

# INTERNATIONAL NEWS

Capacity building for better water management



TRAINING  
INFORMATION  
MANAGEMENT  
COOPERATION



*International  
Office  
for Water*



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## At conclusion time...



### ...tangible progress for basin management and transboundary cooperation has been made

The topic of basin management and transboundary cooperation has been widely discussed during the recent World Water Forum in Marseilles.

- **UNESCO and the International Network of Basin Organizations (INBO)** jointly coordinated the nine official sessions of Priority 1.5 "Contribute to cooperation and peace", mainly on the management of the basins of transboundary rivers, lakes and aquifers.
- **INBO** also coordinated "target" 3, Condition for Success 1 "Good governance" related to the development and implementation of national or transboundary Basin Management Plans.
- **The European Commission and UNECE** also coordinated two sessions of the European process on the **"Water Convention"** (Helsinki 1992) and on the implementation of the **European Water Framework Directive (WFD)**, in liaison with **"Europe-INBO"**.
- **INBO** had the honour of being invited to be a key note speaker at the **ministerial**



**round table on transboundary basins**, chaired by the United States of America, Tajikistan and Zimbabwe, on Tuesday 13 March in the morning.

- **INBO Member Organizations** were also invited to present their experiences and recommendations at an event dedicated to the management of large transboundary basins, organized at the "French Pavilion" by the **International Office for Water, INBO Secretariat**.

**A large preparatory mobilization has taken place for over a year and many contributions were received on the "platform for solutions" website.**

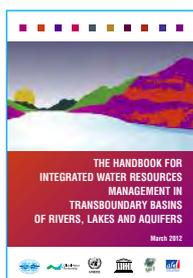
The sessions left wide room for lively and rich debates and discussions, **and a large majority of participants converged on the interest of the basin approach, either national or transboundary, to address the global challenges of water resources management.**

**All the papers and photos of these events can be downloaded on the website:**

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



## Handbook for Integrated Transboundary Basin Management



More than half of the world population lives in the basins of 276 transboundary rivers and lakes or nearly 300 aquifers.

Cooperation among the riparian countries is becoming imperative as pressure is increasing

because of the global changes which are intensifying.

The integrated approach to water resources management appears as the basis for improved management of transboundary basins.

**The basins of rivers, lakes and aquifers are indeed the spaces where hydrological, social, economic and environmental interdependences better appear.**

The experience gained allows today saying that it is possible to organize effective management on the basin-scale of transboundary

rivers, lakes or aquifers, when there is a real willingness of the stakeholders concerned.

Nevertheless, significant progress remains to be done everywhere in the world.

To support this process, the International Network of Basin Organizations (INBO), the Global Water Partnership (GWP), UNECE, UNESCO, the GEF, EVREN and the French Development Agency drafted the **"Handbook for Integrated Water Resources Management in the Basins of Transboundary Rivers, Lakes and Aquifers,"** presented at the World Water Forum in Marseilles.

This handbook aims to provide practical advice to improve transboundary basin management, using more than **60 practical examples** of actions already successfully initiated in various basins.

**The handbook itself and its French and English versions on CD-ROM can be obtained free of charge, subject to availability, by E-mails to: [gwp@gwp.org](mailto:gwp@gwp.org) or [riob@riob.org](mailto:riob@riob.org)**



Handbook presentation in Marseilles

**Digital versions of the English and French Handbook can be downloaded, free of charge, on INBO and GWP websites, including at:**

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



## 69 Organizations from the whole World sign "the World Pact for Better Basin Management"

Initiated by the International Network of Basin Organizations (INBO), its Regional Networks in Africa, America, Asia, Europe and the Mediterranean, and 12 French metropolitan and overseas Basin Committees, this "World Pact" was signed on Friday, 16 March 2012 in Marseilles by 69 organizations from all continents, the basins of which are concerning 33 countries.

The signatories commit themselves to apply in their respective basins the management principles recognized as the most relevant and most effective using the field experience acquired by the INBO Member Organizations for over 18 years.

They affirm as a prerequisite that the basins of rivers, lakes and aquifers, whether local, national or transboundary, are the suited areas in which organize the joint management of water resources, aquatic ecosystems and all water-related activities in order to cope with the global changes related to rapid world population growth, migration, increasing urbanization, climate change ....

They encourage the riparian countries sharing basins of transboundary rivers, lakes and aquifers to organize joint management, to sign the necessary cooperation agreements and to establish the institutions needed for their application.

They express their will to commit themselves alongside their national governments and international institutions for:

- improving water governance, facilitating the creation of Basin Organizations where they do not exist yet, strengthening existing organizations;
- organizing dialogue with the stakeholders recognized in their basins;
- based on prior assessment, facilitating the agreement of the various stakeholders on a "shared vision of the future of their basin" and developing, through dialogue and transparency, Management Plans for setting out the goals to be achieved in the medium and long term;
- developing successive action and investment plans that meet the economic, social and environmental priorities of the basins;



The signatories of the Pact

- making better use of water and ensuring low consumption of this scarce resource by better control of the demand, while encouraging more efficient uses, and according to the case, the use of non-conventional resources;
- better taking into account the significance of ecosystems and of the services they provide in making decisions for the development and management of river basins;
- mobilizing the financial resources needed for carrying out governance reforms, ensuring a long-term good basin management and implementing the action and investment plans needed and ensuring their lasting operation;
- organizing in each basin a harmonized data collection as part of Integrated Information Systems;
- supporting initiatives of Regional Cooperation Institutions for harmonizing policies and legislation in the field of water and for developing joint action plans at the basin level;
- strengthening institutional and technical cooperation with counterpart Basin Organizations in their region or other parts of the world;
- organizing better liaison with Research Organizations to better focus their work on the priority aspects of basin management and rapidly disseminate their findings in the field.

They also committed themselves to promote the "Pact" to other Basin Organizations that were not able to come to Marseilles for inviting them to join quickly and also becoming signatories.

Among the 69 signatories, there were African Transboundary Basin Organizations, and, for example, the Basin Committees of Quebec and the Brazilian Basin Committees represented by their national Associations, as well as the pilot Basin Organizations of Cambodia, Laos and Vietnam in the Mekong River Basin, etc.

The commitment also provides for the establishment of a **symbolic basin passport** to reinforce the feeling of citizenship in their river basin.

The French Basin Organizations committed themselves to use the legal maximum allowed 1% of their budget in their cooperation with least developed countries and to double their twinning arrangements with basins abroad.

Finally, the French Overseas Departmental Water Boards committed themselves to establish a **Network of Basin-Islands** to integrate in the development concepts the insular and specific nature related to the smallness of the territory and the strong connection between terrestrial waters and coastal waters, including coral lagoons.

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

## Success of the European Regional Process



On proposal of the French partners, the International Forum Committee (IFC) entrusted the International Office for Water (IOWater) with the coordination of the European Preparatory Process for the 6<sup>th</sup> World Water Forum held in Marseilles - France from 12 to 17 March 2012.

This Process involves the Pan-European region as defined in the UN Commission for Europe, i.e. the European Union and candidate and associated countries, the Balkans, Eastern Europe, Caucasus and the Russian Federation.

The five Central Asian countries, members of the UNECE, also participated in the concerned target groups.

To facilitate the European Preparatory Process, IOWater established a "Steering Committee", in which the main European networks concerned were invited to participate and play a very active role.

### 12 Specific Priority Targets for the European Region:

During its first two meetings, held in Brussels on 21 December 2010 and in Paris on 18 January 2011, this Steering Committee of the European Process proposed to retain 12 Specific Priority Targets for the European Region:

- Improve transboundary cooperation in Europe, particularly in the context of the UNECE Convention of 1992 called Helsinki Convention;
- Achieve Good Ecological Status of European Water Bodies in 2015, through the implementation of the Water Framework Directive;
- Adapt to the long-term challenges of climate change and prevent extreme phenomena;
- Developing a European water friendly agriculture;
- Promote European inland waterways navigation respectful of the environment;
- Better coordinate European policies on water and renewable energy;
- Improve access to drinking water supply and sanitation services for the underprivileged European populations;

- Ensure sustainable financing of drinking water supply and sanitation services in Europe;
- Develop knowledge and know-how on river hydromorphology, restoration and protection of aquatic ecosystems;
- Promote technological innovation, the "Science - Policy Interface";
- Adapt water management to the specific features of European Outermost Regions;
- Develop European cooperation with third countries in the field of water.

It was also decided to add a "trialogue" entitled "**European action for global access to water and sanitation**," gathering Ministers, Parliamentarians and local elected representatives and the European Commissioner, **Kristalina Géorgieva**, in charge of international cooperation, humanitarian aid and crisis response, to discuss about strengthening solidarity mechanisms on a Pan-European and global scale.

A coordinating body was designated for each of these European priority targets.

The last meeting of all the Members of the "Steering Committee of the European Process" was organized by IOWater on 12 and 13 January 2012 in Nice (France).

Each of the 12 European Priority Targets was the subject of a formal session during the World Water Forum between 12 and 15 March 2012 in Marseilles.

### The European process was highly participative, and seven preparatory meetings were organized in 2011:

- In Plovdiv (Bulgaria) from 20 to 23 March,
- Within the International Water Forum in Istanbul (Turkey) from 3 to 5 May,
- In Tashkent (Uzbekistan) from 10 to 12 May,
- In Oporto (Portugal) from 27 to 30 September with EUROPE - INBO and MENBO,
- In Guadeloupe on 6 and 7 October,
- In Tbilisi (Georgia) on 14 and 15 November,
- In Moscow (Russia) on 14 and 15 December.

Papers on the "European Process" were also presented during:

- The UNECE legal council on water, from 24 to 25 February 2011 in Geneva;
- The conference on "Futures of European Waters" from 23 to 25 March 2011 in Budapest, Hungary,
- A meeting of the Council of Europe in Strasbourg, 10 June 2011;
- The Water Week in Stockholm, 21-27 August 2011;
- The Seventh UNECE Ministerial Conference on "Environment for Europe" in Astana, Kazakhstan, 21-23 September 2011;
- The UN Water Conference – RIO + 20 in Dushanbe – Tajikistan, on 19 and 20 October.

