

# INTERNATIONAL NEWS

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*International  
Office  
for Water*



## Training Information Management Cooperation

N° 11 - December 2003 - English Edition



PARTICIPATE IN THE VI<sup>TH</sup> WORLD GENERAL ASSEMBLY  
OF INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

The Martinique (French Antilles) - 24 - 28 January 2004

4,000 trainees/year

# Training

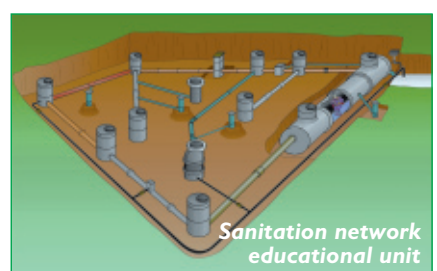


## THE "CNFME"

### PROFESSIONAL TRAINING - CATALOGUE 2004:

Each year, changes in professions and techniques are the concerns of the National Training Center for Water Professions (CNFME) and the proposed training courses are constantly adapted to the expectations of IOWater's partners, thanks to the experience gained by accommodating 4,000 trainees per year on the average, including 10 % of foreign English or Spanish speaking trainees.

The training course offer for 2004 includes the development of 20 new courses as compared to 2003.



"CNFME" training catalogue has reached 210 training topical programs for the first time since its creation. This represents 343 training courses!

It provides a suited and real response to all the organizations, state corporations and private companies of the water sector; either designers, builders, equipment providers, operators, controllers or managers, etc.

It precisely addresses engineers and executives (30%), team leaders or supervisors (30%) and technicians, employees and workers (40%).

The technical training courses are based on the concept of training under real working conditions, which is unique in FRANCE and EUROPE. It has been developing for more than twenty five years by the International Office for Water in its centers of Limoges and La Souterraine or on the premises of the sector employers.

The team of 25 permanent trainers, and the "CNFME" network of specialists, provide their technical and educational skills on 21 topics.

It is obvious that the operation and maintenance of drinking water production plants, wastewater treatment plants and drinking water supply and sewerage

systems of the municipal utilities are at the core of the training proposal with 150 courses, including new modules and 7 with diplomas.

In addition this new training proposal also includes, in particular:

- maintenance of rivers and water bodies, with new modules including legal and normative aspects, techniques, management of community utilities, knowledge of aquatic environments, the use of Water Management and Development Schemes, etc. ;
- management of community utilities, with also new courses out of the proposed 24, especially on assessments, the meeting of the new regulatory requirements, performance indicators and management, awarding of public works contracts, relations with the clients and administrative and financial management, quality evaluation, safety, etc. ;
- water in the industry, which is an entire part of the catalogue with 25 courses, 2 of which, dealing with "internal quality evaluation" and "water for heating and cooling", are new ones.

These courses, classified according to objectives, contents, levels and dates, usually last from 2 to 4 days.

Training curricula are proposed on almost all these topics to enable the trainees to progress in their profession on the multi-year basis of new skills acquisition.



The training courses are carried out on real installations which recreate the daily environment of the participants on about 20.000 m<sup>2</sup> of educational units: underground network for the laying out of mains and leak detection, units for the production of drinking water and removal of micro-pollutants, biological and physical-chemical units for urban wastewater treatment and the drying out of sludge, plant for effluent decontamination, pumping stations, automated and regulating units, sewerage system and control units, flow metering and sampling, analysis laboratory.

All these courses can be "tailor-made" in English and Spanish and organized in foreign countries.

We remind that the training courses on the catalogue are certified ISO 9001 by BVQI.

All the training courses can be consulted and downloaded on the Internet at the following address:

<http://www.iowater.org/cnfme>

### THE 2004 CATALOGUE OF CNFME OFFERS 343 CONTINUING PROFESSIONAL TRAINING COURSES



The 2004 catalogue of the National Training Center for Water Professions (CNFME) proposes 210 programs which correspond to 343 training courses dealing with 21 topics: 1) introduction to the profession, 2) regulations, 3) water quality and analyses, 4) production of drinking water, 5) drinking water supply, 6) laying out and rehabilitation of water supply systems, 7) sewerage systems, 8) wastewater and sludge treatment, 9) on-site sanitation, 10) boreholes, 11) pumping, 12) maintenance and electrical engineering, 13) automation, remote management and sensors, 14) management of water and sanitation utilities, 15) safety of the personnel, 16) aquatic environments, 17) industrial management, 18) analyses and controls in industry, 19) process water, 20) treatment of discharges, 21) decontamination by surface treatment.

The 2004 catalogue is extended with a new topic: "on-site sanitation" that includes training courses close to the situation found in the field, utilities and companies.

There are also highly advanced courses on current topics or topics linked to an emerging demand, such as water treatment refining, boreholes, landscaping of facilities, management of utilities and storm water removal.

Information  
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## THE "CNFME"

220,000 references:  
130,000 in English!

## "EAUDOC": UNIQUE ACCESS TO ALL "WATER" DOCUMENTATION REFERENCES

"EAUDOC", the water-related documentation base, managed by the International Office for Water since 1991 in the National Center for Water-related Information and Documentation ("SNIDE") in Limoges, includes more than 220,000 French and foreign references. "EAUDOC" is daily updated and proposes about 6,000 new references every year.

60% of our references are in English.

### A GUARANTEE OF RELEVANCE

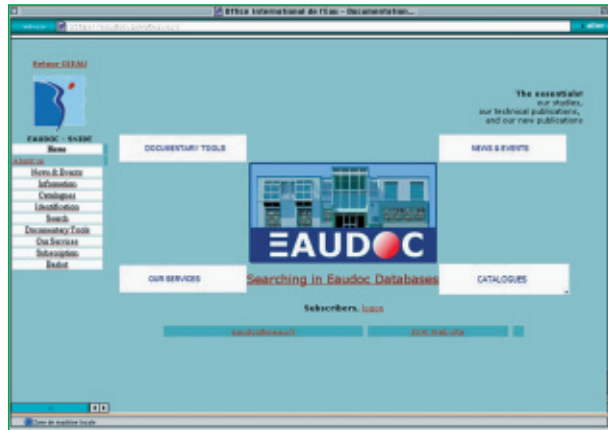
The documentation center selects "EAUDOC" references, according to their relevance, among articles from 380 French and international periodicals, received and analyzed at the SNIDE, recent publications, study reports, the water references of the INIST-CNRS, etc.

These references are analyzed by a network of experts. The bibliographical entries, written by water professionals, are available on line and are the first level of analysis and a true guarantee of relevance as to the results gained through research.

### UNIQUE ACCESS TO ALL WATER-RELATED DOCUMENTS

In addition to the references produced by the SNIDE, "EAUDOC" provides access to:

- "FONTAINE", the bibliographical base of the French Water Agencies and the Water Directorate of the Ministry of Ecology and Sustainable Development, updated six times a year, Basin studies in particular,
- a selection of scientific water-related references produced by INIST-CNIS and CEMAGREF,
- a series of water-related publications, such as technical booklets and publications, etc.,
- finally, the research laboratories, working in the water field, are advertising their works directly on-line in the Eaudoc R&D base.



### CLOSER TO THE NEWS : THE MONTHLY REVIEW

Since April 2003, "EAUDOC" has proposed a monthly topical review available free of charge on its website.

These reviews are short news items. They include a general introduction to the issue and a bibliography extracted from "EAUDOC" and other documentary sources to deepen the subject matter. Some useful links are also proposed.

The first reviews dealt with the following topics:

- pesticides in water,
- the Water Framework Directive in two parts:
  - 1 the basic principles of the Directive, its main implementation stages and the progress made in France in the different basins,
  - 2 public participation: the key points of public participation, the main consultation stages, the stakeholders, etc.,
- the special issue on drought, online since 5 August 2003, when events were pressing to review drought in France and foreign countries: how to assess a drought situation, what are the measures to take to restrict water uses, what are the risks for non-respect of orders, the situation in France and other countries,
- the Law on PPP,
- lead-related health risks.

### AN ADDITIONAL WATCH TOOL : A PRESS REVIEW

Among the available products and services, "EAUDOC" proposes an electronic press review of 60 unavoidable international periodicals, available upon subscription.

The list of the articles is online as soon as the periodicals are published. These articles are available in our center and can be ordered online.

A search engine enables an automatic search in all articles making up the press review. This tool complements the Selective Dissemination of Information (SDI) to keep informed of the novelties in "EAUDOC".

130,000 references in English!

### "EAUDOC" topics :

- TECHN'EAUDOC:** 190,000 international scientific, technical and economic references, including the "Water" references of INIST base
- JURI'EAUDOC:** 2,400 references on water-related legal texts in France and the Community, comments and jurisprudence
- FONTAINE:** 16,000 references on local information produced by the French Water Agencies, the Water Directorate of the Ministry of Ecology and Sustainable Development
- R&D'EAUDOC:** Studies & Researches on Water: references on the European research world
- ADMINISTR'EAUDOC:** 11,200 administrative references on institutional management and the organization of the water world
- ECO'EAUDOC:** 5,600 references on water economy

<http://eaudoc.iowater.org>



Information

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Consultable in English!

# Information / Water Data

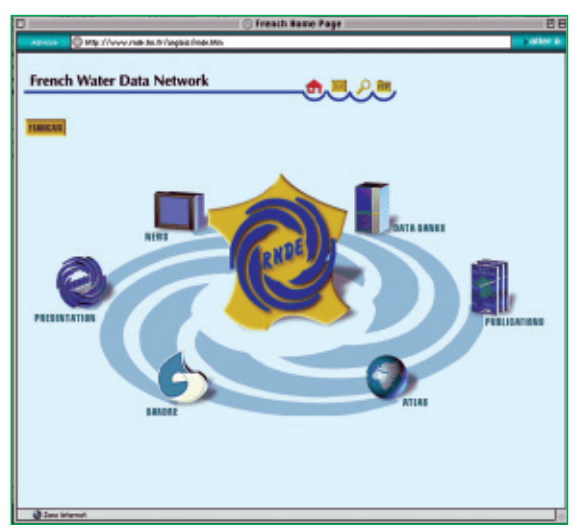
## WIS THE FRENCH WATER INFORMATION SYSTEM

The European Water Framework Directive is an ambitious challenge regarding water-related data. Its requirements are huge in terms of knowledge of the environments, uses and costs to prepare management plans and to inform the public.

An inventory, carried out in all the French basins, underlined the gaps in data production and management. It led to the changing of the National Water Data Network into a Water Information System (WIS), with broader assignments, that will be later integrated into a European system.

**The main WIS objectives are:**

- the creation, in the short term, of a geographic reference frame on surface and ground "water masses",
- the specifications of an "inter-operable" technical architecture enabling simultaneous access to different databases,
- the formulation of a water data master plan for each basin to better produce and collect all the data,
- the reinforcement of SANDRE works, especially in hydro-biology, the monitoring of water bodies and transition waters.



IOWater manages the SANDRE, the national portal and the National Water Data Base that includes all the major reference frames necessary for all users. It brings technical support to the WIS by following the master plans in the basins and by directing inter-operability works.

More than ever, the national portal [www.rnde.tm.fr](http://www.rnde.tm.fr) aims at offering unique and easy access to all sources of data.

The "national portal" <http://www.rnde.tm.fr> and access to the English version.

**THE "RNDE" PARTNERS:**

-  **The Ministry of Ecology and Sustainable Development**
-  **The Ministry of Health**
-  **The 6 Water Agencies**
-  **The Higher Council for Fisheries**
-  **The French Institute for the Environment**
-  **IFREMER**
-  **Electricity of France**
-  **The Research Center for Geology and Mines**
-  **The International Office for Water**

### UWW DB: URBAN WASTEWATER DATA BANK THE TOOL FOR MONITORING URBAN SANITATION

The European Directive relative to Urban Wastewater requires that the wastewaters of towns are collected and treated and that the sewerage networks and wastewater treatment plants comply with its obligations.

The Member States must have all the necessary data available to report on the implementation of the Directive.

Within the French Water Information System, IOWater has assisted the Ministry of Ecology and Sustainable Development with the carrying out of a significant work since August 2002 for clarifying and making the data on urban sanitation consistent and the building of a specific computer application: **UWW DB**.

All water policing departments, the Regional Departments of the French Ministry of the Environment (DIRENs) and the Water Agencies will use the **UWW DB**.

 **Information**  
 Fax : +33 5 55 11 47 48  
 E-mail : [rnde@oieau.fr](mailto:rnde@oieau.fr)

After the tests made in June 2003 by about a dozen of pilot users, the extension of **UWW DB** to the national territory will be completed in November and December 2003.

# SANDRE:

## The catalogue of water data "sources"



The water data "sources" include all the "collection tools": monitoring networks, surveys, self-monitoring networks and all administrative and technical instruments.

Knowledge of these collection tools is a prerequisite to the implementation of a **Water Information System** on the French territory.

IOWater, with the support of the Ministry of Ecology and Sustainable Development (MEDD), has started, within the **National Center for Water-related Information and Documentation (SANDRE)**, the creation of a database including all the description sheets of the French collection tools.

The **SANDRE**, whose tasks concern the standardization of water data and the implementation of national (cartographic and topical) reference frames, drafted a standard description sheet (metadata)



that details stakeholders, produced data, their entry into databases and their availability.

The SANDRE has implemented a computerized tool, based on Internet technologies, that guarantees to the public easy access to this catalogue and also

offers a secured area for the entry, modification and validation of the sheets by the various data producers.

Based on the Internet, this system includes two levels for its organization: **the level of each basin** for the tools that fall within its competence and **the national level**. A sophisticated synchronization system enables the consultation of these datasheets at these two levels.

The first available site including these description sheets is the one implemented in the Rhone-Mediterranean-Corsica basin, accessible at:

<http://rmc.rnde.tm.fr>



### Informations

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### Following up all the news in the Water World?

