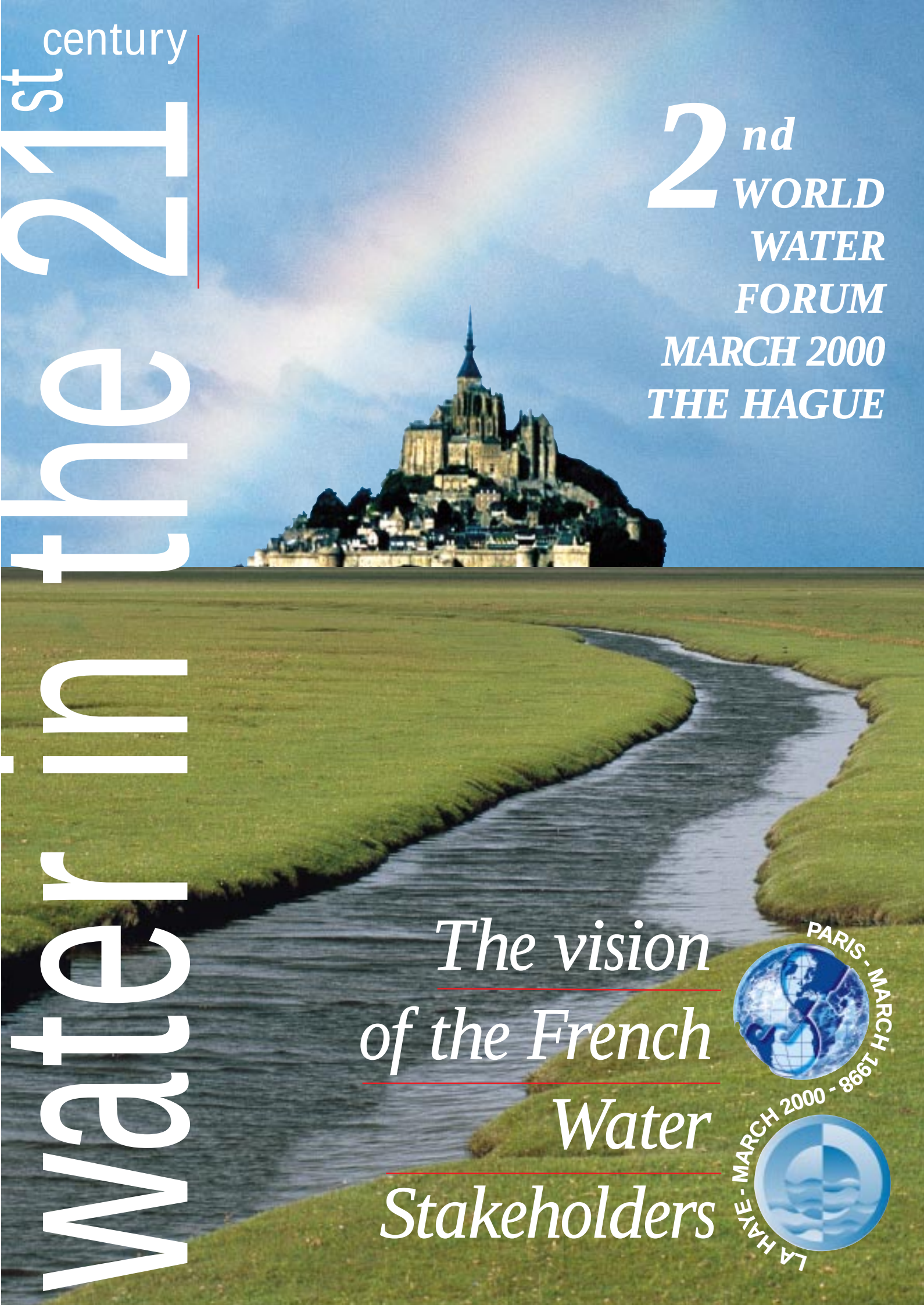
Water in the 21st century



2nd WORLD WATER FORUM
MARCH 2000
THE HAGUE

The vision of the French Water Stakeholders

PARIS - MARCH 1998

LA HAYE - MARCH 2000

water in the 21st century

The World Water Council has produced a long-term Global Vision of water, life and the environment for submission to the second World Water Forum in The Hague in March 2000.

This vision is intended to raise the awareness of those concerned at local, national and regional levels of the importance of sustainable water resource management.