Finally, a synthesis conference was held on 29 February 2012 at the **European Parliament** in Brussels under the aegis of the "water inter-group" and the Presidency of **Richard Seeber**.

### Strong involvement of European Commissioners and Ministers:



Andris Piebalgs, European Commissioner

Four European Commissioners, **Connie Hedegaard**, Climate Action, **Andris Piebalgs**, Development, **Janez Potocnik**, Environment, and **Kristalina Géorgieva** as well as the Director General of the Joint Research Center, **Dominique Ristori**, travelled to Marseilles and actively participated in the European sessions on their field. Several Ministers in charge of water in the 27 EU Member States and Candidate Countries, in the Caucasus and the Russian Federation have been active in the sessions of the European Process, as well as European Parliamentarians and the President of the Economic and Social Committee.

## A mobilized and united Europe to face the water challenges

### The European opening event of the Forum:

On Monday 12 March, under the title "**2012 European Water Year**", the European process was opened by **Jean Léonetti**, French Minister for European Affairs, in the presence of two European Commissioners, **Connie Hedegaard** and **Andris Piebalgs**, of **Andrey Vasilyev**, UNECE Executive Secretary, **Laszlo Borbely**, Romanian Minister for the Environment, **Semen Levi**, Russian Deputy Minister for Natural Resources, **Serge Lepeltier**, former Minister, French Ambassador for Climate and **Dominique Vlasto**, Member of the European Parliament, Deputy Mayor of Marseilles, in particular.

This event proceeded in two parts, one devoted to "**water management and adaptation to climate change in Europe**", in which Connie Hedegaard presented a preview of the new "**Climate adapt**," platform, the other to "**European cooperation with third countries in the water sector**", in which Andris Piebalgs reported on the outcomes of ten years of the "**European Water Initiative**" (EUWI) and announced the measures planned for its continuation after 2014.

### The "Blueprint" to preserve the European water resources:

On Tuesday, 13 March, at the opening of the session on the European Water Framework Directive (WFD), **Commissioner Janez Potocnik** said that despite the progress made, there are still problems for both water quality and quantity, that it is necessary to improve water efficiency and meet the challenges of scarcity, drought, floods, climate change, population growth and increasing demand for food and energy. That, at the same time, it is necessary to protect ecosystems and the services they provide against pollution and physical transformations.

If we are to achieve "good status of water bodies" in 2015, there are three things we must do:

- **First**, improve the implementation of the current Community legislation;
- **Then**, take greater account of water in sectoral policies and in financing, relying on better knowledge of the costs and

benefits of the economic activities and water resources management;

- **Finally**, introduce new tools leading to better water efficiency.

The Commissioner went on to say that it is necessary to finish the "**blueprint**" to preserve European water resources in November 2012 and that he will launch the same week a consultation on new policy options to give everyone the opportunity of a better understanding of the process.

It is planned to launch "**an innovative partnership for water**" in May 2012, .

Mr Potocnik concluded by saying that to achieve the 2015 target, a strong political will is needed as well as financial resources and this despite the crisis and difficulties, because protecting water is also providing the economic sectors the means to prosper.

### Conclusions and proposals of the European region:



Europe Synthesis session on 16 March 2012

Work was concluded on Friday, 16 March, by **four round tables** organized around the reports of the twelve European official sessions on:

- **Management of European basins:** to ensure cooperation and peace, promote economic development, prevent risks, achieve good status of Water Bodies and adapt to climate change;
- **Multiple water uses:** for economic development and health of Europeans - urban and rural water, agricultural water, industrial water, hydropower, inland navigation, fisheries and fish farming, domestic tourism ....;

- **A new green and blue growth:** to protect and restore aquatic ecosystems and develop natural infrastructure;
- **Strengthened European cooperation with the neighboring pan-European countries and with the entire world:** for better water management.

It was reminded in particular that many European countries have developed institutional and financial tools and efficient techniques for water management, both at the level of the general hydrologic cycle and of community utilities or control of individual uses.

At the pan-European continental level, **the UNECE Convention** called Helsinki Water Convention for transboundary water management has been applied since 1992.

In the European Union, many Directives organize water management, in particular **the Water Framework Directive (WFD) and its "Daughter" Directives**, have been setting ambitious goals, strict procedures and deadlines for the Member States since 2000.

Municipal management of drinking water supply and sanitation utilities relies, in various forms in many European countries, on the municipalities that have obtained positive results for guaranteeing the health and hygiene of their population, associating, whenever possible, specialized public or private companies.

### Strong development and interactivity:

To support the entire European process and to open it to the greatest number of participants, a dedicated website was created to disseminate information and gather opinions and suggestions from everyone:

<http://european-region-wwf2012.eu>

This site has received over **304,000 visitors** since its opening in March 2011.

All papers presented in the European sessions of the Forum and photographs are published there in particular.



## Capacity building for better water management

In 2011, 6,000 trainees benefited from the training provided by the French National Water Training Center (NWTC) managed by the International Office for Water.

Every year, the NWTC draws on its sites in Limoges and La Souterraine, the water professionals who want to improve their technical and regulatory knowledge and skills.

Nearly 2,000 of these students are also trained directly on their workplaces.

From operators to department heads, all the staffs of drinking water supply and sanitation utilities find at the NWTC all the useful training courses needed for good control and evolution of their work.

For the staffs of public and private operators, governmental services, Water Agencies, municipalities, industrial companies or of consulting firms, the training offer is thought, organized and delivered so as to meet the needs for ongoing reorganizations, regulatory changes, new activities and technical innovations.

A specific catalogue is also addressing the personnel managing process water in the industry.

The NWTC's professional trainers, supplemented by the best experts as lecturers, design and develop training programs using a concept of putting the students in real working situation, unique in France and Europe.

Participants will thus benefit from their training which can be measured with our instruments for assessing the knowledge acquired.

The NWTC proposes training programs, some of them graduating. On more than 15 training days, these programs correspond to periods of professionalization

The NWTC is certified ISO 9001, Version 2000, and has got many quality labels.



## Our 2012 training courses on "water"



Unit for work in confined space

In 2012, the NWTC proposes 294 training programs divided into 439 training courses and 7 large topics, in the water field:

- **Discovery of trades.**
- **Management of water supply and sanitation utilities, regulation, staff safety.**
- **Water in the city:** analysis and water quality, sensors and flowmeters, drilling, pumping, drinking water production, process water, drinking water supply, community sewerage, storm water, sewerage



The NWTC at La Souterraine

networks including stormwater drainage, treatment of urban wastewater, treatment of sludge and odor, self-monitoring and quality control, maintenance, energy, automation and remote management.

- **Water for recreational activities.**
- **Water in nature:** regulations, groundwater, rivers and surface waters, GIS and mapping.
- **Water in agriculture:** technical and regulatory management, design of pumping stations, operation and maintenance of irrigation systems, effluent treatment and reuse.
- **Water in industry:** initiation, regulation, analysis and control, process water, industrial wastewater treatment, detoxification in surface treatment.

25 new training courses appeared in 2012.

These training courses can be organized to produce a **customized training program** as curriculum, which may correspond to periods of professionalization.

**Several training programs are graduating:** maintenance of backflow preventers, electrical welding of polyethylene tubes, handling of chlorine in bottles, intervention in confined spaces, etc.

**The NWTC also proposes modules of interactive distance learning via the Web:** the economic approach of the European Water Framework Directive, the water cycle, wastewater treatment by reed beds.

**Most of these training courses may be organized in English on request.**



[www.iowater.org](http://www.iowater.org)

## Training Center

### Training program 2012 for industry

#### Training, source of money savings...

Process optimization, quality improvement and cost reduction are achieved through training.

It provides the knowledge needed for the successful operation of facilities. It allows making the best technical and strategic choices. In water treatment, training requests are more numerous, more sophisticated and are constantly evolving.

Good training is a source of money saving by contributing to the optimization of the design and operation of processes

The **NWTC** has developed its training based on these findings.

#### Recognized technical experts

The **NWTC's** trainers come from the professional world and their motivation and skills are very high. They know about the problems and help solve them by providing relevant and practical solutions to industrialists.

#### Neutrality

**NWTC** training allows exchanging freely and openly about the various processes and multiple techniques without any commercial goal in the background. Only the result matters. This neutrality enhances the training quality and meets the needs of everyone.

#### Unique teaching tools

The **NWTC** has teaching tools unique in Europe. Pilot units adapted to real situations allow being placed, safely, in conditions of malfunction and thus provide practical solutions in case of difficulties. All these pilot units aim to optimize teaching and allow its application to a real "field" situation that can be adjustable or reproducible in all industrial facilities.

#### Practical training

Trainees are able, when back to business, to apply the improvements seen during the training.

Training immediately becomes a true added value.

In 2012, the **NWTC's** proposes courses corresponding to the needs of all water industrial, dealing with traditional and up-to-date topics: water reuse, process water treatment, disinfection and microbiology, boiler and cooling water, ...

#### So ... "Save money by training yourself!"

**The NWTC is at your disposal to make the best training choice!**



Practical work in a NWTC pilot unit for activated sludge treatment

NWTC's complete training offer, as well as the planning for the whole year 2012, can be consulted on the website:

[www.iowater.org/cnfme](http://www.iowater.org/cnfme)

### Training on Waste, Environment, Sustainable Development



In 2012, the **NWTC** proposes 48 training programs organized in 52 training courses on the topics "Waste, Environment and Sustainable Development":

- **Waste:** management of "municipal waste", waste collection, selective sorting, customer's environment, logistics of a sorting and transfer unit, special waste, treatment and reuse of waste and wastewater treatment sludge, leachate, biogas, etc.
- **Air:** measurement of pollution in open air.
- **Noise:** noise at work in water and sanitation utilities, noise in the environment, protection of workers against noise.
- **Sites and soils:** pollution appraisal and removal from polluted sites and soils.
- **Energy:** optimization of energy consumption and renewable energy in water production plants.
- **Sustainable development:** carbon footprint, sustainable development approach, sustainable purchase, landscape integration into hydraulic infrastructures, "storm water quality" label.



