decade, the message stresses how important it is to overcome scarcity problems, as well as preventing waste and strengthening our capabilities for conserving and using water rationally.

Achievements and the IAWD Portal

The outcomes achieved during these ten years are highly positive. Latin American countries have creatively succeeded in getting their people to participate in the IAWD celebrations. Moreover, processes have been planned in such a way that what was initially an occasional activity, has turned into a program of activities as the years have gone by, strengthening possibilities for disseminating information and promoting actions with several segments of the population.

In 2001, several countries carried out an evaluation that demonstrated truly meaningful achievements.

An issue in which remarkable progress has been made, has been communication, which has improved and expanded. Indeed, communication among institutions and countries aimed at facilitating, promoting, and broadening the IAWD commemorations has been supported quite well and have provided a flexible and creative mode disseminated through the PAHO/CEPIS website. The website address is: <http://www.cepis.ops-oms.org/bvsadiaa>.

The various enquiries in this portal, the ability to add documents, disseminate news and experiences, along with the information and links it offers, have make it an invaluable instrument of support for IAWD activities.

The homepage contains valuable information at the regional and country levels in Spanish, English, along with some documents available in Portuguese. The following aspects stand out:

At the regional level:

- About the IAWD initiative
- Materials from previous years
- Support materials
- Coordinating groups
- News and commemorations
- Useful links
- Courses and events
- Suggestions.

At the country level:

- Case studies and experiences
- Activities
- Evaluation.

The portal also includes links to the IAWD 2002 and 2003, gender issues, and a discussion list. The list is an interesting forum for debates at the regional and international levels and disseminates information in Spanish on the IAWD. Subscription to the list is quite simple; just enter the corresponding link, write the name, surnames, and e-mail of the interested person, and then click on "Subscribe." This portal has great potential and expansion and improvement is foreseen.

International Coordinating Group (ICG) and National Coordinating Groups (NCG)

The International Coordinating Group (ICG)¹⁷ was originally formed by AIDIS¹⁸, CWWA¹⁹, and PAHO/WHO²⁰ representatives and has played an important role in promoting the IAWD in the Region. Later on, in 2001 the OAS²¹ was incorporated into the initiative. From this year onwards, the ICG has approved the incorporation of the Economic Commission for Latin America and the Caribbean (ECLAC)²² and the United Nations Environment Programme (UNEP)/Regional Office for Latin America and the Caribbean (ROLAC).²³

In addition, the creation and implementation of National Coordinating Groups proves that activities have been strengthened by planning local and regional actions and enhancing exchanges among countries.

Each country, in a creative manner, has gradually incorporated, into its plan of work, the activities it has been carrying out in every IAWD commemoration²⁴. All of this has had positive ripple effects and the aims of these commemorations have led towards the achievement of continuity, institutionalization, and broader coverage.

Several countries, like Argentina, Ecuador, Colombia, the Dominican Republic, Trinidad and Tobago, among others, have included their own materials and ingenious messages, which have fostered the participation of young people and different social sectors.

Brazil has published the IAWD document in Portuguese and every year, the participation in each country increases. Canada has prepared the translation into French and the document was distributed to Haiti and other French-speaking countries and territories. Several documents were also prepared in Dutch by Suriname.

The evaluation,²⁵ carried out in 2001 on the outcomes and principal actions in each of the countries, also indicates that local messages broaden and multiply the achievements, which work synergistically with the regional commemoration of the IAWD within the global framework of the Water Day celebrations²⁶. In 2001, everybody worked on the same theme highlighting water and health.

¹⁷ See Coordinating Groups: <http://www.cepis.ops-oms.org/bvsadiala/e/grupos/gci.html>

¹⁸ See information about AIDIS on: <http://aidis.org.br>

¹⁹ See information about CWWA on: <http://cwwa.net>

²⁰ For further information, see the World Health Organization - WHO site: <http://www.who.int> and the Pan American Health Organization - PAHO site: <http://www.paho.org>

²¹ See information about OAS on: <http://www.oas.org>

²² See: <http://www.eclac.cl>

²³ See: <http://www.rolac.unep.mx>

²⁴ See activities of the countries: <http://www.cepis.ops-oms.org/bvsadiala/e/activi.html>

²⁵ See: <http://www.cepis.ops-oms.org/bvsadiala/e/evaluación.html>

²⁶ See further information about the World Water Day on: <http://www.worldwaterday.org>

Water Flagship Country and the Water Friend Award

Starting in 2002, the "Water Flagship Country" system has been established on a rotary basis to reinforce Pan-Americanism and promote equity, which has become increasingly important for IAWD actions. In 2002, El Salvador was selected by the International Coordinating Group as the Flagship Country owing to the natural disasters that have affected the population's quality of life in recent years.

In El Salvador, several local organizations are preparing a wide program of action and specific projects to receive external support for the IAWD commemorations.

Likewise, starting in 2002 the "Water Friend Award" will be established. This award will be granted for the first time in 2003.

**Congratulations to all countries that every day demonstrate
that with the active participation of our communities, we can
move forward to a better future!**

**Let us think and act to celebrate
the Inter-American Water Day (IAWD)
Waste Not, Want Not!**

Community:

- ❖ *Let us study this manual to identify the main topics related to waste and water scarcity. Let us meet together with the authorities, educational community, and communicators to define activities to be carried out, as a community, for celebrating the Inter-American Water Day. Let us design a joint plan and put it into practice.*

Authorities:

- ❖ *Let us invite several social and economic sectors of our locality to implement a plan that will be prepared jointly for celebrating the IAWD. Let us contact the local coordinating groups in our country to review experiences and options chosen in other countries and contact the respective National Coordinating Groups.*

Educators:

- ❖ *Let us meet together with our educational community to explain why the IAWD is celebrated and study each one of the items related to this year's theme. Let us analyze in our classes the topics discussed in this manual. Let us create groups among students, girls and boys, to promote motivation and dissemination of activities for different target audiences. Let us take part in the preparation and implementation of the general plan of celebrations in the locality.*

Communicators:

- ❖ *Let us coordinate with the authorities, educators, and the community, to put in motion strategies to forward the IAWD celebration plans. Let us propose innovative mechanisms to convey the principal ideas and let us design a communication strategy to meet the goals we have planned jointly.*

**Let us remember that if we fight against waste,
we are contributing towards water availability for all,
both today and in the future.**

Waste Not, Want Not!