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 implies that water should become everyone's concern, which is one of the goals set in preparing the vision ("World Water Vision: Making Water Everybody's Business").

The French view on water is not restricted just to France; it must reflect the importance of international exchanges and relations with its neighbors over the next 25 years. France is also a member of the European Union, which is a major player in water policy. Through the EU's many directives affecting water (notably its directive on drinking water and its draft framework directive), which will apply to all member states, the EU is striving to improve the future water management in Europe. The EU's approach, based on the principle of precaution, is aimed at a high level of public protection and an improved environment by tackling pollution, not only in rivers and along coasts, but also the wider sort of diffuse pollution caused in particular by the growth of intensive farming. As France, the European Union also plays a part in international cooperation on water issues, especially with Mediterranean countries as well as those in Central and Eastern Europe.

Whether in the public or private sector, the French have sought to publicize their approach to the Global Vision of Water (hereafter referred to simply as "vision"), all the more so as the World Water Council is headquartered in France (in Marseilles) and a "vision unit", which is handling preparations for the event, is based in Paris at Unesco headquarters.

In March 1998, France convened an **International Conference on Water and Sustainable Development** in Paris, representing a major step in launching the vision.

Additionally, **France's Water Academy** has unveiled a Social Charter for Water, which will be presented at The Hague; a Water Solidarity Program (P.S. Eau) is actively supported by French international water cooperation players; the **International Network of Basin Organizations (INBO)** of which the **International Office for Water (IOWater)** is the permanent technical secretariat, has helped with French input on river basin management; and the **French Association for the Study of Irrigation and Drainage (AFEID)** has made its own contribution to the vision.

French water experts have nonetheless felt it necessary to describe their vision in light of French concerns, even if documents drafted by the Unesco-based vision unit have quite rightly included most aspects of a consistent water policy at local, regional and global levels.

The sustainable management of water will require choices

We in fact find it essential to underscore some important points, since **the sustainable management of water will require choices**. Therefore, while respecting the environment, humankind must be put 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 putting most of it back in the cycle of the water that is immediately available to people.

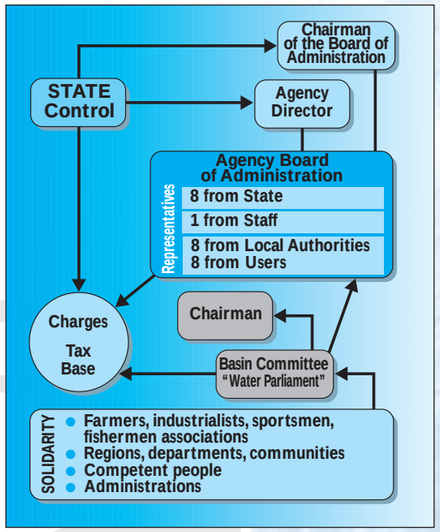
For some countries, this distribution of water (often disadvantageous in time and in space) could be exacerbated by climatic changes in the next century - although France seems unlikely to be particularly affected. Additionally, water cannot be "compressed" and so can only be conveyed over long distances at very considerable cost.

Based on these observations, France's vision comprises a certain number of major concepts concerning water and life, land development and international solidarity.

1 COMPREHENSIVE AND PARTICIPATIVE MANAGEMENT BY RIVER BASIN

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, relevant planning authorities and water utilities as well as the various types of water users.



Basin organization in France

Over the years, the river basin institutions, **Basin Committees and Water Agencies** set up in France (by the 1964 legislation) and in other countries have been improved and modernized, notably by new legislation passed in 1992. New legislation is being drafted to strengthen the links among these various organizations.

Decisions regarding the water policy for the six French basins are in fact made jointly in the interests of all users in all categories (elected officials, farmers, manufacturers, environmental protection and consumer associations and the government) by **the Basin Committee**. Its **commitment** to the main basin interests is expressed through funds voted from **fees it receives from users and polluters**. This will ensure coherent basin development, program by program, both up and down stream.

Moreover, with a water development and management scheme (known in French by its initials, SAGES, for Schéma d'Aménagement et de Gestion des Eaux), 1992 legislation promotes decentralized cross-user 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 early 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, at the constitutive meeting in Aix-les-Bains (France), this led to the creation of the **International Network of Basin Organizations (INBO), which today has 127 members in 49 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 overall water and environmental resources management system 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.
- Creation of basin master plans with mid- and long-term goals 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 the water".

