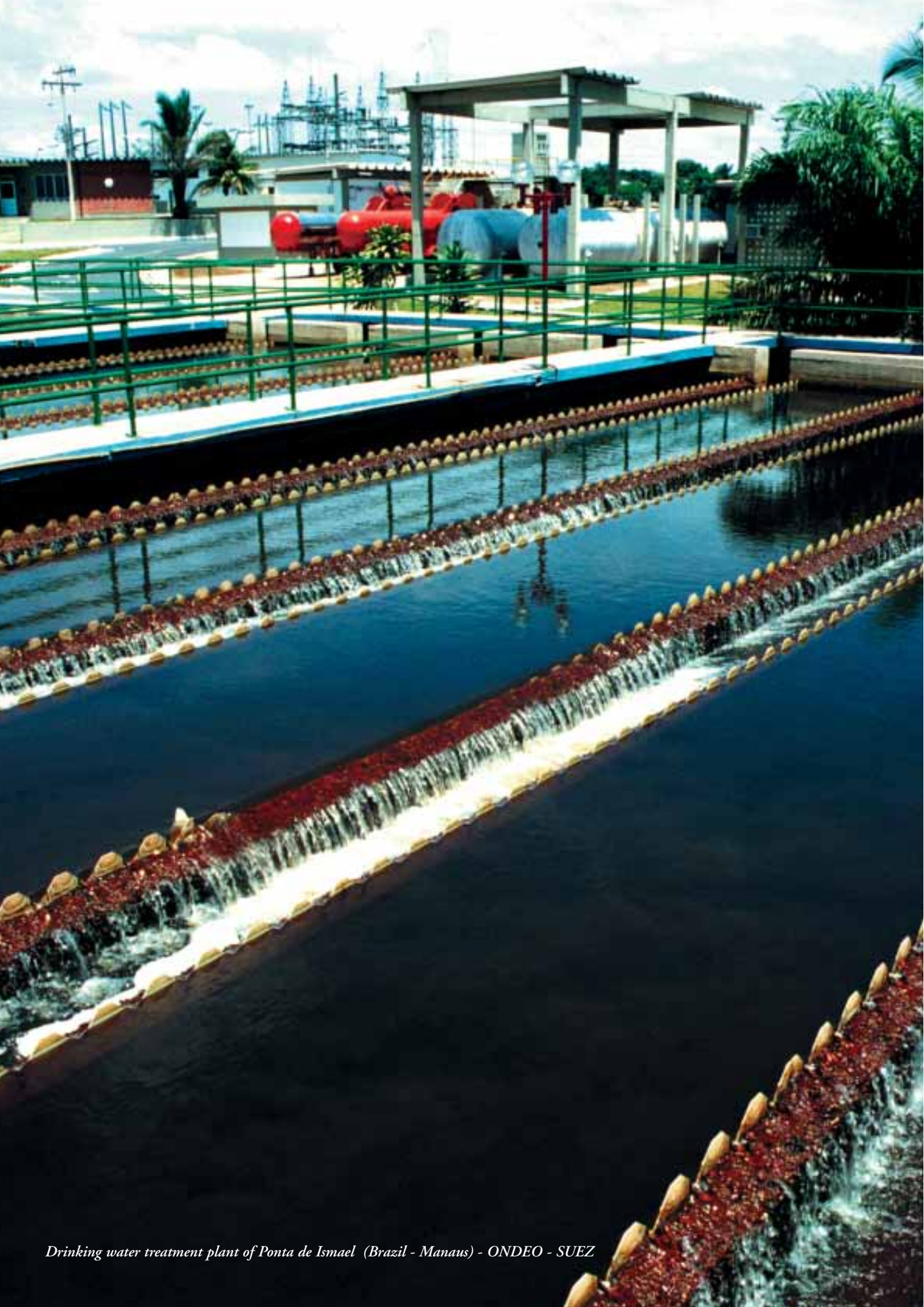
# Water for the 21st century

## 2003: International Year for Water


*From Paris, 1998 to Kyoto, 2003*

*the French Water Stakeholders*

*are mobilizing*



*Drinking water treatment plant of Ponta de Ismael (Brazil - Manaus) - ONDEO - SUEZ*

"The world vision on water, life and the environment", presented at the 2nd World Water Forum in the Hague in March 2000, has raised awareness, at local, national and international levels, on the importance of Integrated Water Resources Management (IWRM).

Through public bodies, design offices and companies of all sizes, France has always shown interest in water policy. As soon as legislation was passed in 1964, it set up **a river basin management system along with effective citizen participation.**

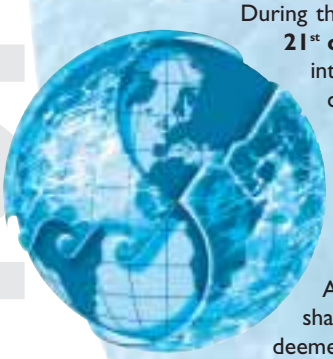
The water act of 2 January 1992 already implied that water should become "everyone's concern", *which is the title of the report on "World Water Vision" presented in the Hague.*

The French view on water is not restricted just to France; it also reflects the importance of international exchanges and relations with its neighbors.

**The European Union** is a major player in water policy through many directives which apply to all member States. The EU is striving to improve water management in Europe. The EU approach, based on the principle of precaution, is aimed at a high level of public protection and an improved environment, especially inland and coastal aquatic environments, by tackling point, industrial and urban pollution but also agricultural non-point pollution. The European Union also plays an active part in international cooperation on water issues, especially with Mediterranean countries and Central and Eastern Europe.

Whether in the public or private sector, the French have sought to publicize their approach, all the more so as **the World Water Council** is headquartered in France (in Marseilles) and **the International Hydrological Program (IHP)** is hosted in Paris at **UNESCO** head office.

**In March 1998, France convened an International Conference on Water and Sustainable Development in Paris, representing a major step in assessing the global situation.** Additionally, **France's Water Academy** has initiated a Social Charter for Water and a Charter for Water, Health and the Environment; the **Water Solidarity Program (PS-Eau)** is actively supported by French international humanitarian cooperation players; the **International Network of Basin Organizations (INBO)**, of which the **International Office for Water (IOWater)** is the permanent technical secretariat and whose head office is also in Paris, has drawn up an "associated program" with the **Global Water Partnership (GWP)** to "support the creation and development of basin organizations over the world"; and the **French Association for the Study of Irrigation and Drainage (AFEID)** is playing an active part in reflecting at global level on the management of irrigation and is involved in bilateral or regional cooperation activities.



During the 2nd World Water Forum in the Hague, **the "World Commission for Water in the 21st century"** presented a report with several conclusions. They include the need to promote integrated water resources management (IWRM) and to have water-related services paid at cost price, with financial aid targeted towards the underprivileged populations. The report also emphasized the need for political will, for behavioral change and for a significant increase in water-related investments with a higher involvement of the private sector.