[www.iowater.org](http://www.iowater.org)



### A new portal for enhancing information

**IOWater** which has been on the Web since 1996 is reorganizing its Web portal.

This portal, which received over 6 million visitors in 2011, presents **IOWater** know-how and actions in training, information and documentation, management of water utilities and cooperation.

For each of these areas accessible via the main menu "Training", "Information", "Cooperation" and "Management" the user will find ongoing actions, websites, ad hoc publications and **IOWater** news.

The reference sheets on actions achieved in France, Europe and around the World by **IOWater's** teams are also online.

True to its mission of disseminating information, **IOWater**, via the [www.oieau.org](http://www.oieau.org) portal, pro-

poses information on the Water World in its "News Flash", the announcement of conferences over the World in the "Events diary", a section presenting "Jobs vacancies" in the field of water and environment, a "Web library", which lists, but is not limited to, the websites of the stakeholders in the field, a section with "proceedings, papers and photos of top conferences in the world of water, as for example the last 6<sup>th</sup> World Water Forum.

Greater importance is given to the user on this portal, indeed a tool allows calculating his water consumption and he can share his own information by broadcasting the announcement of a conference or publication of a report.

[www.oieau.org](http://www.oieau.org)



## Worldwide Capacity building for water and sanitation professionals

On 15 March 2012, the **International Office for Water** organized a Side Event: "Capacity building for water and sanitation professionals worldwide," at the French Pavilion during the World Water Forum, in Marseilles.

The effectiveness of the Water and Sanitation Services requires permanent capacity building.

Vocational training is an essential tool to achieve this goal. The training requirements for all categories of employees are huge.

This side event allowed the presentation of the experiences of varied and complementary organizations: **IOWater**, French Ministry of Economy and Finance, Agro ParisTech, National Directorate for Water Supply and Sanitation of Haiti, National Office for Drinking Water Supply of Morocco, Suez Environment and the International Committee of the Red Cross.



IOWater's Side Event in the French Pavilion

These presentations helped provide answers to the following key points: how capacity building participates in the effectiveness of Water and Sanitation Services, what training, for what audience and with which training organizations, how to implement the various solutions to organize sustainable develop-

ment of professional training, which synergies should exist between capacity building and Human Resource Management for water and sanitation services, how sustainably finance training activities ...?



### "SANDRE"

#### National standardization



**Sandre**

Under the French National Water Data Plan (order of 26 July 2010 approved by the Ministers of the Environment, Local and Overseas Authorities, Health, Agriculture and Food), **International Office for Water provides the Technical Secretariat of the National Data Reference Center for Water (SANDRE).**

"SANDRE" produces and disseminates reference frames (specification documents and data sets) free of use at:

<http://sandre.eaufrance.fr>

These reference frames allow data gathering and exchange for knowledge of water and aquatic environments; **they ensure the technical interoperability of information systems.**

Year 2011 was marked by:

- **The Atlas release.** "Sandre" is improving the performances and functionalities of the Atlas. Remember that it offers a new cartographic search engine for geographic data sets and associated metadata. This service appears in the "SANDRE" website.
- **Obtaining the ISO 9001 certification** covering the specification documents and specifically the "SANDRE" data dictionaries - now fully modeled in UML. These will evolve in 2012, the goal is to gradually cover all activities of the "SANDRE" Technical Secretariat.



"Explore2070" is a project of the French Ministry of Ecology and Sustainable Development which aims to pool data on various topics (biodiversity, groundwater, surface water, coasts and socioeconomic prospect) to plan for adaptation to climate and anthropogenic changes.

**IOWater** is involved in the integration model that provides access to results.

- **Publication of specification documents** on various topics such as barriers to flow, zoning or migratory fowls. Furthermore, "SANDRE" published an exchange scenario for enhancing the data of the information system of the Hydro-meteorology and Support to Flood Forecasting Center (SCHAPI).

**Over 1,000 codes were created for all reference frames.**

The "SANDRE" is working to establish a new service for the dissemination of data sets including history management. In addition, the reference taxons and methods will be improved in close collaboration with AQUAREF.

**More than 800 certifications of exchange files were achieved** according to "SANDRE" formalism including exchanges between water suppliers and the Regional Agencies of the Ministry for Health.

The "Sandre" is testing a certification service for web services available soon ...

#### European and international standardization

As part of the INSPIRE Directive, OGC and of COVADIS work, "SANDRE" is a contributing member for drafting specifications for the exchange of water data: WaterML 2.0 specification (working group on hydrology of the OGC), COVADIS and INSPIRE specifications.

<http://sandre.eaufrance.fr>



#### Making available data on climate change

The website, being configured, will provide access to these data gathered according to four key issues (water availability and demand, biodiversity, coastal risks and extreme events) and different geographical scales (national, river basin, shoreline, wetland, large city).

On some aspects, the model will allow calculating the risks and costs of climate change and of the adaptation to deal with it. ✓

### Water RtoM

#### From Research to Market...



**Water RtoM** aims to accelerate the transfer of research results to end users, adding a step between research

findings and existing technology transfer mechanisms.

For 3 years (2011-2013), **IOWater and its partners** (the Water Foundation of Gdansk (Poland), Amphos21 (Spain), the Romanian Water Association (Romania) have aimed to develop a new service providing a space for collaboration between research teams and public or private end users.

"Water RtoM" is a continuous monitoring of research findings but is also making an analysis of the market needs for practitioners and their results are made available in an e-Fair.

It is also a standard method for evaluating innovative research products in terms of close relationship to the market.

About thirty innovations will be analyzed (benefits, costs, development, marketing) for their implementation and dissemination.

#### Next meetings:

Pollutec in France, IFAT in Germany, WODKAN in Poland, World Water Week in Stockholm, EXPOAPA in Romania, Europe-INBO ...

**Please contact Water RtoM!**

[www.waterptom.eu](http://www.waterptom.eu)



[www.iowater.org](http://www.iowater.org)

**The water world on the Web**



**6.560.000 visitors in 2011!**

## Around the world

### Brazil: National Forum of Basin Committees III Pre-ENCOB - 29 - 31 August 2011, Rio de Janeiro

In Brazil, the REBOB (Brazilian Network of Basin Organizations) and the National Forum of Basin Committees (COB) organized, from 29 to 31 August 2011 in Rio de Janeiro, a preparatory event for their National General Assembly 2011, the topic of which was water management in metropolitan areas. Each year, the National Meeting of the Basin Committees (ENCOB) gathers, on the average, 1,500 participants from all sectors of Brazilian water resources management.

The various lecturers in the Rio meeting spoke about their local experiences, as so many solutions that can be reproduced while taking into account the diversity of the Brazilian basins.

Mr. Jean-François Donzier, General Manager of **IOWater**, presented the organization of Water Management in the Paris region in France.

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



### 7<sup>th</sup> Ministerial Conference on "Environment for Europe" 21 - 23 September 2011 - Astana - Kazakhstan



From 21 to 23 September 2011, the 7<sup>th</sup> Ministerial Conference on "Environment for Europe" gathered in Astana (Kazakhstan) delegations of 53 countries from the whole Pan-European region.

The Conference focused on the challenges of the protection of water and water ecosystems and on the transition to a green economy.

It was organized by the United Nations Economic Commission for Europe (UNECE) and the Government of Kazakhstan.

The main agreements obtained dealt with:

- Improvement of environmental protection and promotion of sustainable development in the UNECE region;
- Importance of the participation of the civil society, women and non governmental organizations in decision making to improve the environment;
- Cross-sectoral cooperation within dialogues at the national level;
- Additional financial resources needed to improve the water sector;

- The ongoing environmental assessment process and the Shared Environmental Information System (SEIS);
- Energy efficiency as one of the most effective ways to address climate change and the transition to a green economy;
- Contribution of Regional Centers for the Environment in promoting the green economy and better environmental governance.

Countries are encouraged to ratify, if not already done, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

The preparatory process of the 6<sup>th</sup> World Water Forum for Europe region was presented on this occasion by the Regional Coordinator, Mr. Jean-François Donzier, General Manager of **IOWater**.

[www.unece.org/env/efe/Astana/welcome.html](http://www.unece.org/env/efe/Astana/welcome.html)

#### Astana Water Action - AWA

**Governments and other stakeholders are invited to commit on a voluntary basis to implement some specific actions, taking into account the different situations in countries of the region and relying on analyses provided by the UNECE on the "Sustainable management of water and water-related ecosystems".**

The presented actions include measures for a more effective valuation and protection of water-related ecosystems; for addressing human health issues related to water quality and quantity; for adapting water management to extreme weather events and to climate change; for improving transboundary water management and for increasing water efficiency by different users.

The Initiative encourages investments to reduce the impacts on water quantity and water quality, improve water and energy efficiency and to take account of the vulnerable populations.



## The SIAEAG Water Days 2 - 7 October 2011 - Guadeloupe - The Caribbean

As part of the "SIAEAG" Water Days (Syndicate of Intermunicipal Water Supply and Sanitation of Guadeloupe), Guadeloupe hosted from 2 to 7 October 2011 two preparatory workshops for the World Water Forum in Marseilles:

- **"Local water management and policies"** chaired by Messrs. André Flajolet, French Deputy, Commissioner of the World Water Forum and Patrick Lavarde, Vice President of the Thematic Process Commission;

- **"Water management in the Outermost Regions of the European Union and cooperation with non-European neighboring countries"**, chaired by Mr. Daniel Chomet, President of the Basin Committee of the Martinique, and facilitated by Messrs Pierre Roussel, representative of the French Ministry of Ecology in the European regional process of the Forum and Jean-François Donzier, Coordinator of the European Regional Process, respectively **IOWater** President and General Manager.



