INTERNATIONAL NEWS

Capacity building for better water management

COOPERATION
MANAGEMENT
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TRAINING

International Office for Water

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The French National Training Center for Water Professions

Capacity building for better water management

5,800 Trainees in 2007

The International Office for Water trains the stakeholders of the water sector, and now of the waste sector, at **the National Training Center for Water Professions (CNFME).** This center, unique in Europe, has two major assets:

First of all, an exceptional human resource potential without equivalent in the training world. **55 permanent collaborators, including 26 full-time trainers and a maintenance and assistance team** implement most of the training programs proposed in a rich catalogue with **275 training topics** in the water and waste fields.

The advantage of permanently having such a potential is to guarantee a "memory effect" in the design and evolution of the training courses, i.e. to make them evolve by effectively taking into account the remarks of the clients and recipients of these training courses, but also of past experience, permanent source of ideas.

Secondly, for several decades, the **CNFME** has acquired a unique know-how to design, build, make evolve and develop **technological units directly related to the trainees' daily work.** These units, which can be used for presentations, demonstrations or even for working in real situation, are the result of our trainers' teaching experience and of very good relations with all the French and European industrial partners.

800 m² entirely dedicated to networks and hydraulics on the site of Limoges, **30,000 m²** of installations on the site of La Souterraine,centered on drinking water processes, wastewater, industrial water, the building, laying out and control of drinking water supply and sanitation systems, sludge treatment and drying, automation, remote management and maintenance, … without forgetting the laboratory, the analysis and tasting of water.

The quality of this training offer allowed gathering 5,800 trainees in 2007, i.e. a 10% increase as compared to 2006 which was already an exceptional year.

This success is also the result of a rigorous selection of the specialized trainers, who are able, in addition to their widely recognized technical abilities, to transmit their knowledge thanks to their educational skills and who supplement our permanent team.

The **CNFME** proposes modules and "professional training programs", allowing the acquisition of the knowledge and skills necessary for serenely fulfilling the duties of an operator exploiting a system, a river technician, the manager or department head of water syndicates or subcontractor companies, or even the engineer of a consulting firm or the person in charge of the environment in industry, etc.

For a public or private company, professional training is a real investment: for this purpose the **National Training Center for Water Professions** developed, in 2006 and 2007, a tool allowing the measurement of the training-related acquisition.

The **CNFME** would not be entirely "professional" without **the capacity to advise a community or a company in the choice of the best suited training program(s).**

ISO 9000 certified, version 2000, and entirely computerized for registration, convening and invoicing, the **CNFME** makes all its logistics easy and reliable.

All our training courses can be managed in English.

To know our offer in detail, but also the other training and information oportunities, the training of elected officials, the series of technical booklets and our technical tools, there is only one address:

www.iowater.org/cnfme

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Practical work on a pilot unit for wastewater treatment with activated sludge

Training on "waste"

In 2008, **CNFME** will propose **30 training courses in the municipal waste sector.**

This new offer really started in 2007 and proposes:

- good practices for the management and treatment of municipal waste,
- collection and sorting of municipal waste (collection optimization, waste sorting unit, waste reception center, waste of electrical and electronic equipment -WEEE, ...),
- waste treatment and end-use (composting, storage center, incineration, ...),
- characterization and treatment of leachate,
- good management of waste from building sites,
- account taking of hygiene and safety rules,
- waste from the water and sanitation sector (sludge, waste resulting from preliminary treatment, sewer cleaning, …).

To know about this offer in detail and practical conditions, please consult the catalogue 2008 on waste on our website.

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Information: Fax: +33 (0) 5 55 11 47 01 - E-mail: cnfme@oieau.fr

WATERDOC

A new design of the international portal on water information

In 2008, the **WATERDOC portal** will offer a series of new services and topical contents focusing on water:

- **Its new platform for data production and processing,** giving access to documentation bases and full text documents meeting our users and customers' new requirements,
- **Its last-generation search engine** which allows identifying the sources of water information on the Web: documentation bases, French, European and International topical websites.

  The WATERDOC portal offers its users a powerful and exhaustive search with a single request and system interface,
- **Its watch solutions** for optimizing the search for information on various topics, such as the Water Framework Directive in Europe, its transposition into French law, the objectives of the new French Water Law of 2006, the impacts of climate change on water management, water demand management, floods, wetlands, the reform of water intake protection areas, the reform of water policing, the Millennium Development Goals (MDGs), etc.

Our sections:

- **The virtual library** which gathers rich documentation bases of more than **255.000 bibliographical references,** with scientific, technical, legal and economic information in the various European languages. They can be consulted on line on the **WATERDOC** website.
- **The series of IOWater syntheses** dealing with subject-matters chosen for their topicality or their significance.
- **The current events of the month** of all **IOWater** topical and specialized websites.
- **The diary of events:** conferences, seminars and events on a regional, national and international scale.

255,000 References in the different European languages

- **The Journal of Summaries:** the **WATERDOC** portal proposes, upon subscription, an online electronic journal of summaries of 60 international periodicals.
- **Services with added value:** products of specialized topical watch, market research, micro-studies, summary and trend notes. **IOWater** uses its specialized software to collect technological, economic and legal information and has it analyzed by its study engineers and network of specialists.

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waterdoc.iowater.org

The French Water Information System

Data standardization

The French Water Information System (WIS) is designed to meet the needs for public environmental information in the water sector and aims at a consistent management of water data.

It gathers partners, signatories of the WIS Agreement, under the authority of the Water Directorate of the Ministry of Ecology and Sustainable Development (MESD).

According to the new Water Law of December 2006, the WIS organization is now under the responsibility of **ONEMA - National Office for Water and Aquatic Environments.**

WIS relies on common reference frames, databases and websites.

IOWater is in charge of the **National Data Reference Center for Water (SANDRE),** within the WIS Agreement.

SANDRE establishes a common language for water data which contributes to the Water Information System (WIS).

It also draws up the specifications of the WIS architecture, allowing technical interoperability, and manages the reference frames of the WIS.

Year 2007 was marked by various actions aiming at providing more services to its users:

That year, **IOWater** drew up **the catalogue of cartographic water data,** which enables to look for data, to access their description (source, creation date, contact, summary), to download the geographical layers and to visualize them on a dynamic map: www.sandre.eaufrance.fr/geonetwork

IOWater has also written the technical specifications of **SANDRE**, allowing, on the one hand, the exchange of data on water analyses between the Regional Departments of the French Ministry for Health and the Water Suppliers, and, on the other, the laboratories to collect data on field water analyses with a Personal Digital Assistant (PDA).

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www.sandre.eaufrance.fr

FRANCE

Compared analysis of water prices

France-Belgium

There has been a significant increase in the water price since the 1990s on the French national scale, due to the new European Directives implementation between 1990 and 1996.

The highest annual progression was the price of sanitation, which reached 10%. There was a 5% increase per year in the price of drinking water supply over the period.

A study, **ordered by the French Artois-Picardy Water Agency to the International Office for Water,** focused on comparing the water price in the Artois-Picardy Basin with the other prices in France and in some large European cities and on learning some lessons.

Analysis of the water price and invoice

In the Artois-Picardy Basin, the average water price amounted to 3.46 Euros/m^3 in 2006. The average invoice for a household was thus of about 415 Euros for a yearly consumption of 120 m^3.

In 2005, the average share of the water bill in the households' available income reached about 1.6% as compared to 1.12% on the national scale.

Comparison with the average price per m^3 at the European level

The comparison with the French average shows a significant variation, as the average water price on a national scale was 2.77 Euros in 2005, against 3.39 Euros/m^3 on the average in the Artois-Picardy Basin.

In 2006, as compared with the water price in Europe, in cities close to the Artois-Picardy Basin, it seems that the water price was lower in Brussels, Antwerp, Ghent and Liege than in Artois-Picardy, but the prices in Amsterdam, Rotterdam and Middelburg were close to those in Artois-Picardy.

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Governance improvement of drinking water supply and sanitation utilities

The Voiron Community of Agglomerations


Voiron

In France, the creation of Communities of Agglomerations (CA) by the concerned municipalities involves regrouping the drinking water supply and sanitation utilities.

In addition to the legal and financial aspects of this regrouping, these new community services are very often encountering problems in defining their human and material means and facing organizational difficulties. Indeed, it is necessary to find a new sharing of assignments and tasks to meet the needs of the service and the subscribers' requirements.

This was well understood by **the water supply service of the Voiron Community of Agglomerations** (approximately 90.000 inhabitants managed under public corporation): wishing to give its Water Utilities the best possible effectiveness: it selected **IOWater** to help in this project.

After a detailed study of the constraints of the existing water services in each CA municipality, **IOWater proposed a new organization to meet the challenges**. Beyond this proposal, the technical study of the new common structure aimed at defining the human and material means necessary for its operation.

IOWater also helped in defining the functionalities of the information processing system for achieving integrated management of the service, including the reading of meters and the invoicing to subscribers, the automatic calculation of the performance indicators, the management of information flows between the water utility, the sanitation utility and public accounting (Treasury), the follow-up of third parties' actions (from request to invoicing),the direct comparison of the graphic or alphanumeric data of the Geographical Information System and the Electronic Management of Documents.

Owing to the obtained results, **the Voiron Community of Agglomerations also asked IOWater to set up an efficient organization of its sanitation service and to make an appraisal of its technical installations,** more particularly of the pumping stations and wastewater treatment plants.

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National Water Committee

Identification of the French NWC's counterparts over the world

The French National Water Committee (NWC) has two fundamental features: on the one hand, it gives the Government optional advices on the issues of national interest, on the other, its composition is representative of all the stakeholders in water management.

Based on these two criteria, the study, ordered by the French Ministry of Ecology and Sustainable Development, aimed at finding the NWC's counterparts in all the countries of the European Union and in a selection of countries throughout the world.

Out of **the 43 studied countries,** the **IOWater** study shows that about a third has organizations comparable to the French NWC and that, in 8 countries, these organizations were created after 1999. The multiplication of such organizations is thus a relatively recent phenomenon, which corresponds to the spreading of **the obligation of transparency and public participation in the decision-making processes.** The identification of these participative bodies worldwide will, without any doubt, allow increasing international dialogue between "sister organizations".

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FRANCE
Small wastewater treatment plants

Analysis of their operation in the Loire-Brittany Basin

Since February 2007 and for 18 months, **IOWater** has carried out a study of the operation of small capacity wastewater treatment plants (50 to 500 pop.eq) in the Loire-Brittany Basin, in France.

In addition to a synthesis of the operation of these various processes, this study, carried out for **the French Loire-Brittany Water Agency,** also aimed at initiating a network for technical experience sharing between the Basin SATESEs (Technical Assistance Service for the Operation of Wastewater Treatment Plants).

Following the meetings held in the entire basin, four topics were selected for discussion in specific working groups gathering the Basin SATESEs:

- filters planted with reeds,
- sand filters (infiltration-percolation filters and buried filters),
- mixed processes and responses to legal obligations (zero discharge, N and P treatment),
- a cross topic on methods for acceptance of work, self-monitoring, maintenance-hygiene-safety and costs (operation/investments).

While participating in these groups, **IOWater also developed a database on 80 representative sites.**


Filters planted with reeds

The detailed "site-sheets" coming from this database are used as support for the discussions of each working group.

The creation of a specific discussion forum is being finalized to enable each participant to talk about the syntheses and conclusions of the four technical groups.

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Water Worldwide

Country profiles on water management

Within the Multiyear Objective-targeted Convention between **IOWater** and **the French Ministry of Public Works,** country profiles were drawn up for 26 countries in 2007. These profiles mainly present the administrative background and quantified information on water resources which comes from international databases: rainfall, total resources, consumption.

They deal with the politico-institutional mechanisms, with a summary presentation of the stakeholders in water management and regulations.

These profiles also include information on the management of river basins and of water supply and sanitation utilities.

Finally, contacts and bibliographical references allow going further in the search for information.

These profiles are available on line on the website of the **French Water Partnership** for the following countries: **Algeria, Bulgaria, China, Cyprus, Egypt, Estonia, Hungary, Japan, Latvia, Lithuania, Malaysia, Malta, Morocco, the Netherlands, Poland, Romania, Russia, Slovenia, Slovakia, South Africa, South Korea, Thailand, Tunisia, Turkey, the United States of America and Vietnam.**

www.eau-international-france.fr

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IOWater "ENGREF"

10 years of syntheses!


A synthesis on the watering of golf courses

As done every year since 1997, **IOWater** has proposed to the student-engineers of **ENGREF (French National School for Rural Engineering, Water and Forestry),** Water Management curricula, topics for syntheses on current problems in the field of water.

These documents of about fifteen pages, validated by **IOWater** and **"ENGREF"** professors, are an invaluable code of practice, appreciated by the professionals of the sector.

This year, the selected syntheses are:

- wastewater recycled in golf courses and parks,
- neutralization of water before supply,
- biological membrane reagents: experience feedback,
- administrative, technical, economic constraints for the implementation of a water saving policy,
- drinking water supply management in time of crisis,
- storm water reuse and the recycling of wastewater for residential lodgings,
- analysis of the French "Oudin-Santini" law implementation, for launching cooperation projects,
- syntheses of the main donors' strategies in the sector of agricultural water in Africa.