**The Hague Ministerial Declaration** outlines seven main challenges which the world population has to face to secure water supply in the 21st century.

Although the French water stakeholders share the views expressed in the Hague, they deemed it necessary to present their proposals for consistent water policy, based on everybody's participation (as they were requested for the preparation of the 3rd World Water Forum which will take place in Japan in March 2003).

*The sustainable management of water will require choices*

We in fact find it essential to underscore some important points, since sustainable water management will require choices. Therefore, while respecting the environment, humankind must be at the center of water-related policies, with drinking water, sanitation, health, and water essential for food at the top of these priorities.

Of course, since water can neither be lost nor re-created and can - if naturally purified or artificially recycled - be re-used, there will be no planetary water shortage. But the way usable water is distributed in both time and space as well as its quality will often pose problems, especially as irrigation (which on a global scale accounts for the greater part of total water use) uses water without returning most of it back to the natural cycle of the water that is immediately available to people.

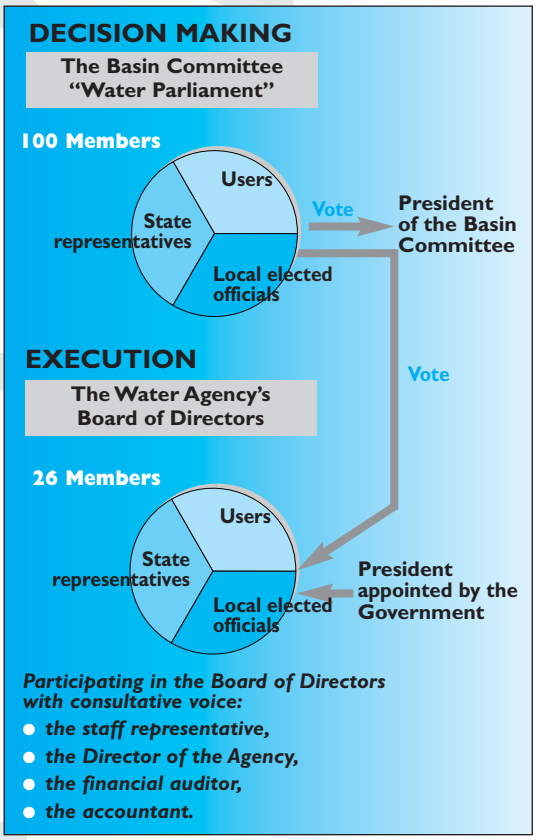
## Development of a public cooperation strategy at the international level

In order to solve, globally and consistently, the multiple problems encountered over the world, France wishes to promote integrated water resources management involving all water stakeholders. This strategy is based on three orientations: close collaboration between the people involved (public sector, private sector, scientists), concentration of aid on four areas in which France has a particular added value (institutional support to management; relations between water, agriculture, health, environment and development; the information-training-documentation trilogy and enhancement of an approach respecting water cultures.

# 1 INTEGRATED, JOINT AND PARTICIPATORY MANAGEMENT AT THE LEVEL OF A RIVER BASIN

For more than 30 years, France has had a clear institutional framework which specifies the role of the Ministry of the Environment, in charge of coordinating national water policy with the various technical ministries involved (Agriculture, Public Works, Industry, Interior, Health) and with the local authorities, with decentralized responsibilities since 1992 (regions, departments and especially municipalities).

The National Water Committee, made up of elected officials and representatives from the socioeconomic sectors and associations is consulted on the main orientations and on draft laws and regulations.




*Basin organization in France*

As water can only be transported at great cost, **its management must first be organized within the natural geographical context of each river basin.**

At this level, it is especially important to ensure effective coordination between government authorities (who decide the regulations, procedures and public funding mechanisms), local authorities, operators of facilities and public utilities and the various types of water users.

**Over the years, the river basin institutions, Basin Committees and Water Agencies, set up in France (by the 1964 legislation) have been improved and modernized, notably by the new legislation passed in 1992.**

New legislation is being drafted to strengthen the links among these various organizations.

Decisions regarding water policy for the six French basins are in fact made jointly by all users in all various categories (administrations, local authorities, farmers, industry, environmental protection and consumer associations) by **the Basin Committee.** Its commitment to the main basin users' interests is expressed through funds voted from fees it receives from users and polluters. This will ensure consistent basin development, program by program, both up and down stream, in accordance with the medium and long term objectives defined in **the Master Plan for Water Development and Management (SDAGE).**

Moreover, with a water development and management scheme (known in French by its initials, SAGE, for Schéma d'Aménagement et de Gestion des Eaux), the 1992 legislation promotes decentralized common cause responsibility, at small basin and sub-basin levels. This concept of collective user responsibility at local level is very much in the spirit of good management recommended at the June 1992 Rio Conference and further reinforced at the March 1998 Paris Conference on Water and Sustainable Development.

Since the nineties, many countries have been seeking to structure cooperation with France on an official basis to enable them to create their own river basin organizations.

In 1994, this led to **the creation of the International Network of Basin Organizations (INBO)**, which today has 134 members and observers in 51 countries. The International Office for Water (IOWater) provides permanent technical secretariat services with assistance from French authorities.

By sharing experience, member organizations have spurred INBO to set down four guiding principles for an internationally revitalized water policy:

- For major basins, organization of an integrated water resources and environmental management, aiming at optimal satisfaction of all legitimate requirements.
- Participation of local government and all user categories when determining water policy, mainly through river basin committees.
- Formulation of basin master plans with medium and long-term objectives and their implementation under five-year priority action programs.
- Implementation of targeted funding systems based on the "user-polluter-pays" principle, so that **"water pays for water".**

On this basis, several cooperation programs have been implemented or are on-going with Algeria, Brazil, Central America, Indonesia, Ivory Coast, Morocco, Mexico, India, Kazakhstan, Russia, Turkey or Ukraine especially, or more generally in Central and Eastern Europe.

Integrated management of shared basins should be based on cooperation agreements signed between the bordering countries concerned, and should include, among other things, the creation of the appropriate international commissions or other bodies.

France - which has been involved with regional cooperation for the basins of the Rhine, Meuse and Scheldt rivers as well as Lake Geneva - applauds any initiative to develop **"water-related common cause"** between neighboring countries sharing the same river.

The United Nations Agencies have selected the case of the Seine-Normandy basin for their Water Resources Assessment Global Program.

**I**ntegrated **W**ater **R**esources **M**anagement presupposes the setting-up, at all the relevant levels and for each river basin in particular, of permanent and comprehensive observation and information systems, providing improved data on the quantity and the quality of water resources and the environment, the uses to which they are put, and the pollution discharged, whether point or non-point.

Today France, thanks to the creation in 1992 of the **National Water Data Network (RNDE)**, has a fully integrated and highly effective information system and contributes to the European accession work in this area.