IOWater information system proposes a range of efficient watch tools:

◆ **To be alerted of the new publications in your specialty?**

The **Selective Dissemination of Information** enables you to know about the new documents incorporated in our technical, scientific, legal and economic databases. **You define the query, by characterizing your center of interest with our help and that is all.** The system alerts you on your e-mail when new references may directly interest you, at intervals that you will have defined (when subscribing). You may then order the documents that you wish to have on line to our center.

◆ **To participate in an event?**

Do consult the online diary of events to know everything on the dates to retain in the coming months: seminars, exhibitions, conferences, etc.

◆ **To know about the latest publications?**

A sole reflex: the online press review with more than 60 unavoidable titles of the water world as soon as they are published.

**Do not hesitate to contact us:**  
[eaudoc@oieau.fr](mailto:eaudoc@oieau.fr)





## INBO SUCCESS AT THE III<sup>RD</sup> WORLD WATER FORUM Kyoto- Japan - 16 - 23 March 2003

### "TEN COMMANDMENTS" FOR BETTER INTEGRATED WATER RESOURCE MANAGEMENT AT THE LEVEL OF RIVER BASINS

- I** *Freshwater is a common good.*
- II** *Integrated Water Resource Management should aim at meeting, in a sustainable and inter-sectoral manner, all essential and legitimate needs, at protecting against risk and at preserving and rehabilitating ecosystems,*
- III** *The basins of rivers, lakes and aquifers are the territories suited for organizing the integrated management of water resources and ecosystems.*
- IV** *In each country, a clear legal framework must specify the rights and obligations, institutional responsibilities, the processes and means needed for good water governance.*
- V** *The representatives of populations, local Authorities, water users and of organizations representing collective interest, should participate in this management, especially in Basin Councils or Committees.*
- VI** *Information, awareness and education of populations and of their representatives are required.*
- VII** *Master plans or basin management plans should be prepared, through dialogue and transparency, to set the objectives to be achieved on the medium term.*
- VIII** *Reliable, representative, harmonized and easily accessible integrated information and monitoring systems and specific research programs should be set up in each basin.*
- IX** *The establishment of financing systems, based on the consumers and polluters' contribution and common cause, is required in each basin to ensure the implementation of successive priority action plans and the smooth operation of community utilities. These contributions, defined by consensus in Basin Committees, should be managed at the level of the basin by a specialized, technical and financial "Agency".*
- X** *As regards large transboundary rivers, lakes or aquifers, cooperation agreements should be signed by riparian countries and the Management Plans designed at the level of the basins, especially in international or transboundary Basin Commissions, Authorities or Organizations.*

▼ Seven Ministers participated in INBO Round Table in Shiga on 20 March 2003



▼ Participants came from all over the world for better water management

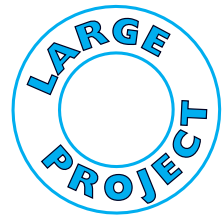


# Basin Organizations

## CEENBO

Liaison Bureau

Tulcea, Romania – 11 - 13 September 2003



CEENBO is directly involved in this project, which aims to create a working community for the implementation of the European Water Framework Directive. Mr. Donzier presented the 2<sup>nd</sup> stage of GWP/INBO Associated Program. Some projects of the Associated Program could be presented by Poland, Bulgaria, Slovenia and Romania which have proposed six projects corresponding to the four objectives of the Associated Program.

Mrs. Aliona Haisan presented the Romanian National Focal Point of "Aqu@docINTER".

The Liaison Bureau of the Central and Eastern European Network of Basin Organizations (CEENBO) took place on 12 September 2003, in Tulcea / Romania in the Danube Delta, at the invitation of "Apele Romane".

The participants came from most of the member countries: Bulgaria, Czech Republic, Hungary, Serbia & Montenegro, Slovenia and Romania. Moldova was also represented by Mr. Ion Savga, Vice-President of the Complex "Apele Moldovei" / "Moldavian Waters".

The 25 participants were welcomed by CEENBO President, Mr. Costica Sofronie, Mrs. I. Bogdan, Romanian Ministry of Agriculture, Forestry, Waters and the Environment, and Mr. Petru Serban, National Administration "Apele Romane".

As Secretary of CEENBO, Mrs. Daniela Radulescu, presented a progress report on the actions undertaken since the Liaison Bureau held in Calimanesti, last year.

Mrs. Madeleine de Grandmaison, President of the Martinique Basin Committee (France) and Mr. Jean-François Donzier, INBO Secretary, also presented the conclusions of the last INBO Liaison Bureau meeting, held in the Martinique (France), in June 2003.

The "EUROPE-INBO" project was actively discussed. The idea of a European Group of Basin Organizations was born a few months ago.



## INBO : 6<sup>TH</sup> WORLD GENERAL ASSEMBLY

The Martinique (French Antilles)  
24 – 28 January 2004

At the invitation of the Basin Committee, Water Board and Authorities of the Martinique and with the support of the Loire-Brittany Water Agency and the French Ministry of Ecology and Sustainable Development, the next World General Assembly of INBO will take place:

**From Saturday 24 to Wednesday 28 January 2004**  
**At the Trois-Ilets (The Martinique)**  
**French Antilles – (France)**

This important event, that only takes place every two years, will be the opportunity of making a report on the significant progress made in integrated water resources management at the level of river basins over the world, with the presentation of the most advanced cases.

Registration to [inbo@wanadoo.fr](mailto:inbo@wanadoo.fr)



INBO Liaison Bureau meeting already took place in the Martinique from 15 to 18 June 2003 to prepare the General Assembly of January 2004



Information

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INBO Website :  
[www.inbo-news.org](http://www.inbo-news.org)



## EUROPE-INBO:

### Creation of a "Group of European Basin Organizations for implementing the Framework Directive"

Valencia - Spain - 11 / 12 November 2003



*The Organizations represented in Valencia wish to be able to better exchange their information and experiences with, and to point out the difficulties encountered to the national Authorities concerned and the European Commission with a willingness of stronger cooperation between them and at European level.*

**123** delegates of governmental administrations responsible for managing water resources, of basin organizations and non governmental organizations, coming from Albania, Belgium, Estonia, France, Greece, Hungary, Italy, Lithuania, Macedonia, Morocco, Moldavia, Norway, Poland, Portugal, Romania, Spain, Switzerland, Ukraine, United Kingdom and the European Commission, met in Valencia, on 11 and 12 November 2003, under the auspices of the International Network of Basin Organizations (INBO), of the Mediterranean Network of Basin Organizations (MENBO) and of the Central and Eastern European Network of Basin Organizations (CEENBO), at the invitation of the Jucar Hydrological Confederation and Spanish Authorities.

They agreed on the following resolutions:

- ▶ as the new European Water Framework Directive aims at achieving good ecological status for surface and ground waters with 2015 as deadline,
- ▶ as it is based on an implementation at basin or water district level,
- ▶ as, after the first step of its transposition into each national legal framework, the WFD is now entering in its active and operational phase of implementation by basin organizations, either existing or in a creating process, or by water district authorities,
- ▶ as this implementation might be complex and is based on new concepts and methods for sound water management,
- ▶ taking into account the very ambitious objectives to reach and important tasks to be executed,



For this purpose, they decided to set up, within INBO and without building any new structure, a "group of European basin organizations for implementing the WFD" (Europe-INBO), open to all concerned organizations of the European Union and bordering countries wishing to be associated.

This Group aims at **facilitating the implementation of the WFD by basin organizations** involved in the enlarged European Union, in candidate States and other interested Eastern European and Mediterranean Countries, especially leading to common initiatives, aiming:

- ▶ to participate in the local, national and international discussions on integrated water resources management and sound and sustainable development of river basins and aquifers,
- ▶ to develop exchanges of information, experiences and expertise between interested basin organizations,
- ▶ to strengthen cooperation between the countries bordering transboundary rivers, lakes and aquifers,
- ▶ to evaluate the activities undertaken and to disseminate their results, especially through publications and appropriate training programs,

- ▶ to design and promote common projects for achieving these objectives,
- ▶ to facilitate the development of useful management tools and models,
- ▶ to promote the exchange of information and data essential for knowledge of the resources, uses and pollution and required for forecasting natural hazards and accidents, for defining multi-year plans for joint and consistent actions and for evaluating the common policies implemented,
- ▶ to assist with the establishment of financing systems, based on the "user-polluter-pays" principles and on common cause in the basin,
- ▶ to promote training programs for the managers, executives and technicians of the member organizations and, more generally, for all stakeholders in water management,
- ▶ to promote the participation of the populations concerned in planning processes and sustainable water resource management.

### OPERATING METHOD

All the interested partner organizations agreed to meet again within 12 months and later at least once a year or at each significant step of the implementation of the European Water Framework Directive.

**Poland proposed to host the next plenary meeting** and will jointly choose the place and dates with INBO Permanent Technical Secretariat, with the assistance of a provisional Steering Committee, chaired by the representative of the organization that hosted the last meeting, **the Jucar Hydrological Confederation** for the coming period.

INBO Permanent Technical Secretariat will handle the secretariat of the provisional Steering Committee.

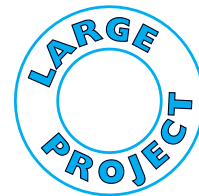
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# Basin Organizations

## TWINBASIN<sup>XN</sup>

Promoting twinning between basins to reinforce practices of Integrated Water Resource Management



The TWINBASIN<sup>XN</sup> project, that has just started at the end of 2003, aims at facilitating twinning between Basin Organizations to disseminate good practices and strengthen their human resources.

The tool thus developed will focus on the capitalization of the acquired know-how to share it on the widest scale possible. Special attention will be paid to the relations between Basins and research to increase the dissemination of results to the users and thus improve management according to demand.

The project outputs will include guides for arranging beneficial twinning, exchanges on today topics (trans-boundary waters, public participation, modeling, monitoring, etc.), scholarships to facilitate the mobility of executives between basins (1 to 2-month practical courses), tools for managing knowledge and distance training, etc.

Participation in the TWINBASIN<sup>XN</sup> community is open: it is "only" necessary to sign the TWINBASIN<sup>XN</sup> protocol (the MoU – Memorandum of Understanding) to become member (this will mean that the signatory supports the project principles), then to commit himself to participate in the exchanges.

The project should regroup 150 members before 4 to 5 years. To start its activities, it will rely, under the coordination of the International Network of Basin Organizations, on a group of 20 founder members, representatives of the stakeholders concerned: Seine-Normandy Water Agency (France), International Office for Water, Ea – Water Pole (France), Confederación Hidrográfica del Júcar – MENBO (Spain), Department for International Development (UK), Cap-Net (the Netherlands), Techware (Italy), Global Water Partnership, RZGW – Gdansk (Poland), National Water

Authority - OVF (Hungary), Interstate Coordination Water Commission – ICWC Aral Sea (Uzbekistan), Jara Tirta I Corporation (Indonesia), African Network of Basin Organizations (Africa - Niger), Algérois – Hodna – Soumman Basin Agency (Algeria), Sebou River Basin Agency (Morocco), Organization for the Development of the Senegal River (OMVS), Comisión Nacional del Agua (Mexico), Agencia Nacional de Aguas (Brazil)

The project has been selected within the framework of the "Global change and ecosystems" priority of the 6<sup>th</sup> Framework Program for European Research. The European financing of the project will cover the operating expenses of the network (travels, tool development, scholarships, etc.) for a 48-month period.

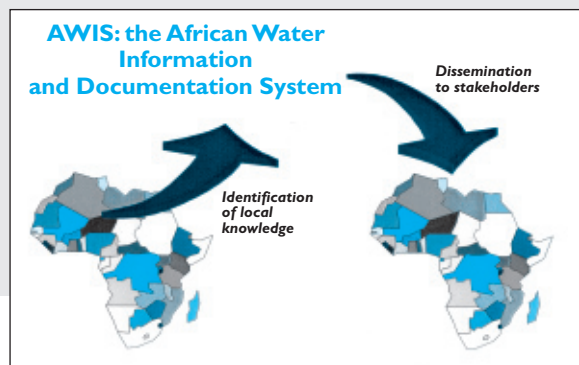
## AWIS: African Water Information and Documentation System

The African Water Information and Documentation System (AWIS) will rely on the networking of different Regional Resource Centers (AWIS InfoDesks) to share and exchange the information indispensable to their activities, either documentary bases for instance or information on the operators or the sharing of techniques or experience.

These AWIS-IDs will be focal points and relays between the users, the local, national, regional or international specialized bases.

AWIS is intended for all the stakeholders in the water sector: governmental administrations, basin organizations, local authorities, water suppliers, operators of sanitation utilities, large public developers, consulting firms, organizations of irrigation users, NGOs, research organizations, training centers, etc.

AWIS is neither English nor French nor Portuguese speaking, etc. It is an African tool for the exchange of water-related information with real multilingualism.



The African Resource Centers (AWIS-IDs), correspondents and coordinators of the system at the local level (physical link with the users), will be supported by a **Coordination Unit** which will coordinate the system by applying the orientations defined by a **Steering Committee**, itself advised by a **Consultative Group** made up of the different users.

Information  
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[www.inbo-news.org](http://www.inbo-news.org)



## 9 COUNTRIES SHARE THE NIGER RIVER BASIN

### A constructive audit of the NBA

The riparian States of the Niger River and its tributaries created in November 1964 the Niger River Commission (NRC) with the aim of "encouraging, promoting and coordinating the studies and programs related to the development of the basin resources".

After seventeen years, the States decided to change the NRC into another institution, whose assignments would be more extended, the **Niger Basin Authority (NBA)** with 9 member countries: Burkina Faso, Benin, Cameroon, Chad, Ivory Coast, Guinea, Mali, Niger and Nigeria.