All the syntheses made for 10 years are available on:

waterdoc.iowater.org

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ENGREF

International Network of B

7th World General Assembly

DEBRECEN – HUNGARY – 7-9 JUNE 2007


Madeleine de Grandmaison and Laszlo Kothay

The basins of rivers, lakes and aquifers are the relevant natural geographical territories in which to organize water management.

Indeed, river basins are the natural territories in which water runs on the soil or in the sub soil, whatever are the national or administrative boundaries or limits crossed.

DECLARATION OF DEBRECEN

From 7 to 9 June 2007, **217 delegates coming from 46 Countries,** representatives of governmental administrations in charge of water management, of Basin Organizations, already existing or being created, and from interested bi and multilateral cooperation agencies, met in Debrecen in Hungary, during the seventh General Assembly of the International Network of Basin Organizations (INBO) of which **IOWater** ensures the Permanent Technical Secretariat.

The delegates reaffirmed that freshwater resources are limited and threatened all over the world and that their better governance, respectful of the environment, is one of the main keys to sustainable development.

However, findings are alarming over the world.

Climate change, pollution, wastage, destruction of ecosystems: the situation is serious in many countries and requires urgent implementation of ambitious reforms.

The Millennium Goals for drinking water supply and sanitation can only be achieved with significant and simultaneous progress made to introduce Integrated Water Resources Management (IWRM), organized on the relevant scale of basins of rivers, lakes and aquifers, either local, national or transboundary.

Integrated water resources management at the level of river basins is obviously essential worldwide!

Significant progress has already been made since the 1990s.

River basin management experienced a quick development in many countries, which made it the basis of their national legislation on water or try it in national or transboundary pilot basins and the acquired experience allows today to say that **integrated water resources management at the level of river basins is a real advantage for governance.**

Water resources management should be organized in geographical areas where the problems occur, i.e.:

1. **on the scale of** local, national or transboundary **basins of rivers, lakes and aquifers;**
2. **based on Integrated Information Systems,** allowing knowledge on resources and their uses, polluting pressures, ecosystems and their functioning, the follow-up of their evolutions and risk assessment. These information systems will have to be used as an objective basis for dialogue, negotiation, decision-making and evaluation of undertaken actions, as well as coordination of financing from the various donors;
3. **based on Management Plans** or master plans that define the medium and long-term objectives to be achieved;
4. **through the development of Programs of Measures** and successive multiyear priority investments;
5. **with the mobilization of specific financial resources,** based on the "polluter-pays" principle and "user-pays" systems;
6. **with the participation in decision-making** of the concerned Governmental Administrations and local Authorities, the representatives of different categories of users and associations for environmental protection or of public interest. Indeed, this concerted participation will ensure the social and economic acceptability of decisions. Decentralization is the basis for effectiveness in water policies.

Legal and institutional frameworks should allow the application of these six principles.

It is especially necessary to take into account the particular situation of **the 263 rivers or lakes and hundreds of aquifers,** the basins of which are shared by at least two riparian countries.

Cooperation agreements need to be initiated or signed between these riparian countries to achieve **indispensable common cause at the basin level.**

It seems necessary to support the creation of **International Commissions** or similar organizations and to strengthen those already existing.

Such international organizations allow better dialogue, the exchange of useful information, the solving of possible conflicts and the sharing of benefits from better joint management and the strengthening of transboundary cooperation.

Agreements for transboundary aquifer management should be developed in particular, taking their fragility into account.

Adaptation of water management to climate change.

Global warming cannot now be avoided and fresh water resources will be directly affected in the coming years, with announced consequences:

- increase of extreme hydrological phenomena, such as droughts and floods;

asin Organizations - INBO


217 delegates coming from 46 countries

- melting of glaciers, reduction of the snow cover in mountains, which will not be able to regulate flow in the large rivers which are born there;
- modification of the plant species and soil cover, which will result in increased erosion;
- rise of sea and ocean level, which is likely to drown coral islands, coastal lowlands, polders areas and river deltas and mouths, the flow of which will be changed;
- salt water intrusion inland and in coastal aquifers;
- significant move of populations.

It is thus essential to adapt water resources management policies, by taking into account the new elements of the climate change in the coming years.

A priority: to make up for lost time as regards urban sanitation!

85% of the anthropogenic pollution is discharged into the natural environments, without any treatment.

The effects on human health and hygiene, on economic development and the degradation of natural environments are very significant and will worsen with the lack of sufficient measures.

The time lost with sanitation is extremely alarming and will require urgent reforms, several decades of constant effort and huge financial resources.

The renewal, maintenance, operation and management of installations are also a challenge to meet to ensure full effectiveness of the investments.

Vocational training of the employees of the sector will have to be organized on a large scale.

The reduction of non-point pollution is also a prerequisite to maintain or recover good water status.

INBO recommends that agricultural practices be adapted to limit pollution risks (use of fertilizers and pesticides).

Users' participation should be organized in Basin Committees or Councils for a real mobilization of partners.

These bodies should be involved in decision-making, within procedures that clearly define their role which should be facilitated by the setting-up of integrated water information systems as objective basis for dialogue, negotiation and decision-making.

Significant means should be devoted to public awareness and participation, especially for women and young people.

Funding by the users is the logical consequence of their participation.

The investments necessary for the sustainable management, conservation and control of water resources and ecosystems and for the development, exploitation, maintenance and rehabilitation of public utilities require huge financial resources.

Therefore, it is necessary to set up everywhere complementary financing systems that are based on the users' participation and common cause.

These arrangements should be an incentive to limiting wastage, to controlling pollution and to reducing discharges, by changing the users' behavior.

INBO recommends the progressive and wide use of the cost recovery principle, through the establishment of basin water taxes, which have shown their efficiency everywhere they have been applied, while ensuring common cause between the categories of water users, between upstream and downstream, and between generations.

Improving knowledge of water resources, aquatic environments and of their uses is essential for good decision-making.

Systems for warning against floods, droughts and pollution should be developed and coordinated.

It is essential to specify the institutions responsible for the organization and the permanent operation of such systems and to guarantee sufficient means for investments and their continuous operation in the long term.

INBO recommends that the concerned multilateral institutions and national Authorities take into account the specificity of water and environmental management in insular environments.

It is necessary to support the creation and strengthening of Basin Organizations over the world!

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Addresses on progress in basin management over the world

www.inbo-news.org

Information: Fax: +33 (0) 1 44 90 88 60 - E-mail: inbo@wanadoo.fr

TWINBASIN^{XN}

For promoting twinning agreements between Basin Organizations


Countries involved in TWINBASIN^{XN}

2007 is the last year of the **TWINBASIN^{XN}** project, coordinated by **IOWater** and **INBO.**

Since September 2004, the project has obtained very interesting results: **41 completed or ongoing twinning arrangements, more than 100 missions for the exchange of experience, involving 70 Basin Organizations from 42 countries.** In particular, the representatives of the two largest basins in the world (those of the Amazon and Congo rivers) met, thanks to the project support, and signed a twinning agreement, thus participating in the **TWINBASIN^{XN}** community.

With **TWINBASIN^{XN}** support, an important seminar, held in Rochehaut (Belgium) in April 2007, gathered representatives of Basin Organizations from 6 countries (Bulgaria, Romania, Latvia, Malta, Walloon Region and France), particularly motivated by the economic dimension of IWRM and Management Plans. They worked on the economic component of the European Water Framework Directive and drafted a "guide" available on the project website. This seminar allowed the drafting of a proposal for the implementation of Programs of Measures in Bulgaria, within an institutional cooperation between the Bulgarian Water Authorities and the French Artois-Picardy Water Agency.

The first lessons learned from the **TWINBASIN^{XN}** project were presented during the World Water Week in Stockholm: **twinning agreements are a powerful tool for improving the operation of Basin Organizations and implementing integrated management.** The success of a twinning agreement and of its possible follow-up is related to the commitment of the top-executives of the concerned organizations.

The implementation of multiple twinning arrangements such as, for example, between Spain, Romania and France shows the added value of comparisons between several different national situations.

Finally, twinning agreements are effective tools for the capacity building of stakeholders involved in Basin Organizations, with regard to technical and institutional aspects.

The future summary report will be rich with information on the good use of the "twinning" tool and on the contents of the actions carried out by the twinned Basin Organizations.

www.twinbasin.org

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"INWTC"

Creation of an International Network of Water Training Centers

Although they are still insufficient to meet the needs of many emergent and developing countries facing water crises, many investments are made each year in the water sector, including, in particular, those aiming to improve infrastructures for drinking water supply and sanitation.

This generates very significant needs in terms of competence and professional skills to ensure the exploitation, maintenance and good operation of facilities. The continuing training of water professionals tends to spread and many projects for creating specialized Training Centers are initiated all over the world. **IOWater** has widely contributed in supporting some of these initiatives through the implementation of feasibility studies for Training Centers for Water Professions (WTCs) in several countries: Mexico (1995), Poland (1996), Vietnam and Laos (2005), Algeria (2006) or very recently Saudi Arabia (2007).

The French Ministry for Foreign Affairs supports the IOWater initiative to test the creation of an International Network of Water Training Centers having the common objective of developing exchanges and feedbacks among the Centers, developing synergies at regional or international level, of pooling training tools or creating partnerships with donors.

The project started at the end of 2007 with a census of the existing Training Centers and with an analysis of the regional cooperation initiatives in this field, together with an assessment of the needs and expectations of these centers in participating in such a network.

In a first phase, this means structuring profitable exchanges between the stakeholders in continuing professional training, developing pilot work on the common problems encountered by the Training Centers for leading, if possible, to the creation of a lasting International Network.

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ICRC

Strengthened collaboration

Collaboration between the "Water and Habitat" (Wat-hab) Service of **the International Committee of the Red Cross (ICRC),** based in Geneva, and **the IOWater's National Training Center for Water Professions (CNFME)** has been strengthening for several years.

In particular, **"CNFME"** received in France in October 2007, for the sixth consecutive year, a group of ICRC Project Managers, based all over the world (Burundi, Democratic Republic of Congo, Eritrea, Ivory Coast, Afghanistan, Chechnya, Chad, etc.) for a professional training course on the "Evaluation of drinking water infrastructures".

In 2007, the **"CNFME"** also carried out, for **ICRC** and in partnership with the Wat-hab units of the concerned countries, several training courses on the topics of the maintenance of water production plants and pumping stations in Burundi and in the Democratic Republic of Congo.

A training course and technical assistance on the operation of drinking water production plants are already planned, at the beginning of 2008, for 3 units in Pakistan (Cashmere Province). ✔

UNECE

For equitable access to water for all!

Under the aegis of the United Nations Economic Commission for Europe (UNECE) and the European Regional Office of the World Health Organization (WHO EURO), the French Ministry of Health, the Water Academy and IOwater organized a Seminar on Equitable Access to Water, in Paris on 5-6 July 2007, within the Protocol on Water and Health, which came into effect in August 2005, and the UNECE Convention on the Protection and Use of Transboundary Rivers and International Lakes.


Opening roundtable of Paris workshop

This protocol aims to protect human health and well-being by improving water resources management and by preventing, controlling and reducing water-related diseases in Europe.

The discussions allowed evaluating the actions carried out in the countries of the European Union, Eastern Europe, Caucasus and Central Asia.

However, the objectives are not yet achieved everywhere and sometimes the delay becomes alarming: the risk should be avoided of seeing a gap widening, even in Europe, between urban and rural areas, between rich city centers and marginalized suburbs, between those which have demanding Directives to apply, the required organization, competences and financial resources and the others which must be helped through common cause.

There will be true access for everyone to drinking water supply and sanitation only when there will be performing community services for ensuring investment, the operation, maintenance and renewal of installations, modern and effective management within a suited institutional framework and qualified and trained men at all levels.

Financial mechanisms are needed to ensure, lastingly, the recovery of all operation and investment costs, which would not be covered by subsidies.

As opposed to what is believed, water is very expensive for the poorest: access to community service is possible with equalization mechanisms ensuring common cause between the richest and poorest populations, with progressive pricing or specific social assistance systems.

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Towards a "metadatabase" on water for the countries of Eastern Europe, Caucasus and Central Asia

Within the activities undertaken by **IOWater** with the support of the French Ministry of Ecology (MESD) to develop international cooperation actions in the field of **Water Information Systems,** Mr. Paul HAENER participated in the 8th meeting of the working group on monitoring of **UNECE** (UN Economic Commission for Europe) in Helsinki on 25-27 June 2007.

Participating in this meeting, which gathered experts from the water sector of the European Union, Eastern Europe, Caucasus and Central Asia, allowed the presentation of the French experience in the administration of metadata on water, developed with the **French Water Information System (WIS)** and **the feasibility study for a Regional Water Information (Observation) Mechanism in the Mediterranean region.**

After this meeting, the **UNECE** working group on monitoring requested that France contribute in its work related to the creation of a "metadatabase" of information sources managed by **UNECE**, especially for the data collected during the evaluations/analyses carried out by **UNECE** in the main transboundary basins of Central Europe.

For such a purpose, **IOWater** will draw up a conceptual note and a first "metadatabase" template for the beginning of 2008, while an Action Plan for the effective implementation of this system will be presented to the working group.