# 2 LAND USE DEVELOPMENT AND MANAGEMENT

## A balanced distribution of activities on the land

The French land use policy in force for the last forty years has resulted in more coherent development than would have been possible with mere economic-based decisions.

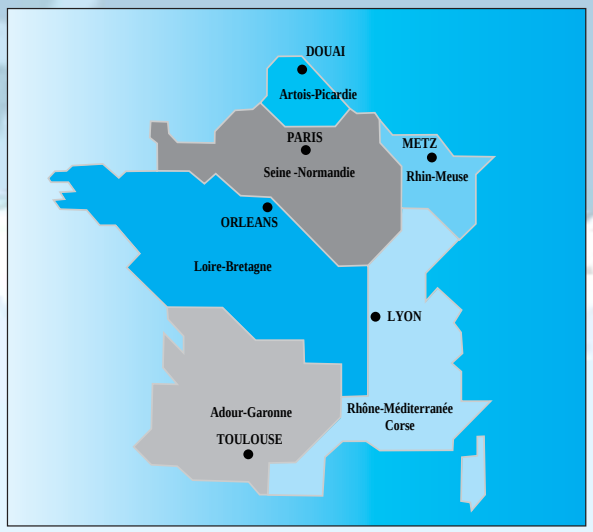
Clearly, uncontrolled development of mega-cities raises acute societal, economic and political problems. Depopulation and rural exodus also pose serious threats, including harm to the countryside, increased risk of natural disasters (fire, intensive erosion and blocked waterways, among others) and a threat to the entire livelihood of the areas concerned.

Balanced development of rural areas, preserving the natural environment, is also an obvious advantage for recreational activities. It notably helps avoid a disastrous and costly super-concentration of summer visitors along our coasts, thereby ensuring a more even distribution of tourists over the country as a whole.

It has not been possible to avoid the decline of some rural areas and the policy has not always succeeded. Yet, thanks to the development of large regional centers and mid-size towns, it has kept growth to France's only megalopolis, the Paris region.

Creating and saving jobs in farming, industries and the services in small towns and rural areas have been the main goals. In this process, water has been a major factor, in particular in some dry regions such as those on the Mediterranean. Water is needed for agriculture (irrigation), cities and the development of some industries - in particular the agro-food industry - and for recreational activities (quality of the natural environment, swimming, and drinking water for tourist resorts). In order to ensure that undertakings are efficient and relevant, water and other issues need to be seen not by sector but in terms of integrated and sustainable development.

Large developments of regional interest have been entrusted to the **"Etablissements Publics Territoriaux de Bassin (EPTB)"** - Basin Public Bodies.




*The 6 French Water Agencies*

Protecting water resources means dealing with land management and use issues. Upstream from the basins, the impact of forests on water and land conservation is well known. Peaceful co-existence of woodlands, livestock and arable farming is the best way of preventing forest fires, maintaining benches and terraces, etc., and ultimately of reducing erosion and flood levels while recharging groundwater.

Another basic issue is the impact of human activity on water quality and the aquatic environment. Choosing the right location for these activities (and monitoring water abstraction and wastewater discharges), developing good farming practices, and promoting stronger policies to protect ecosystems, wetlands and nature reserves are necessary to protect - and sometimes win back - this quality.

France has recently passed a law on land use and sustainable development and public service systems in nine areas (including transport, energy and rural and natural environments).

The acquisitions of the **National Littoral and Lakeside Conservancy (Conservatoire National du littoral et des rivages lacustres)**, the creation of fully protected **national parks** as well as **regional nature reserves** which not only protect the environment but also provide a mainspring of economic development: these are major aspects of this policy; and indeed they provide an effective example of good environmental management practices.

At the international level, the problems that have to be dealt with can often be very different from those encountered in France. In the emerging countries in particular, population growth can represent a threat to agricultural development and bring with it the risk of overgrazing in unsuitable, sensitive areas and of a massive rural exodus to the towns (which can be catastrophic when employment is scarce). There, water is an even more critical factor, whether for supplying towns with drinking water or as a job protection factor or food provider (irrigation) in rural areas. Basically, the core of the problem remains one of land use, and it is essential to deal with this issue.

## 2 Risk management

Sustainable land use implies that particular attention is paid to natural hazards.

Taking due account of the risk of drought has led to the creation of a number of large infrastructures which are designed to store winter rain for later distribution in the summer, when there is a high water demand to maintain activities and preserve the natural environment.

The reforestation and ecology-oriented development of the river basins are not sufficient to guard against certain highly destructive floods, which occur every year in some part of the world or another, causing death and material damage on a wide scale. At the very least, measures need to be taken to deal with flash floods in order to prevent damage in the best way possible.

*Photo Seine-Normandy Water Agency*

Whilst in France there has been no major "slow" flooding by its main rivers since decades, such as the Seine flood of 1910 or the floods of the Loire, the Garonne and the Rhone in the 19th century, there could be some slow floods at any time. People tend to forget what happened to earlier generations!

The recent floods came as a cruel reminder of the fact that priority has to be given to infrastructures designed both to anticipate and to control floods at the same time as preserving the ecosystems.

"Total" flood control is costly and has necessarily to be limited to areas that have total priority, usually urban areas. At the same time, we need areas into which the floods can spread.

But whatever we do, intensive flooding means massive volumes of water, which cannot be drained off over-night. Thus flood control consists of two fully complementary types of action:

- "structural": dykes, dams, river rehabilitation;
- "non-structural": a better understanding of the different phenomena, risk identification, information, rules for land use, flood forecasting, warning systems, crisis management, etc.

Whilst there is no way of preventing all damage to private and public property, to the infrastructures or to the industrial and the farming sectors, this damage can at least be reduced to a minimum by prioritizing initiatives designed to prevent, or at any rate reduce, the loss of human lives - which unlike other things, cannot be restored.

Weighing up the various possible solutions involves deciding between interests that are sometimes antagonistic. This calls for a high degree of dialogue among the various stakeholders concerned, enabling them to reach a meaningful consensus acceptable to everybody and capable of being translated into action.

The storms of December 1999, which ravaged France and caused some 90 deaths before hitting other parts of Europe, mainly Switzerland and Germany, showed that even temperate countries could be affected by disasters that are traditionally more prevalent in tropical countries. Whilst these storms produced only secondary effects as regards water, they are a reminder that (although the efficiency of the water suppliers has limited consequences for the populations) without electricity, drinking water supplies are endangered, and that even in the developed countries our water systems, just like our power and telecommunications systems, have to be protected.

The floods which occurred in Brittany (Winter 2000-2001) and in the Somme (Spring 2001) have led to take measures to reduce risk in the most vulnerable areas (river rehabilitation, flood spreading areas, etc.) and to improve flood warning systems (modernization of the warning equipment, extension of radar coverage).