Mrs. Jeanne Defoie, Director of the Regional Water Office of the Martinique, presented **the project for the creation of a new "Islands Basin Network" within INBO.**

✓

## Preparatory Conference for RIO+20 19 - 20 October 2011 - Dushanbe - Tajikistan



The Conference on "Towards the UN Conference on Sustainable Development (Rio+20): Cooperation for Water" was held in Dushanbe (Tajikistan) on past 19 and 20 October, at the initiative of the Government of the Republic of Tajikistan and UN-Water.

Nearly 140 participants, water specialists and representatives of governments and international institutions took part in this conference.

Work focused on three points:

- **Strengthening cooperation and dialogue to achieve the Millennium Development Goals;**
- **Presentation of best practices from all over the world**, in terms of cooperation at local, national, regional and basin levels, to improve access to safe water and sanitation, and effective use of water resources for development and environmental protection;

- **Making recommendations** on approaches and mechanisms to be implemented for a joint use of water resources in the basins of transboundary rivers, aquifers and lakes.

The recommendations and guidance document adopted at the end of the Conference will be presented in the program of the Rio+20 Conference to be held in Rio de Janeiro from 20 to 22 June 2012.

Jean-François Donzier, General Manager of **IOWater**, presented INBO Action Plan.

**2013 was declared "International Year of Cooperation for Water" by the United Nations.**

✓

## WWF6 Regional Preparatory Meeting for Caucasus 14 - 15 November 2011 - Tbilisi - Georgia

The WWF6 Regional Preparatory Meeting for Caucasus, organized by **the Regional Environmental Center for Caucasus**, was held in Tbilisi (Georgia) on 14 and 15 November 2011.

Coordinator of the European Regional Process and General Manager of the **International Office for Water**, Mr. Jean-François Donzier addressed the participants, reminding in his welcoming speech the importance of regional cooperation for the success of transboundary river management.

**Participants came from three Caucasian countries - Armenia, Azerbaijan and Georgia.** The discussions led to the emergence and refinement of priority targets for the Caucasus region in terms of water management.

The participants thought the meeting very productive and very informative and agreed to advance regional cooperation and dialogue, related to the consumption increase and effects of climate change on the hydrological cycles, for facing future challenges.

✓



## French Development Agency

### Capitalizing on the experience of Transboundary Basin Organizations

Integrated Transboundary Water Resources Management (IWRM), by appropriate governance and investment planned in the basin, is the key to sustainable use and conservation of natural resources.

With fair sharing of resources and benefits, it helps prevent conflicts between uses and between riparian States.

**Transboundary Basin Organizations are the main framework for water resources management beyond national borders.**

Such organizations were created decades ago in the basins of the Senegal River (OMVS) or Niger (NBA) and more recently of the Mekong (MRC), Congo (CICOS) and Volta (VBA).

A Water Resources Coordination Center (WRCC), of which one of the tasks is to promote basin's water management, was created within the Economic Community of West African States (ECOWAS) in 2004.

French Cooperation supports these institutions through various projects, and by the presence of technical assistants specialized in IWRM.

Over the period 2011-2013, the French Development Agency has asked the **International Office for Water** to drive a project aiming to, through sharing of experience and capacity building, improve the functioning and effectiveness of the activities of the beneficiary institutions (NBA, VBA, WRCC, CICOS, OMVS, MRC), in support of the technical assistance provided to them.

The specific objectives are:

- ◆ Capitalization of each relevant experience and appropriation of best practices by the other institutions;
- ◆ Support to and coordination of the French technical assistants working in the institutions;
- ◆ Improving the strategic vision of their activities by the beneficiary institutions;

◆ Organization of benchmarking, particularly on the following topics:

- Governance;
- Looking for autonomous and sustainable financing;
- Strategic planning and implementation of actions;
- Optimization of monitoring.

[www.afd.fr](http://www.afd.fr)

✓



# FROM ONE CONTINENT TO ANOTHER

## AFRICA

### Côte d'Ivoire

#### Visit of the Ivorian Minister for Water and Forestry



Mr. Boueka Nabo, Minister for Water and Forestry of Côte d'Ivoire, leading a large delegation from his ministry, visited the **International Office for Water**, in Paris on 12 July 2011.

The interviews of the Ivorian delegation with the Office were an opportunity for the Minister to underline the willingness of the governmental Authorities of his country to be part of a partnership and of a powerful exchange network of international cooperation to develop the organization and capacity for water management and introduce measures to protect this natural resource.

He wished to promote a technical partnership and mutual collaboration in order to fully use all available expertise.

The key points, leading to collaborations in which **IOWater** could provide support, were discussed including: the preservation and integrated management of water resources, development of water-saving uses, capabilities for operation and governance, professional training, quality and quantity monitoring of the resources that were once very abundant in Côte d'Ivoire, but are currently experiencing a severe decline due to changes in natural balance caused by deforestation, agricultural development and urbanization resulting from rapid population growth.

✓

## AFRICA

### Water, Climate and Development Program (WACDEP)

#### To develop water security and resilience to climate change

Adaptation to climate change impacts on water is an emerging concern worldwide.

In Africa, this issue is especially addressed through the Water, Climate and Development Program (WACDEP) established in 2010 by GWP and AMCOW.

To ensure that countries have the abilities to integrate climate resilience and water security in development planning, and develop the investment strategies needed, **the partners initiated a project "Framework for water security and development of climate resilience"**.

Led by HR Wallingford, this project associates the **International Office for Water** in particular in all aspects of adaptation in transboundary river basins.

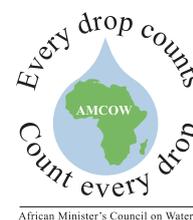
The project results will form a set of benchmarks for developing countries to implement the necessary adaptation plans, develop the "no regret" investments that are needed in Africa, and to finance strategies for action.

The WACDEP will provide:

- A Technical Paper for drafting a policy framework on the development of water security and climate resilience;
- The strategic framework itself, which will specify how to develop adaptation actions and make suitable policy decisions in African countries;
- Some brief notes for policy makers, particularly on "no regrets" investment;
- A strategy for capacity building and an implementation plan.

Results are expected by spring 2012.

[www.gwp.org/fr/WACDEP](http://www.gwp.org/fr/WACDEP)



## ECOWAS - WRCC

### Selection of priority projects of major hydraulic infrastructures

 In West Africa, there is a need to develop large hydraulic infrastructure projects that enable the development of irrigation and energy and the improvement of the overall standard of living of the populations.

Such projects often involve several countries and contribute to regional integration if they are carried out with dialogue through the transboundary basin organizations, according to internationally recognized environmental and social standards.

**The Water Resources Coordination Center (WRCC) of the Economic Community of West African States (ECOWAS) has organized a dialogue on major infrastructure projects in the water sector.**

In this context, WRCC entrusted in 2009 the **International Office for Water (IOWater)** with the evaluation of the mechanisms implemented by the water resources management bodies, with an analysis of three existing dams or under construction: Bui (Volta Basin), Manantali (Senegal) and Kandadji (Niger).

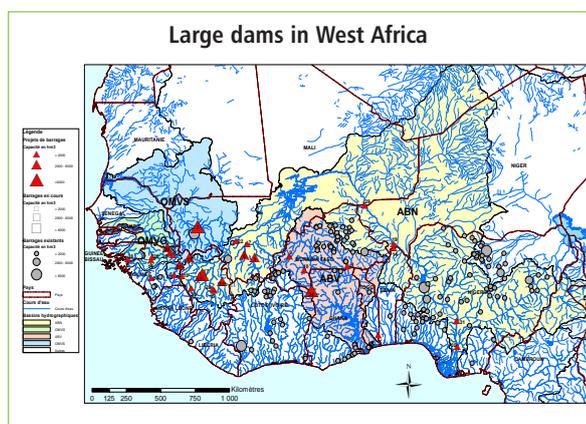
Meanwhile, a panel of experts produced recommendations for best practices for the development of sustainable hydraulic infrastructures in West Africa.

On the request of WRCC, **IOWater** established a list of large priority hydraulic projects, having a significant impact on regional integration, during a second phase completed in 2011.

The selection was made using a multi-criteria analysis tool designed by **IOWater**.

Five criteria related to transboundary projects, economic integration, food security, hydro-power production and environmental and social impacts were used in the analysis.

**Eight infrastructures were selected:** Adjarala (Mono Basin), Bureya (Senegal), Digan (Gambia), Fomi (Niger), Kaleta (Konkouré) Nounbiel (Volta), Saltinho (Koliba-Corubal) and Sambangalou (Gambia).



The choice of priority infrastructures and the Expert Panel's recommendations were validated during a regional workshop in July 2011 by the fifteen ECOWAS countries and the West African transboundary river basin organizations.

The workshop recommended the implementation, for each of the selected infrastructures, of specific institutional and financial mechanisms for sharing costs and benefits between the countries concerned.

[www.ecowas.int](http://www.ecowas.int)



## AFRICA

### Congo Ubangi Sangha: "CICOS"



#### Hydrological monitoring and "SDAGE" of the Congo Basin



The International Commission of the Congo-Ubangi-Sangha Basin (CICOS), the **International Office for Water (IOWater)**, the hydrological services of the four "CICOS" Member States, the french Rhine-Maas Water Agency and Solidarity Water Europe (SEE) have obtained funds from **the Water Facility of the European Union** to allow capacity building for hydrological monitoring and **the drafting of the Master Plan for Water Development and Management (SDAGE) of the Congo Basin.**

**IOWater** will carry out training courses with the Rhine-Maas Water Agency and SEE.

Hydrological monitoring activities will be carried out under the Congo-HYCOS project, in collaboration with the World Meteorological Organization, the Hydrological Research Center in Cameroon, the Directorate of National Meteorology in Central Africa, the Group for Research in Natural Sciences in Congo and the Waterways Authority in the Democratic Republic of the Congo.

Regarding the "SDAGE", the French experience will be based on that of the Rhine-Maas Basin and public participation will be dealt with by SEE and "Eau Vive". The project is jointly financed by the French (FFEM) and German (GIZ) Cooperation Agencies.