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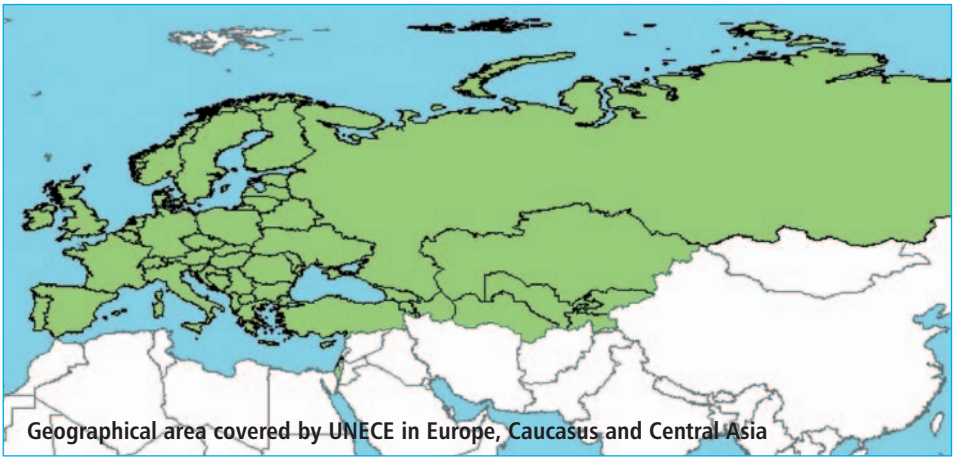
Geographical area covered by UNECE in Europe, Caucasus and Central Asia

Information: Fax: +33 (0) 4 93 65 44 02 - E-mail: aquacoope@oieau.fr

AFRICA

AWIS

Towards an African Water Information System for better regional integration of knowledge on local water management

Although there is an important quantity of information in the African water sectors, it is not very accessible for lack of an organized management system.

In Africa, the water and sanitation sector should be able to:

- allow the communities to make better decisions, regarding the problems which affect them, to meet their needs;
- facilitate the capacity building of the stakeholders of the sector;
- improve the institutional frameworks at local and national levels.

In order to meet these needs, a group of partners of the North and South **(OMVS, CREPA, PS-Water, WEDC and IOWater)** proposed a feasibility study for **an African Water Documentation and Information System (AWIS)** to benefit from a joint financing from **the European Water Facility for Africa and the French Ministry for Foreign Affairs.**

A genuine tool for supporting decision-making for sustainable water resources management, **AWIS** aims to promote and facilitate the provision of information and knowledge on water in Africa via a Pan-African Web portal, which relies on associated local partners.

The process uses a two-step approach: first of all, developing and providing a mechanism for the exchange of knowledge and information (based on existing systems such as **EMWIS** in the Mediterranean region), then working on the stakeholders' capacity building by creating an African network gathering the organizations producing information (Basin Organizations, resources management centers, documentation centers, NGOs, etc).

AWIS will be developed and tested during three years in about ten African pilot sectors, in the French-, English- and Portuguese-speaking countries. The AWIS process will then be extended to all Africa.

AWIS activities will aim at facilitating:

- the sharing of experience and access to the existing information on know-how in the African water sector;
- the translation of key documents coming from the French-, Portuguese- and English-speaking countries to allow its use by a larger public;
- the dissemination of research results to the end-users, whatever the scale (regional, national, basin) of this research work. Better dialogue between stakeholders and researchers will be looked for, as well as a better integration of research results to meet the needs and requests coming from people in the field.

From an operational viewpoint, the team involved in the **AWIS** process will identify the existing African organizations which wish and can become sub-regional AWIS Centers (Focal Points).

The **AWIS** process does not aim at replacing the existing information management centers, but, on the contrary, at developing them and facilitating access to the information they manage.

AWIS, a participative process

In addition to the 5 partners, initiators of the project coordinated by **OMVS,** the African local partners will be involved in a Euro-African coordination committee to validate the tool feasibility during the preparatory phase. A conference, organized in Paris, will complete the feasibility phase, gathering about fifty participants coming from African organizations, wishing to get involved in the **AWIS** process, and other prospective users and donors.

Throughout the process, **AWIS** will closely work with the local stakeholders to identify their needs for capacity building and to find solutions (human resources, organization, equipment, etc.), especially during decentralized meetings.

AWIS is not only a technological tool but can also organize and direct a network of African and non-African partners, producers and users of water information (drinking water supply, sanitation, water resources management).

The first meetings of **AWIS** steering committee were held in Paris at **IOWater** in April 2007 and in October 2007 in Dakar at **OMVS** head office.

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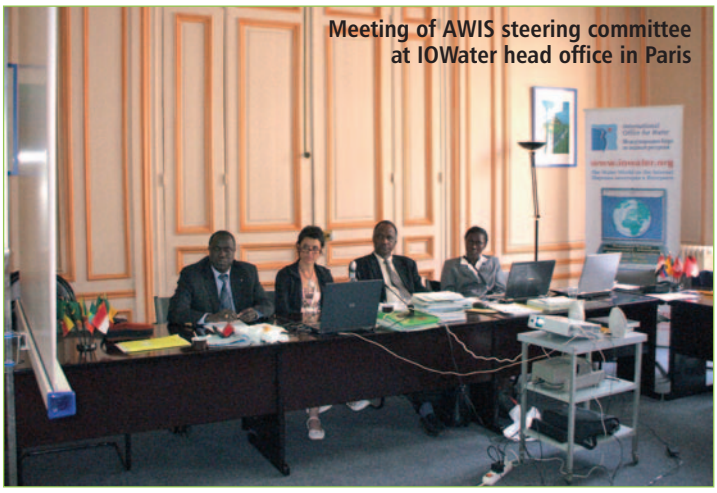

Meeting of AWIS steering committee at IOWater head office in Paris

AFRICA

Niger Basin Authority

Achievement of the "Shared Vision"

In 2003, the World Bank and the **Niger Basin Authority (NBA)** had called upon the **International Office for Water (IOWater)** to carry out an Audit aiming at proposing institutional and organizational reforms for the Authority.

Various meetings of the **Niger Basin Authority (NBA)** bodies confirmed the will of the nine Member States (Benin, Burkina Faso, Cameroon, Chad, Ivory Coast, Guinea, Mali, Niger, Nigeria) to make this organization a tool for regional cooperation and economic development.

Thus, **a "clear and shared Vision" of the Niger Basin was formulated** to create an "environment favorable" to cooperation and to draw up **a "Sustainable Development Action Plan (SDAP)"** accepted by all the basin stakeholders.

The Declaration of Paris on "The principles of management and good governance for sustainable and shared development of the Niger Basin" was signed in April 2004 by the nine Heads of State and Government.

The Niger Basin Authority is financed by the Water Facility of the European Union to implement a project entitled "Formulation and Implementation of an Investment Program".

IOWater is **NBA** partner in this project, and deals with the task of assisting in work control, especially on the following topics:

- Drafting a Water Charter;
- Consistency of the SDAP with the national and regional processes of Integrated Water Resources Management (IWRM);
- Preparation of the investment program and methods for implementing the projects.

With the formulation of the SDAP and the development of the Investment Program by the end of 2007 and the Summit of the Heads of State and roundtable of donors planned for the beginning of 2008, **the Niger Basin Authority** will be able to achieve practical and lasting outcomes for ensuring the future of the basin users and citizens.

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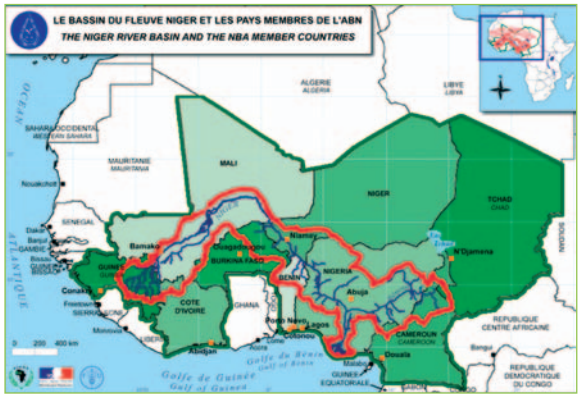

Governance of community drinking water supply and sanitation utilities

According to its Multiyear Objective-targeted Convention with the French Ministry of Ecology and Sustainable Development, **IOWater** developed two new activities in this sector:

- **The African Water Association (AWA) joined IOWater** to draw up a proposal aiming at improving the management of the African water utilities with performance indicators: the project **"Organization of a sustainable service of performance measurement in eight African water utilities"** will concern Benin, Burkina Faso, Ghana and Kenya. It required a strong collaboration with **AWA** and a preparatory assignment was carried out in March 2007 in Ghana and Ivory Coast, AWA head office.

The project should begin in 2008 for a three-year duration, with financing being discussed.

- **IOWater is in charge of the secretariat of the "governance" working group within the French Water Partnership (FWP);** the group's assignments were specified and deal with an action plan with six goals:
  - Promoting discussions on water and sanitation policies in France and finding synergies between all the water stakeholders;
  - Informing the members of the legal texts and standards related to water and sanitation;
  - Preparing "governance" and "local community" sheets for the international events where France will be present under the FWP banner;
  - Ensuring French presence in international meetings;
  - Coordinating thinking with decentralized cooperation;
  - Creating training mechanisms for the elected officials of the Southern countries.

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AFRICA
Capacity Building

LARGE PROJECT

South Africa: The NCWSTI project

The Project consisted in providing technical and teaching assistance to **the National Community Water and Sanitation Training Institute (NCWSTI),** located in the Northern University at about 40 km from the regional capital of Polokwane (Limpopo Province).

The Project aimed at building **NCWSTI** training capacities, in terms of educational equipment, at widening its training offer to the staffs of the South-African drinking water supply and sanitation utilities, but also at creating a network of internal trainers allowing the dissemination of these actions in Southern Africa.

Thanks to a financial support from the French Embassy in Pretoria, **NCWSTI built a series of training units,** allowing the launching of practical training programs on the laying out and maintenance of drinking water supply systems.

These first units were then supplemented by educational equipment on sanitation systems.

An "incubator" of 110 internal trainers, composed of staff members of the South-African water utilities, was created at the same time and benefited from multiple training activities carried out within this contract associating **IOWater** and **SAUR:**

- 5 training courses on objective-related teaching, from May to October 2005;
- 5 training courses on trainers' accreditation, from June to October 2005, in conformity with the rules laid down by the South African Qualification Authority (SAQA);
- 4 training courses on wastewater treatment, in December 2005 and March 2006;
- 4 training courses on drinking water treatment, in January and June 2006;
- 4 training courses on electric maintenance and automated systems, in January 2006 and January 2007;
- 2 training courses on the commercial management of customers of water utilities, in March 2006;
- 1 training course on the management of water utilities (performance indicators), in October 2006;
- 2 training courses on mechanical maintenance, in February 2007.

In November 2006, with the approval of the Project Steering Committee and with the support of the French Embassy, **IOWater organized a technical visit in France** for Mr. G. Djolov (NCWSTI Director), Mr. A. Matukane (Regional DWAF in Limpopo Province) and Mrs. Yaleswa Witboi (DWAF in Pretoria) **on the occasion of the POLLUTEC Fair** in Lyons. The delegation met many industrialists and equipment suppliers of the sector and discovered the new technologies developed in the water sector.

This visit of the Pollutec Fair was supplemented by a visit to **IOWater's National Training Center for Water Professions** in Limoges and La Souterraine, and by meetings in Paris with representatives of the Ministry for Foreign Affairs (MAE) and French Development Agency (AFD).

Professor N.M Mollel replaced Professor G. Djolov at the head of **NCWSTI** in June 2007.


A group of trainees

At Professor Mollel's request, **IOWater** will develop proposals for strengthening the **NCWSTI** development strategy by **establishing a "business plan"** and a framework for the creation of 2 regional branches in Eastern Cape and Kwazulu Natal.

Finally, it is planned to supplement the training activities on Human Resources Management in water utilities, including, in particular, the management of their staff training plans.

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Training on mechanical maintenance

Performance Indicators

For African Basin Organizations

Performance indicators are now regularly used in the management of drinking water supply and sanitation utilities. For a few years, experiments have been made for their use by Basin Organizations to define criteria for the evaluation of Integrated Water Resources Management.

In order to propose an approach to the adaptation and integration of African specificities in this field, the International Network of Basin Organizations, through **the African Network of Basins Organizations (ANBO), with the support of the International Office for Water and Ecologic,** has just launched a project aiming at developing, testing and comparing Performance Indexes for the African Basin Organizations.

This project, financed by the European ACP Water Facility program and the French Ministry for Foreign Affairs, will last 3 years and will involve about ten African river basins during 2 test phases. The first phase for testing the use of indicators was launched in November 2007. It involves the Senegal, Niger, Congo, Orange-Sebu and Okavongo River Basins.

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Saudi Arabia - Riyadh

Creation a National Training Center for Water Professions

In order to meet the needs generated by the high growth of its industrial and agricultural sectors, but also for better accompanying the quick development of its main cities, linked to high demographic growth, even to the creation of several new cities such as the King Abdullaziz Economic City (KAEC), the Kingdom of Saudi Arabia decided to implement a new water policy, voluntarily centered on a vision of sustainable development, quality of provided services and resources protection.