## The major infrastructures, power supplies and transport

In some cases, the lack of sufficient water resources has led to the creation of a number of major structuring development projects, particularly in the South of France, with its adverse hydrometric conditions. Very fortunately, the average annual rainfall figure is high for these areas, although far from evenly distributed over the months and generally fairly random. Moreover, some of the rivers are very powerful, even in summer, as they receive the alpine snow. The most powerful in the Mediterranean region is the Rhone (56 $km^3$/year, 96% of which goes to the sea). Due to a combination of water storage and transfer, it has been possible to develop sustainable means of dealing with the main problems.

**Two essential aspects of water in the context of land use planning are energy production and waterways navigation.**

In this connection, the building of hydropower stations produces a renewable form of energy which neither pollutes nor contributes to the greenhouse effect. Over the past few decades, France has developed the bulk of her usable hydropower resources along her major rivers (the Rhine and the Rhone) or in mountain areas; **these stations are managed so as to meet the various water uses.**

As regards transport infrastructures, France enjoys a long tradition of waterway navigation. Let us not forget that the "Canal du Midi", built in the 17th century, and the Seine where it runs through Paris are both UNESCO World Heritage sites.

Today, this tradition may be given new life in line with transport requirements of the 21st century to avoid the "everything by road" approach and develop areas away from the coast.

Navigation developments clearly mean altering river beds, and very probably building canals and river ports as well as reservoirs to supply the water distribution reaches. This should all be possible, provided the various developments meet economic requirements and also respect certain sites and ecosystems which themselves have a high social and economic value.

The fact is that river navigation and combined river and maritime navigation offer numerous advantages:

- In socioeconomic terms, they are high-capacity energy-effective forms of transport. Their relative slowness is compensated by their regularity. They are ideal for the transport of raw materials, building materials, grain and so on. Furthermore, today's container shipping opens up a whole new future.
- From an environmental point of view, experience has shown that properly balanced development projects, taking into account ecological considerations, are often feasible; a waterway, natural or man-made, can fit harmoniously into the landscape whilst providing the urban or rural area it runs through with a major infrastructural asset.

A well-designed and fully exploited navigable waterway system can also make a useful contribution to the sound qualitative and quantitative management of water, in particular where flood control is concerned.

At a time when concerns are increasing on the need for a sustainable form of socioeconomic development, the waterway can and must recapture its place among the different means of transport, to contribute to environmental protection.

# 3 EFFICIENT WATER MANAGEMENT

## Water and sanitation utilities, a public - private sector partnership

In France, the public water supply and sanitation systems come under the local authorities, which may manage them themselves or else have them managed by public or private companies under fixed-term contracts whilst retaining ownership of the installations and setting the prices. The governmental administration keeps control, especially over the quality of supplied water and over discharges.

As investments in water-related facilities mean investing very heavily, first and foremost it is important to ensure that the existing facilities are very well maintained or rehabilitated and renewed before investing further. It is therefore essential to ensure that the various facilities are efficiently managed throughout their life span.

The water supplied to the network and water consumption have to be metered, and costs have to be recovered to save water, avoid wastage and prevent leaks.

The French water utilities have considerable experience in these matters. Under contracts delegating water utilities, if the local authorities so wish, French private suppliers have been able to place this experience at the service of both vast urban metropolis and medium-sized towns on all five continents. The experience enjoyed by France has led to some spectacular successes, particularly as regards services to users, performance and the life of the various installations.

The investments which have to be made in any event will mean mobilizing large amounts of public and private capital, which in turn will mean giving much thought (as the World Water Council is already doing) to the means of increasing the funds currently devoted to the different water-related infrastructures, especially in developing and emerging countries of limited financial means.

This will mean, in the various countries concerned, the existence, as in France, of a legal framework containing a means of **control of the water sector**. A controlling authority has to protect the interests of the end user and provide that user with a high-quality problem-free service while keeping the transparency of the delegation contracts. At the same time, the operator will only be able to invest under long-term contracts that carry adequate guarantees.

The private sector in France has already invested heavily in a number of countries. The cumulative investments alone in concessions in developing countries managed by one of the companies concerned, ONDEO-SUEZ, represents some 90 thousand million francs, taking into account the total term of the contracts, and the annual flow of investments financed by the group in these countries (holdings + loans). It is of the same order of magnitude (1 thousand million dollars) as the volume of loans made by the World Bank to the water and sanitation sector.

3

# Water management in agriculture

In France, legislation in the matter of water used for farming includes the Water Acts of 1964 and 1992 as well as the Agricultural Orientation Act of 8 July 1999, which redefines the farming activity framework, extending it to include the management of green spaces, the environment and land use under a Land Use Contract (Contrat Territorial d'Exploitation - CTE) which bounds the farmer to the government for a period of four or five years. This contract provides funds for these activities and also imposes a policy of rational irrigation on farms using water for that purpose.

Water control as regards farming applies not only to irrigation but also to drainage and sanitation under reasonable conditions.

## Collective management

In France, collective management goes back a long way and involves some 1,800 **Authorized Union Associations (Associations Syndicales Autorisées - ASA)** for irrigation comprising 134,000 members and an irrigated area of 500,000 hectares which they themselves manage. The lasting success of this type of management (one-third of the total irrigated area in France) is due to its direct link with the actual ownership of the land and the collection of charges, relative to the amortization and operating of community facilities by means of the land tax. This is an appreciable institutional advantage at a time of decentralization of irrigation management although mobilizing the members to carry out renewals or finance the maintenance required is proving more difficult than it used to be with changes affecting land use and the growing ascendancy of the urban areas.

## Regional Development Companies (SARs)

Today's large-scale projects have been developed and are now managed under state or local authorities' concessions or by regional development companies (Sociétés d'Aménagement Régional-SAR); these were created between 1956 and 1964 at the instigation of the government for the purpose of developing France's southern regions (5 SARs covering some 250,000 hectares).

With a status of semi-public company, they were involved in water resources development policies and/or actions focusing on a more effective way of using existing resources. They acted as a tool for a strong political will aiming at making up the "development lag" in the South of France and the Massif Central, where water performs a vital structuring function. Water used on the farm (irrigation) plays a significant but not exclusive part: with some SARs, the water used for domestic and industrial purposes is equally important, and the concessions under which they operate effectively reflect the concept of a balanced regional development embracing the urban as well as the rural areas.

The basic objectives of the SARs were regularly updated. Thus the direct involvement of the government has increasingly given way to management by the local authorities and the actual users. This is a good example of the "semi-public or semi-private" management whereby the companies concerned, whose job it is to provide a public or community service with the accent very much on maintenance, operate on the economic principle of private companies with the obligation to balance the budget.