However the financial and institutional crises continued in spite of a mandate reviewed in 1987, which assigned to the NBA the following objectives:

- harmonizing and coordinating national policies for the development of the Basin's resources;
- participating in planning and development by drafting and implementing a plan for the basin's integrated development;
- promoting and participating in the design and exploitation of infrastructures and joint projects;
- controlling and regulating any form of navigation in the river, its tributaries and sub-tributaries in accordance with the "Niamey Act";
- participating in the formulation of requests for assistance and in the mobilization of funds for the studies and works required for developing the basin resources.

**The preparation in 1998 of a three-year action plan (2000-2002) and its implementation enabled NBA to gradually boost its activities.** The statutory meetings are regularly held, most countries pay their contribution and the development partners have restarted their assistance.

However, even if NBA has carried out many studies, those are not yet translated into real activities for the well-being of the riparian populations. Indeed, NBA suffers from:

- ➔ insufficiency of technical and operational capacities to formulate and implement actions related to the objectives assigned to the NBA.
- ➔ lack of dialogue and coordination between the NBA and the member Countries regarding the planning and implementation of development actions in the basin.



- ➔ lack of concerted and joint actions to test the legal and institutional mechanisms, defined in the NBA, and to be a catalyst for concerted global cooperation on the basin scale, that would lead to appropriate sub-regional strategies, based on a clear shared vision of the Niger basin development.

This situation led the executive body of the NBA to take some corrective measures and to organize an institutional and organizational audit. The World Bank entrusted this audit to the International Office for Water. It dealt with the following topics:

#### ● **NBA mandate:**

##### **Redefinition of the mandate, role and responsibilities of NBA.**

According to the analyses made, an appropriate structure was proposed. The latter fits in with the NBA mandate and specifies the role and responsibilities to take account of the need for strengthening cooperation between the member States.

#### ● **NBA Organization:**

##### **Proposal of a clear and operating organizational scheme for NBA.**

A more efficient and operational administration is proposed.

##### **Distribution key of the countries' participation to the NBA operation:**

Recommendations for improving the distribution key of the States' financial contributions (to the NBA operating cost and activities) are provided.

#### ● **Capacity building and human resources:**

##### **Assessment of the human resources of the NBA Secretariat as compared to its assignments:**

The collaborators' profiles needed and performance criteria are defined and clearly formulated to enable the staff to carry out NBA assignments.

The functions, jobs and profiles are defined to make NBA operational and performing.

##### **The main goal of this audit is to make NBA a legal and institutional framework, truly operational on the long term, orientated towards the sustainable development of the basin for the well-being of the riparian populations.**

It happens at a time when a "clear and shared vision" is developing, in line with a "political declaration that defines the long-term objectives and the commitments of the States to an action program". It will now be the reference framework for any initiative for national or regional development in the basin.



**Water resources management is becoming one of the major challenges for international cooperation in Africa.**

Many African countries have started these last years an in-depth legal and institutional reform focusing on a water policy organized according to the integrated management concept (IWRM) and based on river basins. However, most of the Countries have worked alone up to now and reforms are long to get implemented.

Many bi and multilateral donors, especially European ones, NGOs or large private companies have been working beside Governments, Local Authorities and rural or urban groups of people for a long time and now they wish to strengthen and better coordinate their actions in this sector.

Many international meetings have been organized to facilitate the implementation of a better governance of water resources on the regional scale.

It is now especially necessary to implement sustainable water management on the African continent, in accordance with the commitments and the recommendations of the international Community made in the Conferences of Paris (1998), The Hague (2000), Bonn (2001) and in the World Summit (Johannesburg, September 2002).

### The European Water Initiative was launched in Johannesburg on 3 September 2002.

This initiative includes five components, the first two being dedicated to Africa:

- an "access to water supply and sanitation" component, with special emphasis on sanitation in periurban areas, led by Denmark;
- an "Integrated Water Resources Management" (IWRM) component, led by France, focusing in particular **on African transboundary river basins that cover most of the continent and concentrate the main surface and ground water resources.**



*Conference of AMCOW Ministers, Ouagadougou, 2 – 3 October*

The French Ministry for Foreign Affairs requested the International Office for Water for assistance in the analysis and proposal stage of the "large rivers" component: a first step of this second component consisted in an inventory, whose method was validated by the main partners involved. The inventory aimed at analyzing the situation and at **characterizing 10 major transboundary basins in Africa, based on about twenty studied cases.**

The interim report of this step was presented during a meeting in Paris in September 2003 to representatives of the European Commission, of Member States and different NGOs and organizations (GWP).

**The Ouagadougou Conference in October 2003 was then a significant step of the process with the identification of the first four basins in which the European Initiative will start (Lake Chad, Lake Victoria, Orange, Volta), French Cooperation also supporting the Niger.**

The second phase will include two steps:

- ① Drafting of a methodology to develop basin action plans suited to the African situations;
- ② The implementation of this methodology in each of the chosen basins, in collaboration with the African and European partners, to make a proposal for action plans complying with IWRM criteria (contents, priorities, budgets).

This phase should be completed in summer 2004.

This European Initiative on the IWRM topic will "facilitate" a better management of African transboundary rivers and the preparation of National IWRM Plans in the concerned riparian countries.



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## MAURITIUS

### The "CNFME" and the Limousin "IUT" in Mauritius

Within the framework of a cooperation between the Limousin IUT and Mauritius IST, the "CNFME" provided its technical support to the launching of a +3-level training program that would lead to a university diploma. This training is addressing people having a DUT or BTS certificate and aims to train versatile high-level technicians on water treatment and the electromechanical maintenance of equipment.

This diploma could be compared to the one prepared in France at La Souterraine for four years. Among the people who are at the origin of the project, there are: Messrs. Robert Sarrazin, Gilles Broussaud, IUT Director, who has managed other +3-level training programs in Mauritius for several years and who was the promoter of this new training program.

During a first assignment in February 2003, the CNFME participated in an audit and in a workshop to

**assess the relevancy of the training with the human and technical resources of the island.**

The need for training the staffs was emphasized so that they could have good technical skills on treatment and maintenance but also that they could teach technical teams. Mr. Sacquard, educational specialist in charge of the professional GRPE certificate, option "maintenance of plants and water supply systems" that takes place at La Souterraine, led the assignment on behalf of the Limousin IUT, with the technical support of B. Portero on behalf of the "CNFME".

During a 1-week assignment in August 2003, the CNFME, provided educational kits to the IST, covering all water treatment aspects. He also introduced the maintenance issue with a visit of production and treatment facilities.

## CAPE VERDE

### "SAAS"

Within the cooperation program with Cape Verde, dealing with the topic: "Search and Management of Water Resources", the French Embassy in Praia has requested IOWater to implement a **training program, addressing the Managers of the Autonomous Water and Sanitation Utilities ("SAAS")**, recently created in this archipelago.

The aspects of the management of a water and sanitation utility were presented to these managers: administrative, financial, technical and commercial management, management indicators, depreciation and renewal of equipment, and rehabilitation techniques, etc.

At the end of the training program, the local Authorities wished that IOWater continue its assistance on the following topics: performance indicators, methods and tools for assessing the needs and developing water utilities and water resource management.

## MAYOTTE - INDIAN OCEAN

### Drinking water supply

The SIEAM (Syndicat Intercommunal de l'Eau et de l'Assainissement de Mayotte - Mayotte Inter-community Syndicate for Water and Sanitation) requested technical support from the International Office for Water regarding drinking water production and supply on the island.

The local context is very specific: high population density, exponential water needs, tropical climate, limited financial capacities are features that make a good evolution of drinking water supply and sanitation difficult on the island.

It is to be reminded that Mayotte has a special administrative status: the island is indeed a local community having a unique and specific organization system. By year 2006, the island should obtain the DOM (overseas department) status, which requires that the management of water resources and infrastructures is previously made compliant with administrative requirements.

In order to assist the water syndicate with this approach, the CNFME has participated in several activities since the beginning of 2003, focusing on qua-



The Oouvéni river at the intake point for the plant supply

lity of the water supplied to the population with the aim of:

- **improving knowledge of natural water resource quality on the island**, with on-site samplings and standardized analyses made by the CRECEP (Water Research and Control Center of Paris). This action led to sampling and analysis campaigns, including more than 10 production points distributed on the entire island,

- **proposing ways to improve the operation of drinking water treatment plants** (structural and operational improvements),
- **monitoring water quality** at the output of the 60 reservoirs of the island,
- **installing a treatment unit for the sludge generated by the plants**, using natural drying by solar energy. The objective is to define the sizing needed to reach efficiency in terms of dryness in this climate context.

This work could be carried out thanks to the collaboration of the various water stakeholders of Mayotte and especially the SIEAM, DAF and SOGEA, a conceded company that operates the drinking water treatment plants.



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# SOUTH AFRICA

## Creation of a network of professional Training Centers

In its capacity building strategy for the water sector, South Africa defined a consistent policy for developing the professional skills of South African stakeholders. It can be summarized in 5 points:

- 1 creation of a network of Professional Training Centers,
- 2 definition of programs and/or creation of new professional qualifications,
- 3 constitution and training of a team of specialized trainers,
- 4 identification of the needs for increasing the professional capabilities of the stakeholders working in the sector,
- 5 implementation of a multi-year training program for this personnel.

**The South African Authorities in charge of the water sector designated the NCWSTI (National Community Water and Sanitation Training Institute), as the national operator for implementing this policy.**

It is in such a context that the French Embassy launched, in agreement with the South African party, an international invitation to tender to implement this

project, financed by the French Fund for Priority Solidarity (FSP).

**IOWater and SAUR were jointly designated as tenderers of this market in September 2003.**

It deals with the definition and implementation of common training methods (training units, educational kits, training manuals, educational tools and methods, etc.) for upgrading NCWSTI training programs.

A training program for the South African trainers is needed. It will deal with new educational procedures and with the new technical capabilities required.

The objective is to federate the professional training offer and demand for the South African water sector.

Development will concern 5 topics for professional training at the NCWSTI: drinking water treatment, wastewater treatment, electrical engineering, mechanical maintenance and commercial management.

Two other Regional Centers (Branches) will be created in the provinces of Kwazulu Natal and Eastern Cape, and will later complete the NCWSTI resources.



A first assignment (Inception Phase) of an expert of the International Office for Water took place at the beginning of November 2003 to finalize, with the South African partner (NCWSTI) and the French Embassy, the conditions for the operational start of the project.

This large and innovative project in this southern part of Africa should last about two and a half years.

# MAURITANIA

## Water as a development factor

In order to coordinate the multiple actions initiated by different donors, UNDP proposed to Mauritania a **National Action Plan for Nature and the Environment (PANE)**, a way to clarify initiatives, to describe their benefits and objectives and to emphasize synergies.

Many things were done in the water sector: water resource planning, organization of rural water supply, first water law, creation of protected natural reserve parks, of irrigated areas, clarification of the different national stakeholders' tasks, support to the farmers and stock breeders, development of small water trades, reform of the national water supply company, membership and participation in the OMVS (Organization for the Development of the Senegal River), etc.

Nouakchott has also a system for the drainage of domestic wastewater and an operating wastewater treatment plant, the treated water of which is used to irrigate a date grove in the city center.

However, the water issues are still considered as insufficiently solved, especially in town. Water, even of poor quality, is still scarce and industrial pollution is more and more threatening a fragile ecosystem.

Called for supporting the United Nations Secretariat on Urban Development, an IOWater expert prioritized the following actions:

- 1 Associating and making transparent, rather than channeling and managing, all initiatives for the sector improvement, with, in particular, the taking into account and facilitating of initiatives of the best suited local stakeholders, i.e. the communities;
- 2 On the occasion of the water law review, establishing a jurisdictional control of the relevancy of all sectoral measures taken by the technical, financial, customs administrations (e.g. importation of hazardous substances), etc., concerning the environment and especially water supply. All this while keeping always in mind not to centralize but to capitalize the initiatives of other stakeholders;
- 3 Better communicating over the policy chosen for drinking water supply, improvement of hygiene and living environments, waste collection and disposal;
- 4 Continuing the reinforcement and favoring of such jobs as water carrier and hydrant man;

- 5 Establishing a plan for the disposal of liquid waste;
- 6 Creating and making socially honorable and well-paid the job of refuse collection worker;
- 7 Creating the conditions for a market of building and maintaining shower latrines;
- 8 Making the technical inventory of existing collective sanitation with, in order: the topographical and technical survey of the network, the systematic check of connections, the assessment of the wastewater treatment plant capacity, for receiving drainage products for instance.

The guideline is to build a lasting economic environment for the companies of the hygiene sector for sustainable services to the public.



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# Africa

## ETHIOPIA

### Towards water management at the level of river basins.

In its bilateral cooperation program, France supports the Ethiopian Ministry of Water Resources on the following topics:

- access to drinking water in rural and urban areas,
- integrated river basin management on a national and sub-regional scale, when transboundary rivers are involved,
- development of irrigated agriculture and electric power.

The Ethiopian Minister for Water Resources had shown an interest in the French institutions involved in water resources management and suggested the organization of a study tour for a group of top executives led by the Vice Minister, Mr. Mesfin.

The program, managed by IOWater, was implemented between 30 August and 7 September 2003. It included:

- an introduction to the cooperation program of the French Ministry for Foreign Affairs,



*The Ethiopian delegation received at the DGCID by Mr. Stephan*

- an introduction to IOWater activities (institutional support, training and information systems),
- a visit of organizations and companies: Rhone-Mediterranean-Corsica Water Agency, National Rhone Company, Canal de Provence Com-

pany, Bas-Rhone Languedoc Company, decentralized departments of the State (DIRENs), private companies (BCEOM, etc.) and others (AGROPOLIS, VERSEAU association).



# Latin America

## BRAZIL

### Training Centers for Water Professions

In order to meet the development and modernization needs of the water sector, the Brazilian water authorities - Secretariat of Water Resources (SRH) of the Ministry of the Environment, and the National Water Agency (ANA) - and the French Embassy in Brasilia entrusted IOWater with the feasibility study for the creation of a **Network of Training Centers for Water Professions**.