Owing to this ambitious strategy, **the Ministry of Water and Electricity (MoWE)** is developing new methods for the management of the drinking water supply and sanitation utilities of the bigger cities (Riyadh, Jeddah, Mecca, etc), which will be entrusted to private operators after international invitations to tender.

One of the significant innovations is also the transfer of most **MoWE** responsibilities to **the National Water Company (NWC),** created by royal decree for this purpose.

To support this approach, **MoWE** drafted a proactive and demanding strategy for the professionalization of the personnel working in the water sector.

One of the pillars of this strategy is the decision made by MoWE to create **a Training Center for Water Professions** in Riyadh, meeting excellence criteria equivalent to the best world practices.

The Consortium, made up by **BRGM, the International Office for Water** and the Saudi partner **Abunayyan Trading Corporation,** won the invitation to tender for carrying out a feasibility study for this Training Center.

This study, which started in April, was completed in October 2007 and the obtained results were presented during several workshops with **MoWE**.

In addition to the definition of the technical and educational components of this future Center, planned for training about 13,000 to 15,000 staff members of the sector, an architectural project was developed and management and investment methods were identified.

In order to meet the terms of reference wished for by the Saudi Ministry, the future Center was designed to receive all the facilities and resources (research center, documentation center, resource center, laboratories, full-scale training units, pilot treatment units, auditorium, lodgings and restaurant, etc) for achieving its objectives.

The selected building site is located in the Salbukh catchment area, at about 40 km North-East of Riyadh.

Finally, the Saudis in charge wish to orientate the development of these Training Center activities towards a dynamics of broad international cooperation on the regional scale.

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Project of the future Training Center in Saudi Arabia

Cambodia

IWRM in the North West Irrigation Sector Project

The Cambodian Authorities have started a new policy for Integrated Water Resources Management (IWRM).

IOWater participates in the North West Irrigation Sector Project of Cambodia, led by **BCEOM** and financed by the Asian Development Bank and the French Development Agency.

The study of IWRM implementation in Cambodia was already carried out. Thanks to former projects, most of the necessary regulatory texts were written and proposed. **IOWater** worked on the practical implementation of IWRM in the project region.

In agreement with the Cambodian Administration, the approach mainly consisted in "coaching" the people of the Cambodian Administration in charge of water in the sub-basins of tributaries of the Tonle Sap Lake.

The practical scale of an embryo of a future sub-basin organization was determined, as well as its composition and its operating methods for the coming months.

Cases of conflict on uses were jointly identified with the local partners. The knowledge and capacities required for solving these conflicts were jointly evidenced with the Cambodian partners.

The first actions for joint management of water resources were carried out.

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Breaking down of the dike of the Anlong Rot reservoir (Banteay Meanchey)

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ASIA

Vietnam

French-Vietnamese cooperation in the water sector


IOWater identification mission to Vietnam

Water and the environment have been among the priorities of French action in Vietnam and all the studies carried out led to convergent analyses of the situation:

- Vietnam will have a growing need for water because of strong economic, social and local development;
- Pollution will increase because of urban and industrial development and agricultural practices;
- Surface and ground water resources will be more and more in demand.

In September 2006, **the Higher Council for the Development of French-Vietnamese Economic Cooperation, co-presided by Mr. Jacques Oudin,** President of the French National Water Committee, proposed that France shares with Vietnam the experience acquired for forty years in the field of integrated surface and ground water management.

An identification assignment was carried out in Vietnam by Messrs. Tien Duc and Millo, **IOWater**'s Director of International Cooperation, from 27 February to 8 March 2007.

Among the findings, there is a strong development of infrastructures in the drinking water supply sector, thanks to an effective technical and financial organization. On the contrary, wastewater collection and treatment systems are still little developed. Often, wastewater is discharged into the storm water drainage system, which directly flows out into the natural environment.

The concept of Integrated Water Resources Management (IWRM) is a recent introduction; its practical implementation in river basins is only beginning.

The assignment identified the following topics for cooperation:

- Information on water, creation of national and river basin databases,
- Integrated Water Resources Management: legal and economic expert's assignment,
- Improvement of the technical performances of urban drinking water supply systems,
- Decentralized cooperation in rural water supply.

An official visit to Vietnam was then led by Mr. Jacques Oudin, during which the Vietnamese Authorities said that they wished to benefit from French cooperation and asked that a Vietnamese ministerial delegation be received in France to study the field application of the French principles of integrated water management.

The Vietnamese delegation, led by the Minister, Mai Ai Truc, stayed in France from 3 to 9 June 2007. At the end of this visit, the two French and Vietnamese parties signed a memorandum, in which they commit themselves to cooperate in the Integrated Water Resources Management sector along three lines:

- Reinforcement of the institutional tools for integrated water management in Vietnam;
- The transfer of techniques for water resources development and water pollution control;
- Building of the Vietnamese capacities in the field of information and awareness on water protection.

The French partners proposed a three-year cooperation program dealing with **the integrated management of the Dông Nai pilot river basin in the Ho Chi Minh City region.** Its detailed program is been studied by the Vietnamese Authorities and the project could start in 2008, under the supervision of the French Embassy to Vietnam and with the support of the French Ministry of Economy, the French Development Agency and the Loire-Brittany and Seine-Normandy Water Agencies. ✔

Kazakhstan

Environmental Performances Analysis (EPA)


Fisherman in Astana, the new capital

On behalf of the French Ministry of Ecology and Sustainable Development, the **IOWater** drafted the water chapter of the Environmental Performances Analysis (EPA) of Kazakhstan.

An EPA is an external audit of the actions carried out by a country to reconcile its objectives of economic development with environmental protection and compliance with its international commitments in this field. This Analysis deals with the following issues: how the countries reduce pollution on their territory, how they manage their natural resources, integrate their environmental and socioeconomic objectives, adapt and implement their environmental policies and strategies and how they participate in international cooperation in this field.

This analysis for Kazakhstan is coordinated by **the United Nations Economic Commission for Europe (UNECE) for the non-member countries of OECD.**

The main enquiry, carried out by a multidisciplinary and international team of 11 international experts, in which Pierre Henry de Villeneuve **(IOWater)** participated, took place from 10 to 19 September 2007 in Kazakhstan.

After significant drafting and editing, its report will be published at the beginning of 2008. ✔

North America

Management of the St. Lawrence and Great Lakes Basin


International Symposium in Sorel

Organized by the **CO**mmittee for dialogue and **VA**lorization of the **BA**sin of the **R**ichelieu River **(COVABAR),** an important International Symposium on the Management of the St. Lawrence and Great Lakes Basin was held from 13 to 15 last September in Sorel-Tracy in Quebec. It gathered about one hundred participants and elected officials who testified to the successful experiments of water management at the level of river basins in the United States, in Europe and Ontario, such as, in particular, Mr. Jean-François Donzier, Technical Secretary of **the International Network of Basin Organizations (INBO),** and, for France, Mr. Rémy Filali, Director-General, Interdepartmental Institution for the Development of the Charente River and Mr. Christian Bernad, President of the Association for the Development of the Lot Valley.

The participants thus underlined the importance of raising the awareness of the decision makers of the St. Lawrence River Basin on the challenges, water stakes and changes in the way of thinking necessary to develop the territory water resources: integrated water management offers the only solution for sustainable development and it is urgent to support its implementation at the level of river basins; the experiments in the basins of Ontario, the United States and France already have proven its effectiveness.

The creation of a Network gathering the River Basin Organizations of North America, within INBO, was also at the core of the discussions during the three days of this great meeting.

It was thus agreed to develop, as soon as possible, water management Master Plans for the river basins of the St. Lawrence/Great Lakes District on the Quebec territory, in adequacy with the development plans of the Municipalities.

The Minister for Sustainable Development, the Environment and Parks of Quebec, Ms. Line Beauchamp, invited the whole population to act and prioritize water protection.

COVABAR, presided by Mr. Hubert Chamberland, is an Organization representing all the citizens of the territory of the Richelieu River Basin, from Lake Champlain to Lake Saint-Pierre, up to its confluence with the St. Lawrence River.

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COVABAR
COMITÉ DE CONCERTATION ET DE VALORISATION DU BASSIN DE LA RIVIÈRE RICHELIEU

Haïti

Reform of the drinking water supply and sanitation utilities

The Government of the Republic of Haiti started a thorough legal and institutional reform, due to the necessity of modernizing the drinking water supply and sanitation sector, to allow access to water and the building of sanitation facilities.

Since September 2007, according to the Water Law now at the Parliament for signature, and on the request of the Haitian Ministry of Public works, Transport and Communications (MTPTC), in charge of the water utilities, **IOWater** has aimed at defining the future organizational model of the services, by taking into account the new triangular principle based on:

- establishment of a regulator at national level to ensure the planning and coordination of the sector,
- decentralization of assignments towards "OREPAs" (Regional Offices for Drinking Water Supply and Sanitation), which will be the regional organizing Authorities,
- diversification of the methods for the field management of drinking water supply and sanitation.

The context is such that studies are simultaneously carried out in the metropolitan area of Port-au-Prince and in rural areas, taking into account the specificity of these areas. After an inventory of the operating utilities in 2007, suitable economic, financial and technical analyses, are carried out to develop:

- **the best suited technical master plans for water supply and sanitation** (urban community systems, on-site sanitation and latrines in rural or suburban areas, drainage and excreta management, etc.), taking into account the vulnerability of the receiving environments (surface waters or aquifers),
- **the best possible balance between income and expenditure of the sector,** based on pricing models adapted to the socioeconomic situation, by planning the necessary investments and by prioritizing them,
- **institutional scenarios** for relevant organizations between the stakeholders of the sector,
- **optimal financial arrangements** taking into consideration the timely planning of investments to be made (international assistance, subsidies, loans, equalization, depreciation, etc.),
- **the future "action plan" of the stakeholders of the sector** (OREPAs included), based on the technical and financial master plans selected for Port-au-Prince, for the rural and semi-rural areas.

For a finalization in April/May 2008, service providing is carried out to offer the Haitian Authorities varied and complementary "macro" strategies, of which it will be necessary to show the advantages, disadvantages and related risks; those will be based on realistic prospects as regards water demand and resource availability, while, for instance, taking into account the risks of drought, such as the one in 1997, and reducing health risks.

IOWater, together with CALIA Consultants, carries out this study by validating each alternative with the Haitian Authorities, which select the optimal overall models for all the territories (urban, suburban and rural).

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LATIN AMERICA
Brazil

National Water Agency / IOWater

Signing of a new cooperation agreement

On last 11 June, in the IOWater office in Paris, Mr. José Machado, President-Director of **ANA (Agência Nacional de Aguas)** and Mr. Jean-François Donzier, General Manager of **the International Office for Water**, signed an agreement aiming at intensifying technical cooperation and the exchange of experience between both institutions.

ANA is responsible for implementing the National Water Policy and strengthening the National Water Management System in Brazil.
IOWater will provide its expertise on the institutional and technical aspects of integrated water management, more particularly as responsible for the Permanent Technical Secretariat of the International Network of Basin Organizations (INBO) and privileged operator of the French Ministries for Foreign Affairs and of Ecology and Sustainable Development.

The cooperation program, signed for 5 years, will prioritize the following topics:

- **Strengthening of the Brazilian Basin Organizations** for better guaranteeing integrated water management;
- Experimentation of management instruments and mechanisms in **a pilot basin,** and dissemination of the obtained results through training activities;
- Support to the design and implementation of **the Brazilian National Water Information System,** mainly on data management, creation of databases, production of indicators for evaluating the efficiency of the actions undertaken, processing of information and methodologies for supporting decision-making;
- **Operation of Basin Agencies,** their departments, boards of directors, technical teams, as well as Basin Committees… with emphasis on:
  - Taxes for water uses;
  - Planning and programming of actions;
  - Participation of the users and the civil society in the decision-making processes;
- **Training and Human Resources Management** and participation in the development of a specialized training system in Brazil.

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Tocatins State

Master plans for the Rio Manoel Alves and Rio Palma Basins


Rio Manoel Alves, county of Rio da Conceição

IOWater participates, with the Brazilian consulting firm **Gama Engenharia,** in the formulation of Master Plans for the Rio Manoel Alves and Rio Palma Basins. The Government of the Tocantins State is the contracting authority for these two studies, financed by the World Bank.

The two rivers are born in the buttresses of the Serra Geral, are fed by the huge Urucuia aquifer and run from East to West to the Rio Tocantins, itself tributary of the Amazon.

This year, a state of emergency was declared in several communities of the study area because of drought. The Master Plans of the Rio Manoel Alves and Rio Palma Basins will have to allow for better mobilization of the available water … or better organization of the human activities according to water availability.

The first stage of the study consisted of **a "social mobilization" in each concerned community,** inviting the water stakeholders and the population to actively think about the characterization and analysis of the current situation.

The participants were numerous and productive in the meetings, thus confirming the Brazil's reputation of "participative democracy".

In the second stage, the same stakeholders will be invited to **propose scenarios** for the future, then to deliberate on the choice of one of these scenarios, which will be used as a basis for an action plan.