## Individual irrigation systems

*Photo Seine-Normandy Water Agency*

A very high proportion of recent developments in irrigation consists of individual systems with the creation of a water resource, a hill dam, or, as is more often the case, withdrawals from an alluvial aquifer or directly from a river. In terms of surface area, this is the most widespread type of water management in France, taking in some 1.2 million hectares. Today, the collective management and control of these individual irrigation systems is a vital factor as regards water use and withdrawal control when the demand for irrigation water peaks, whilst conversely surface water levels are at their lowest. If the quality of surface water is to be maintained, withdrawals from the rivers and the adjacent aquifers have to be properly controlled. And whilst they have achieved some remarkable successes, these good practices governing the collective management of our water resources must now be put into general use.

The increase of the pressure of individual irrigation systems on groundwater resources is now a global phenomenon which requires large mobilization to promote sustainable management methods.

## The economic tools of water management

The Act of 1992 defines water as part of the common national heritage, which confers upon it the status of both "economic goods" and "social goods", which cannot be managed on the basis of market forces alone. The economic value of water is only one of the factors in making decisions concerning water allocation. Much of the thinking devoted to the subject by the experts, working in collaboration with the research centers, has led to concepts such as the "value of water" and the "cost and price" of water with direct or induced impact on employment, and to pricing tools which aim to **balance supply and demand** and to balance the accounts of the operator whose job it is to convey and distribute the water.

Pricing policies have tended to evolve more in the SARs than in the ASAs in response to user demands in the matter of quality or diversification of the services provided.

## 3 *Prospects: concerted approach to local development and water management*

With a contribution of 5% to the commercial gross development product and a marked impact on the trade balance (+10 thousand millions Euros), agriculture, forestry and agro-food industry maintain and develop an economic activity which extends on 87% of the national territory. France, which is welcoming millions of tourists, must maintain an harmonious development and balanced land use of her territory and therefore must rely on a dynamic agriculture respecting its physical and social environment. This often goes with a better control of inputs in agricultural production in which water has an essential part to play.

This also implies that the farmers using irrigation participate in a concerted management with the other users of resources and land. This concerted management, which is individually carried out through Land Use Contracts (CTEs) and collectively through Water Development and Management Schemes (SAGEs), or through joint projects which favor improving practices such as "IRRI-MIEUX", is the key challenge of today and tomorrow for the economic and social development of rural areas.

It is more difficult to involve individual irrigation management systems than any other management system, collective or SAR, in the new policies of integrated management, either in terms of participation and representation in negotiations, in terms of metering consumption and recovering the tax on water consumption paid to the Water Agency.

The generalization of some successful experiments in concerted management of fragile groundwater resources is a challenge for the immediate future of irrigation, especially for the individual irrigation systems of Central and Northern France, where environmental constraints are heavy.

## *Professionnal training*

Developing the skills of the personnel concerned at every level is an essential factor in improving the quality of the services provided.

**Thus vocational training, both basic and continuing, is given as a matter of priority.**

In this respect, France has over fifty establishments that provide basic training, open to overseas students at all levels of qualification and covering all the various skills involved in water management.

*The National Training Center for Water Professions - CNFME (France)*

With its **National Training Center for Water Professions (CNFME) of Limoges - La Souterraine**, France has a powerful specialized facility for adult vocational training devoted mainly to practical teaching under actual working conditions.

Today, the Center acts as a model for the many countries wishing to reinforce their own training capabilities. In the wake of the successful creation of **the Gdansk Water Foundation in Poland (GFW)**, an excellent example of this sort of collaboration may be found in **the Mexican Training Center for Water and Sanitation Professions (CEMCAS)**, developed and jointly financed by the French and Mexican Governments in which 44 private French companies are involved, gathered by International Office for Water (IOWater) and working with the SUEZ-ONDEO and VIVENDI-ENVIRONMENT companies.

Other projects are being studied in South Africa, Algeria, Brazil, Chile, Romania, Slovenia or Vietnam, etc.

The provision of specialized documentation to water professionals is also an excellent means of promoting vocational skills on an ongoing basis. With all the communications facilities offered by the Internet, France is very much part of the international program to pool documentary sources, of which **the Euro-Mediterranean Water-Related Information System (EMWIS)**, which includes 27 countries in the European Union and the Mediterranean basin, and the **"AQUADOC-International"** network, which involves countries of Central and Eastern Europe and Latin America, are prototypes.

## Education and raising awareness on water issues

It is universally recognized today that it is vital to include training and educating people to the problems of water management in any sound water management policy.

Thus the job of educating, training and awareness-raising has been in the hands of the six French Water Agencies ever since they were created. This includes a wide range of aspects that have been gradually added to over the last ten or so years. Training is often given in collaboration with local authorities, schools, NGOs and private companies and is open to all, from secondary school pupils and university students to students attending one or another of the "grandes écoles" (higher education establishments).

The training and education provided range from selective or national awareness campaigns relayed by the media to training courses spread over several days designed to make the different categories of users concerned (water classes) generally more aware of water and all that water involves. These **water classes** are now organized in other countries within cooperation programs with France (Mali, Cameroon, etc.).

**"Water days for elected officials"** are also organized in the different "Departments" and a specialized Internet site - www.carteleau.org - informs the municipal elected representatives of their responsibilities.

# 4 FRANCE AND INTERNATIONAL SOLIDARITY

It is the responsibility of the developed countries, and France is one of them, to provide help on both a bilateral and a multilateral basis to those countries in which water is and will continue to be an acute problem.

## SOCIAL CHARTER FOR WATER

### 4 principles

- access to water for all: an inalienable right
- water, both an economic and a social good
- essential financial solidarity between rich and poor
- management shared between decision-makers, specialists and people.

### 7 recommendations

1. identify local stakeholders;
2. assess populations' requirements;
3. set up dialogue and negotiation with peoples;
4. define the populations' participation;
5. implement an adapted education and information policy;
6. carry out an evaluation of the match between offer and demand and the sharing of experience between those responsible for similar actions throughout the world;
7. set up and manage a financial solidarity fund between North and South.

France's Vision in this regard is twofold:

### *Solidarity between rich and poor*

Here, **the Social Water Charter** reminds us that access to water is the inalienable right of everyone. It also recommends ways of ensuring the effective solidarity required between rich and poor and gives numerous examples of the actual experience gained in joint management with the users.

In the 21st century, this form of joint management with the users will characterize a whole new approach to water management, which can no longer be left just to the experts and the decision-makers alone.

Implementing these recommendations and applying the principles involved to underprivileged settlements and to small towns in developing countries is a priority and clearly means adapting them to local requirements.

The 2nd World Water Forum, held in the Hague in March 2000, created the financial fund recommended by the social water charter and a Ethical Committee will label projects as "Actions respecting the Social Charter for Water".

Here the experience and the partners of the **Solidarity Water Program - Programme Solidarité Eau (PSEau)** - , which includes other NGOs, offer a valuable methodology, tried and proven in recent years, mainly in Africa. This program also has huge experience in decentralized cooperation.