On this basis, **several pilot projects have started (or are about to begin)** with Brazil, Indonesia, Ivory Coast, Morocco, India, Kazakhstan and Turkey, in particular.

France - which has been involved with regional cooperation for **the basins of the Rhine, Meuse and Scheltd rivers as well as Lake Geneva** - applauds any initiative concerning rivers shared with its neighbours. Upstream countries are responsible to those downstream for both water quantity and quality.

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.

Integrated management of water resources presupposes that, at all the relevant levels and for each river basin in particular, the organisation of **permanent overall information systems** providing improved data on the quantity and the quality of water resources and their environments, the uses to which they are put, and the effluent discharged, whether locally or diffuse.

Today France, thanks to the creation in 1992 of the **Réseau National des Données sur l'Eau - *National Water Data Network*** **(RNDE)** , has a fully integrated and highly effective observation system.

2 LAND USE AND MANAGEMENT

Balanced nationwide distribution of activities

The French land use policy in force for the last forty years has resulted in **more coherent development** than would have been possible with simply economic-based decisions. Without this policy, France's population - generally stable - would have been drawn to a few major business centers (the area around Paris in particular), while other, less advantaged regions would have emptied. So determined government action has helped prevent both a **rural exodus** and **urban overpopulation**.

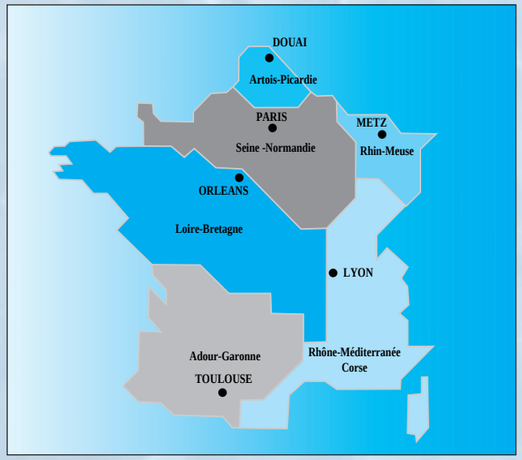
Clearly, uncontrolled development of mega-cities raises acute societal, economic and political problems. Depopulation and rural exodus also pose serious threats, including harm to the countryside, increased risk of natural disasters (fire, with resulting land erosion and blocked waterways, among others)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

Balanced development of rural areas, preserving the natural environment, is also an obvious advantage for leisure-time 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 development of some industries - in particular in agribusiness - and tourism, since it ensures attractive natural sites, swimming, and drinking water for coastal resorts. But to ensure that undertakings are efficient and relevant, water and other issues need to be seen not by sector but in terms of **integrated development**.

So it is essential, for example, to recognize the impact of land use planning on **the water cycle**. Protecting water resources and more generally ensuring sustainable development, mean 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 reducing erosion and flood levels while recharging groundwater.



The 6 French Water Agencies

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 used and waste waters), 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.

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 the direction that has to be taken; and indeed they provide an effective example of good environmental management practices.

At international level, the problems that have to be dealt with can often be very different from those encountered in France. In the developing 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 the rural areas. But in the last analysis, the problem remains one of land use, and this is an issue that it is essential to be dealt with in general terms.

2 Risk management

Taking due account of the risk of drought has led to the creation of a number of structuring development projects, particularly in the South of France, where the hydrometric conditions are unfavourable. These structures are designed to store winter rain for later distribution in the summer, when there is a high demand for the water required in order to maintain activities and preserve the natural environment.

Photo Jean-Luc Dolmaire

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 introduced to deal with flash floods in order to prevent the worst consequences. And whilst in France there has been no major slow flooding by its main rivers, such as the Seine flood of 1910 or the floods of the Loire, the Garonne and the Rhône in the 19th century, there could be some slow floods this year. People tend to forget what happened to earlier generations!

The recent flooding of the Aude, the Tarn and the Eastern Pyrenees (in November 1999) came as a cruel reminder of the fact that priority has to be given to developments 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 overnight. 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 prediction, alarm 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 cooperation among the various decision-makers concerned, enabling them to reach a meaningful consensus acceptable to everybody and capable of being translated into action.