At the end of the study, mid-2008, **the creation of a Basin Committee is planned,** as there are already more than a hundred in Brazil, to sustain a local management body.

For the Government of the Tocantins State, implementing a Basin Master Plan means the possibility of orientating the economic development in such a way to be sustainable and respectful of the environment.

There are large dam projects for irrigation-purpose in the Rio Manoel Alves and Rio Palma basins. Several hydropower stations are being built, others are planned. The area is favorable to the cultivation of sugar cane for the production of ethanol. At the same time, there is a great potential for the development of ecotourism.

Among all these possibilities, the stake of the Master Plans is to enable the local stakeholders to collectively say what they wish for the future of their area in the short, medium and long terms.

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LATIN AMERICA
Mexico - CONAGUA

French-Mexican Cooperation: Training at the core of the National Water Resources Plan

An extraordinary Board of Directors of **CEMCAS, Mexican Training Center for Water and Sanitation,** was held on 11 September 2007, for the official taking up of duties of the new Director General of **the National Water Commission (CONAGUA), Mr. José Luis Luege Tamargo,** former Federal Minister for the Environment, in the presence of **Mr. Alain Gourierec,** French Ambassador to Mexico, Mr. Jean François Donzier, General Manager of the **International Office for Water** and all the representatives of the other founder members of the Center.

This meeting was the occasion to evaluate **CEMCAS** activities since its opening in 2000.

In 6 years, **CEMCAS** thus received **5,036 trainees** from Mexican water utilities, during **215 training courses** representing **121,600 training hours,** including 1,176 trainees in 2006 in 57 courses organized.

France had originated this project and had played a crucial part in its implementation between 1997 and 2000, especially thanks to the support provided by **IOWater.**

Mr. Donzier, as Vice-President of **CEMCAS,** reminded that the Center was an exceptional tool without equivalent on the American continent, but was still very far from having achieved its goals and that it was essential to give it a second breath to meet the huge training needs of the Mexican water sector. He reminded that the objectives of the National Water Resources Plan would not be achieved without a significant improvement of the operation and maintenance of municipal facilities for drinking water supply and sanitation in particular, which implied awareness on the strategic importance of training the employees of these utilities and thus a significant increase in **CEMCAS** resources.

CEMCAS Board of Directors

The French Ambassador underlined the emblematic meaning of **CEMCAS** in French-Mexican cooperation and reaffirmed his wish to see the center in a favorable situation to fully play the part for which it was designed.

The representative of **ANEAS,** Mexican Association of Water and Sanitation Companies, of which Suez and Veolia are members through their local subsidiary branches, indicated that its members felt a considerable need for training their employees and that his association was willing to take direct responsibilities in **CEMCAS** management, in order to meet these needs and to ensure the development of the Center.

Mr. Luege Tamargo concluded the Board of Directors by reminding that the objectives of the Federal Government were to obtain practical results in the improvement of water management before 2012 and that water was a key factor of Mexican development.

He underlined the peremptory necessity to build capacities for the design, management and operation of the community water utilities, which require a huge effort in vocational training.

He indicated that the draft fiscal law should introduce new provisions supporting the financing of the sector. Finally he asked that thinking on **CEMCAS** development be speeded up to lead, as soon as possible, to an ambitious development program in Mexico and Central America.

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www.cemcas.com.mx

www.conagua.gob.mx

CONAGUA
COMISION NACIONAL DEL AGUA

International Office for Water

http://waterdoc.iowater.org


The Mexican Training Center for Water and Sanitation (CEMCAS)

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EUROPE

"EUROPE-INBO 2007"

ROME - 8 - 10 NOVEMBER 2007


The Opening Ceremony

The 5th Conference of the "EUROPE-INBO" Group took place in Rome from 8 to 10 November 2007, at the invitation of the Italian Ministry of the Environment and the Italian Basin Authorities. It gathered 200 representatives coming from 33 countries.

The Conference was organized simultaneously with the General Assembly 2007 of the Mediterranean Network of Basin Organizations (MEMBO).

The "EUROPE-INBO 2007" Conference was opened by Mr. Alfonso PECORARO SCANIO, Italian Minister for the Environment, with many Italian personalities (City of Rome, Parliament and Regions), Mrs. Lubka KATCHAKOVA, Vice-Minister in Bulgaria, and Mr. Laszlo KOTHAY, State Secretary in Hungary and World President of INBO.


200 participants coming from 33 countries

The Basin Organizations of the Member States of the European Union have made significant progress in the implementation of **the Water Framework Directive (WFD):** administrative adaptations, economic analyses, public information and involvement of water stakeholders, characterizations, development of monitoring networks, etc.

The **"EUROPE-INBO 2007"** Conference allowed noting the increasing interest in the WFD of countries of the Mediterranean region and Eastern Europe, of Caucasus and Central Asia.

The next step is to formulate Management Plans and Programs of Measures for 2009, with a preliminary public consultation in 2008.

The conference was thus organized around three topics:

- preparation and cost of the Programs of Measures,
- account taking of global warming,
- public consultation.

As the meeting was taking place in Italy, special attention was paid to the Mediterranean aspects.

37 papers were presented and many recommendations were formulated, in particular:

Preparation and cost of Programs of Measures

Involving the local stakeholders is essential especially the Local Authorities. Actions should also include the preparation of local management plans and programs of measures at sub-basin level.

Speeding up agricultural and sanitation measures is also necessary, as these two sectors are, with the hydro-morphological changes in rivers, the main factors of the Risk of Not Achieving Good Status: integrating the "Urban Waste Water" and "Nitrates" Directives is a prerequisite.

Increasing the means devoted to the management of aquatic environments and wetlands and to hydro-morphology is essential.

It is unavoidable to significantly increase the financial resources, based on the "polluter-pays" and "user-pays" principles.

Economic studies are essential for WFD implementation to justify exemptions regarding deadlines and levels as compared to the Good Status objective, to assess the cost-benefit of the measures, to optimize the efficiency of the Program of Measures. It is necessary to develop an economic culture and train economists specialized in the water field.

The participants wished sharing experience, harmonizing methods (environmental cost assessment, rate of cost recovery, cost-effectiveness models for measures, etc.) and developing socioeconomic indicators or reference values, in the International Districts as a priority (disproportionate cost concept, etc.). Giving explanations to the consumers and decision-makers is necessary to make the stakes understandable and the (often unavoidable) water price increase acceptable.

In International Districts, coordination should be fostered (common catalogues of measures, coordinated objectives, common socioeconomic indicators, etc.) by strengthening the action of the International Commissions.

Account taking of global warming

The WFD does not directly take climate change into account but provides tools that should be effectively used in the Programs of Measures (quantitative status, hydro-morphology, pricing and cost recovery, etc.).

A common approach seems essential at the European and Euro-Mediterranean level: research programs, upstream-downstream common cause, data sharing and coordination of activities between basins, especially in International River Basin Districts.

"Facilitating the implementation of the Water Framework Directive"

The Closing Ceremony led by Ms. KATCHAKOVA and Messrs. KOTHAY, MAZZITTI, GRAPPELLI, COTTET, PINESCI and DONZIER

It is necessary: to evaluate the hydrological consequences of climate change in each basin according to various scenarios; to supplement the monitoring networks planned by the WFD; to set up National Water Information Systems; to develop and coordinate warning systems for floods and droughts; to pass from a policy of offer development to a policy of water demand reduction.

Management Plans for drought should be developed with the stakeholders, not only in time of crisis but also planned in the long term.

Public consultation

The Basin Organizations have organized the first two steps of public consultation planned by the WFD. They allowed better knowing the populations' expectations. The limiting factor is the lack of human and financial resources. Involving the stakeholders and the public from the first stages is a factor of success and this information effort should go further than the official times for public consultation planned by the WFD.

It is necessary to coordinate the process and timetable at the national level and in the International Districts, while favoring the basin and sub-basin scale for the consultation.

Distinguishing information from consultation is needed because these are two different objectives. It is recommended to rely on Basin Councils or Committees when they do exist. It is important to mobilize local elected officials and NGOs, to raise the young's awareness in school, to explain the stakes using local problems, to combine various information tools, not limiting itself to questionnaires and websites but also organizing local public debates.

It is important to communicate in a less administrative and more pedagogical way (joint work by water and communication specialists) and ensure transparency (communicating on uncertainties, explaining the decisions made and reporting on the obtained results).

The main meeting of 2008 should not be missed!

These consultations have a cost and it is necessary to plan specific budgets. Experience sharing is necessary to define the most suitable methods according to situation and cost-effectiveness of the various tools.

Situation in the Mediterranean Basin

The Mediterranean Basin is likely to be one of the areas most affected by climate change over the world.

The problem of water sharing between irrigation, tourist areas and basic human needs (drinking water) is now arising in many places. The real problem is not so much to mobilize new resources but to better use water!

Among the mentioned proposals there are: a Mediterranean Information Mechanism for Water Resources; a policy for fighting against wastages; not supporting the development of irrigation in water deficient areas; defining maximum abstraction quantities, preparing "drought" action plans; a water pricing policy; the re-use of treated wastewater and the desalination of sea water; making up for lost time as regards sanitation, etc.

Modernizing the institutions and capacity building are also necessary: integrated water management at the level of river basins, creation and strengthening of Basin Organizations and International Commissions, the planning and programming of investments with financing based on the polluter-user-pays principles, water users' participation, etc.

It is advisable to develop the management of community services of municipal and irrigation water and basic and continuing professional training.

Access to information should be facilitated especially by creating and networking the National Water Information Systems, that are developed within **EMWIS,** and by more widely disseminating research results, within the European **IWRM-Net** project for instance.

The participants wished to work on adapting the general principles of the Framework Directive to the Mediterranean Basin while emphasizing the importance of the Euro-Mediterranean common cause and of the next Ministerial Conference planned in the second semester of 2008.

The participants underlined the interest of continuing the twinning agreements between basins initiated by the **TWINBASIN**[XN] project, especially for the Mediterranean Basin and the EECCA Region (Eastern Europe, Caucasus and Central Asia), of establishing common socioeconomic indicators and performance indicators allowing making the necessary comparisons between Basin Organizations and of creating a base of practical references on the methods used for public consultation.

Mr. Jacky COTTET, President of the French Rhone-Mediterranean and Corsica Water Agency, was congratulated for the effectiveness with which he held his Presidency in 2006-2007 and **Mr. Roberto GRAPPELLI,** Secretary General of the Tiber Basin Authority (Italy), will take the chair until the next **"EUROPE-INBO"** Conference, which will be organized by Romania in autumn 2008.

The final resolutions, papers and photographs are available on the website:

www.inbo-news.org

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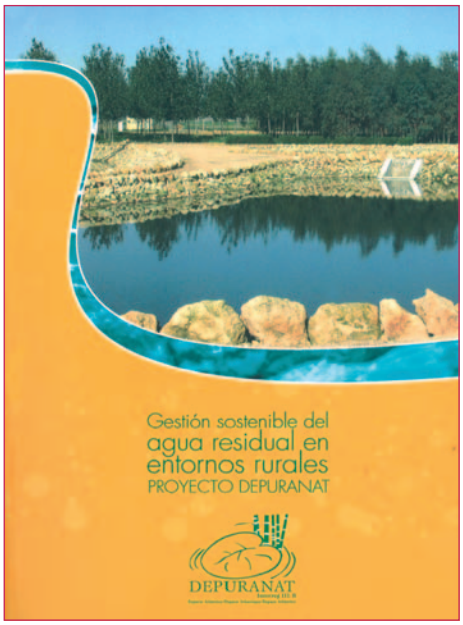
EUROPE

DEPURANAT

Natural wastewater treatment systems for small communities



The **DEPURANAT** Project, financed by European FEDER funds, focused on wastewater treatment for productive purpose in the rural and natural environments of the Atlantic Space, thanks to **natural treatment or low energy consuming systems.**

A consortium made up of **ITC - Instituto Tecnologico de Canarias,** project leader, **University of Minho** - Portugal, **"CENTA - Centro de Nuevas Tecnologías del Agua"** - Spain and of a certain number of Canarian and Portuguese municipalities as well as of **IOWater - International Office for Water** - France, has been working for 3 years on the building and operation of such facilities.

6 treatment plants, already equipped with such technologies in Spain and Portugal, and 6 others, especially built to use these treatment principles, were followed up to:

- **draw up technical guides** to help the project contractors build their wastewater treatment plants according to the code of practice, while taking into account the diversity of the natural wastewater treatment techniques now available;
- **work out decision-making supporting methods** to select the best techniques according to the criteria which the building operator and the municipality are facing in the field;

For this purpose, IOWater designed an expert system to help selecting technologies according to the characteristics of the effluents to be treated and of the site chosen for their building.

This tool was enriched with the results obtained on the pilot units in order to be close to field realities.

- **develop by-products** (sludge, organic matter, treated wastewater, etc.) to focus on the best integration of the plant from a social and environmental viewpoint, landscape considerations included;
- **build the potential market for such techniques in the Atlantic Arc,** taking into account the economic advantages and environmental costs (in accordance with the European Framework Directive), but also the "relation" which is built around such sites with the surrounding population (water classes for the children, market-gardening products, floral products, etc.);
- **develop training tools** for formalizing true engineering on natural wastewater treatment, thanks to the professional support which will result from **DEPURANAT.**

Not very expensive and simple to install, these decentralized systems will contribute to improve water treatment and will support sustainable economic and financial development in rural areas.