The study included a detailed analysis of the drinking water supply and sanitation sectors (coverage rate, rate of water losses, metering, rate of urban wastewater and industrial effluent collection and treatment, sale price, commercial yields, operating costs, investments).

Globally speaking, the number of Brazilian staffs, directly or indirectly working in the Brazilian drinking water supply and sanitation sector, is estimated at about 200,000.

The surveys showed that there were needs for improving professional skills corresponding to the training topics.

The majority of demands (65%) focuses on very practical and directly operational training courses that only a specifically designed and equipped Training Center can offer.

The feasibility study proposed to adopt a "gradual" strategy:

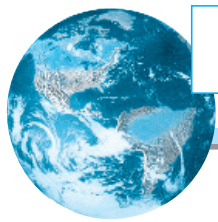
- **a vision focused on regional planning by defining three large areas:** North-East, Center-West and South-East.

- **a 3-step implementation** supported by the concerned States and the large regional municipalities:

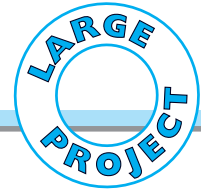
- 1 the Sao Paulo, Rio de Janeiro and Minas Gerais triangle,
- 2 the capital, Brasilia,
- 3 the coastal towns of the North-Eastern region.

- **the networking of Regional Centers** would be built with an architecture focusing on complementarity and specialization: South-East area (urban and industrial sanitation, drinking water supply), Center-West area (management of the resource and of urban water facilities), North-East area (rural water supply and water resources).

[www.iowater.org](http://www.iowater.org)  
Water world on Internet



# Latin America



## MEXICO - "CEMCAS"

The number of 2,000 trainees already exceeded



With the arrival of the new Director Marcos Cerrillo Romero, the training offer extension and the improvement of the quality of educational facilities, enhanced by the provision of equipment by French industrialists, **year 2003 can be defined as the consolidation**

**year of "CEMCAS" (Mexican Training Center for Water and Sanitation Professionals).**

The actions of the French-Mexican cooperation program, between "CEMCAS" and IOWater, have speeded up:

- ▶ With 4 technical assistance assignments, carried out by the IOWater - CNFME's specialized trainers, for helping their Mexican counterparts in the installation of the materials and equipment of the French donors, and in the integration of these new educational tools into the training courses of "CEMCAS" training catalogue,
- ▶ with an educational assistance, aiming at finalizing the adaptation and revision of the educational kits,
- ▶ with the support to the preparation and facilitation of the French-Mexican conference on the "modernization and increase of efficiency of the Mexican water utilities".

This important event, held on "CEMCAS" premises on 29 and 30 May 2003, thanks to the support of the French Embassy in Mexico, and led by UBIFRANCE, enabled the gathering of 188 Mexican executives, representing 46 water utilities, and the organization of 15 display stands.

Inaugurated by Mr. Victor Lichtinger, State Minister in SEMARNAT, and by Mr. Philippe Faure, French

Ambassador to Mexico, this conference was the opportunity of rich exchanges of experiences between participants and lecturers during the 21 addresses dealing with newsworthy topics such as: pricing, billing, financial resources, public-private partnership (PPP), etc...



**The analysis of the training activities shows a continuous increase in the number of trainees trained in "CEMCAS":**

**2000:** 30 training topics enabled the training of 168 staff members coming from 30 water utilities, i.e. a total of 5,376 training hours.

**2001:** 25 training topics enabled the training of 357 staff members coming from 42 water utilities and 18 various organizations. Several training courses were carried out in the "Platino I" and "Zafiro" programs launched by the "CNA". That is to say a total of 16,080 training hours.

**2002:** 43 topics enabled the training of 887 staff members coming from 164 water utilities and 46 from various organizations, including 28 topics from the "Platino II" program, i.e. a total of 26,526 training hours.

**2003:** 20 training courses, now complete and longer, were carried out to train 662 participants coming from 70 water utilities and 47 other organizations, i.e. a total of 56,576 training hours.

**Since its opening in summer 2000, "CEMCAS" has already organized more than**

**100,000 training hours to train a total of 2,000 Mexican colleagues coming from 417 water utilities and other organizations.**

### Prospects...

"CEMCAS" development is, as everywhere else over the world, linked to the budgets of the Mexican water utilities reserved for the professional training of their personnel.

The Mexican Government (CNA) plans to launch the new program: "PROD-DER" (Program for the Development of Water Rights), introducing a tax in the water price paid by the users.

The amounts thus collected would feed a National Fund for the Development of the Water Sector and would be used to subsidize (at about 50 %) the modernization projects of the water utilities.

A percentage (about 3 to 5%) of this Fund would be reserved for the professional training of operators' staff.

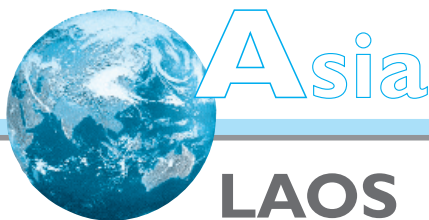
"CEMCAS" should then see a significant increase in the numbers of its clients.



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## LAOS

### A training center for better efficiency in water utilities

Starting with policies for decentralization and reorganization of the water sector, set out in 1998, the Laotian Authorities wished to **increase the efficiency and quality of water utilities (Nam Papa).**

Within the framework of their cooperation with Laos, the French Authorities (French Agency for Development - AFD) agreed to support a training project, that would not only cover the drinking water sector but also prepare the Nam Papa personnel to the development of the sanitation sector, essential for the well-being of the population and for the country economy.

The main objective is to allow and implement the training of the staff in charge of these sectors, in order to:

- **strengthen the decentralization policy;**
- **improve the management of water systems** (planning and

management) and technical skills (O&M, water quality);

- **prepare the people in charge to the sanitation challenges;**
- **enable the drinking water supply and sanitation companies to improve their services to the users.**

After an invitation to tender, the AFD entrusted the feasibility study of the project to the IOWater-BCEOM group.



Relying on surveys carried out by the group and on its proposals, the Governmental Authorities decided to build a **National Training Center for Water Professions (CNFME) for Laos.**

The implementation of this project will include, in particular: the construction of buildings, lecture rooms and accommodation facilities, the creation of the educational facilities of the training center and the implementation, at the same time, of activities enabling its operational start (provision of educational tools and materials, educational and technical training program for the Laotian trainers and corresponding supporting actions).

Relying on the conclusions of the feasibility study, the Lao Authorities made a request to the AFD for the financing of the training center project.

## SRI LANKA - MAHAWELLI AUTHORITY

### Decentralization and basin management

For more than a thousand years, the Authorities that have succeeded themselves on the island have wished to control the too abundant rainfalls during monsoon and insufficient water resources outside the monsoon. The result has been a water-related civilization whose best modern example is the "Mahawelli Authority of Sri Lanka" (MASL).

This institution covers 40% of the island territory: large hydraulic works, water storage, hydropower, regulation, distribution, conveyance of raw water, irrigation, collection, processing and commercialization of agricultural products, providing of fertilizers, seeds and phytosanitary products, schools, recreational facilities and even cemeteries were built and are managed in a centralized manner.

Flow regulation is guaranteed by an outstanding network of canals and subterranean tunnels that connect the main rivers of the Eastern and North-Western part of the island to the south. But, after decades of development, the MASL is still not able to get energized.

Under the impulse of the World Bank, a huge program started for transforming the Authority: new distribution of tasks, subcontracting of secondary tasks, decentralization of decisions and the billing of the water service will be needed on the short term, even only to enhance the work that has been carried out for so many years.

Decentralization of the management of the various interconnected basins has been initiated. To be careful, the people in charge firstly selected a consistent sub-system, the Kala Oya basin, North West of the island. They insisted on **the creation of a new pilot body, the Kala Oya Basin Organization (KOBO).**

It is a new organization, originating from the central office, but different: although it loses its economic and development role, it gains that of environmental developer. It should, above all, have a decentralized decision power involving the civil society. A pilot Basin Committee is now starting to learn how to operate.

At the end of the program, the World Bank requested to IOWater-INBO an

evaluation of the proposed reforms and a transfer of experiences. Two French experts went to Sri Lanka and their assignment was much appreciated. It dealt with legislative and institutional aspects:

- **the draft water law which is being submitted to the Parliament** still includes some seeds for conflicts and dysfunction;
- the planned organization does not seem to specify enough the responsibilities of each party concerned, nor the effective implementation of the needed coordination, in particular **the responsibilities and powers of the Basin Committee.**

The planning and programming of projects still not rely enough on the regulation demand approach. They are made difficult by the weaknesses of the economic indicators used. Communication about the projects is still insufficient.

To summarize, the intents of this reform of the Mahaweli Authority of Sri Lanka must face significant challenges to obtain economic, social and environmental results.

From One Continent to Another





## IRTYSH - RUSSIA - KAZAKHSTAN

### Management of transboundary water resources

The objective of the project, which will be completed at the end of 2003, was to facilitate the joint management of the Irtysh waters by the Russian Federation and the Republic of Kazakhstan. It included:

- 1 the improvement and modernization of networks for monitoring the water resources of the basin,
- 2 the development of a hydrological simulation model for the Irtysh river,
- 3 the setting-up of the Basin Information System (IRBIS),
- 4 the organization of institutional arrangements for cooperation and the exchange of basin data between the two States.

The project, financed by the French Fund for Global Environment, included the part-time secondment of experts from the IOWater/ANTEA/SAFEGE consortium over three years to provide technical assistance to the parties involved, through mixed working groups, the financing of punctual measurement campaigns and light equipment, the organization of concertation and follow-up meetings and capacity building for the institutions involved.

#### The Basin Information System (IRBIS)

One of the Working Groups, led by IOWater, was responsible for developing the IRBIS information system: "Irtysh River Basin Information System".

This system aims to produce and disseminate the information expected by the Irtysh Commission and needed for public information, while enhancing the organization of data production and modeling results.

In order to achieve these objectives and taking into account the existing international agreements, the approach, adopted in a first step for IRBIS system, was to enable the integration of available data into an information system, harmonized in terms of structure and concepts used.

**At the organizational level,** the presented structure plans that each country will take care of data integration in its area, while using common frames of reference. This information may also be easily exchanged to meet the needs of the commission that will disseminate the obtained results on its website.

**At the technical level,** the working group especially took care of:

- the inventory of the organizations that collect data and/or manage information systems, and the analysis of their practices;
- the purchase of the computerized equipment needed for the first data syntheses and for producing the expected information;
- the creation of the first ACCESS tables and GIS layers, with, in particular, the ones on administrative and hydrographic references;
- assistance with organizing the acquisition of the required data;
- the training of the concerned human resources on the software used (Arc-view, Access);
- the processing of the first syntheses (maps, lists, statistics, etc.).



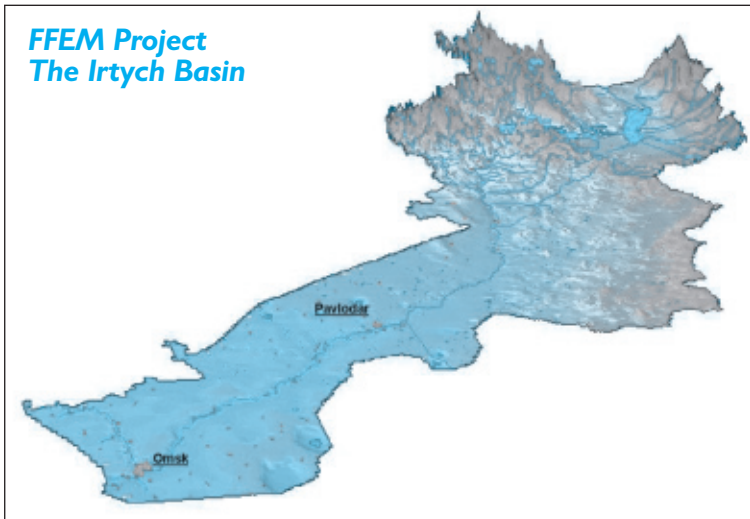
**Therefore, at project completion, the International Commission of the Irtysh River Basin will have a first operational information system, based on:**

- an alphanumeric database;
- a geographic information system for enhancing the mapping of data;
- a web server (developed in French and Russian) for disseminating information.

#### Modernization of institutions

The activities of the institutional assistance carried out in the project, aimed at:

- ❖ acquiring information on the work carried out by the Russian-Kazakh Commission,
- ❖ analyzing the legislation of each country of the Irtysh basin in terms of water management,
- ❖ developing modern principles for water management at the level of river basins,
- ❖ proposing a structure and activities for a specific International Commission for the Irtysh valley that may later integrate China,
- ❖ analyzing rules for the management and operation of Irtysh dams to outline the problems arising from these management choices and find a solution that both parties could agree to.



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## THE RHINE

### A "Rhine Network" for better participatory management of the River

The Rhine River basin shows great diversity in nature, climate, geography and culture. **The Rhine region is one of the most populated and industrialized regions of Europe.**

These intensive activities, industrial and agricultural, have impacts on the alluvial ecosystems, on the pollution of groundwater and water of the Rhine and its tributaries, or on the worsening of floods.

There is a rich and varied local knowledge of water management in the whole Rhine basin, together with initiatives from citizens, associations, private sector, public sector, municipalities and transboundary organizations.

These local practices are especially significant with the view of implementing the European Water Framework Directive that gives a new impulse to the involvement of the public in water management as soon as possible, with a true citizens' participation.

**The aim of the "Rhine Network" is to identify and develop local practices of participatory management of water resources, to strengthen European cooperation on the scale of the river basin and to disseminate the acquired local knowledge.**

The activities carried out in this project will include 6 real case studies and the same number of groups of local stakeholders along the Rhine. Participatory practices will be evaluated and compared for each case and then disseminated to promote the best ones:

- ❶ revitalization of the upper Rhine (F, D, CH),
- ❷ development of the Dreisam in Feiburg (D),
- ❸ protection of springs in Luxembourg (L),
- ❹ classification of the delta wetlands (NL),

- ❺ renaturalization of banks in Karlsruhe (D),
- ❻ flood prevention in the Moselle / Saar basin (F, D).