[www.cicos.info](http://www.cicos.info)



### Volta Basin Authority

At the end of 2011, the Volta Basin Authority, the **International Office for Water** and the International Network of Basin Organizations will start a 3-year project with experts from the Seine-Normandie and Adour-Garonne French Water Agencies.

**This 40-month project is financed by the European Water Facility, the Seine-Normandie Water Agency and the French Development Agency for a total budget of €518,000.**

Its objectives are to improve water governance, regional management of water resources and sustainable development in the Volta River Basin.

The activities will allow building the capacities:

- **of the Stakeholders Forum for the development of the basin**, an advisory body of the Volta Basin Authority (VBA) made up of members representing different categories of water users, the civil society and decentralized local authorities as well as the National Focal Points of the six Member States;

- **of the Experts' Committee**, the VBA executive body consisting of representatives of the Member States of the Volta Authority,
- **of the Executive Directorate**, the first executive body of VBA created in September 2006.

These activities also falls within the specific framework for the process of development and approval of two key tools:

- **The Water Charter**: it will be the political and legal backbone of VBA for improved water governance;
- **The Master Plan for Development and Sustainable Management of Water Resources of the Volta Basin**: a tool for regional planning and definition of actions.

[www.abv-volta.org](http://www.abv-volta.org)



### The Niger Basin Authority

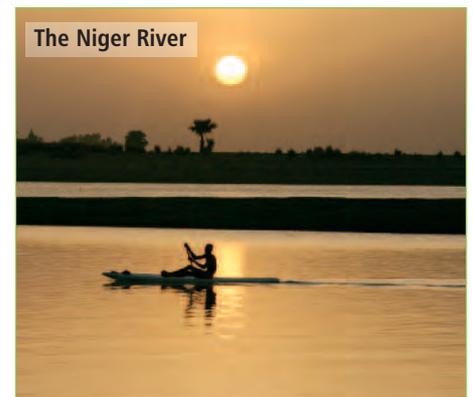
#### Establishing the Basin Information System

The Niger Basin Information System is a body of the Executive Secretariat of the Niger Basin Authority (NBA), established by the NBA institutional reform of 2004.

The Information System, reporting directly to the Executive Secretary, has the essential tasks of monitoring changes in the basin, as concerns the hydrological, environmental and socioeconomic aspects, of producing regular information on the development of the basin through the analysis of collected data and of implementing a system for disseminating the information.

The project "Support to the development of an Environmental Information System of the Niger River Basin" was financed by the French Fund for Global Environment (FFEM) for \$1.2 million.

This project started in late 2005 and ended in December 2010.



"FFEM" entrusted the **International Office for Water** with the final evaluation of the project.

[www.abn.ne](http://www.abn.ne)



## AFRICA

### Congo



#### Strengthening the training centers



As part of the reform of the water sector in the Congo Democratic Republic, **IOWater** won a tender issued by the World Bank concerning the definition of the training centers units.

The project purpose is to propose the most appropriate solutions to support the practical training of the operating staffs.

Putting the trainees in real situations is at the core of the project, which includes an initial audit of the existing installations and a suitable design of units in collaboration with the Training Directorate and the Executive Unit of water projects (CEP-O) of the "REGIDESO".

The first step showed that the facilities of the training center in Kinshasa could be rehabilitated but that others were to be acquired.

In collaboration with local technical teams and also with Congolese trainers, new units are being studied such as: an educational pilot unit for drinking water production, a network for training on the installation of pipes, a welding workshop, a set of meters, etc.



### Kenya



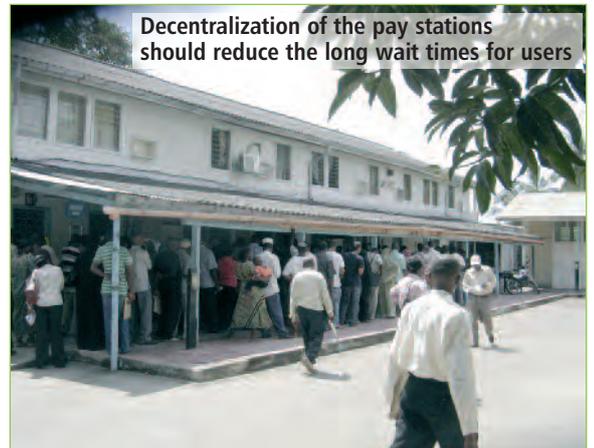
#### Support to the Mombasa Water Company

Since 2010, **IOWater** has been carrying out with its partner SEURECA a major project of support to MOWASCO, the Water and Sanitation Company of MOMBASA, Kenya, financed by the French Development Agency.

The 24-month technical assistance assignment is based on six key topics:

- establishment of a Geographic Information System (GIS),
- a large leak detection program,
- creation of a new computer system for subscriber and Customer Relationship Management (CRM),
- full audit of the functional organization of the Company so as to undertake any restructuring,
- strengthening the monitoring of the supplied water quality through the modernization of the analysis laboratory,
- an extensive training program designed to build the professional skills and abilities of MOWASCO staff, including the handling of new technological resources (e.g. GIS and CRM).

In a first phase, **IOWater** carried out audits of the Company (418 people) and of its activities in order to highlight the difficulties and stakes.



A new organizational chart was proposed and approved by the General Directorate, with a precise definition for each of the departments of the company, of its functions, activities, organization, number of employees and qualifications needed and performance indicators to be followed.

**IOWater** is committed to providing a new customer management software which will be operational in 2012. The new software functionalities should allow MOWASCO moving towards more automated and accurate management to the users' satisfaction.

Proposals were also made to reorganize the laboratory for monitoring drinking water quality and for defining a training plan.



## International Committee of the Red Cross (ICRC)

### 2001 - 2011: 10 years of collaboration between the ICRC and IOWater



In 2001 the first students of the ICRC's Water-Habitat Department (WatHab) came to attend training courses of the French National Water Training Center (NWTC) in Limoges.

In 2002, collaboration was confirmed with a tailor-made training course for analyzing the drinking water supply infrastructures, which required the intervention of 7 permanent **IOWater** trainers, each specialist in his field (drinking water, network, pumping, maintenance, electricity).

In addition, technical audits and diagnostics were carried out in Guinea, Congo Democratic Republic, Burundi and soon in Sudan.

Always rooted in a logic of actions complementary to the ICRC expertise, these interventions also allowed the **IOWater** trainers better understanding the local context and specific constraints encountered by the ICRC-WatHab delegates.

Finally, targeted training courses were carried out in several sub-Saharan African countries.

In May 2011, the training course organized and financed by ICRC was addressed to 18 technicians from the Water Company of Guinea on the maintenance of pumping stations.



# CICR

## THE CARRIBEAN

### Haiti

#### Audit of the Haitian Water and Sanitation Information System



Distribution of drinking water in a refugee camp

**IOWater** had intervened in Haiti in late 2008 to define the missions of a National Water and Sanitation Information System. This task focused strategically on the following functions:

- Having only factual data coming from the field;
- Relying on a small number of performance indicators;
- Drafting procedures for the collection and calculation of these indicators;
- Developing a module for the calculation of indicators.

It appeared that the progress made in establishing this Information System since these proposals was to be analyzed to facilitate planning and decision-making in the sanitation and drinking water supply sector in Haiti. The structuring of **"DINEPA"** also affected the roles and responsibilities entrusted to the Information System.

**IOWater** carried out in 2011 an assessment of the National Drinking Water and Sanitation Information System in Haiti to:

- note evolutions;
- analyze whether the various set objectives had been achieved;
- propose measures that may improve or correct the management and operation of the system to achieve these goals.



#### A technical reference frame on Water in Haiti to increase the capacity of the water sector and the life-span of infrastructures

**"DINEPA"**, National Directorate for Water Supply and Sanitation in Haiti, has entrusted **IOWater** with drafting National Technical Directives and technical guidelines in the field of Water Supply and Sanitation.

Faced with the heterogeneity of the Haitian stakeholders involved in infrastructure projects, **"DINEPA"** should achieve harmonization necessary for:

- ensuring the quality of the projects and improving water quality,
- better controlling master plans and financial aspects,
- simplifying operation and maintenance.

Beyond these purely technical challenges, the development of this national reference frame, which will be hosted on an Internet documentary portal, with associated training is also a strategic element of the capacity building of the sector.

Thus, this set of guidelines and directives will allow better action of the Haitian companies trained to these adapted and controlled techniques; This action is involved in the construction of the water sector and its development.



#### Towards a future water training center in Haiti



Technical day at EMEA

A Water and Sanitation Training Center (EMEA) will be established in Haiti.

In order to define the outlines, the **International Office for Water** in partnership with the French National School for Water and Environmental Engineering (ENGEES), carried out the feasibility study.

This study was financed by the Funds for Studies and Assistance to the Private Sector (FASEP) in connection with AgroParisTech, which realized in 2011 the emergency training of the Haitian water executives.

This study, carried out between April and September 2011, aimed to define the needs for capacity building of the sector but also outlined the technical, governance and financial aspects for the creation of such a center.

"EMEA" should cover a very important training field: an academic level (first degree, master degree, ...) for basic training, as well as a technical level for continuing training, provided in the form of short training courses.

At the end of this feasibility study, the sizing of the center and of its specific educational facilities was completed.

Possible financing mechanisms were also presented and discussed in order to make the structure sustainable and autonomous in the long term.

**IOWater** having been involved in Haiti for several years was able to integrate more easily these local particularities while applying its professional training to the various water skills.



## LATIN AMERICA AND PACIFIC

### Brazil



#### Technical cooperation between the Loire-Brittany Water Agency and the Piracicaba-Capivari Jundiá Basin Consortium (PCJ)

The legal and institutional framework of the Law 9.433 of January 1997 on integrated water resources management in Brazil was inspired by the French Laws of 1964 and 1992.

Technical, academic and institutional exchanges between the two countries have played an important role in its development and implementation.

Brazil has 27 States, with a significant variety of climatic, cultural, economic and social situations and each with considerable autonomy from a political and administrative viewpoint.