Thanks to these systems, **DEPURANAT** aims at promoting the use, for decorative or handicraft purposes, of quality products resulting from water treatment, such as aquatic plants.

In the long term, these new activities will enable these areas to develop traditional agriculture and rural tourism.

It concerns little populated rural areas, a characteristic of the Atlantic Space, where the lack of wastewater treatment systems means discharging the effluents into neighboring natural environments, thus leading to non-point pollution in areas with great ecological value.

DEPURANAT shows that there are sustainable wastewater management systems, which consist in storing the locally collected water, in treating it on the spot in small decentralized systems (lagooning, filtering garden, planted filter, infiltration bed, sand percolation, etc.), and in reusing the obtained by-products. A catalogue of the pilot systems used in Spain and Portugal has been established.

CENTA and IOWater provide technical support for the development of know-how after construction and during operation for better making known these often forgotten techniques, which are better integrated into the environment, especially for a number of population-equivalents ranging from 100 to 500, which is the case of many building lots.

In the continuity of **DEPURANAT, CENTA** organized, from 11 to 15 November 2007 in Seville, **SMALLWAT,** an International Congress dedicated to wastewater treatment in small communities.

http://depuranat.itccanarias.org

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Installation of a drainage system before planting

EUROPE

LARGE PROJECT

A first promising evaluation of the European network of managers of Integrated Water Resources Management programs

IWRM-Net is a European project financed by the European Commission within **the European Research Area (ERA-Net)** of the DG-Research.

IWRM-Net, coordinated by the **International Office for Water,** is now made up of **18 research program managers from all over Europe.**

The ambition of this project, of a 5-year duration (2006-2010), is to set up new research programs, financed by the network members and meeting the national and regional challenges resulting from the evolution of the European context after the adoption of the Water Framework Directive.

The promotion of research, as a scientific support to the application of public water policies, requires:

- **The involvement of the various stakeholders** (decision makers, managers, researchers, users, etc.) throughout the process, for identifying the scientific contents of the research activities initiated by the network;
- **Access to the information** on ongoing or recently completed programs.

This is why, during the first 18 months, the **IWRM-Net** partners started:

- **assessing the needs for water-related research** with a short-term prospect, based on a scientific review and workshops inviting the various stakeholders to express their needs;
- **facilitating access and analyzing the information on existing initiatives;**
- **drafting procedures for financing,** launching and following-up the research activities of the network.

January 2008: Launching of the first IWRM-Net program

The Network members participated in a meeting, held in Vienna on 8 and 9 October 2007, on the financing of the first **IWRM-Net** research program, divided in two parts:

- **Pressures/hydrological and morphological impacts,**
- **Water governance.**

The objectives of this meeting were to validate the scientific contents of the program as well as the procedures for its financing, the selection and follow-up of the research projects.

The program will be launched in January 2008. During the first half of the year, the research projects will be selected to allow their starting in September of this year.

The **IWRM-Net** partners already think about the contents of **the second research program,** which will also deal with long-term prospects - thus aiming at providing scientific support within the second Management Plan required by the Framework Directive after 2015.

Please join the IWRM-NET community!

A knowledge and information management tool for water-related research programs has been available since October 2007.

It is possible to join the **IWRM-Net** community by making yourself known on our website:

www.iwrm-net.eu

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Priority substances

What concentrations in which basin?

IOWater, associated with INERIS, was selected to provide technical assistance to the DG Environment of the European Union during 3 years (2005-2008). This assignment should lead to a revision of the list of priority substances of the Water Framework Directive (WFD).

In 2007, **IOWater** has been in charge of gathering the recent data, available in the 27 Member States of the European Union, on the concentrations of all the potentially dangerous chemical substances in water.

These data allow selecting the substances that should be urgently registered on a list of substances to be treated as a priority to protect water and users.

For this purpose, IOWater developed an electronic collection tool, guaranteeing data quality. It was provided to the Member States.

This gathering will support the European Commission in its discussions with the Parliament for the second reading of the proposal for a Daughter Directive on "priority substances".

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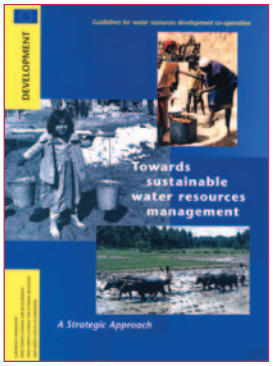
A strategic approach ...



In 1999, **IOWater** had collaborated in the design, writing and publication of the **"guidelines for developing cooperation on water resources: a strategic approach towards sustainable water resources management"** of the Directorate-General for Development of **the European Commission.**

Like the other big donors, **the European Commission** is reforming its procedures for financing projects in Third Countries. The main change consists in passing from a "project" approach to a "sector" approach. This reform started to be applied in 2002.

In November 2006, a seminar had gathered, with **IOWater** participation, about twenty executives from the Delegations of the European Commission.

The first question raised was the identification of the exact limits of the "water sector".

The second one was the identification of the national documents dealing with the political and institutional aspects of the water sector.

For the Delegations of the European Commission, the reform also requires a change in the procedures for aid management, to which are added the analysis of policies and projects and the control of aid performances as well as the necessary coordination with the other donors.

IOWater was approached in October 2007 by the group of organizers of **AIDCO,** the specialized organization of the Commission, to prepare an update of the guidelines, taking into account the experience acquired during 8 years and their evolution.

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Institutional twinning agreements: about 10 years have passed!

Evaluation of a successful process to accompany changes ...

Launched in 1998, the institutional twinning agreements are initiated by the European Commission. They aim at helping the countries, applying for accession to the European Union, build their administrative capacities for implementing the European Directives, relying on the Ministries concerned in the former Member States.

The twinning projects are based on precise objectives, with an obligation of results, a quarterly work plan, indicators allowing the evaluation of the progress made, stringent administrative and financial procedures, etc.

They imply joint work of experts from the two countries concerned to seek suited solutions, to carry out field tests, to write methodological guides and to have them validated by the national Authorities, to carry out a broad dissemination of results, etc.

These structuring projects imply the secondment of a full-time resident-adviser for at least a year, as well as short time assignments of specialists in various issues.

For about 10 years, as an operator mandated by the French Ministries of Ecology and Sustainable Development -MESD- and Health for implementing water-related twinning agreements, IOWater led 17 twinning arrangements in most Central European countries and in the Mediterranean Region, relying on the expertise of the French Water Agencies in particular:

- **Bulgaria:** 3 twinning agreements on Urban Waste Water and authorizations for discharges; Basin Organizations; dangerous substances, bathing and fishing water, and water supply;
- **Estonia:** 2 twinning agreements on basin management and economic instruments; water supply, wastewater and dangerous substances;
- **Hungary:** 2 twinning agreements on dangerous substances; the Framework Directive and accidental pollution;
- **Poland:** 2 twinning agreements on the Directives on UWW, nitrates and dangerous substances and the Framework Directive: Programs of Measures, economic analysis, public participation, Management Plan, cost recovery;
- **Romania:** 2 twinning agreements on the Directives on UWW, nitrates and dangerous substances and the Framework Directive: investment strategy for taking up the "acquis", drinking water supply, wastewater;
- **Slovenia:** 2 twinning agreements on the Framework Directive and water quality;
- **Czech Republic:** 2 twinning agreements on nitrates and the Framework Directive.
- **Malta:** Framework Directive: Programs of Measures, Action Plan and economic analysis;
- **Turkey:** Drinking, bathing and bottled waters.

The initiative has now extended to the countries of the Mediterranean region and neighborhood area, which wish to apply the great principles of the European legislation.

For example, **IOWater** participated, with the **MESD** Department for International Affairs, in a mission to Egypt in May 2007, in order to identify the twinning prospects, which will be proposed by the Egyptian Ministries in charge of the environment and water resources management.

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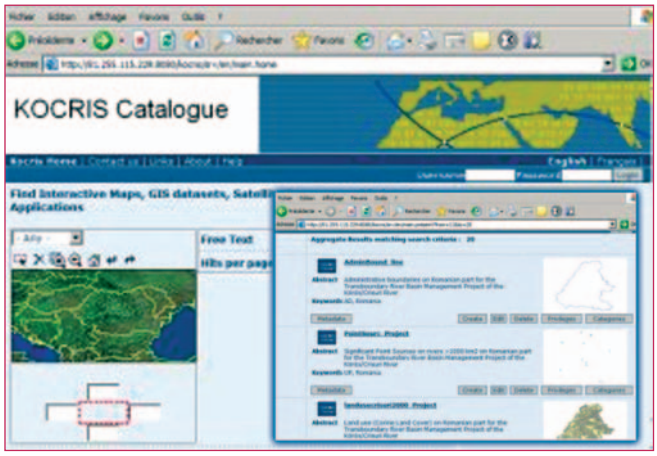
Hungary / Romania

The Water Framework Directive implementation in the Körös / Crisuri transboundary basin

The project for the Körös / Crisuri, tributary of the Tisza in the great Danube Basin, started in 2005, is now ending: the two concerned countries, Hungary and Romania, are now members of the European Union and apply, in a convergent way, the same community legislation. The methodological and practical contribution of the French experts was useful to develop the new practices necessary for the Water Framework Directive implementation.



Web application for sharing metadata between the various institutions

The project exceeded its initial objectives with the finalization of one of the very first Management Plans for the Danube Basin, as required by the WFD for 2009.

Jointly financed by **the French Fund for Global Environment (FFEM)** with one million Euros, this project, being carried out at the center of the Tisza Basin, main tributary of the Danube and shared by Hungary, Romania, the Ukraine, Slovakia, and Serbia, is of major interest to this region.

Carried out by **IOWater** under the aegis of **the International Commission for the Protection of the Danube River (ICPDR),** this project allowed true cooperation between Hungary and Romania for the creation of a management body, coordinating the work of the two national parts of the basin.

In a first phase, "organizational blocks" were created for data management, the introduction of mechanisms for regional dialogue, the harmonization of the delimitation of ground Water Bodies and the monitoring of ground and surface waters, the economic analysis, from the analysis of cost recovery to the choice of the best measures to be taken, the projection of the trends up to 2015, and the organization of accidental pollution control.

This preliminary work allowed the progressive drawing up of two international documents showing the high level of coordination reached by the two basin's countries at the end of the project, i.e.:

- **A Management Plan for the Körös / Crisuri,** in accordance with WFD requirements;
- **A plan for the prevention of accidental pollution,** which was tested during an international exercise in June 2007.

After 2 years of work and many assignments, the following exemplary results can be underlined:

- Development of **a catalogue of shared metadata,** thanks to an application software provided by **IOWater;**
- Creation of a website, hosted by **ICPDR (www.icpdr.org)** entirely devoted to the project, with the various experts' reports;
- **Checking that the Objectives of Good water Status would be achieved in 2015,** according to the implementation of the Program of Measures proposed through modeling;
- Implementation of joint work aiming at **harmonizing the methods for sampling fish and invertebrates** for the realization of a Biological Quality Index;
- **Training on quality management** in the laboratories analyzing the basin water and implementation of a blank quality audit;
- **Testing a public consultation on significant basin issues in the two countries** for preparing the national phase;
- **Drafting of a detailed economic analysis** of the measures planned for the project;
- **Drafting of a guidance document** on the implementation of the various stages of the planning process necessary for the development of the Management Plan;

Electrical fishing for harmonizing the measurement methods

- **Presentation of the project results during various international meetings** and design of a brochure for disseminating the obtained results.

At the end of this particularly profitable project, we deplore the death in May 2007 of one of its craftsmen, **Mr. Petru Serban,** Romanian Water Director in Apele Romane, who led his country on the way to integrated water resources management and widely contributed to the success of the project by his direct personal involvement in the activities and his active participation in the steering committee.

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EUROPE

Romania

Decentralized cooperation and training

Within the twinning agreement between **the Limousin Region (France) and the Bacau Departmental Council (Romania),** a plan for the professional capacity building of the institutions in charge of water and municipal waste in this Romanian region started with several training courses on the following topics:

- techniques for the production of drinking water,
- operation of the drinking water supply systems,
- community management of domestic waste.

Bacau Departmental Council, the Regional Agency for Environmental Protection, the Apa Serv Company and APELE Romane were the recipient Romanian institutions of these training activities, thanks to a joint financing by the Limousin Region and the Bacau Departmental Council, and to **IOWater** educational support.