In addition to these case studies, **public information and awareness activities will be organized on the basin scale:**

- local information workshops on the active participation of the civil society in water management (Main, upper Rhine, Moselle / Saar, Rhine delta);

IOWater will mainly deal with the evaluation of participatory management practices and with the drafting of the operational guide, which will enable the capitalization of the best practices, before widely disseminating them to water stakeholders.

The project partners are:

- ❖ **Naturlandstiftung Saar (D), main contractor,**
- ❖ **Solidarité Eau Europe (F), coordinator,**
- ❖ Ministry of Culture of the Saar Land (D),
- ❖ Ministry of the Environment of the Baden Württemberg Land (D),
- ❖ Ecologic (D),
- ❖ Bundesverband der Bürgerinitiativen Umweltschutz - AK Wasser (D),
- ❖ Regiowasser (D),
- ❖ Office of the Environment of Karlsruhe city (D),
- ❖ Hellef Foundation for Nature (L),



- organization of a poetic contest "Rivers of pictures, rivers of words" in the schools of the Upper Rhine and Moselle / Saar, with a mobile exhibition;
- organization of a "Bathing Day" in the Rhine to entice the population back to the river;
- organization of the "Neckar festival", gathering about a hundred events in the entire Neckar basin.

Knowledge gained on the different participation techniques will then be discussed with the public in topical exchange workshops to prepare an "operational guide for participation" addressing stakeholders in water management.

The obtained results will be presented and discussed during a restitution seminar and widely disseminated later.

- ❖ Stichting Reinwater (NL),
- ❖ European Rivers Network (F),
- ❖ Saarguemines agglomeration (F),
- ❖ International Office for Water (F).

The project will have a permanent mechanism available that will enable new Swiss, French, German and Dutch partners to join the work.

The total budget of the project amounts to 3.600 Million EURO, half financed by the European INTERREG IIIb North West European (NWE) program.

[www.iowater.org](http://www.iowater.org)  
Water world on Internet

# WaterStrategyMan

## An international conference organized in Paris

This WaterStrategyMan research project, which is being implemented from January 2002 to June 2006, aims at developing and **evaluating alternative strategies for water resource management and the regulation of water demands in the arid zones of Southern Europe**. Methodologies, tools, collection of directives and implementation protocols will be developed so that the decision-makers may access to a set of integrated management strategies.

IOWater is involved in the project and organized, from 8 to 10 October 2003 in Paris, the first seminar for presenting its results, in partnership with the National School of Public Works.

The goal of this seminar was to present the progress made on the following tasks:

- **analysis of the current context** (existing institutions, regulation methods, current uses, water availability, infrastructures for mobilizing the resource, etc.),



- **preparation of an analysis grid to define the types of arid zone in terms of resource availability**, of uses to meet, management practices and mechanisms for water policy,

- **development of a methodology for assessing resource availability and demands** and for estimating the economic and environmental costs of actions to improve water management,

- **testing and adaptations of the different models and tools for water resource management.**

Assessment of their applicability to arid zones and their improvement. These tools and models are used for formulating and evaluating the scenarios on demand versus water availability.

- **collection of data on water resources and demands**, preparation of a database combined with a Geographic Information System.

The project is coordinated by the National Technical University of Athens (Greece) and gathers partners from Cyprus, France, Germany, Israel, Italy, Portugal and Spain.

For more information:

<http://environ.chemeng.ntua.gr/WSM/>

## EUROPEAN TOPIC CENTER ON WATER

### Eurowaternet emissions



The European Environment Agency (EEA) is one of the specialized agencies of the European Union. It covers 31 European countries and is producing reliable and comparable information for the decision-makers and the public.

In some of its areas of responsibility it entrusts "Topic Centers" to collect and organize data and produce environmental indicators and evaluations for its own needs.

**IOWater has been member of the European Topic Center on Water (ETC/WTR) since 1995.**

Within this framework, IOWater is defining a method for collecting and organizing the data called "EUROWATERNET-Emissions". It aims at retrieving the information on the polluting emissions of all kinds into water, requested by the new Water Framework Directive.

In order to demonstrate its feasibility, **IOWater created a database including the data on emissions available in different countries covered by the EEA. It currently gathers 100,000 emission data concerning 3,000 geographic areas.**

A test is also under way to determine whether the data available in the pilot basins, which are testing the "pressure and impact" aspects for the Framework Directive, may enable the meeting of the needs of the Directive and also of the EEA.

The positive results of this work enable us to hope for the "EUROWATERNET-Emissions" sustainability, with the publication of a guide for the collection and implementation of a yearly data collection in all the EEA countries.

### A European IRBM Working Group

Four working groups were created to continue the European work on the definition of the conditions for the implementation of the Water Framework Directive.

**France is jointly chairing the IRBM (Integrated River Basin Management) Group with Spain.**

IOWater is providing technical support to the French Water Directorate for following-up this Working Group: constitutive meeting in Paris on 10 and 11 March, plenary meeting in Barcelona on 2 and 3 July 2003.

The work dealt with the progress made by the drafting groups on economic aspects, and with the opportunity of thinking about measurement programs. It also dealt with a guide on wetlands and with the test phase that could start on the pilot basins.



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## TO THE "WEST", SOMETHING NEW!

The Water Framework Directive (WFD) has an original approach to water management, especially due to **the importance given to the economic aspects**, either for the analysis of water uses or for the choice of the measures needed to achieve its objectives.

The implementation of this innovative approach requires that all the stakeholders master the concepts, methods and the often complex economic notions.

**Although the "WATECO" methodological guide, prepared for the Framework Directive, is an essential tool, it must be approved by all stakeholders, who have a very diverse knowledge of economics.** A popularization and dissemination work must be carried out: this is the WEST (Water Economics Training) project, entrusted to IOWater by the European Commission (DG Environment).

**The WEST project aims to develop specific training tools** that take this diversity of knowledge into account to give each stakeholder the information needed to complete its assignment (economic study, program definition, decision-making, etc.). Three target groups were selected to ensure

appropriateness between training tools and users:

- **the decision-makers**, who will define the orientations of water management in the districts and who will thus use the economic works as tools for decision-making support;
- **the water professionals**, who will prepare the operational documents (management plan in particular) and who will rely on outside experts whenever necessary. They will have a role of interface between decision-makers and experts;
- **the economists**, to whom will be entrusted the studies needed for the preparation of this management plan. Their knowledge of water management in general, of the WFD in particular and lastly of the significance of economics in this process will be prevailing.

**The developed products are adapted to each group and case studies are widely used.**

This project, launched at the end of 2002, was completed in October 2003. The European Commission will widely disseminate these tools in the coming months to allow their most widespread use and a consistent practice within the European Union.

## WFD-COMMUNITY Remote training and collaborative work

**The objective of the experimental WFD-Community project is the remote training of young executives of basin organizations.** The basic principle is the creation of **a community of professionals** who exchange the different aspects of their activities and mutually train themselves under the leadership of instructors and with the support of tutors.

**The training topic is the implementation of the European Water Framework Directive (WFD).**

Work is remotely done, using an electronic tool that facilitates structured exchanges, the capitalization of knowledge, collaborative work, etc. and the remote intervening of experts through web-conferences.

IOWater manages this 36-month project. It will mobilize the members of the International Network of Basin Organizations, the Gdansk Water Foundation in Poland, Hydrocontrol in Italy, the National Water Administration in Romania, the Polytechnical University of Bucharest.

It is supported by the European Leonardo da Vinci program.

## "AQUALIBRIUM"

In 2002, IOWater was involved in the European "Aqualibrium" project with German and Spanish partners.

**The goal was to make an inventory of the private sector participation in the management of water supply and sanitation utilities in the 15 Member States of the EU and to draw some trends.**

Very interested by this work, the European Commission (DG Research) decided to publish it.

This report, that should be disseminated at the end of 2003, will provide a short review of national situations, in terms of legal framework and its evolution, as well as the stakeholders' perception and discussion topics.

It underlines the significance of the national context (history, culture, etc.) although common features do exist in the Member States, starting with the ongoing discussion on performance indicators and benchmarking.

## IWRM.NET

### For an overview of water-related research in Europe

**The IWRM.Net project will consist in an exhaustive inventory of the water-related research programs, financed and organized by the Member and Candidate States, to obtain a view, as reliable as possible, of the efforts made outside European funds to improve Integrated Water Resource Management (IWRM).**

Using this inventory and the analysis of ongoing programs, a workshop will gather about fifty managers of these programs to examine the conditions for exchange, and even for sharing, which could be developed between them. These links, to be defined, could be supported by the 6th Framework Program for Research and Development (ERA.Net), a system implemented to support the creation of a **European Research Area**.

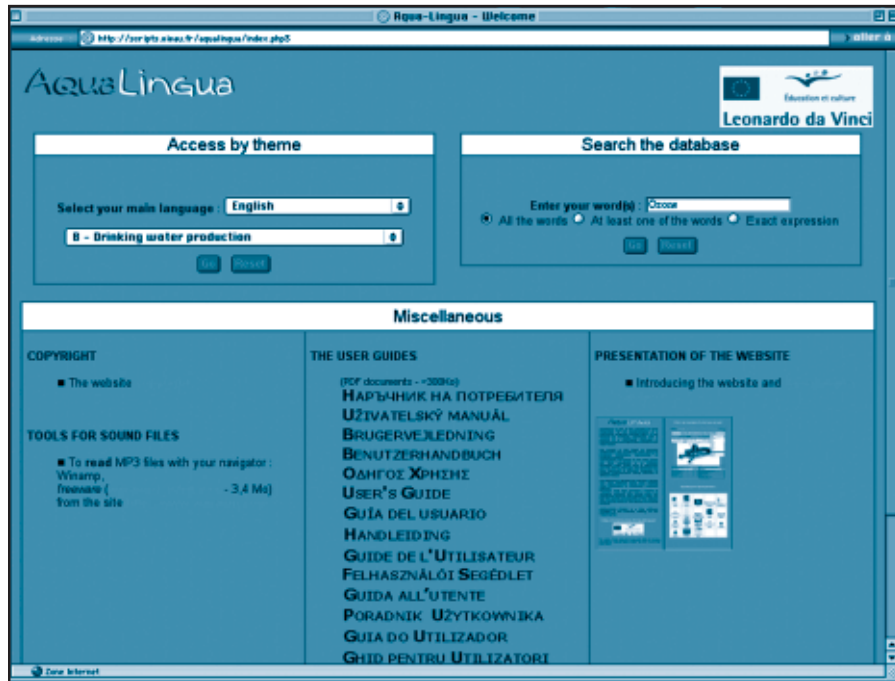
The project is managed by the International Network of Basin Organizations and its Scientific Council and is implemented by IOWater.

Local surveys will be subcontracted to the usual partners of IOWater in the various countries.

This 9-month project is financed by the European Commission – DG Research.

# "AQUALINGUA"

## Water technologies in 15 languages



Within the Leonardo Da Vinci program, the "Aqualingua" consortium, in which IOWater is partner, has developed an original system for the creation of technical drawings on water, with a legend drafted by professionals and aiming at a wide dissemination to the world of basic education and professional training in the water sector.

"Aqualingua" is thus made up of:

- a bank of educational water-related materials, including about 150 selected technological diagrams, drawn up or adapted

by the consortium with 6 large topics and an access to the titles, legends and descriptive wording in 15 languages, in written and spoken form, with a search engine capable of operating in all these languages,

- a multilingual sharing system for creating and translating educational materials on water and bringing his/her own contribution using his/her own language,
- [www.federgasacqua.it/aqualingua](http://www.federgasacqua.it/aqualingua) is the site for dissemination to the system users and especially to the



training organizations and universities with a direct link to the relays of the "Aqualingua" network.

Today, the areas already covered are the following:

- ★ drinking water production (treatment techniques, etc.),
- ★ water supply (networks, valves, pumps, etc.),
- ★ collective and on-site sanitation,
- ★ river development.

Access to this site and its contents is free of charge within the European project.

In addition to the project itself, the exploitation of this site led us to propose to all industrialists and specialists of water-related training in Europe to contact us to continue to feed "Aqualingua" with new areas or generate technological innovations:

- tertiary treatments and urban and domestic wastewaters,
- advanced technologies for drinking water treatment,
- on-site treatment and rehabilitation of groundwater, soils and rivers,
- techniques for saving water in households, etc.

# "EUROSTAT"

## A manual on the collection of water-related statistical data

The Statistics Office of the European Commission, EUROSTAT is in charge of collecting all the data of Europe on all sectors, environment included. A questionnaire, jointly drafted with the OECD, on the status of the environment and covering all aspects of the water cycle is sent to each State, member of one or the other organization.

The section on inland waters deals with available quantities, abstractions and discharges of the various economic stakeholders and the quantities of polluting substances produced, treated and discharged.

In order to improve data comparability, EUROSTAT wished to have a manual on data collection, intended for guiding the national statistics departments in the collection, estimation,

aggregation and analysis of water data. It should cover three aspects:

- 1 explaining the contents of each table and especially the main concepts and their structure, using figures in particular,
- 2 inventorying the methods used by the Member States to reply to each party,
- 3 proposing the best methods and practices identified in the reviewed countries.

This manual should provide a clear description of the recommended terms and methods, including the different sectors intervening in the water cycle from abstraction to discharge.

IOWater, associated with CEH-Wallingford, WRc, and CEDEX, was selected to conceive this manual. The work, which lasted over a year and a half, is now ending with the publication of a book of about a hundred pages for a first use during the collection of 2004.