The Brazilian institutional framework is comparable in many ways to that of the European Union.

As part of the financing of decentralized cooperation, the French Loire-Brittany Water Agency started a project alongside the PCJ - Piracicaba and Capivari Jundiá Consortium and the **International Office for Water** to address, through training and exchange of expertise, the three following priority topics:

#### 1 Comparison of the Brazilian System with the Water Framework Directive

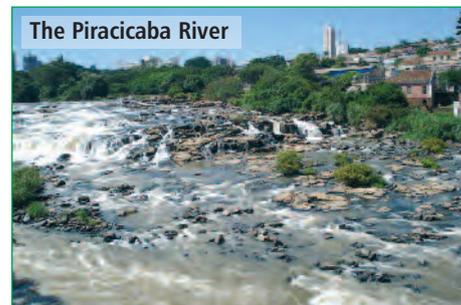
The European Water Framework Directive (WFD) of 2000 is interesting the Brazilian experts, since it implements a process of articulation between different levels of jurisdiction, echoing the difficulties faced in applying the Law of 1997 in the Brazilian federal context,

#### 2 Water resources planning

The experts involved will produce a comparative assessment of practices in both countries and propose changes:

- **Brazilian experience:** National Plan for Water Resources in 2006, the development of Plans for Water Resources in several federal States, Basin Plans in various parts of the country, on very different geographical scales, and with widely varying technical characteristics, participation of water stakeholders or of a wider public,

- **French experience:** Basin Master Plans (SDAGE and SAGE) and more recently the WFD Management Plans,



#### 3 Financing of water resources management

The mobilized experts will produce a comparative assessment of practices, including water taxes and the application of the "polluter-pays" and "user-pays" principles in both countries and propose changes.

The first results obtained in this project were presented in a side event at the 6<sup>th</sup> World Water Forum of Marseilles.



### New Caledonia

#### Developing sanitation



The development of sanitation is a major challenge in New Caledonia.

Noting that the current approach to wastewater treatment does imperfectly meet

the challenge, the Government has taken the initiative to improve sanitation in towns and villages to ensure true sustainable development in the Territory.

The Government thus requested support from **IOWater**, SOGREAH-ICEA and IDR for the analysis of possible different institutional, legal, technical and financial scenarios.

**Following this study, the creation of a Stakeholders' Organization for Sanitation in New Caledonia (OPANC) gathering all the local authorities and the State seems to be an appropriate response.**



Keeping in line with the "sanitation" responsibilities of the municipalities, the Government is able to offer them, through the "OPANC", a new framework for a multi-year planning of future sanitation facilities, which is made collegially and in partnership.

In this context, the municipalities becoming members of "OPANC" will make shared efforts, reconciling the interests of local development and respecting a common heritage. This membership will bring together all the institutional stakeholders around a common destiny in sharing the implementation of the country's public policy.

The study is based on these guidelines and implements realistic proposals widely discussed during regular meetings with the management bodies. A study tour in France, organized by **IOWater**, has also stimulated discussion on the practices of continental France.

"OPANC" promotes a progressive integration of sanitation into other public policies (planning, public health and environment). For this purpose, a long-term strategy has been proposed requiring realistic steps, well defined from a legal, financial and technical viewpoint.



### Mekong River Commission - MRC

#### Study visit of the Mekong River Commission to France and Germany



As part of the cooperation agreement between the French Development Agency and the Mekong River Commission (MRC), a study visit was organized in late October in France and Germany, with support from the **International Office for Water**.

This visit, which took place as part of the Information and Knowledge Management Program in the field of Hydrology (IKMP-Hydrology), gathered representatives of the MRC and of each of its member countries (Cambodia-Laos-Thailand-Vietnam).

The main topics were the acquisition, processing and use of hydro-meteorological data and their use in the context of Good Basin Governance and for better management of flood risk in particular.

To better meet these issues, exchanges with the following institutions were organized:

- General Directorate for Risk Prevention and the Hydro-meteorology and Support to Flood Forecasting Center (SCHAPI) and the French Ministry of Ecology, Paris,
- **International Office for Water**, Paris,
- "Météo-France", Paris,
- International Commission for the Protection of the Rhine, Koblenz,
- Global Runoff Data Center, Federal Institute of Hydrology, Koblenz,
- Rhine-Maas Water Agency, Metz,
- National Rhone Company (Compagnie Nationale du Rhône) in Lyons,
- and field trip in the Rhone Valley.



Given the intensity of the recent rainy seasons in the Mekong River Basin, the concern for better protection against such flooding is extremely active in the interested countries. A concerted policy of the different countries in this field and coordination at the Mekong River Basin level are to be quickly established.



### Laos

#### The pilot Nam Ngum River Basin spearheaded for IWRM development in Laos

A first management plan for the Nam Ngum River Basin had already been studied a few years ago with the French Development Agency (AFD) financing.

In Laos, the new Ministry of Water Resources and Environment (MONRE) has just been created and takes over the powers of the former WREA (Water Resources and Environmental Administration).

To accompany the reforms in progress for Integrated Water Resources Management, the

French Loire-Brittany and Rhine-Maas Water Agencies decided to support a pilot project in the Nam Ngum River Basin under their decentralized cooperation.

The **International Office for Water** will take care of coordination.

An International Seminar, organized on 28 and 29 March 2011 in Vientiane with AFD funding, helped launch this project, with an excellent level of participation.



The Lao Minister for Water Resources and Environment and the French Ambassador co-chaired the first part of the seminar, thus demonstrating the local political will and enriching debates with their ideas.

The contribution of the French Water Agencies thus made possible to continue and deepen the work already done in this basin.

The challenge is to develop mechanisms for Integrated Water Resources Management (IWRM) included in the new Lao legislation.

In practice, it will be necessary to build the capacity of the Secretariat of the Nam Ngum River Basin Committee (NNRBCS), of MONRE, of the Provinces and Districts, so that they can prepare and implement, in a participatory manner, a sustainable Water Resource Management Plan in their basin.



## ASIA

### Vietnam



#### Dong Nai Pilot Project

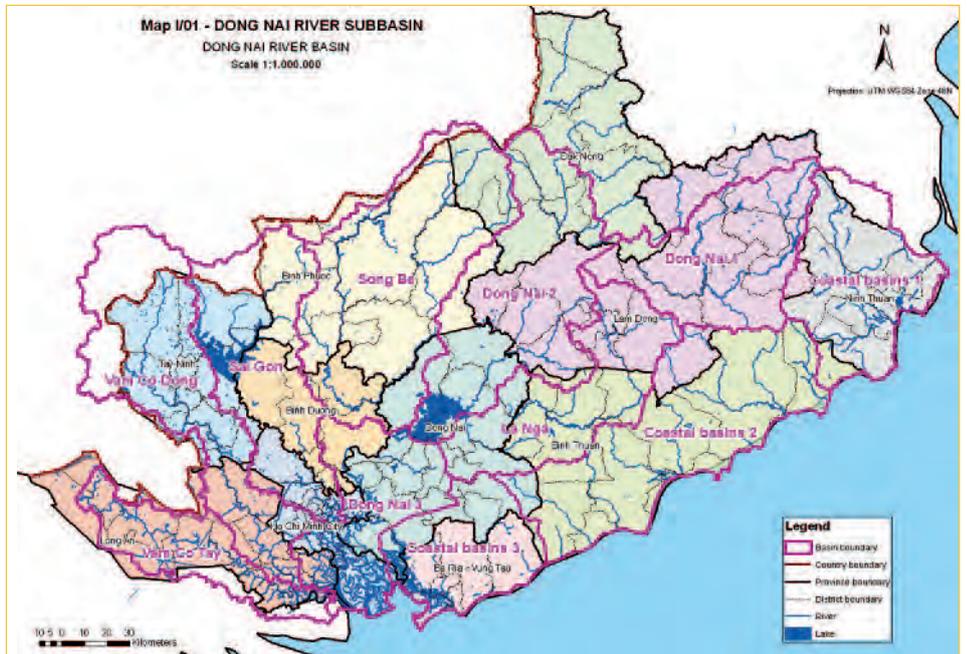
The Dong Nai Basin pilot project, coordinated by **IOWater**, aims to provide MONRE (Ministry of Natural Resources and Environment) with:

- **Institutional support**, financed by the French Loire-Brittany and Seine-Normandy Water Agencies;
- **Assistance in developing the Dong Nai Management Plan**, in connection with an information and monitoring system for surface water, funded by the French Ministry of Economy.

In a first step, it means strengthening the role of the Directorate for Water Resources Management of MONRE for central coordination and of the DWRPIS (Division for Water Resources Planning and Investigation of South Vietnam), which will become the Dong Nai River Basin Organization.

Year 2011 has been rich in actions on the different project components:

- Participation of French legal experts in the drafting by MONRE of the future Water Law;
- Organization of the first meeting of the future Dong Nai Basin Committee and discussions on the characterization of the Dong Nai;

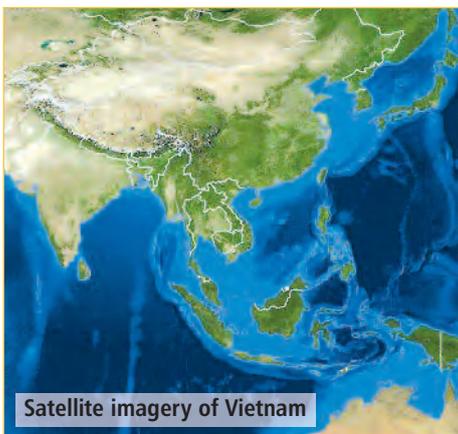


- Finalization of sectoral reviews for developing the Management Plan in the fields of domestic waters, industry, agriculture, regulation of water regime and hydromorphology by experts of the French Water Agencies;
- Establishment of a water information system;

- Support to the development of the Basin's water monitoring provided by Asconit;
- Development of the Dong Nai pilot management plan coordinated by SCE Consultants.