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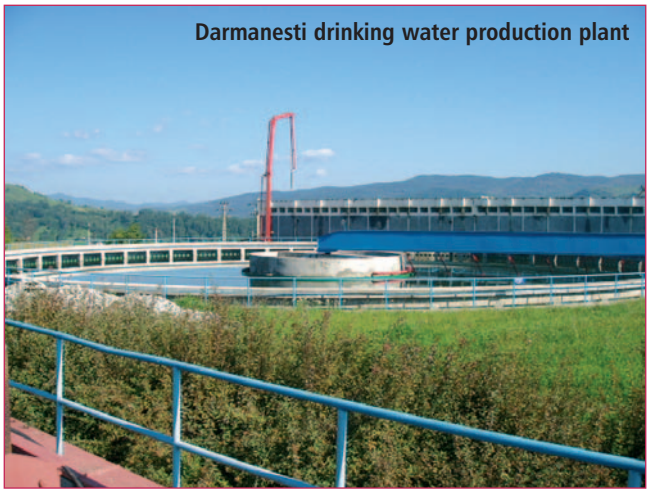

Darmanesti drinking water production plant

THE MEDITERRANEAN

"MEditerranean diaLogue on Integrated water manAgement" - "MELIA"

Strengthening Euro-Mediterranean dialogue for improving water management

The MELIA Project (Mediterranean Dialogue for Integrated Water Management) is a coordinated **INCO-Med** action financed by the European Union.

Led by **CSIC,** Spain, **it gathers 45 organizations from 16 Member and non-Member States of the European Union.** The gathering of bodies of different nature (public authorities, international organizations, NGOs, universities, etc.) is a fundamental feature of this project. It started in September 2006 and will be completed in 2010.

MELIA aims at evaluating the methods for Integrated Water Resources Management (IWRM) in the Mediterranean countries, using the regulations of the European Water Framework Directive (WFD) to harmonize water policies in the Mediterranean basin.

Its objectives are to:

- **build a knowledge base for planning IWRM,** based on the integration of the widest possible contributions;
- **develop awareness on social** (cultural and participative), **economic and technical issues** related to water management on the Mediterranean scale;
- **propose participation mechanisms and prevention tools** to avoid competition for the allocation of the resource between the regions and the various water users;
- **support sustainable water policies, provide the institutions with criteria accepted** by a broad representation of the social, economic, scientific and political stakeholders of the various countries;
- **provide indicators** to implement benchmarking of IWRM in the Mediterranean region;
- **facilitate the development of a common language** to contribute to water-related negotiations.

In the **MELIA** project, the **International Office for Water** leads the "Water Policy" working group, which aims at analyzing the water policies of the various countries represented in the project, using a common conceptual framework.

This means identifying the main factors which direct and condition the development and implementation of these policies (conditions of resource scarcity, sustainable -or non sustainable- development approaches, etc.), how they are effectively applied, and improving dialogue between decision makers, lawyers and researchers in order to improve the water policies by basing them on the example provided by the WFD, but by paying special attention to the limits of using the WFD or its principles in the Mediterranean countries.

The MELIA Project has a website at the address:

www.meliaproject.eu

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MCSD

Promoting demand management policies

In November 2001, **the Mediterranean Commission on Sustainable Development (MCSD)** was entrusted with the drafting of a strategy, which focused on four topics:

1. **Promoting economic development** by developing Mediterranean assets;
2. **Reducing social disparities** by achieving the Millennium Development Goals and strengthening cultural identities;
3. **Changing the methods of non-sustainable production and consumption** and ensuring sustainable management of natural resources;
4. **Improving governance** on local, national and regional scales.

The **MCSD** selected a series of indicators for evaluation and follow-up, using this approach.

With regard to water demand management, these indicators aim at establishing a characterization, at following up the progress made and the effectiveness of the water management policies.

Written by IOWater, upon request from the Ministry of Ecology and Sustainable Development, the French report summarizes all the indicators and results obtained in the French Mediterranean area.

In France, the progressive implementation of integrated river basin management since 1964 saw the gradual emergence of management methods which, de facto, tended towards better demand management, the conservation of aquatic ecosystems, including under condition of water stress.

The recent droughts, climate change and the economic approach, linked to the Framework Directive implementation, among others, resulted in introducing new management principles into the new Water Law of 2006, which aims at better managing demand for the various uses, including drinking water supply and agriculture but also the needs of ecosystems.

It remains that the elements of analysis and future prospects for 2015/2020 are still badly understood and deserve more thorough investigations. Although it is clear that the requirements for drinking water are increasing, because of demographic growth (20%), and that agricultural demand could decrease, more proactive policies, aiming at decreasing water consumption, are still to promote.

Tomorrow, the demand management policy will require a bigger integration of all aspects of public policies, going further than "a world of day-to-day actions", with the definition of shared objectives accepted by all the stakeholders, including those of the civil society, correctly informed of the consequences of their actions.

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"INECO"

INstitutional and ECOnomic instruments for sustainable water management in the Mediterranean region

INECO, "Institutional and Economic Instruments for sustainable water management in the Mediterranean Region" is a coordinated project, supported by the European Commission (6th RDFP), with specific measures for international cooperation (INCO Program) with the Mediterranean Partner Countries (MPCs).

INECO gathers 14 institutions from 10 Mediterranean countries (Greece, France, Italy, Cyprus, Tunisia, Egypt, Lebanon, Syria, Algeria and Morocco), including public, private and international organizations.

The project, which extends over 3 years, began on 1st July 2006 and will be completed in June 2009.

It is led by the School of Chemical Engineering of the National Technical University of Athens (Greece).

It aims at presenting an interdisciplinary approach to water management, which integrates three main aspects: environment, economy and society.

INECO deals with the various problems encountered in the decision-making process and with the deficiencies of the current governance structures in the Mediterranean Basin. Research focuses on the alternative institutional and economic instruments which allow promoting equity, economic effectiveness and environmental sustainability in water resources management.

The main goal of **INECO** is to develop the stakeholders' skills and constructive commitments in water resources planning, by meeting three challenges:

- **Water sharing,** referring to the institutional, regulatory, legislative and economic mechanisms created for allocating water resources in the basin.
- **Giving a value to water,** which refers to assessing the cost of water use, maximizing economic effectiveness, implementing the cost recovery principle for sustainable management of water utilities, and implementing the "user-pays" and "recipient-pays" principles.
- **Improving water governance,** referring to the institutional environment, which allows the implementation of IWRM (Integrated Water Resources Management).

IOWater more particularly deals with:

- **the analysis of the current practices** used by developed countries in arid zones, other than EU Member States,
- **the role of women** in Integrated Water Resources Management in the Mediterranean countries,
- **the organization of workshops** and exchange activities.

INECO is a "social experiment" for developing skills and political structures. **INECO** aims at providing experience and enabling local societies to change their perceptions and, consequently, their water management practices and at providing complete and adaptable recommendations.

http://environ.chemeng.ntua.gr/ineco

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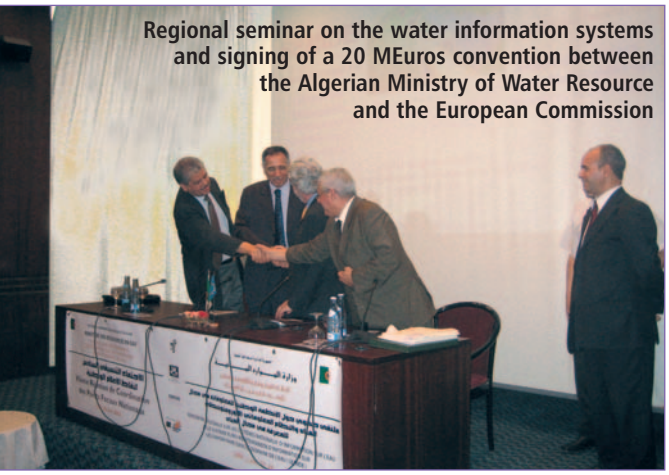
EMWIS, Vector for Cooperation in the Mediterranean



Regional seminar on the water information systems and signing of a 20 MEuros convention between the Algerian Ministry of Water Resource and the European Commission

Operational since the end of 1999, the Euro-Mediterranean Information System on know-how in the Water Sector - EMWIS - is an essential tool for dialogue and institutional exchange between the concerned Countries of the Euro-Mediterranean Partnership.

It fits in with the decisions made by the Ministers at the Conferences of Marseilles (1996) and Turin (1999) on local water management.

The significance of the completed work was underlined by the Partnership Countries, which also reaffirmed their will to continue cooperating on the bases already defined during the Euro-Mediterranean Conference of Athens in November 2006.

Preparation of the Euro-Mediterranean Ministerial Conference on Water in 2008

The Partner Countries and the European Commission agreed that convening a ministerial conference was necessary under the European Union French Presidency at the end of 2008, to start again regional cooperation in the water sector. **EMWIS** is preparing a contribution to this conference in the form of an assessment of and prospects for cooperation in the Mediterranean water sector for better coordinating all the initiatives for real effectiveness.

Synthesis and transfer of knowledge

Three topics are being developed by working groups initiated with **the Water Framework Directive and Med-EUWI Joint Process** (Mediterranean component of the European Water Initiative):

- **Wastewater reuse,**
- **Drought and water scarcity,**
- **Monitoring networks.**

The first results of this work were presented to the Euro-Med Water Directors during their meeting on 10 and 11 December 2007 in Bled (Slovenia).

National Water Information Systems

At the end of 2007, **EMWIS** had **16 national websites** with the launching of the Egyptian site that year. **The National Focal Points (NFPs)** do not spare their efforts to revise their site and produce contents useful for the national stakeholders of the water sector.

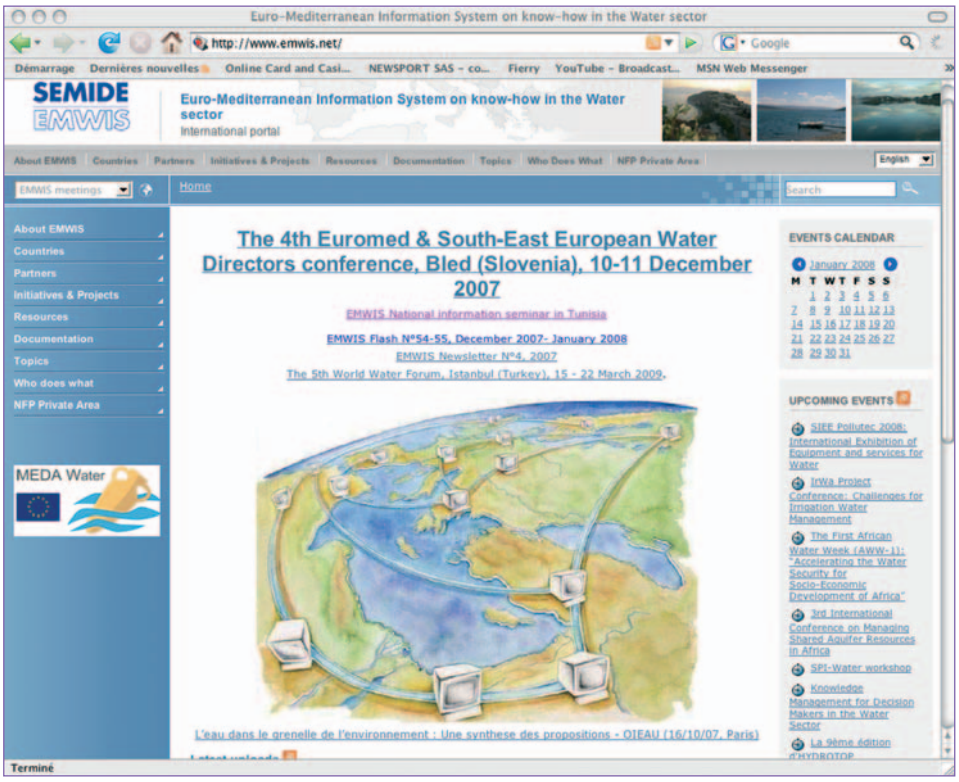
The know-how acquired by Algeria, Spain and France in the technical and organizational implementation of their National Water Information Systems enables to facilitate the actions of the other countries.

A Web portal in full expansion

Nearly one year after its launching, the new international portal of **EMWIS** receives about 50,000 monthly visits on the average: about 1,000 news and more than 500 events were published in 2007.

Its thesaurus on water is now available in **5 languages** (Arabic, English, Spanish, French and Italian).

The electronic flash (e-Flash) is sent every month to more than 14,000 readers in Arabic, English and French. It not only allows incorporating the information provided by the NFPs and various topical websites, but also providing flows of information in real time for other websites (e.g. Alliance for water monitoring). It is a reference media for water information in the Euro-Mediterranean area and a collaborative working tool for the working groups of the WFD/Med-EUWI Joint Process.



THE MEDITERRANEAN

LARGE PROJECT
SEMIDE
EMWIS

Thanks to a toolbox based on free software, which enables to generate very powerful Web portals in a simple way, Jordan launched its new bilingual (English-Arabic) **EMWIS** portal in May 2007, in cooperation with the main national stakeholders.

Towards the creation of a Mediterranean Water Information Mechanism

According to the mandate given to **EMWIS** by the Euro-Mediterranean Ministers during the Turin Conference on Local Water Management, the Euro-Mediterranean Water Directors agreed to study, with the voluntary countries, the feasibility of **"a Water Information Mechanism in the Mediterranean".**

This study, coordinated by **EMWIS** Technical Unit and the Water Directorate of the French Ministry of Ecology and Sustainable Development, is carried out with the technical support of **IOWater,** owing to its expertise in the field of shared water information systems.

The first phase of the study, aiming at identifying the objectives and the main prospects of such a mechanism, was carried out in 2006 and its first results were presented during the Water Directors' Conference in Athens (November 2006).