The storms of 26 and 27 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. And whilst these storms produced only secondary effects as regards water (flooding, the water supply in some rural areas), they are a reminder that, 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 "major infrastructures", power supplies and transports

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 Rhône (56 km3/year, 96% of which goes to the sea). In the French Mediterranean regions as a whole, due to a combination of water storage and transfer, it has been possible to develop sustainable means of dealing with the principal problems.

As regards the mobilisation of these resources, the possibilities are far from exhausted, as witness the project whereby water would be conveyed from the Rhône to Catalonia. This project, which poses no particular environmental problems, would supply the Barcelona region with the water it requires at the same time as taking the pressure off certain sensitive resources in Languedoc-Roussillon, and would thus provide a good example of European co-operation.

Two essential aspects of water in the context of land use planning are energy production and the transport infrastructures required for the exchange of economic goods.

In this connection, the creation of hydroelectric plants will produce 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 hydroelectric resources along her major rivers (the Rhine and the Rhône) or in mountain areas; these plants are managed so as to meet the various water uses.

2

As regards the transport infrastructures, France enjoys a long tradition of waterway navigation infrastructures. Let us not forget that the Canal du Midi, built in the 17th century, and the Seine where it runs through Paris (and which in the course of 2 000 years has seen many developments often detrimental to the surrounding areas, both natural and man-made) are both UNESCO World Heritage sites.

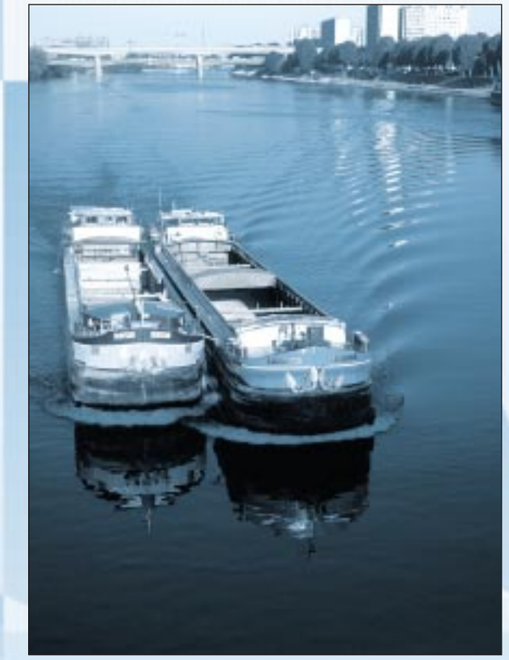


Photo Jean-Luc Dolmaire

Today, this tradition must be given new life in line with transport requirements of the 21st century. It might well be a good idea to avoid the "everything by road" approach and develop areas away from the coast, where, in the developing world, many of the megalopolitan centers are currently springing up.

Upgrading the various navigation developments will 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 as well as in terms of the environment:

- In socioeconomic terms, they are high-capacity energy-effective forms of transport. Their relative slowness is compensated by their regularity and reliability. 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, ones bringing an intelligent approach to 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 rational qualitative and quantitative management of water, particular where flood control is concerned.

At a time when we are becoming increasingly aware of the need for a sustainable form of socioeconomic development, the waterway can and must recapture its place among the different means of transport, each of which has its own part to play in the face of the rapid expansion of national and international trade.

3 EFFECTIVE WATER MANAGEMENT

Water and Sanitation Services, 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 rates. The local authorities, and notably the quality of water and discharges, are governed by the state.

As investments in water and the related facilities mean investing very heavily, first and foremost it is important to ensure that the existing facilities are **very well maintained** or indeed **rehabilitated** and when necessary **renewed** before investing further. It is therefore essential to ensure that **the various works are efficiently managed** throughout their life and not merely when handed over to the operator running the service.

The water supplied to the network and water consumption have to be **metered**, and, **irrespective of the rate charged**, sold and outstanding debts collected to ensure good water economy, the avoidance of waste and the prevention of leaks downstream from the meters.

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

The investments which have to made in any event will mean mobilising **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 doubling the funds currently devoted to the different water-related infrastructures, especially in emerging countries of limited financial means.

This will mean, among other things and in the various countries concerned, the existence, as in France, or the establishment of a legal framework containing a means of control, whether management is by public or

private entities. **The fact is that the water sector requires heavy investments that cannot be duplicated, which puts the service operator in a natural monopolistic position, the latter being required to protect the interests of the end user and provide that user with a high-quality problem-free service. 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 managed by one of the companies concerned, Lyonnaise des Eaux, represent some 90 thousand million francs, taking the total term of the contracts, and the annual flow of investments financed by the group in these countries (holdings + loans) 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.