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## SLOVENIA

### Assistance with the implementation of the Training Center for Water Professions

The feasibility study, carried out by IOWater in 2001-2002, had emphasized the strategic objectives of the training center.

The Slovenian Training Center for Water Professions (CSFME) must be a tool for promoting know-how in the water sector, in areas related to regulations, techniques and the management of utilities.

The CSFME should assist with and promote:

- the implementation of the European water-related Directives,
- the economic readjustment of the Water and Sanitation Utilities (increase of self-investment capacities of State corporations, recovery of developing capacities),
- the improvement of environmental protection.

Therefore, the training programs to be proposed should prioritize in their design a logic of return on investment and deal with topics linked to regulations, techniques and environmental protection.

The project for assistance with the creation of the CSFME, supported by the French Ministry for Foreign Affairs, includes the following various components:

- ➔ an administrative and financial component relative to the provisional organization of the center and the financial arrangement for infrastructures and equipment;
- ➔ a technical component for the design of the center's infrastructures and facilities: general architecture and educational units;
- ➔ a component dealing with capacity building including the training of Slovenian trainers and the drawing up of educational kits suited to the local context.

These different activities are led by IOWater experts in support to the team in charge of the implementation of the CSFME, designated by the Slovenian Ministry of the Environment.

In 2003, IOWater assistance mainly included the following components:

#### **Administrative and financial component:**

- **financial arrangement:** assistance to the Slovenian Government with the search for European funds as a counterpart of the Slovenian own funds,
- **preparation of statutes:** legal character of the center, participation of the different concerned parties in the Board of Directors (Ministries, Chamber of Commerce, professional associations of the water sector, Municipalities).

#### **Technical component**

Assistance to the Slovenian project team as regards the implantation sites: analysis of the two sites proposed by the Slovenian Ministry of the Environment (Celje and Dombasle), advantages / disadvantages of each site, possibility of keeping these two centers by specializing them.

## POLAND

### Support to the decentralized and participatory management of water resources

#### **Decentralized implementation of the European Directives**

The project is being implemented by the Water Management Office (BGE) under the aegis of the Ministry of the Environment, in partnership with the Polish Water Agencies (RZGWs) and Gdansk Water Foundation (GFW). It is financed by the French Ministries for Foreign Affairs and of Ecology and Sustainable Development. It took place from March 2002 to the end of 2003.

In 2003, the following activities were carried out:

- ① **Continuation of the cooperation between the Polish RZGWs, IOWater and the French Water Agencies,** in particular a mission of two experts from the Seine-Normandie Water Agency in March 2003 on an economic analysis for the implementation of the Framework Directive and a visit of the Warsaw RZGW to the Adour-Garonne Water Agency in July.

- ② **Assistance to the local and regional Authorities:** the implementation of the European Directives can only be effective if the regional and local stakeholders are informed and able to make the decisions needed in the areas under their responsibility. For this purpose, a 1-week study tour was organized in France in October 2003 for about thirty participants

from the Environmental Directorates, Voivodships and regions, and Polish local Authorities.

- ③ **Methodology for developing an on-line information service:** a first meeting was held in November 2003 in Limoges to analyze the possibility of developing a service such as "C@rtel-water" in Poland.



From One Continent to Another

# UKRAINE

## Legal and institutional assistance

In 1999, in the TACIS project, managed by the IOWater/Verseau group, a working group of the Ukrainian Ministry of the Environment and Natural Resources started learning about water resource management at the level of river basins.

At the end of this training period, this group started the drafting of texts for the creation of a **Commission for the South BUG basin**, having a co-ordination and planning assignment for actions of common interest in the basin.

The results obtained in the Bug basin have been sufficiently conclusive to go further than the pilot experiment and start a redesign on a national scale. The Ministry thus initiated a reform of the legislative and institutional framework in force.

The current cooperation project, financed by the French Ministries for Foreign Affairs and of Ecology and Sustainable Development, deals with the 4 following actions:

- transfer of legal and institutional know-how on integrated water resource management at the level of river basins, based on the European Framework Directive of 2000 and on the French Water Law,
- assistance with the drafting of a water law adapted to the Ukrainian and international context as this country has **4 large transboundary rivers: Dniepr, Dniestr, Western Bug and Donets**,
- assistance with the creation of an executive body for the South Bug Commission, starting with the Environmental Fund, and preparation of the implementation in other basins, the Dniepr included,
- drafting of documents preparing this body and defining its assignments and means, especially economic and financial means with the aim of controlling pollution and conserving water resources.

This approach shows the will of some Eastern Countries of having their water legislation changed and closer to the vision of the European Union regarding integrated water resource management. **Ukraine, together with Russia, is one of the more advanced country in this field.**

# ROMANIA

## Capacity building: Water management and implementation of the Framework Directive

### Implementation of the Framework Directive: Characterization of river basin districts

The implementation of the Framework Directive requires a lot of work at community level and at the level of each Member State and Candidate Country. **One of the priority objectives is the establishment of a basic inventory of the river basin districts in 2004.**

Following the workshops of Warsaw (Poland), in July 2002, on the analysis of "pressures and impacts" and of Calimanesti (Romania), in November 2002, on the delimitation of "water masses", a technical seminar took place on 11 and 12 September 2003 in Tulcea, Romania.

It was jointly organized by CEENBO Secretariat and IOWater, with the support of the French Ministry of Ecology and Sustainable Development and the Romanian Authorities.

Directly devoted to the preparation of the inventory of river basin districts, this workshop gathered about thirty participants (Bulgaria, Czech Republic, Hungary, Moldova, Romania, Serbia and Slovenia), who were able to present and discuss the progress made in the implementation of the Directive in each country.

The Romanian participants were from Apele Romane – a National Administration, and from the Water Directorates of Prut, Siret, Arges-Vedea, Buzau, Dobrogea-Litoral and the Water Management System of Tulcea, the Danube Delta Biosphere Reserve Authority and Danube Delta National Research Institute.

The representatives of the French Water Agencies (Delegation of the Agencies in Brussels, Rhine-Meuse Agency), of IOWater and the University of Liege presented the French and European experience in this field: community work, French guide for the preparation of the basic inventory, a case study on the first characterization at the level of a French river basin, the gathering and organization of the necessary data, the use of models and software for assessing water quality, specificity of wetlands.

All the papers presented during the workshop have been gathered on a CD-ROM for dissemination. They are also available at:

<http://ceenbo.mobius.ro>

### Capacity building

The French-Romanian bilateral cooperation arrangement plans for an analysis of the feasibility of a **School for Executives addressing all the Romanian civil servants involved in water resource management.**

The implementation of the European Directives (the Framework Directive in particular) will cause changes in the organization of services and in practices that will increase more this training need.

The IOWater experts worked with the following objectives:

- analyzing the consequences of the ongoing reforms and the role assigned to the various organizations at regional and local levels;
- specifying the different tasks to carry out for the implementation of the European directives and estimating the importance of the staff concerned and its geographic distribution;
- constituting a follow-up group, made up of an executive from each river basin, and training this group;
- preparing a questionnaire to evaluate the assignments, the skills required and training needs for each team;
- processing the replies to this questionnaire and preparing a first grid of training needs;
- assessing the existing training resources and presenting the different options for creating the School for Executives.



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### Reminder of the context

The twinning process consists in providing the Central and Eastern European countries, which are members and candidates to accessing the European Union, with all the technical and administrative knowledge they require to include in their national law all the legislative and regulatory texts already passed and applied by the 15 current Member States.

Institutional capacity building through twinning between counterpart Eastern and Western administrations, is one of the priorities of the European Commission's PHARE program.

This multi-year comprehensive cooperation aims at providing each member or candidate country with the efficient and operational organization required to fulfill its future community obligations.

An agreement is thus signed by one of these Countries and the Member

State selected for each twinning arrangement. It defines the expected outputs of the project, the responsibilities of each party, the implementation methods to achieve the result and their cost.

When several Member States are concerned, one of them is the project leader and signs the agreement on behalf of the others.

The following cooperation methods are planned for each twinning arrangement:

- the long-term and full-time secondment of civil servants (Pre-Accession Advisers) from Member States in the candidate countries,
- short assignments carried out by specialists in each Directive in the Countries concerned,
- practical training courses in the Member States' administrations and organizations concerned for

experts from the member or candidate countries participating in the transposition phase,

- training of personnel who will have to operate the new systems in their respective countries, and particularly training of trainers.

The European Commission has established a new process, called "Twinning Light". It enables the development of shorter twinning projects without any need for the long-term secondment of an expert.

Regarding the preparation and implementation of twinning agreements relative to the water sector, **the International Office for Water has been intervening since 1999 as an operator for the French Ministry of Ecology and Sustainable Development in Bulgaria, Hungary, Estonia, Poland, Romania, Slovenia and the Czech Republic.**

## HUNGARY

### Improvement of the system for controlling accidental water pollution

Two French experts worked to have a clear view of the structure of the main basin information used in Hungary for water management and identified the three following improvements in existing and future applications:

- need for compliance of the GIS information layers (rivers, lakes, catchment areas and limits of water bodies, etc.) with Framework Directive requirements;
- need for linking the databases of the water and environment sectors and for agreement on the use of a national reference system for all kinds of data shared in the environment sector;
- need for improving the collection of digital information in existing databases to prepare the emergency basin plans.

**The "Monitoring of surface and ground waters" component includes recommendations for the follow-up of surface and ground waters and institutional capacity building for the implementation of the Framework Directive.**

The basic elements of the ecological monitoring were institutionalized for surface water.

The project, started in November 2002, was completed at the end of 2003.

### Assistance with the implementation of the Water Framework Directive

The overall objective of the twinning was to assist Hungary with the readjustment of the law, regulations and national procedures to take into account some specific aspects of the Water Framework Directive and with the institutional capacity building needed to comply with the requirements of this directive regarding planning, regulations, reporting and information.

The project, led by IOWater and completed at the end of 2003, enabled an assistance to the Hungarian Ministry of the Environment and Water (MoEW) with the implementation of the regulatory procedures, defined in the Directive, by developing its national system for the control of accidental water pollution and the system for monitoring surface and ground waters.

The "Accidental water pollution" component dealt with:

- ✦ the introduction of the "safe installations" principle,
- ✦ the improvement of the system for the control of accidental pollution according to the WFD,
- ✦ the transfer of knowledge and operational experience for quick and efficient responses,
- ✦ the choice and good use of the new response techniques, consistent with the Hungarian strategy for the control of accidental pollution.

This component included a study tour in France, whose objective was to briefly present professional training in France to help the participants **create a training center on accidental pollution in Hungary**. The four main participants of the future project were in the delegation: Dr Josef Gayer and Mr. Istvan Kantor, directors of the training centers of VITUKI and ABKSZ respectively (these two units were selected to accommodate the future training courses in Hungary), Mr. Tamás Kőszeghy and Dr Eva Deseő, who initiated the project at the Ministry of the Environment and Water.

They visited three different institutions involved in this specific area of the environment: the "CEDRE" in Brest, for response to accidental pollution, the "CFDE" in Paris, for the training of environmental inspectors and the IOWater training center in La Souterraine for the training of technicians of the water sector.

This visit allowed to show how non-profit and self-financed institutions are organizing professional training in France. These three centers have been mandated by the State to carry out this task of public interest and to provide professional training courses, based on their experience.



# Pre-Accession Twinning Agreements

## BULGARIA

The International Office for Water, as an organization empowered by the French Ministry of Ecology and Sustainable Development and by the European Commission, participated in Bulgaria in the first two generations of PHARE institutional twinning arrangements.

Therefore:

1 in the "1998 twinning", as part of a Group of Member States (Germany - group leader -, Austria and France), IOWater was responsible for the Water component, that depended on the Bulgarian Ministry of the Environment and Water with the overall objective of transposing the "community acquisition" relative to urban wastewaters, on the one hand, and to dangerous substances, on the other.

2 in the "1999 twinning", the Bulgarian Ministry of the Environment and Water selected the French proposal made by the International Office for Water that met the overall objective of creating basin organizations: **four basin organizations were officially created, their directors nominated and the first activities carried out, taking into account the provisions of the Water Framework Directive.**

As regards the "2000 twinning", a new group of Member States was created by Germany and France - France being the group leader - to meet the overall objectives of transposing the Directives relative to water supply, to waters for fish farming and oyster farming, to bathing waters and to the discharge of dangerous substances.

The recipient Ministries of this last twinning are, of course, the Bulgarian Ministry of the Environment and Water (especially the Department of Water Protection, the Regional Inspectorates for the Environment and Basin Authorities) but also the Bulgarian Ministry of Health (especially the Department of

Health Protection and National Sanitary Control, the Regional Inspectorates for Hygiene and Epidemiology).

Owing to the scope of the specific objectives, two Pre-Accession Advisers were nominated:

- Dr Martin Socher, Head of the Department "Water Resource Management" of the Environment Agency of Leipzig (Germany) in order to implement the sub-project dealing with drinking water supply.
- Mr. Hakim Taleb, Chargé d'Affaires at the Loire-Brittany Water Agency, was in charge of the program of support to industries. He was responsible for the sub-project dealing with waters for fish farming and oyster farming, bathing waters and discharges of dangerous substances. He fulfilled his job at the Bulgarian Ministry of the Environment and Water from September 2002 to October 2003. IOWater led this twinning by participating in or coordinating the different experts' assignments and took charge of the overall supervision.

The project was completed with a closing seminar, held in Sofia at the end of October 2003, during which the Bulgarian Authorities expressed their satisfaction.



## CZECH REPUBLIC

The International Office for Water, as empowered organization, participated in the Czech Republic in two generations of PHARE institutional twinning arrangements.

The first "1999 twinning" was carried out by a Group of Member States (United Kingdom - group leader -, Austria and France), in which the International Office for Water was responsible for the "Nitrates" component, that mainly depended on the Czech Ministry of Agriculture, with the overall objective of transposing the corresponding "community acquisition".