The second phase of the study, which was completed at the end of 2007, enables to identify detailed proposals for the implementation of this mechanism.

Work confirms the main conclusions of the studies and enquiries carried out in 2006 involving many regional and national organizations:

1. One of the characteristics of the Mediterranean region is to be in the middle of many national, regional and global political processes, including an important component with activities related to water resources management (Millennium Goals and Mediterranean Strategy for Sustainable Development, Barcelona Convention, environmental policy of the European Community, Euro-Mediterranean Partnership, European Neighborhood Policy, "Horizon 2020" Initiative, African Water Policy, etc.);
2. To implement these policies, many stakeholders intervene at the national and regional levels, through many initiatives, programs or projects, some of them based on very thorough work programs;
3. Most data and information, used at the regional and/or global level, are above all processed with data produced at the national and/or local level;
4. Most stakeholders, whatever their level of action (regional, national, local), are faced with problems related to the availability, quality, organization, accessibility and sharing of the water information necessary for achieving the goals laid down in these programs.

The study results were presented during the Water Directors' meeting in Bled (December 2007) and enabled to specify:

- The objectives and overall principles of the mechanism;
- The main common measures to be adopted for promoting the production and enhancement of interoperable water data;
- The possibility of building the national capacities of data services, especially for the production of data of common interest, which meet national expectations while being compatible with the expectations at the regional level;
- The priority topics such as the production of "Millennium water indicators", the indicators of the Mediterranean Strategy for Sustainable Development, etc.;
- A program for the mechanism implementation with an estimated budget.

For harmonizing WISE and EMWIS

EMWIS work on the Mediterranean Information Mechanism and the National Water Information Systems raised the interest of **the European Environment Agency (EEA),** with which an agreement is being drafted. It especially concerns the harmonization with **the Water Information System for Europe -WISE-** launched in March 2007, and the monitoring of the Horizon 2020 initiative (pollution removal in the Mediterranean Sea) for which the Agency is responsible.

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Algeria

Capacity building

In 2007, **the International Office for Water - CNFME** carried out several activities for upgrading the skills of the Algerian staff of Water Supply and Sanitation Utilities:

- First of all, in partnership with **the ACEF Company, IOWater** trained the Quality Unit of Algiers Water and Sanitation Company (SEAAL) on Quality Management for its ISO 9001 certification.
- In addition, **ACEF and IOWater** also carried out a training cycle on the design and sizing of wastewater treatment plants for several Algerian consulting firms and industries.
- Following an invitation to tender, the German cooperation body **"International Weiterbildung und Enwicklung GmbH" (INWENT)** entrusted **IOWater** with the training of trainers from the Ministry of Professional Training on the treatment of urban and industrial effluents.
- Owing to the building and start of the drinking water treatment plant of Constantine by the **Degrémont Company, IOWater** trained the staff of the "Algérienne des Eaux" on the use of reagents for the production of drinking water in compliance with safety rules.
- Finally, in 2007, collaboration between the **SCE** consulting firm and **IOWater** became effective with the audit and training plan of the Drinking Water Department of the "Algérienne des Eaux" in Jijel, to be carried out in 2008.

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Training of the "Algérienne des Eaux" staff

Training course for the trainers of the Ministry of Professional Training

Lebanon

"Aquarius" training

Training course for the engineers of the Aquarius Company

Aquarius, with the strong will to maintain its leadership in Lebanon on the treatment of drinking water, swimming pool water and wastewater, continuously upgrades its know-how through training courses carried out by **the International Office for Water.**

Thus, in 2007, **IOWater** trained engineers from **Aquarius** on the design and sizing of wastewater treatment plants using activated sludge.

This training course was supplemented by a field trip on the design of drying beds planted with reeds.

A training course is now planned for 2008 on drinking water treatment techniques.

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For sustainable water management in the Mediterranean region

In March 2007, **the University of Constantine, the French Embassy in Algeria and the Constantinois - Seybousse - Mellegue Basin Agency organized an international conference on sustainable water management in the Mediterranean region,** associating all the Algerian and Mediterranean partners concerned.

The selected topics were:

- Water policy: legislative and regulatory framework.
- Water resources protection and respect of the environment: quantitative and qualitative water management.
- Fair sharing of water resources: case of the transboundary river basins.
- Water and economic contexts: water cost.
- Water and social culture: traditions, awareness and respect of the resources.
- Examples of cooperation on sustainable water management.

Mr. Jean-François Donzier, **IOWate** General Manager, was invited to present the water situation in the Mediterranean basin as an introduction.

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The International Conference of Constantine

Malta

WFD implementation in a Mediterranean island, a Program of Measures for Maltese groundwater

A PHARE twinning agreement on the definition of the Program of Measures planned by the European Water Framework Directive (WFD), signed by the French Ministry of Ecology and Sustainable Development (MESD) and the Malta Resources Authority (MRA), was carried out from January to August 2007 and managed by IOWater, as project operator.

Strong stakes for groundwater management

Historically, the Maltese population always had to face a relative scarcity of freshwater resources, but the increase in groundwater abstraction led to a fragile balance between recharge and withdrawal.

While technical solutions were developed (building of desalination plants), they did not allow abating the pressure on groundwater, caused by population growth, but also by the high increase of illegal boreholes.

The characterization, required by the WFD, thus classified 10 out of the 16 Groundwater Bodies at "risk of not achieving the quantitative objectives in 2015".

It showed a significant increase in concentrations of nitrates and chlorides, up to values sometimes exceeding 5 times the limits relating to drinking water. 15 out of the 16 Water Bodies were thus identified at risk or potentially at risk of not achieving Good Chemical Status.

To these stakes should be added significant needs with regard to water control and management by the institutions, but also huge requirements in terms of knowledge of these aquifers and public awareness to water management issues.

The Framework Directive demands to the Member States to develop a Program of Measures, to achieve the environmental objectives. The development of such a program, in collaboration with the Maltese experts, was thus the paramount objective of this twinning, which mobilized, during 32 assignments, **12 French experts** coming from **French Water Agencies** (Artois-Picardy, Loire-Brittany, Rhine-Meuse and Seine-Normandy), **BRGM** and **IOWater.**

The Program of Measures, developed during a 6-month cooperation between French and Maltese experts, thus attempted to provide answers to these great stakes, using a logical and participative approach. In a first step, it consisted in revising the risk assessment carried out in 2005 and in identifying the great challenges of water management.

Looking for balance between the stakes of water use for agriculture and the conservation of endemic species dependent on groundwater quantity and quality

On this basis, an identification of all the possible measures to be taken was carried out and information on their technical and economic description and their implementation was gathered in a catalogue of measures.

An economic analysis, dealing with cost/effectiveness criteria, was then carried out with 3 different scenarios and thus allowed proposing a selection suited to the Maltese situation.

Finally, the work aimed at **analyzing the financial consequences of this Program of Measures** for the various water stakeholders and users, as required by article 9, on cost recovery, of the Framework Directive.

The development of such a program over a short period was a great challenge for the Maltese and French experts.

The participative approach used was a significant element of success of this project: indeed, a "panel" of interested parties, representing various State administrations or water users (companies, agriculture, etc.), was involved from the start of the project, then in 3 feedback seminars at the important stages and allowed the taking into account of the opinions and remarks on the work.

In addition, regular sectoral meetings gathered the French and Maltese experts in order to propose relevant measures suited to Maltese realities.

To supplement the assignments in Malta, three study tours in France enabled the Maltese people in charge to exchange, with their French and European counterparts, their experience in WFD implementation but also to discover precise examples of groundwater management bodies (Syndicates for Alsace, Roussillon and Astien aquifers).

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THE MEDITERRANEAN

Turkey
"Water and Health" twinning betwe


The Bosporus

This twinning agreement, carried out within the Program for Pre-Accession to the European Union, deals with the "drinking water", "raw waters intended for drinking water supply", "bathing water" and "mineral water" Directives.

For 18 months, four people have continuously worked in close cooperation with the departments of the Turkish Ministry for Health in Ankara and other organizations in charge of the fields covered by these Directives in Turkey.

About forty French experts participate in this twinning agreement through short-term assignments. They are mainly experts from the French Ministry for Health, or related organizations, and from the Ministry of Ecology and Sustainable Development.

Tenths of Turkish specialists are regularly involved in this twinning and hundreds occasionally participate in its activities. In addition to those from the Ministry for Health, from its provincial directorates and laboratories, they come from the other ministries, in particular those of the Environment and Forestry, Tourism, the Interior, DSI (General Directorate of State Hydraulic Works), of the Bank of Provinces, etc.

Regarding drinking water, the twinning activities have, for one year and a half, dealt with all the issues which guarantee public health.

The Turkish Authorities especially examined the legal aspects and responsibilities of the various institutions, the monitoring programs and their optimization, the reliability of the supply from a quantitative and qualitative viewpoint.

The difficulties and shortages encountered in the water supply, which occurred in summer in Ankara, illustrate the interest of having preventive measures to reduce the vulnerability of the supply, alternative measures when water shortage cannot be avoided and provisions to prevent negative impact on health.

The relation between quality of the supplied water and resource protection, the eutrophication phenomena, which appear when water resources decrease, their consequences on the treatment processes, the taking of measures to face them, water saving, etc., were profitably discussed by the Turkish people in charge with their French counterparts from the Ministries for Health and Sustainable Development, the Loire-Brittany and Seine-Normandy Water Agencies, the Office of Geological and Mining Research, analysis laboratories, the French Agency for Health and Food Safety, Paris Water and the **International Office for Water.**


Istanbul drinking water treatment plant

An important component concerns the dissemination of results on water quality, data bases and public information.

As regards bathing waters, Turkey has a privileged situation, which makes it a very favored tourist destination for its coastal waters. It also has an important potential for fresh water bathing.

From the point of view of health protection, Turkey benefits from many very favorable features:

- a wide and tested control network: more than 1,400 monitoring points have been controlled regularly by the Health Services since the 1990s,
- a long-time "recognition" of the stakes of health and environmental protection from the Ministry of Tourism and the large "metropolitan authorities", such as ISKI in Istanbul;
- a relatively limited extension of animal husbandry in the coastal basins, and thus a limited risk of eutrophication and bacterial contamination in the bathing areas;
- a very sunny climate (biocide effect of UV radiation) with very few showers and storms in summer, which are one of the main causes of bathing water contamination;
- most of the recent tourist resorts are equipped with modern and effective sanitary infrastructures, especially thanks to the investments of the Ministry of Tourism in sanitation;
- very low tides and an absence almost total of long distance pollution transfers, making occasional pollution limited to the close neighborhood.

en France and Turkey

The twinning priority actions deal with the evolution of organization and the harmonization of control with the European Directives, the new Directive published in March 2006 in particular:

- definition of bathing areas, coding and classification,
- laboratory practices: analyses, sampling, conveyance, as well as quality assurance and accreditation,
- profiles of environmental vulnerability of bathing areas and pollution reduction as well as modulation of monitoring frequencies,
- knowledge of the pressures of polluting activities on the environment and exchanges with the other ministries, municipalities or urban metropolises, etc.,
- design of a database that can be used, either locally in the season or before-season for the annual opening, or for classifications at the end of season, or for drafting the national and triennial reports intended for the European Commission,
- communication tools, exchange of information between the institutional partners and public information.

As regards natural mineral waters, the twinning project, using the characterization of waters and treatment and production plants, carried out an expert's appraisal of the conditions for implementing the Directive 80/777/EEC: definition of mineral waters according to the Directive, field of application, rules concerning the chemical and microbiological characteristics and radioactivity, limit values, acceptable treatments, bottling and labeling conditions and the whole control process by the producers themselves and inspection by Health Authorities.

The conditions applicable to imported waters were also examined, together with the recognition of waters produced by third countries. The latter is of special significance in Turkey, taking into account the importance of natural mineral waters in the country's economy because of internal consumption, but also of Turkish export worldwide.

French experts' assignment in Turkey

The extent of the covered issues, the significance of the public health stakes, as well as of the related economic stakes, the interest of achieving the objectives, led the European Commission, upon a joint request from the Turkish and French partners, to continue the twinning agreement beyond 30 November 2007 for a new 6-month period in 2008.

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The 5th World Water Forum of Istanbul is launched: "Bridging Divides for Water"

A Kick-Off Meeting took place in Istanbul on 19 and 20 March 2007 for preparing the **5th World Water Forum,** planned from 15 to 22 March 2009.
It is now time to define the priority topics and to study the various processes which can lead to the practical use of the suggested ideas.
Regional round tables were also organized.

Following this kick-off meeting and as a first contribution to the 5th World Forum, **the General Directorate of State Hydraulic Works (DSI) organized an International Congress on River Basin Management in Antalya from 22 to 24 March 2007.**
This congress was opened by the Turkish Prime Minister, Mr. Erdogan.
700 participants from 60 countries participated.
During plenary sessions, Jean-François Donzier, General Manager of **IOWater** and **INBO** Permanent Technical Secretary, was invited to make speeches on Integrated River Basin Management and on the implementation of the European Water Framework Directive.

Professor Oktay Tabasan was appointed Secretary General of the 5th Water World Forum.
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In March 2009, let's participate in the World Water Forum of Istanbul

BRIDGING DIVIDES FOR WATER

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