Water management in agriculture

Legislation in the matter of water used for farming includes the Water Acts of 1964 and 1992 as well as the very recent Agricultural Blueprint Act of 8 July 1999, which redefines the farming activity framework, extending its assignments to include the management of green spaces, the environment and land use. Under a Land Use Contract (Contrat Territorial d'Exploitation - CTE) the farmer will be bound to the government for a period of four or five years for a project involving the creation of added value and management of the land. This contract upgrades the status of jobs in the primary agricultural sector and subsidizes work designed to protect the environment. It also imposes a policy of **rational irrigation** on farms using water for that purpose.

Irrigation facilities in France are managed either by users' associations or by planning and development companies or farmers where individual irrigation is concerned. Lastly, it must be remembered that water control as regards farming applies not only to irrigation but also to drainage and sanitation.

Collective management

In France, collective management goes back a long way and involves some 1800 Authorized Union Associations (Associations Syndicales Autorisées - ASA) for irrigation comprising 134,000 members and an irrigated area of 450,000 hectares which they themselves manage. The 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 always reliable collection of charges by means of the land tax. The age alone of this form of management proves its durability. However, due especially to a certain inability to adapt to fast technological developments and other changes affecting the land (changes in land use and the growing ascendancy of the urban areas), mobilising the members to carry out or finance the maintenance required is proving more difficult than it used to be.

Regional Development Companies (SARs)

Today's large-scale projects have been developed and are now managed under state concessions or by one or another regional development company (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 of developed area).

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 original virtually direct management by 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" concept whereby the companies concerned, whose job it is to provide a public service with the accent very much on maintenance, operate on the economic principle of private companies with the obligation to balance the budget.

The "Philippe Lamour" irrigation canal in Languedoc (France) - Photo BRL

Individual irrigation systems

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 water body 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 of these systems is a vital factor as regards water use and withdrawal control under an integrated system of management. In summer, 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 water bodies 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 economic tools of water management

The tools used to manage irrigation are designed both to balance supply and demand and to balance the accounts of the operator whose job it is to convey and distribute the water.

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. The Act of 1992 defines water as part of the common national heritage, which confers upon it the status of both "economic asset" and "social asset", which cannot be managed on the basis of market forces alone. The economic value of water, which serves as a basis for comparing types of use or regional consumption figures, is only one of the factors in making decisions concerning water management.

Two widely used economic tools are pricing and quotas, both of which are subject to in-depth reviews designed to make them generally more effective. 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.

Today, the major issues at stake in respect of rates have to do with developments affecting individual irrigation systems (Central and Northern France) where environmental considerations mean finding prudent means of managing what is a limited resource. To take one example, in-depth studies have been made of irrigation management in the Charentes to test the effectiveness of implementing a quota system compared with system of widely graduated rates.

Lastly, it is important to remember that all water used in France is subject to one or another charge payable to the Water Agency on the basis of actual consumption. As regards irrigation, the charges are generally managed by the collective systems (SARs and ASAs) but they run into numerous problems where individual irrigation systems are concerned.

Vocational 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 initial and continuing, is given as a matter of priority.

In this respect, France has over fifty establishments that provide initial 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)**, 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 enhance their own training facilities.

In the wake of the successful creation of the **Gdansk Water Foundation in Poland**, an excellent example of this sort of collaboration may be found in the **Training Center for Water Professions Project in Mexico**, developed and financed by the French Government together with Mexican joint ventures and 44 private French companies gathered by IOWater and working with the Lyonnaise des Eaux and the Générale des Eaux.

The provision of specialist documentation 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, is the prototype.

Water-related education and awareness raising

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

Thus the job of 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 pupils and university students to students attending one or another of the grandes écoles (prestigious competitive-entrance higher education establishments).

The training and education provided range from selective awareness campaigns relayed by the media to limited areas in three or four French "départements" to seminars 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.

4 FRANCE AND INTERNATIONAL COOPERATION

It is the responsibility of the developed countries, of which France is one, 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 who should be associated and involved into the project decision making process from the beginning;
2. initiate an evaluation of local peoples' requirements;
3. set up dialogue and negotiating procedures with people and their representatives;
4. define and establish, with the help of people and their representatives, the scope and method of local participation;
5. take pains to include implementation of an education and information policy in all projects;
6. carry out a regular evaluation of the match between offer and demand, involving the people and their representatives, and organize a network of exchange and sharing of experience between those responsible for action on the ground throughout the world;
7. set up a financial fund between North and South and rules required for combining the financial resources required to make all the above initiatives possible.