The second "2001 twinning" deals with the implementation of the European Framework Directive 2000/60/EC. It is carried out by a Group of Member States (United Kingdom - group leader -, Austria and France), in which IOWater is mainly responsible for the organization of management plans at the level of a pilot river basin (Orlice Povodi), for public participation and the network for monitoring and following-up aquatic environments.

This twinning officially started on 6 May 2002 and will end on 31 January 2004.

The permanent team is composed of two Pre-Accession Advisers, the first, Mr. James Hunt, for the twinning duration, and the second, Sylvie Jégo, French Adour-Garonne Water Agency, for a 12-month period at the Czech Ministry of the Environment.

In the part entrusted to France, significant results were obtained, especially on:

- ❖ the drafting of a manual for the evaluation of procedures;
- ❖ the training on procedures for preparing a management plan for the pilot Basin;
- ❖ the training on the use of the decision-making support system;
- ❖ the development of a strategy for long-term data management;
- ❖ the development of strategies for medium-term and short-term data management;
- ❖ a strategy for dialogue with partners and the population - with a

view to using it in the preparation of a management plan in the pilot Orlice basin;

- ❖ the practical implementation of this strategy.

Others are being finalized and especially deal with:

- the economic aspects of the Framework Directive;
- an illustration: the characterization of the Orlice basin.

The corresponding activities could be carried out, thanks to the participation of experts from the French Ministry of Ecology and Sustainable Development, the Water Agencies and of the International Office for Water, on the one hand, and experts from the Czech Ministries of Agriculture and the Environment and of the Orlice Povodi on the other.



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## SLOVENIA

### How better assess water quality

With the accession to the European Union and the implementation of the Water Framework Directive in the background, a PHARE twinning project was implemented between January and July 2003 by France and Slovenia. The International Office for Water intervened in the preparation and implementation of this twinning project as an operator of the French Ministry of Ecology and Sustainable Development. Under the supervision of the Ministry of the Environment, Energy and Regional Planning, the new Slovenian Environment Agency was the main recipient of the project, which dealt with tools for water quality assessment.

This twinning included 5 activity areas:

- ① analysis of Slovenian needs and presentation of the French experience in water quality assessment,
- ① evaluation and proposal for improving the networks, monitoring surface and ground waters,
- ① providing of tools for water quality assessment,
- ① work on the Kamniska Bistrica basin,

- ① additional work for preparing the computation of integrated emissions.

### Various stakeholders

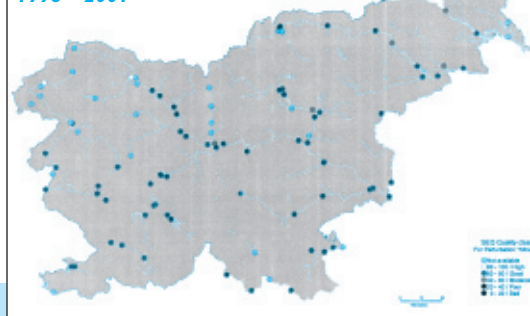
Once the Slovenian experts had selected the most appropriate software for assessing water quality, the provision, installation and customization of this software to the Slovenian context and data was carried out during ten assignments of experts from IFEN, Loire-Brittany Water Agency, BRGM and IOWater.

If the installation of the **Nopolu software**, developed by the Beture-Cerec company in partnership with IFEN, was the basis of this work, the **Norber software**, developed by the Loire-Brittany Water Agency and **SEQ-Eau** (inter-agency product), was also very appreciated by the Slovenian experts. This twinning also included the presentation of the progress made by France in the implementation of the Framework Directive, especially regarding the aspects related to the delimitation and characterization of water masses.

### Positive outcome

Although completed in a very short time, this project was the occasion of providing practical tools for the inventory and decision-making support regarding the aspects of water quality on the national scale or on the scale of a basin. The French experts, who participated in this twinning, underlined the benefit of such projects dealing with topics corresponding to their current concerns. The work carried out for implementing the Water Framework Directive in the Member States and Candidate Countries facilitated these exchanges, with experts facing the same stakes and objectives.

Water quality map for the "Nitrates" indicator, obtained by using the SEQ and NOPOLU 1998 - 2001



## "NORBER", international version: a software for the evaluation of discharges

**"NORBER". ("Norme d'Objectif de Rejets et Bilan d'Epuration en Rivière" – Objective Standard for discharges and purification diagnostics in rivers) is a calculation tool developed under EXCEL format by the Loire-Brittany Water Agency. It enables the simulation of the impact of point discharges on a watercourse quality.**

Using the entered characteristics of the receiving environment, water quality, flow and quality objectives to be achieved, the tool automatically provides the acceptable flow to meet an objective, expressed in quality class and concentration.

In the case of a town considered as the main discharge, it enables simulating changes in water quality for different types of discharge according to different purification performances, while taking into account the effect of self-purification on a linear river bed up to 50 km.

**"NORBER"** also enables the sizing and positioning of a monitoring network according to a foreseeable change of quality class.

This easy-to-access and user friendly tool had proven its usefulness in different countries (for instance in the twinning arrangements with Bulgaria and Romania). It had especially been appreciated for its capability of generating clear information on the discharges that can be acceptable to a river on the scale of the catchment area. The production of easy-to-understand graphs and figures displaying different possible options, offers to the decision-makers and technicians the elements necessary for making pragmatic decisions to meet specific objectives.

IOWater has steered the implementation of an international version of **"NORBER"**, with financing from the Ministry of Ecology and Sustainable Development. **The software is now available in the English language. It has a new functionality that enables the addition of any new language for use (translation of a list of wordings in an Excel "dictionary" sheet). This enables the users of the different countries to get a version in their national language, thus facilitating the use of the software by institutions.**

This new version of **"NORBER-International"** has already been installed in Slovenia during the recent PHARE twinning on water quality assessment.

## ESTONIA

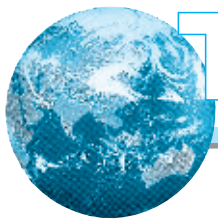
A PHARE twinning agreement was signed by the Estonian Ministry of the Environment and the French Ministry of Ecology and Sustainable Development.

IOWater being the operator, this twinning will deal with methods for implementing the Directives relative to drinking water, wastewater and dangerous substances.

It will also deal with the capacity building of the Slovenian national, regional and local administrations for implementing these Directives.

The project has just started at the end of 2003 with the 1-year secondment of an expert to the Estonian Ministry and of "short-term" specialists from the French Ministry of Ecology and Sustainable Development, Water Agencies, BRGM and IOWater.

[www.iowater.org](http://www.iowater.org)  
Water world on Internet



## TURKEY

### Integrated water resource management at river basins level

Water management at the level of river basins is becoming a priority for the Turkish Authorities (Ministry of the Environment and Ministry of Agriculture in particular).

Among the topics dealt with during the mixed French-Turkish commissions, the following should be outlined:

- ❖ protection areas for the intakes of water intended for human consumption,
- ❖ the compatibility of the different water uses at the level of a river basin,
- ❖ management and conservation of water quality,
- ❖ legislative and regulatory aspects aiming at better water management.

For this purpose, a seminar on integrated water resource management was organized with the support of the French Ministries for Foreign Affairs and of Ecology and Sustainable Development and with the participation of French experts (IOWater, Water Directorate of the Ministry of Ecology and Sustainable Development).

This seminar was attended by the different Turkish Ministries (Environment, Agriculture) and by various Turkish operators of the water sector. Its objective was, on the one hand, the finalization of a strategy document for better water resource management with the different ministries and departments concerned, and, on the other, the identification of projects that could be included in this national strategy and financed by the European Union.



## TUNISIA

### A quality approach for CITET

In 2003, the partnership between the National Training Center for Water Professions (CNFME) and the International Center on Environmental Technologies of Tunis (CITET), which depends on the Tunisian Ministry of Agriculture, Environment and Water Resources, widely developed.

Therefore, this year enabled IOWater to organize 2 seminars in Tunis, dealing with the topics: "Design of pumping stations in sanitation" and "Treatment of industrial effluents".

As a continuation to these seminars, the CNFME is now helping the CITET in its technical assistance assignments and audits in the water sector and industry: follow-up and validation of several technical assistance studies carried by the CITET (surface treatment, paperboard industry, agri-food industry, etc.) and joint audits of industrial wastewater treatment plants in Tunisia.

**On the other hand, CITET has started optimizing its training quality to obtain the ISO 9001 certification in 2004 and requested the CNFME's experience in this field.**

It is to be reminded that the CNFME has been certified ISO 9001/BVQI for several years.

This collaboration on the topic of quality management included three steps:

- 1 audit of the organization of CITET training center to improve the quality of its services,

- 2 a study tour of the CITET executives in charge of training at the CNFME in June 2003,
- 3 quality support to CITET by CNFME up to the ISO 9001 certification for its training activities until August 2004.

**All these activities are financed by GTZ (German Cooperation to Development).**

In 2004, this cooperation should increase, especially regarding the following projects:

- organization of seminars at the CITET on sanitation (water disinfecting, operation of wastewater treatment plants, etc.),
- technological cooperation for the drafting of international technical documents on the adaptation of wastewater treatment techniques to the Maghreb context and management of international working groups on these topics,
- joint organization of seminars addressing beneficiaries other than Tunisians,
- e-mail coaching in terms of technical assistance to industrialists, etc.



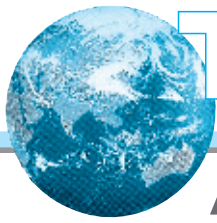
Visit of the executives from the CITET training center to the "CNFME" at La Souterraine



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# The Mediterranean

## ALGERIA

### Assistance to the River Basin Agencies - "ABH"

Assistance has been provided since 1999 to the Algerian River Basin Agencies (ABH) mainly in the form of training courses and also on-site practical training in the French Water Agencies.

Different topics were dealt with, mainly communication, databases and planning. In 2003, the program included:

➤ **Monitoring**

The ABHs have already collected many data and drawn up maps and summary documents that will soon enable them to make inventories of the situation in terms of qualitative and quantitative aspects of water resources.

It is now necessary that the ABHs gather more precise data on water quality, flood hazards and on the aquatic environments and wetlands to have an overall view of the situation regarding the water sector.

➤ **Master plans**

The specific training program, carried out in 2002, enabled the preparation of a work plan model for implementing the Algerian Basin Schemes and the formalization of preliminary proposals for the main orientations and for some parts of the strategy.

Each ABH, which has qualified staff to implement its Basin Scheme, must now adapt this work plan to define the orientations and, above all, the strategy according to the inventory of the situation in its own basin.

Their inventory must be completed regarding drinking water, the management of flood hazards and the management of aquatic environments and wetlands.

In 2003, the ABH managers requested that French experts intervene again to provide on-site assistance to the ABHs for the preparation of these schemes.

➤ **Cartography and Geographic Information Systems**

In addition to these training activities, already started in the previous programs, two 1-week assignments in Algeria of a French specialist in water-related cartography were planned to assist the ABH with the drawing up of these maps, essential tool for the Basin Schemes.

➤ **Basin Committees**

The Algerian Basin Committees are bodies for dialogue between all the water stakeholders (State, local elected

representatives, users), but this tool is currently under-used and it is now important to reactivate it so that the committees fully play their role of evaluating, discussing and approving these schemes.

A French expert's mission is planned for the next meetings of these bodies, in agreement with the ABH management, to help with preparing the presentation of the Basin Schemes and, in a broader sense, with the preparation of the meetings of these Basin Committees.

In addition, two members of French Basin Committees participated in the meetings of the Algerian Basin Committees for directly exchanging their experience.

➤ **Management seminar**

Finally, on the occasion of "Pollutec" 2003, a seminar addressing the managers of the Algerian ABHs was organized for a second phase of training on communication, through meetings and interviews with French specialized journalists and with people in charge of communication in the Seine-Normandy Water Agency and IOWater.

### "Algérienne des eaux" - "ADE"

#### Specialized training program for trainers

The following tasks were carried out in the 2003 program:

- ① **Immersion of the Algerian trainees** into the operational bodies of large French groups, dealing with water, during two weeks.
- ② **Acquisition of the methodology needed for implementing training activities:** this 2-week program dealt with pedagogy per objective, the determination of training needs (methodology, surveys, etc.), the organization of training activities, of individual practical courses on the design, preparation and management of a training course.
- ③ **Facing reality in Training Centers for Water Professions:** the aim of this 2-week step was that the Algerian trainees face the reality of their trainer job. It took place in two French training centers, those of the SAUR and IOWater.

④ **Follow-up and evaluation in Algeria**

At the end of the previous step, it was proposed that the "instructor trainees" face real situations on their own during several weeks in Algeria.

Once completed this period of "in-situ integration" of the knowledge gained during the training program for trainers in France, two experts (SAUR and IOWater) went to Algeria (a 1-week period each) for "coaching-advicing" the Algerian trainers.



*The delegation of the Regional DRHs of ADE in a technical visit*

#### Human resources management and training of trainers

In the 2003 program, the following activities were carried out:

- ① a study tour of the "ADE" General Management in France for them to be presented the activities, organization and resources of the National Training Center for Water Professions in Limoges and La Souterraine (industrial treatment units, technical and educational halls, unit for practical training) and a technical meeting (in Paris) to analyze the prospects and priorities of a French-Algerian cooperation;
- ① a 2-week training course in France for 8 Algerian executives (Regional DRHs of ADE) concerned with the issue of human resource management and dealing with the definition of a methodology suited to "ADE" for preparing references on jobs, skills and training. The definitions of needs, the conception and validation of programs were studied and applied to a case study for each of these three frames of reference.

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# SEMIDE EMWIS

## Euro-Mediterranean Water Information System

**FOURTEEN COUNTRIES ARE ALREADY ONLINE**

**The** Euro-Mediterranean Information System on know-how in the Water Sector - EMWIS - now offers direct access to the information managed by 14 countries of the Mediterranean region (Algeria, Cyprus, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Morocco, Palestine, Portugal, Spain and Turkey).