The French "Water Academy" and "Red Cross" have initiated a **"Water-Health-Environment" Charter**, whose principles may be summarized in three sentences:

- complying with simple measures to improve the environment near settlements,
- reducing direct risk coming from the use of water for drinking and food,
- helping in making more efficient the actions carried out by people in charge of health, water and the environment.

- To plan for the financial resources needed to develop education and training on water, health and hygiene issues everywhere,
- To establish a chronology of educational and training activities, taking account of the specificity of the different people concerned and of their responsibility,
- To look for the best local vectors to carry out these educational and training activities while involving instructors and researchers,
- To mobilize the media.

*Photo International Office for Water*

Water solidarity also means to help the emerging countries in implementing new and better methods for managing irrigation (decentralization of management) and for improving the techniques used by farmers and managers. The AFEID is mobilizing its members to implement many decentralized cooperation activities which involve professionals from the South and North countries (for instance: the "Water User's Associations" and "Associations Syndicales Autorisées"). France is also significantly helping with the increase in the productivity of irrigated agriculture through its own research and development centers (CIRAD, IRD, GRET, …) or by supporting international networks (IWMI, IPTRID, FAO, …).

### *Solidarity in periods of crisis*

When really catastrophic crises afflict the people of Kurdistan, Rwanda, Bosnia or Kosovo, etc. or when natural disasters occur (such as floods and earthquakes), the number one priority is to ensure a supply of healthy water - something which is often done rather inadequately and only after the provision of food, tents and so on. Associations backed by the French water suppliers have acted in many such cases. The Marseilles Water Company, supported by the World Water Council, has launched the idea of formalizing a "humanitarian doctrine" which would be **an Emergency Water Charter for dealing with crises.**

The French Government has also been involved in actions led by the Emergency Unit of the Ministry for Foreign Affairs.

# 5 FROM VISION TO ACTION

*The French water stakeholders' vision leads to action, at both national, enlarged European and international level*

The French water stakeholders' vision leads to action, at both national, enlarged European and international level:

**As regards the institutional context**, several "tools", used in France for several decades, have been singled out by the major multilateral organizations as being particularly effective and useful with regard to management of the essential administrative reforms required:

- Water management at the level of river basins, with the River Basin Committees, the Water Agencies and their fees, based on the "user-polluter-pays" principle, the master plans for water development and management, now widely disseminated within the International Network of Basin Organizations (INBO),
- Contracts for major projects (Electricité de France, Compagnie Nationale du Rhône, Regional Development Companies, Local Basin Public Bodies, etc.),
- Delegated management of municipal water utilities, basically involving an original and lasting private/public sector partnership,
- Decentralized management of irrigation by Authorized Union Associations (Associations Syndicales Autorisées - ASA),
- The National Water Data Network (RNDE) and the approach to integrated information systems.
- Our professional training system, with in particular the National Training Center for Water Professions (CNFME) of Limoges-La Souterraine.

These "tools" are based on fundamental concepts, whose ready adaptation to a variety of contexts has been amply demonstrated and that France proposes to share with all interested countries.

## The European Water Framework Directive

The Directive "establishing a framework for community action in the field of water policy" came into force at the end of 2000. This text is of prime importance for water management. Its objective is to strengthen the consistency of the European policy in this field: it provides a set of regulations which were previously scattered and only sectoral.

Some points are emerging from this text:

- Need for river basin management, balanced between all the uses and respectful of the aquatic ecosystems,
- Priority is given to environmental protection: the member States must implement monitoring programs to achieve good status of all kinds of water (surface water, groundwater and coastal water) within fifteen years. Six to twelve-year delays may be possible under some circumstances. In addition, some water masses, which are heavily modified, may be subject to less stringent obligations.
- The prevention of further deterioration and improvement of the quality of ecosystems in all their "priority" aspects, and suppression in the long-term (twenty years or more) of the discharges of "priority dangerous" substances.
- Prime importance is given to economic instruments and pricing: the principle of recovery of the costs of water management and decontamination from the water users and from those who deteriorate water and the "polluter-pays" principle.
- Involvement of the general public in management: the public must be informed and consulted in each river basin district.
- Strengthening of the groundwater protection policy (a draft directive is expected regarding this issue).

**As regards water management**, priority must be given to the following, particularly in France and in Europe as a whole:

- Improving water quality and pollution control, notably of non-point pollution sources such as nitrates, pesticides and heavy metals.
- The efficient and properly regulated management of the various facilities in order to provide a better service to the users - the sort of management for which France has a number of internationally recognized companies.
- The importance of preserving the heritage bequeathed by previous generations and of maintaining the installations throughout their whole life span, particularly where damage could endanger public health.

**As regards public participation**, the resort to associations is more and more obvious and essential. In this sector, the French experience related to water is very old and fruitful. A great number of structures adapted to all aspects of water management and environmental protection essentially contribute to the general effort and are integrated into the institutions, such as the river basin committees for instance. Another example is that the Water Academy, now opened to international partners, gathers not only 50% of the water specialists but also 50% of personalities of the civil society who enrich its reflection work.

Lastly, it must be remembered that these things must be done in such a way as to strengthen the solidarity existing among the different users, between rich and poor countries, and in a country between those who have enough water to meet their needs and those for whom this essential resource is lacking.

In times of crisis, this solidarity has got to be translated into rapid action without regard to national borders, which means foreseeing what equipment and human resources will be needed for immediate emergency relief.

# 6 DECLARATION OF PARIS *(Abstracts)*

***International Conference on "Water and Sustainable Development" PARIS - March 1998***

## *We, Ministers and Heads of Delegation meeting in Paris for the International Conference on Water and Sustainable Development, 19 - 21 March 1998:*

- Convinced that freshwater is as essential to sustainable development as it is to life and that water has social, economic and environmental values that are inter-linked and mutually supportive,
- Seriously concerned by a situation in which a quarter of the world's population does not have access to safe drinking water; more than half of mankind lacks adequate sanitation; poor water quality and lack of hygiene are among the primary causes of death and disease; and scarcity of water, flood and drought, poverty, pollution, inadequate treatment of waste and lack of infrastructure pose serious threats to social and economic development, human health, global food security and the environment,
- Also **concerned** that constraints on access to water, in terms of quantity and quality, could become a major limiting factor in sustainable development,
- Determined to take advantage of the opportunities to tackle these problems by promoting local and national systems for managing the sustainable use of water resources, based on an integrated approach linking development with protection of the natural environment, participation of all actors and interested parties, the involvement of both men and women, and recognition of the social and economic value of water,

## *Underline that:*

- water resources are essential for satisfying basic human needs, health, energy and food production, and the preservation of ecosystems, as well as for social and economic development;
- the protection of ecosystems is essential for the maintenance and rehabilitation of the natural hydrological cycle in order to manage freshwater resources in a sustainable manner;
- water is a key natural resource for future prosperity and stability, which should be recognized as a catalyst for regional cooperation;
- it is crucial to improve knowledge and understanding at all levels of water resources in order to develop, manage and protect them better and to use them in a more efficient, equitable and sustainable manner;
- a high priority should be given to strengthening institutions, in particular local institutions, and improving training and awareness of professionals and users alike;
- the development, management, use and protection of water should be:
  - promoted by a partnership between the public and private sectors, thus mobilizing good practice and long term financing,
  - based upon a participatory decision-making process open to all users, in particular women, people living in poverty and disadvantaged groups. The role of NGOs and other socioeconomic partners remains essential.
- international cooperation should play a key role in achieving these objectives, at national, regional and global levels.