France's Vision in this regard is twofold:

Solidarity between rich and poor

Here, the **Social Charter governing Water drawn up at the instigation of the Académie de l'Eau 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, an area in which the French in particular have played a major role.

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

Implementing these recommendations and applying the principles involved in disadvantaged districts and to small towns in developing countries clearly means adapting them to local requirements. Here the experience and the **Programme Solidarité Eau (PSEau)**, which includes other NGOs, offers a valuable methodology, tried and proven in recent years, in order to allow water access to peripheral densely-populated problem areas, mainly in Africa.

This program also involves a decentralized cooperation experience between communities in developed and developing countries.

Solidarity in periods of crisis

When really catastrophic crises afflict the people of Kurdistan, Rwanda, Bosnia or Kosovo (and thus in Albania, Macedonia and Montenegro); 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 with both courage and determination in many such cases. The President of the Société des Eaux de Marseille has suggested to the World Water Council that it would be useful to embody the elements of a "humanitarian doctrine" in **an Emergency Water Charter for dealing with crises**; France is hoping to back the adoption of this charter by the Second World Water Forum and the Ministerial Conference to be held in The Hague in March 2000.

This would mean setting up a task force made up of drinking water experts and equipped with mobile pumping and water treatment units provided by the developed countries acting together at the request of international bodies such as UNESCO and of organisations involved in the different aspects of development.

Main organizations consulted when preparing this document:

- Ministère des Affaires Etrangères
- Ministère de l'Equipement
  Conseil Général des Ponts et Chaussées
- Ministère de l'Agriculture et de la Pêche
  Conseil Général du GREF
- Ministère de l'Aménagement du Territoire et de l'Environnement
- Académie de l'Eau
- Agences de l'Eau
- BCEOM
- BRL - Ingéniérie
- CEMAGREF
- Cercle Français de l'Eau
- Electricité de France
- Europôle Méditerranéen de l'Arbois
- Générale des Eaux - Vivendi Water
- Institut Méditerranéen de l'Eau
- International Office for Water (IOWater)
- Plan Bleu
- Programme Solidarité Eau (PSEau)
- SAGEP
- SAUR International
- Société des Eaux de Marseille
- Société du Canal de Provence
- Société Hydrotechnique de France (SHF)
- SOGREAH
- Suez - Lyonnaise de Eaux

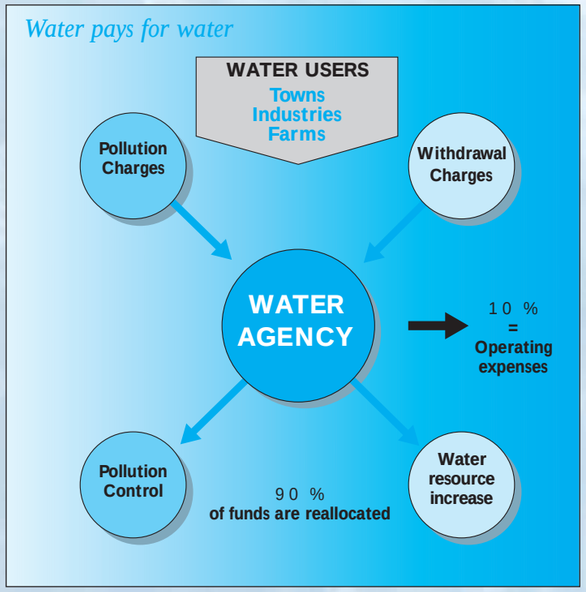
5 FROM VISION TO ACTION

It is essential that the Vision should be translated into action, at both national and international level.

It is essential that the Vision should be translated into action, at both national and international level.

As regards the institutional context, **a number of our "tools" have been singled out by the major multilateral organizations as being particularly effective and therefore to be recommended with regard to management of the essential administrative reforms required:**

- **The organization of water management by river basin**, with the river basin committees, the water agencies and their charges based on the "user-polluter-pays" principle, the masterplans for water development and management, now basically disseminated within **the International Network of Basin Organisations (INBO)**.
- **Contracts for major projects** (Electricité de France, Compagnie Nationale du Rhône, Regional Development Companies, EPALA, etc.).
- **Delegated management of municipal water services**, basically involving a private/public partnership.
- **The National Water Data Network (RNDE)** and our approach to integrated information systems.
- **Our vocational 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.