[www.monre.gov.vn](http://www.monre.gov.vn)

#### Support to the development of information systems



The "information system" component of the French-Vietnamese cooperation program aims to support MONRE in its role as coordinator of "national water data and information management".

It also aims to foster the sharing of data between the various stakeholders producing data.

A first inventory of existing data sources was established with **an online catalogue** which already provides access, in English and Vietnamese, to descriptions of over **350 sources**.

The initial diagnostic phase has also noted that data processing and enhancement are very limited for reasons mainly related to the heterogeneity of the data produced and the lack of procedures for information sharing between producers and users.

A short-term action plan was thus presented to create an organizational and technical framework for facilitating shared data management between the national and basin

levels, and developing a pilot information system on the Dong Nai Basin, in accordance with the new Vietnamese legislation.

[www.oieaudci.net/catvietnam](http://www.oieaudci.net/catvietnam)

[www.iowater.org](http://www.iowater.org)

The water world on the Web



6.560.000 visitors in 2011!

### China



#### **French-Chinese Cooperation: Integrated Water Resources Management in the pilot Hai River Basin and the Zhou sub-basin**

Access to water has become a major concern in China. It has indeed only 7% of the water resources of the planet for one fifth of the world population.

The location of these resources is also uneven between South, West and Northern China. Water quality is threatened by pollution from industrial, urban and agricultural effluent discharges.

**To address these challenges, China is building huge infrastructure and modernizing its water management methods.**

The Chinese Government is developing international cooperation, including with the European Union and its Member States.

An agreement was signed on 21 December 2009 by the Chinese Ministry of Water Resources and the French Ministry of Ecology and Sustainable Development, to develop cooperation in areas of common interest of Integrated Water Resources Management and Protection.

As part of this agreement, **the Hai River Basin, which extends over 318,000 km<sup>2</sup> and covers four Provinces (Hebei, Shanxi, Henan, Inner Mongolia) and two large Municipalities (Beijing and Tianjin), was selected in order to develop a pilot project for cooperation between the two countries.**

The achievement of this cooperation and technical assistance project between 2011 and 2015 will address the following objectives:

- Learning from each other and sharing the experience of both countries in integrated water resources management at the basin level;
- Exchanges on policies and measures to protect and restore aquatic ecosystems, as well as on the implementation of "polluter-pays" mechanisms;
- Testing in the pilot basin management tools adapted to the context, in terms of institutional arrangements and technical solutions to address the major challenges of river basin management.

The project especially aims at testing the application in China of some mechanisms for basin management, water pollution control and protection of aquatic ecosystems, used in France since the Law of 1964 that created the Water Agencies.

The project partners are, on the Chinese side, the Ministry of Water Resources, the Hai River Conservancy Commission and the Water Boards of Tianjin City and Hebei Province, and, on the French side, the Ministry of Ecology, Sustainable Development, Transport and Lodging (MEDDTL), the Seine-Normandy Water Agency, the Interdepartmental Sanitation Syndicate of Greater Paris (SIAAP), the Interdepartmental Institution of Great Lakes of the Seine and the **International Office for Water (IOWater)** which takes care of the project technical coordination.

#### **Phases of the cooperation agreement**

The project is developing in two phases:

**The first cooperation phase**, following the memorandum of understanding signed on 4 July 2011 in Beijing, allowed better knowing on both sides the functioning of the basin institutions and the procedures and means they are implementing in France and China.

The French experts' assignments in China allowed making a first assessment of the Hai River Basin and training 70 Chinese counter-

parts of the basin on the basin management tools used in France. Meanwhile, three Chinese delegations were received in the Seine-Normandy basin.

**A second phase (April 2012 - April 2015)** has just been launched on the occasion of the World Water Forum in Marseilles, on 12 March 2012. It will allow testing in the Zhou River sub-basin some French methods whose relevance has been identified in the first phase and which especially focus on:

- **Basin management**, with the establishment of general planning for integrated management of the Zhou river basin.
- **Technical development**, with proposed solutions and measures to address pollution and eutrophication, for the protection and restoration of aquatic environments, the monitoring of water quality and a warning system,
- Strengthening know-how with the organization of training programmes in China and France.

A jointly-prepared multiannual and practical action plan will specify the requirements in expertise and training, a three-year realistic implementation schedule and a cost estimate of cooperation for both parties.



Signing of the second phase of the project memorandum in Marseilles on 12 March 2012

### Eastern Europe, Caucasus and Central Asia

#### Early stages of the project

#### to strengthen data administration in two pilot Transboundary Basins

In the countries of Eastern Europe, Caucasus and Central Asia, the challenges related to transboundary water management are particularly critical for future development.

The implementation of effective policies to manage water resources while respecting natural balance requires above all that the decision makers, involved at regional, national, and local levels, have the information available to meet their needs and validated with the partners, on water resources assessment and present and future water needs / demands.

In 2010, the French Global Environment Fund (FFEM) provided the funding of €800,000 for jointly financing a €2,252,000 project to build data administration capacity and enhancement at transboundary basin level in the countries of Eastern Europe, Caucasus and Central Asia. It was carried out with the support of the French Ministry of Ecology and Sustainable Development (MEDDTL) and of the **International Office for Water**.

This project, developed as part of activities related to **"the Convention on the Protection and Use of Transboundary Watercourses and International Lakes"**, whose secretariat is hosted by UNECE, aimed primarily at strengthening, in 2 transboundary pilot basins, the capabilities of shared data and information management between the various partners by using methodologies that can be also applied to other transboundary basins.

Administered by IWAC (International Water Assessment Center) and technically coordinated by **IOWater**, this project began activities in December 2010:

- **In the Dniester River Basin** shared by the Ukraine and Moldova, in cooperation with the national authorities and the Dniester III project.

- **In the Aral Sea Basin** (Amu Darya and Syr Darya River Basins) shared by the five Central Asian countries (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan) and Afghanistan, again in collaboration with the national authorities through IFAS Executive Committee, an international organization recognized by the five Central Asian countries to develop integrated water resources management in the Aral Sea Basin.

After a phase of objective validation with the partners, the diagnostic phase is terminated. It has already enabled to:

- **develop a database of data producers, managers and users which can be consulted online,**
- **organize, in 5 of the 7 countries concerned, workshops gathering the main data producers,** to launch, with their direct collaboration, an inventory of data sources existing at national level (available online in Russian and English) and draw data flow diagrams describing the exchange of existing data on the main topics of water resources management (surface water quantity and quality, rainfall, groundwater, uses, socioeconomic, environmental and geographical data).



The Amu Darya delta

- **launch an online survey** that allows partners, data producers, managers and users, presenting their needs in terms of information, management tools, services and training related to data administration.

Based on the obtained results, an action plan will shortly be presented to the partners of each basin in order to define with them the priority actions that will be developed in 2012 for the final phase of the project.

The results of this work are already available on the dedicated Website and were presented in several side events during the last UNECE Environment Ministers' Conference held in Astana in September 2011.

This project was presented at the World Water Forum which took place in Marseilles in March 2012.

[www.aquacoope.org/ffem-eecca](http://www.aquacoope.org/ffem-eecca)



Workshop in Central Asia





## "EUROPE-INBO 2011" and General Assembly of the Mediterranean Network of Basin Organizations (MENBO)

### Oporto - Portugal - 27-30 September 2011



The 9<sup>th</sup> Conference of the "EUROPE-INBO" group was held in Oporto, Portugal, from 27 to 30 September 2011, at the invitation of ARH Norte.

**It gathered 254 participants from 46 Countries.**

**This meeting was jointly organized with the 9<sup>th</sup> General Assembly of the Mediterranean Network of Basin Organizations (MENBO).**

The 9<sup>th</sup> "EUROPE-INBO 2011" International Conference in Oporto was organized around successive round tables addressing the following issues:

- **Water Governance in Transboundary River Basin scenarios;**
- **Adaptation to long term challenges linked to climate change and prevention of extreme phenomena;**
- **Water and Energy;**
- **River hydro-morphology, restoration and protection of water ecosystems;**
- **Application of the WFD in countries non-members of the European Union.**

75 papers were presented during these five round tables.

The recommendations and proposals for solutions were presented at the World Water Forum in Marseille, from 12 to 17 March 2012, during the sessions of the Region Europe:

#### ❶ **Transboundary Water Management**

Cooperation among the riparian countries to better manage transboundary rivers, lakes and aquifers in Europe and the Mediterranean should be improved.

Transboundary river basins and aquifers should be managed in an integrated manner, based on legal frameworks common to all the riparian countries, a shared understanding of the challenges, based on the exchange of data and analyses, and on the involvement of all the different stakeholders to define a "shared vision" and a common strategy for the future to share the benefits.

It is advisable that all UNECE countries ratify the "Water Convention" (Helsinki 1992) as well as the amendment opening the Convention to countries outside the region.

#### **Many basins still lack effective frameworks for cooperation.**

The joint bodies responsible for transboundary cooperation on water are still few, often with a limited mandate and limited operational capacity.

It is advisable to provide increased support to interested countries for the signing of new agreements on transboundary basins, as well as for the creation of new River Basin Organizations or for strengthening existing ones.

The implementation of the European Water Framework Directive (WFD) is a path that other regions can explore, especially neighboring countries that share the same transboundary basin with EU Member Countries.

It is necessary to strengthen and widen the mandate of International Commissions and their means for carrying out their tasks of

exchange and coordination at the level of their entire transboundary basin.

The Basin Management Plans should be the key instruments for this integration of transboundary efforts.

#### ❷ **Cross-sectoral integration and adaptation to climate change**

The basin management approach seems the best way to manage water resources: **common cause between upstream and downstream basins should be strengthened, particularly for adaptation to climate change.**

It is essential to improve coordination between the WFD and the other European Directives on water resources management.

But, above all, water management is linked to many sectoral policies of the European Union: **cross-sectoral integration is the only way for sustainable water resources management in the future.**

The "Good Status" of many Water Bodies, especially groundwater, will not be achieved in the entire European Union in 2015 and sometimes beyond, without a significant strengthening of agri-environmental measures especially in the reform of the Common Agricultural Policy.