**6** **Call upon the international community, public authorities at every level and civil society to give priority to providing access for all to safe drinking water and sanitation.**

**Commit ourselves** to support the implementation of the following guidelines, where appropriate and in the framework of national and local strategies, taking into account each country's specific situation:

- **Promote the integration of all aspects of the development, management and protection of water resources,** by developing plans which set out to satisfy basic needs and to promote efficient and equitable allocation of water resources, the protection of ecosystems and the maintenance of the hydrological cycle.

  Shared vision between riparian countries is important for the effective development, management and protection of transboundary water resources.

- **Mobilize adequate financial resources from public and private sectors** and, as an important part of that task, enhance the effective use of available resources.

  To this end, provisions for progressive recovery of direct service costs and overheads, while safeguarding low income users, should be encouraged.

  Both the polluter-pays principle should be promoted and user-pays systems should be encouraged, at national and local levels, and measures should be adopted to facilitate private funding in the financing of water and sanitation projects, taking into account the specific conditions in each country and region.

  Official development assistance should complement and focus on programs designed for creating enabling frameworks, meeting basic needs, sustainable development, management and protection of water, protection of ecosystems and capacity building. Cooperation and coordination between bilateral and multilateral donors and recipient States should be strengthened.

- **Improve knowledge, training and information exchange** by encouraging increased transfer of technology and expertise, the development of monitoring and information systems related to water resources and their different uses, and support programs for vocational and continuous training. In parallel, people living in poverty and disadvantaged groups, indigenous communities, youth, local authorities, leaders of local communities and NGOs should be enabled to become more involved in the decision-making process. Women should be enabled to participate fully in project definition and implementation.

**Stress the need** to ensure that the problems of achieving sustainable development, management and protection, and equitable use of freshwater resources are kept under review, to improve coordination between UN Agencies and Programs and other international organizations, to ensure periodic consideration within the UN system, in particular the Commission on Sustainable Development, of the proposed priorities of governments for action.

**Emphasize the need** for continuous political commitment and broad-based public support to ensure the achievement of sustainable development, management and protection, and equitable use of freshwater resources, and the importance of civil society to support this commitment.

# 7 DECLARATION OF THE HAGUE *(Abstracts)*

***2nd World Water Forum***
***THE HAGUE - March 2000***

***The Ministers and Chiefs of Delegation, gathered in the Hague on 22 March 2000, declared:***

- **To achieve water security in the 21st Century the following main challenges are:**
  - **Meeting basic needs:** to recognize that access to safe and sufficient water and sanitation are basic human needs and are essential to health and well-being, and to empower people, especially women, through a participatory process of water management.
  - **Securing the food supply:** to enhance food security, particularly of the poor and vulnerable, through the more efficient mobilization and use, and the more equitable allocation of water for food production.
  - **Protecting ecosystems:** to ensure the integrity of ecosystems through sustainable water resources management.
  - **Sharing water resources:** to promote peaceful cooperation and develop synergies between different uses of water at all levels, whenever possible, within and, in the case of boundary and transboundary water resources, between states concerned, through sustainable river basin management or other appropriate approaches.
  - **Managing risks:** to provide security from floods, droughts, pollution and other water-related hazards.
  - **Valuing water:** to manage water in a way that reflects its economic, social, environmental and cultural values for all its uses, and to move towards pricing water services to reflect the cost of their provision. This approach should take account of the need for equity and the basic needs of the poor and the vulnerable.
  - **Governing water wisely:** to ensure good governance, so that the involvement of the public and the interests of all stakeholders are included in the management of water resources.
- The actions advocated here are based on **integrated water resources management**, that includes the planning and management of water resources, both conventional and non-conventional, and land. This takes account of social, economic and environmental factors and integrates surface water, groundwater and the ecosystems through which they flow. It recognizes the importance of water quality issues. In this, special attention should be paid to the poor, to the role, skills and needs of women and to vulnerable areas such as small island states, landlocked countries and desertified areas.
- Integrated water resources management depends on collaboration and partnerships at all levels, from individual citizens to international organizations, based on a political commitment to, and wider societal awareness of, the need for water security and the sustainable management of water resources. To achieve integrated water resources management, there is a need for coherent national and, where appropriate, regional and international policies to overcome fragmentation, and for transparent and accountable institutions at all levels.

The Ministers and Chiefs of delegations will further advance the process of collaboration in order to turn agreed principles into action, based on partnerships and synergies among the government, citizens and other stakeholders. To this end:

- **They will establish targets and strategies, as appropriate,** to meet the challenges of achieving water security. As part of this effort, they support the development of indicators of progress at the national and sub-national level.
- **They will continue to support the UN system** to re-assess periodically the state of freshwater resources and related ecosystems, to assist countries, where appropriate, to develop systems to measure progress towards the realization of targets and to report in the biennial World Water Development Report as part of the overall monitoring of Agenda 21

7

- **They will work together with other stakeholders** to develop a stronger water culture through greater awareness and commitment. They will identify best practices, based on enhanced research and knowledge generation capacities, knowledge dissemination through education and other channels and knowledge sharing between individuals, institutions and societies at all appropriate levels. This will include coordination at regional and other levels, as appropriate, to promote arrangements for coping with water-related disasters and for sharing experiences in water sector reform. It will also include international cooperation in technology transfers to, and capacity building in, developing countries.
- **They will work together with stakeholders** to increase the effectiveness of pollution control strategies based on polluter-pays principles and to consider appropriate rules and procedures in the fields of liability and compensation for damage resulting from activities dangerous to water resources.
- **They will work within multilateral institutions**, particularly the UN system, International Financial Institutions and bodies established by Inter-Governmental Treaties, to strengthen water-related policies and programs that enhance water security, and to assist countries, as appropriate.
- **They call upon the Secretary General of the United Nations to further strengthen the coordination and coherence of activities on water** issues within the UN system. They will adopt consistent positions in the respective governing bodies to enhance coherence in these activities.
- **They call upon the Council of the Global Environmental Facility (GEF) to expand activities that are within the mandate of the GEF in relation to freshwater resources** by catalyzing investments in national water management issues that have a beneficial impact on international waters.