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

- Improving the **quality of water** and the control of pollutants, notably diffuse pollutants such as nitrates, pesticides and heavy metals.
- **The efficient and properly regulated management of the various facilities and works** in order to provide a better service to the users - the sort of management for which France has a number of internationally recognised companies.
- **The importance of preserving the heritage** bequeathed by previous generations and of **maintaining the works concerned**, particularly where damage could endanger the public.

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**.

Summary authored by:

- Jean Bourgeois,
  IME - Société des Eaux de Marseille
- René Coulomb,
  SHF - Suez-Lyonnaise des Eaux
- Jean-François Donzier,
  International Office for Water - IOWater
- Jean-Pierre Nicol, BRL - Ingéniérie
- Jean-Louis Oliver,
  Conseil Général des Ponts et Chaussées
- Daniel Renault, CEMAGREF
- Claude Salvetti,
  Seine-Normandy Water Agency

Thus our Vision must effectively bring about a "Blue" Revolution in order to avoid the sort of conservatism that would continue to keep entire countries in a state of deprivation for the benefit of the economies of the wealthier nations and the leisure activities of their populations

6 PARIS' DECLARATION

International Conference "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,

Guided by the conclusions of the United Nations Conference on Environment and Development (Rio 1992), in particular the Rio Declaration and Agenda 21 and its Chapter 18, and of the Special Session of the United Nations General Assembly in June 1997,

Recalling previous deliberations on water by the international community, in particular the conclusions of the meetings at Mar del Plata (1977), New Delhi (1990), Dublin (1992) and Noordwijk (1994),

Noting the ongoing preparatory process to the 6th session of the Commission on Sustainable Development, including the contributions made by the expert group meetings recently held in Harare and Petersberg,

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 recognised as a catalyst for regional co-operation;
- 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:
  - l promoted by a partnership between the public and private sectors, thus mobilising good practice and long term financing,
  - l 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 socio-economic partners remains essential.
- international co-operation should play a key role in achieving these objectives, at national, regional and global levels.

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.

Also call upon the international community, to develop an agreed statement of the principles to be applied in developing and implementing local and national water management systems and international co-operation to support them, taking into consideration the outcome of the Harare Expert Meeting.

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.

  To this end, the creative development and evaluation of a wide range of options and their benefits and risks, together with the ongoing co-ordination of watershed development, management and protection, are essential. Public authorities at every level and civil society should play their part in this process and related decision making.

  Governments have a crucial role to play in creating enabling frameworks for local and national water resource management through legislative, economic, social and environmental measures.

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

  International conventions such as the Framework Convention on Climate Change, the Convention on Biological Diversity, the Convention to Combat Desertification[1] and the Ramsar Convention[2] can make a contribution on the integration of their special interests in the sustainable use of water.

  Thinking on approaches to integrated water development, management and protection should be facilitated by all relevant institutions, including the World Water Council, and supported by exchanges of experience through informal networking between stakeholders within the framework of existing institutions.

- **Mobilise 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 programmes designed for creating enabling frameworks, meeting basic needs, sustainable development, management and protection of water, protection of ecosystems and capacity building. Co-operation and co-ordination between bilateral and multilateral donors and recipient States should be strengthened. In this context, a range of international organisations, including the Global Water Partnership, could have a notable role to play.

- **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 programmes 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.

In this spirit, **emphasise** the importance of following up the guidance contained in the Programme of Priority Actions developed by the experts workshops during the Conference.

Submit this Programme of Priority Actions to the CSD for consideration at its VIth session during its deliberations on a strategic approach for the sustainable use of freshwater resources.

Suggest that relevant international organisations and institutions follow up the actions derived from the recommendations contained in this Declaration and its annexe.

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 co-ordination between UN Agencies and Programmes and other international organisations, to ensure periodic consideration within the UN system, in particular the Commission on Sustainable Development, of the proposed priorities of governments for action and to emphasise the role of UNEP in the field of environment.

Emphasise 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.

1 : United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa

2 : Convention on Wetlands of International Importance, especially as Waterfowl Habitats