Other countries have already operational National Focal Points (Austria, Belgium, Egypt, Luxembourg, Syria and Tunisia).

● **Phase 2 : Greater support to the Southern countries of the Basin**

In July 2003, the EU agreed to cofinance the second phase of EMWIS, i.e. a budget amounting to more than 3.3 Million Euros paid by the European Commission, France, Spain and the other participating countries. While keeping in line with the overall objective of strengthening regional cooperation in the water area, the approach consists in developing EMWIS as an integrated network of National Water Information Systems. Thus, the Mediterranean Partner Countries will benefit from a specific support to develop their own national systems in conformity with the standards set at the regional level. Arabic will be introduced in addition to the English and French languages to meet the needs of the eight Arabic-speaking countries of the Euro-Mediterranean Partnership.

<http://www.emwis.org>

The current services will be consolidated: the multilingual topical directory (that inventories more than 2,500 organizations), the electronic flash (more than 5,500 recipients), the electronic forums, legislation, etc. Topical activities (analyses, syntheses and events), focusing on the topics of the Turin Action Plan (199), will be developed to provide new contents at the regional level.

Activities were undertaken in 2003 to continue promoting EMWIS as a preamble to the effective start of this second phase:

- finalization of mini CD-ROMs, with a credit card format, which incorporate various presentations of EMWIS in French and English, and the "newsletters". The PowerPoint presentation of EMWIS has already been translated into Arabic;
- continuation of the improvement of Internet connections for the Algerian (satellite connection) and Jordanian (specialized cable connection) Focal Points;
- continuous updating of the Technical Unit's server;
- three publications of EMWIS electronic flash, disseminated to 1,350 people in the French version and to 4,100 people in the English version;

- continuation of the development of the topical directory on water;
  - presentation of EMWIS during international events, such as the Kyoto World Water Forum, workshops, seminars and conferences on water in the Mediterranean in Madrid and Montpellier.
- **A tool for European cooperation in the Mediterranean**

The European Commission has chosen EMWIS as the information and cooperation tool for the Regional Euro-Mediterranean Program on local water management (MEDA-Water) and the Mediterranean Component of the European Water Initiative.

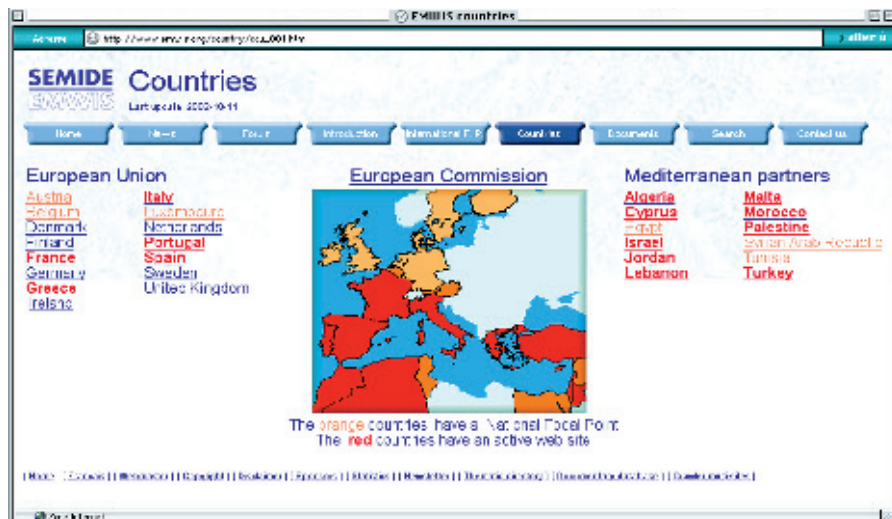
Therefore, the progress made in the MEDA-Water program and in the 8 projects launched in 2003 is presented on the EMWIS website. A close collaboration is kept with "national facilitators" and the "IME", the organization in charge of following up the MEDA-Water program.

● **The Mediterranean Network of Basin Organizations**

Following the cooperation agreement signed with INBO in May 2002, EMWIS has relayed the first General Assembly of the Regional Mediterranean Network (MENBO), Valencia (November 2003), and rerouted the website :

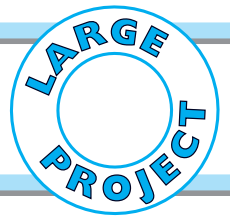
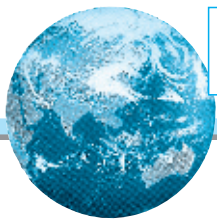
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<http://www.emwis.org>



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Large Project in the Mediterranean



CONTINUATION OF THE COOPERATION WITH

**In** 2003, the French-Mexican cooperation, financed by the French Ministry for Foreign Affairs and CNA, dealt with the following actions, led by IOWater:

**Planning**

In order to improve the Mexican planning tools, a conceptual and operational methodology is needed at the national level and at the level of the **two pilot basins: Mexico Valley and Yucatan.**

French assistance dealt with the analysis of the planning documents provided for by the Mexican Authorities, the preparation of proposals to improve their documents using the French experience (the method applied in the French SDAGEs and SAGEs), emphasizing successes and correcting weaknesses and taking into account the specific aspects of the Mexican context.

Two pilot basins were used for the preparation of experimental Basin Master plans in accordance with the recommendations of the National Hydrological Program (2001-2006): the Mexico Valley Basin twinned with Seine-Normandy ("urban" basins) on the one hand, and the Rio Panuco basin twinned with the Loire-Brittany Water Agency ("agricultural" basins) on the other.

**Application of the "user-pays" principle**

No integrated water resource management policy can really be effective without any mobilization of sustainable financing. The financial participation of users is essential and based on the application of the "user-pays" principle.

The assistance focused on analyzing the successes and failures of the current Mexican tax recovery system (basic principles and application), on preparing proposals for improvement, taking into account the French experience and that of other European countries.

**Launching of the first Water Information and the first steps towards the creation of the**

**With the decentralization of water resource management, the "Basin Councils" created in Mexico have quickly felt the need to access to the information required to enable them making the appropriate decisions.**

In order to meet this demand, the GCC ("Gerencia de los Consejos de Cuenca" - a unit of the CNA) in charge of coordinating the setting-up of these "basin councils", has been studying for more than 2 years the possibility of **developing information centers, called CICAs (Centros de Información y Consulta sobre el Agua) in each basin.**

For this purpose, various information assignments and experts' missions, carried out in 2000 and 2002 by the International Office for Water and French Water Agencies, had already provided technical assistance with the definition of the organizational and technical references required for a consistent development of the first CICAs.

These assignments continued in 2003, thanks to the "Program of Assistance to Mexico in the Water Sector" financed by the French Ministry for Foreign Affairs.

At the beginning of 2003, the "GCC" proposals, relative to the "CICA" and "RMIA" projects, were positively accepted at the local and national levels:

- validation by the "CNA" of the conceptual draft prepared with IOWater;
- the first coordination meetings inside the "CNA", and inter-institutional ones with INEGI, SEMARNAT and IMTA, with a view of preparing cooperation protocols between them;
- introduction of the "CICA" and "RMIA" concepts in the new water law passed by the Parliament (see box next page);
- **unanimous adoption by the Basin Committees of the Yucatan Peninsula and Mexico Valley (a basin which includes Mexico City), of the technical and financial projects proposed for launching the pilot "CICAs".**

The Governor of Quintana Roo already designated a full-time engineer to contribute to the development of the Yucatan "CICA".

**Year 2003 has thus been a study of the practical and effective implementation of the "CICAs" and "RMIA".**



# "CNA"

## WITH THE "COMISIÓN NACIONAL DEL AGUA" -" CNA"

### and Consultation Centers (CICAs) Mexican Water Information Network (RMIA)

It also enabled:

- ❖ the creation of the first "RMIA" working groups;
- ❖ the organization of a coordination unit for the "CICAs" in the "GCC";
- ❖ the mobilization of the funds and staff required for the first two "CICAs";
- ❖ the training of the people in charge of the 2 pilot "CICAs" and of the "RMIA", during a study tour in France for analyzing the French experience in the management of water data and information;
- ❖ the technical organization and the launching of activities of the first 2 "CICAs";
- ❖ the promotion of the first results to other basin committees.

Each "CICA" should indeed play the role:

- of a database on the basin water resources,
- of a documentation and information center gathering all the available documents on the surface and ground water resources in the basin,
- of a center for the education and awareness of the water users and local population,
- of the head office for the Basin Committee secretariat.

It is also planned that all "CICAs" adopt common frames of reference and work methods, made consistent at the federal level to feed the "RMIA".

In order to achieve these objectives, the CNA/IOWater cooperation already enabled:

- ❖ the preparation of a short-term action plan;



National Meeting of Basin Councils  
October 2003 - Mexico DC



The expertise provided by IOWater in 2003 led to:

- \* the definition of the architecture and specifications of the information management and processing system (directory, data, books, articles, studies, etc., either hard-copy or in an electronic form on the basin scale);
- \* the development of technical and managerial tools with the corresponding training materials;
- \* the drafting of partnership conventions with all the relevant information and documentation producers (universities, associations, private companies, schools, etc.);
- \* the drawing up of operational rules for the "CICAs" ensuring dynamic management.

A quick implementation of the "CICAs" was requested by the representatives of the Basin and Groundwater Councils during their second national meeting, which took place in Mexico DC at the end of October 2003.

### The reform of the Federal Water Law

The reform of the law on National waters is now passed by the two assemblies and is awaiting the signature of the President of the Republic.

According to this reform, the "CNA" will become a decentralized organization, a governmental body, with legal identity and financial autonomy.

This reform gives an official character to the "CICA/RMIA" project in its clause 15.

"Hydrological planning at the national level and at the level of the basins will rely on a National Network and System for Water-related Data and Information ("RMIA") for which the "CNA" is responsible and on Information and Consultation Centers for Water ("CICAs"), of a regional nature, whose creation will be supported by the Commission and by the Basin Organizations".



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[www.inbo-news.org](http://www.inbo-news.org)



**The network focuses on the European Water Framework Directive**

The **Aqu@docINTER** project consists in building a global network of national water information centers, offering easy, unified and multilingual access (in French, English, Spanish, Portuguese, Eastern European languages, ...), through a common portal on the Internet, to the documentation, experiences and experts' knowledge available in all the partner countries, especially those participating in the International Network of Basin Organizations (INBO).

Thus **Aqu@docINTER** relies, in each country, on national focal points, called **National Relay Documentation Centers - NRDCs**.

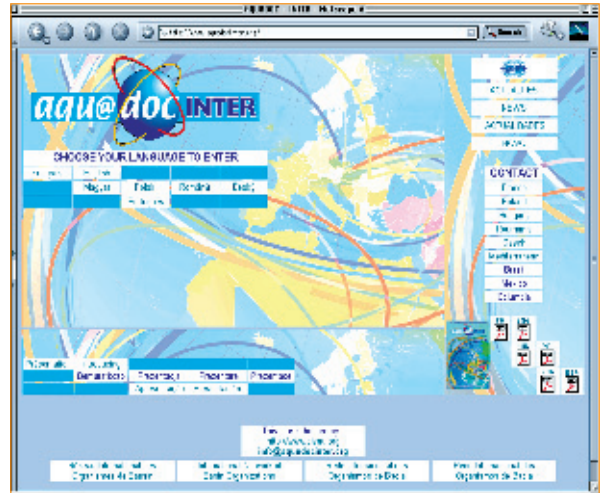
These **NRDCs** gather information in their respective country. They check, organize and make this information available according to the project specifications and an organizational framework. This enables access to this information by all the users of each country and of the world through a common server on the Internet.

The **Aqu@docINTER** network has been extending between IOWater (France) and VITUKI (Hungary), IMGW (Poland), Povodi Moravy (Czech Republic), and Apele Romane (Romania).

**It has already a portal of water activities in these countries, especially focusing on the European Framework Directive of 2000.**

In addition to **multilingual access to the water-related documentary bases** of these countries, to on-line texts and to experts' directories, its new objective aims at informing monthly on practical, institutional, economic, ecological, technical progress and on the results of ongoing research in each country to achieve the objectives of the Framework Directive.

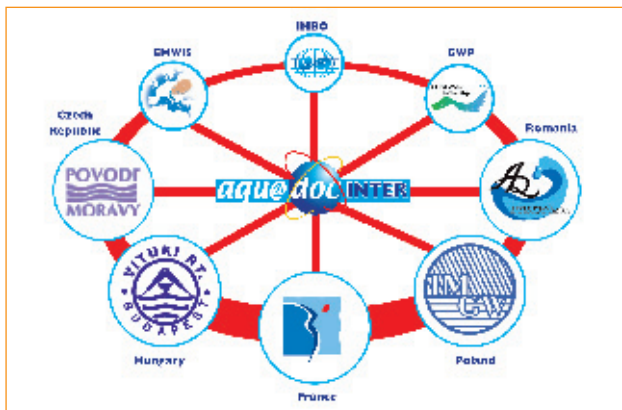
It should be remembered that the Framework Directive includes result-oriented objectives to achieve water quality and especially the good (ecological, physico-chemical, etc.) status of water masses before 2015.



**Portal home page: [www.aquadocinter.org](http://www.aquadocinter.org)**

participation in water management, on the in-depth economic analyses needed to assess water cost and its paying by the users, etc.

The **Aqu@docINTER** portal also provides, thanks to its water-related information specialists in each country, a summary of the events and news on these topics: publication of national guides for implementing the Directive, assessment of the "good ecological status", research on the economic analysis of water prices, cost recovery, investments, pilot projects for public participation, etc.



A network informing all the water stakeholders of the significant progress made in the countries on this topic was worth creating to achieve these objectives.

In addition, it is also necessary to inform on the measures taken for public partici-



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