## *WHICH REFORM FOR THE FRENCH POLICY OF WATER ?*

The current debate on sustainable development has naturally highlighted **the importance of water in environmental stakes.**

The **definition of a new water policy** will come out of **a national dialogue,** taking place in the context of the future law of decentralization.

The debate will have to identify means of **applying the European Water Framework-Directive** of 23 October 2000. Beyond a possible legal reform, it will help to build **an action plan.**

Questions that could be tackled, according to the expectations of the users : the safeguarding and the management of the aquatic environment, the organization of fresh-water fishing, the management of public utilities of drinking water and sanitation...

The debate will proceed in **three phases :**

❶ **The first phase** allowed **bilateral contacts with the national representatives** of the main actors, in order to specify the questions at stake in the local debate.

❷ **The second phase, at local level,** until July 2003, will take place in **Basin Committees, Departemental or Regional Organisations, Communities…** and also in the public through an internet forum.

❸ **A synthesis phase,** in autumn 2003, will lead to **a National Vonference,** in connection with the Parliament.

**The public** will be associated to the debate according to methods defined by the National Commission of the Public Debate.

The conclusions will help to build **an action plan for a reform of water policy.**

# 8 DECLARATION OF JOHANNESBURG *(Abstracts)*

***JOHANNESBURG,***
***August 26 - September 4 of 2003***

7 The provision of clean drinking water and adequate sanitation is necessary to protect human health and the environment. In this respect, we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water (as outlined in the Millennium Declaration) and the proportion of people who do not have access to basic sanitation, which would include actions at all levels to:

- Develop and implement efficient household sanitation systems;
- Improve sanitation in public institutions, especially schools;
- Promote safe hygiene practices;
- Promote education and outreach focused on children, as agents of behavioural change;
- Promote affordable and socially and culturally acceptable technologies and practices;
- Develop innovative financing and partnership mechanisms;
- Integrate sanitation into water resources management strategies.

24 Launch a programme of actions, with financial and technical assistance, to achieve the Millennium development goal on safe drinking water. In this respect, we agree to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water, as outlined in the Millennium Declaration, and the proportion of people without access to basic sanitation, which would include actions at all levels to:

- ❖ Mobilize international and domestic financial resources at all levels, transfer technology, promote best practice and support capacity-building for water and sanitation infrastructure and services development, ensuring that such infrastructure and services meet the needs of the poor and are gender-sensitive;
- ❖ Facilitate access to public information and participation, including by women, at all levels in support of policy and decision-making related to water resources management and project implementation;
- ❖ Promote priority action by Governments, with the support of all stakeholders, in water management and capacity-building at the national level and, where appropriate, at the regional level, and promote and provide new and additional financial resources and innovative technologies to implement chapter 18 of Agenda 21;
- ❖ Intensify water pollution prevention to reduce health hazards and protect ecosystems by introducing technologies for affordable sanitation and industrial and domestic wastewater treatment, by mitigating the effects of groundwater contamination and by establishing, at the national level, monitoring systems and effective legal frameworks;
- ❖ Adopt prevention and protection measures to promote sustainable water use and to address water shortages.

25 Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries, through actions at all levels to:

- ➤ Develop and implement national/regional strategies, plans and programmes with regard to integrated river basin, watershed and groundwater management and introduce measures to improve the efficiency of water infrastructure to reduce losses and increase recycling of water;
- ➤ Employ the full range of policy instruments, including regulation, monitoring, voluntary measures, market and information-based tools, land-use management and cost recovery of water services, without cost recovery objectives becoming a barrier to access to safe water by poor people, and adopt an integrated water basin approach;
- ➤ Improve the efficient use of water resources and promote their allocation among competing uses in a way that gives priority to the satisfaction of basic human needs and balances the requirement of preserving or restoring ecosystems and their function, in particular in fragile environments, with human domestic, industrial and agriculture needs, including safeguarding drinking water quality;
- ➤ Develop programmes for mitigating the effects of extreme water-related events;
- ➤ Support the diffusion of technology and capacity-building for non-conventional water resources and conservation technologies, to developing countries and regions facing water scarcity conditions or subject to drought and desertification, through technical and financial support and capacity-building;

8

- Support, where appropriate, efforts and programmes for energy-efficient, sustainable and cost-effective desalination of seawater, water recycling and water harvesting from coastal fogs in developing countries, through such measures as technological, technical and financial assistance and other modalities;
- Facilitate the establishment of public-private partnerships and other forms of partnership that give priority to the needs of the poor, within stable and transparent national regulatory frameworks provided by Governments, while respecting local conditions, involving all concerned stakeholders, and monitoring the performance and improving accountability of public institutions and private companies.

26 Support developing countries and countries with economies in transition in their efforts to monitor and assess the quantity and quality of water resources, including through the establishment and/or further development of national monitoring networks and water resources databases and the development of relevant national indicators.

27 Improve water resource management and scientific understanding of the water cycle through cooperation in joint observation and research, and for this purpose encourage and promote knowledge-sharing and provide capacity-building and the transfer of technology, as mutually agreed, including remote-sensing and satellite technologies, particularly to developing countries and countries with economies in transition.


## Summary authored by:

- René Coulomb, Société Hydrotechnique de France (SHF) - Suez *www.shf.asso.fr*
- Jean-François Donzier, International Office for Water IOWater *www.iowater.org*
- Jean-Louis Oliver, General Council of Public Works Water Academy
- Daniel Renault, CNEARC *afeid.montpellier.cemagref.fr*
- Jean-Paul Rivaud, Ministry of Spatial Planning and the Environment *www.environnement.gouv.fr*
- Claude Salvetti, Seine-Normandy Water Agency *www.aesn.fr*


## Main French organizations involved in international activities:

- Ministry for Foreign Affairs
- Ministry of Public Works, Transports, Housing, Tourism and the Sea
- General Council of Public Works
- Ministry of Agriculture, Food, Fisheries ans Rural Affairs
- GREF General Council (Agriculture and Forestry)
- Ministry of Ecology and Sustainable Development
- Water Academy
- Water Agencies
- Association Ea
- BCEOM
- BRGM
- BRL Engineering
- BURGEAP
- CEMAGREF
- The French Water Circle
- CIRAD
- National Rhone Company
- Electricity of France
- International Office for Water (IOWater)
- Water Solidarity Program (PSEau)
- SAFEGE
- SAGEP
- SAUR International
- SEURECA
- Marseilles Water Company
- Canal de Provence Company
- Company Hydrotechnique of France (SHF)
- SOGREAH
- SUEZ, ONDEO
- VIVENDI ENVIRONMENT

## Main international organizations located in France:

- World Water Council
- Mediterranean Water Institute
- Blue Plan
- INBO - International Network of Basin Organizations
- UNESCO

*English version*

*Ouzoud (Morocco) - Photo Goodshoot®*