It is necessary to introduce new practices to prevent droughts and water shortages affecting a large part of the territory and of the European population, and to provide "sustainability" to irrigated agriculture, essential for increasing food production, for securing farms' economy and production quality...

#### **It will be necessary to reduce water consumption and enhance the effectiveness of all uses.**

We must quantify the economic value of the services provided by aquatic ecosystems, to better justify their protection and restoration.

Climate change will occur with more severe droughts or floods throughout Europe.

## "For facilitating the implementation of the European Water Framework Directive"

## EUROPE

It is urgent to develop a better "Science and Policy Interface" (SPI) to anticipate changes and provide field operators with new tools for adapting to climate change to be introduced in the next 2015 - 2021 and 2021 - 2027 cycles of the Basin Management Plans and Programs of Measures. It is necessary:

- to reduce the risk of floods and marine flooding;
- to prevent water scarcity and drought risk (especially with a demand management policy);
- to introduce innovative and ambitious measures for adaptation to climate change and to its consequences on hydrological cycles.

### ③ Coordination of policies on water and renewable energy

It is essential to balance the WFD requirements with those of the Directive on Renewable Energy.

The improved performance of existing hydropower plants, which have real economic value, is a priority.

Old infrastructure should be rehabilitated to meet the new requirements.

The infrastructures that are no longer economic should be "erased".

**Strategic plans for the development of hydropower must be drafted and accompanied by measures to minimize impacts on the environment and improve the built areas versus aquatic life.**

Framework agreements, laying down the objectives to be achieved, the requirements to be complied with and the means for follow-up and monitoring, could be usefully generalized.

A review of old hydropower concessions should be quickly considered.

**Infrastructures should meet strict requirements, particularly in terms of maintaining an ecological reserved flow for migrating fish species and sediment management.**

The new hydropower concessions or the renewal of old ones should be considered in each basin to cover "a complete chain of infrastructures" enabling their integrated management and not for each infrastructure after another.

### ④ Improvement of European and Mediterranean drinking water supply and sanitation services

Water services have a cost and require substantial funding, both in investment and operation.

The Organization for Economic Cooperation and Development (OECD), in particular, promotes the concept of "3T" (Taxes, Tariffs, Transfers) as viable options for sustainable financing of water services.

The civil society should be informed and take part in the decision-making process.

The vocational training of the employees of water utilities is essential to guarantee the good design, development, operation, maintenance and renewal of infrastructures and the quality of the services provided to the users. It is essential to make them a condition for assistance from the European institutions and donors.

### ⑤ Rehabilitation and protection of aquatic ecosystems

It is a priority target of the Water Framework Directive.

One of the barriers is land ownership: **the right to intervene in private fields, or to change their use, should be increased.**

Mechanisms for regional planning on a large-scale (green and blue schemes) should be developed,

### ⑥ Strengthening of European cooperation in the field of water

It is undeniable that the Millennium Development Goals (MDGs), especially in the sanitation sector, cannot be achieved without significant support from the European Union and Member States to Third Countries, especially in Africa, but also in Eastern Europe, Caucasus and Central Asia and in the Mediterranean.

The focus can be placed on increasing cooperation between EU District Authorities, Local Authorities and NGOs and their counterparts in neighboring countries through innovative financial mechanisms such as the "1% for common cause" allowing the managers of water and sanitation utilities to voluntarily spend up to at least 1% of their income for national, community and international common cause actions.



**It is appropriate to continue and widen the EU Water Initiative (EUWI), ten years after its launching, by providing it with real means for institutional supports: water should be a priority of the EU assistance-to-development policy.**

It is advisable that the "2<sup>nd</sup> EUWI strategy" gives more room to improved governance, financing mechanisms, transboundary basin management, communication and participation.

To achieve these goals, **it is advisable to launch again the dynamics of twinning between EU Basin Organizations and their counterparts in neighboring countries.**

The participants thanked Mr. Laurent Fayein, President of the Rhone, Mediterranean and Corsica Water Agency (France), for his Presidency of the EUROPE-INBO Group during the year 2010/2011.

**They gratefully accepted Turkey's proposal to host in Istanbul the next EUROPE-INBO 2012 conference.**

The Delegates thanked the Portuguese Authorities and the ARH-Norte for their excellent hospitality and their good organization of this 9<sup>th</sup> Conference.

Mr. Antonio Guerreiro De Brito, President of ARH Norte (Portugal), was elected President of the "EUROPE-INBO Group" for the year to come.

**MENBO General Assembly** thanked Mr. Fadi Comair, General Director for Water and Energy in Lebanon, for his initiatives launched during his MENBO Presidency.

Mr. Antonio Guerreiro De Brito, President of ARH Norte (Portugal), was elected new President of MENBO until the next General Assembly in 2013.

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



### SPI Water

#### When science and innovation meet water policy

For several years, the Science Policy Interface (SPI) has been emerging as a key to the success of the implementation of the European Water Framework Directive.

**The challenge is to organize a better dialogue between researchers and water managers.**

During the official session "**Science and Policy Interface: when science and innovation meet water policy**" of the World Water Forum in Marseilles, organized by **ONEMA** and **IOWater**, speakers and participants gave solutions and recommendations. It is also necessary to promote research results to managers, and conversely to identify research needs to be sent to researchers. The European "SPI and water" cluster, regrouping the "Stream", "Step-Wise" and "WaterDiss" projects, is a good illustration of the work of disseminating research results.

For example, the WaterDiss partners, coordinated by **IOWater**, use their know-how to

disseminate the results of research projects financed by the 6<sup>th</sup> and 7<sup>th</sup> Framework Programs of the European Commission.

**One goal is to reduce by 10 to 5 years the delay for transferring research to potential users.**

To achieve this balance between research demand and supply, "WaterDiss" is organizing "brokerage events", meetings that allow researchers to present their results.

In support, a virtual "European Water Community" platform, hosted by **IOWater**, ([www.europeanwatercommunity.eu](http://www.europeanwatercommunity.eu)), aims to create a scientific community accessible to potential users of research.



"WaterDiss" Side Event in Marseilles

The solutions presented in Marseilles Forum are available online at:

[world-water-forum-2012-europa.eu](http://world-water-forum-2012-europa.eu)



## IWRM-Net-Scientific Coordination Project



For 5 years, from 2006 to 2010, the European **IWRM-Net** project, which **IOWater** coordinated, has gathered **20 organizations from 14 countries involved in research programs on integrated water management.**

**Two calls for transnational projects have been possible**, allowing launching new research on topics such as hydromorphology, water governance, the problems of drought and scarcity, climate change, but also socioeconomic development and evaluation of policies on Integrated Water Resources Management.

**IWRM-Net Scientific Coordination Project** aims to guarantee the continuity of the research projects that were financed by the calls for proposals of the European **IWRM-Net** program.

The French Ministry for Ecology, at the initiative of **IWRM-Net-SCP**, aims to include these projects in the broader context of European Research on Water.

The [www.iwrM-net.eu](http://www.iwrM-net.eu) website has been updated and includes, in addition to a science policy information interface, links to 10 financed projects, 6 of which being multinational projects launched in 2010 on the following topics:

- **Water Cap and Trade** (scenarios of "water markets" in Southern Europe);
- **Water2Adapt** (water demand management for adaptation to climate change);
- **IMPACT** (model of river restoration);

- **ICARUS** (adaptation of ecosystems to climate change in Southern European rural areas);
- **CLIMAWARE** (climate change impact on river flows and their consequences on hydromorphological conditions);
- **ESAWADI** (ecosystem service approach for WFD implementation).

More information on:

[www.iwrM-net.eu](http://www.iwrM-net.eu)



## EUROPE

### "Waterdiss2.0"

#### Optimizing identification and dissemination of findings of European Water research

The "Waterdiss2.0" (Dissemination and up-take of Framework Program water research results) project aims to promote dissemination of European research results on water.

This project is coordinated by the **International Office for Water** and includes 8 partners from France, Spain, Great Britain, Germany, Romania, Poland and Italy.

It is funded by the European Union through its 7th Research and Development Framework Program.

Thanks to an innovative methodology "Waterdiss2.0" allows:

- **enhancing faster research results**, with the development of individual strategies for joint dissemination, defined with the project coordinators,

- **bringing together "producers" and "users" of research**, through their participation in various events such as Pollutec 2011 in Paris or the last World Water Forum in Marseilles,
- **exchanges between partners via a Web platform,**
- **creating the "European Water Community",** a network which aims to improve water management in Europe by promoting links between research and public policy (Science Policy Interface).

More information on:

[www.waterdiss.eu](http://www.waterdiss.eu)



### NOVIWAM

#### New integrated water resources management systems for Southern Europe

**NOVIWAM**  
Novel Integrated Water  
Management Systems  
Southern European Regions



The **NOVIWAM** (Novel Integrated Water Management Systems for Southern Europe) project aims to promote interregional cooperation on water management at the level of river basins.

**This project is funded by the European Union under FP7 and gathers partners from Albania, Cyprus, France, Portugal and Spain and will be developed for neighboring countries facing similar water management problems, existing in the Euro-Mediterranean climate space.**

The need analysis in terms of research was completed in early 2011.

The **International Office for Water** is in charge of the communication and dissemination of the project results, as well as of the coordination of the French partners (Poitou-Charentes Region, INRA, IRSTEA).

In 2010 and 2011, two conferences were held in Poitiers and Oporto on the following topics:

- Integrated river basin management
- Urban wastewater management;
- Quality of water and aquatic ecosystems;
- An irrigation suited to the situation of the resource;
- Governance tools and modeling.

Roundtables were designed to initiate the action plan and to define the tools that can be developed.

More information on:

[www.noviwam.eu](http://www.noviwam.eu)

### European Union

#### A new list of priority substances

**IOWater**, associated with INERIS, has for 6 years provided technical assistance on chemical pollutants to the DG Environment of the European Commission for the implementation of the Water Framework Directive.

In the fall of 2011, the Commission used the results of this work to propose to the European Parliament **a new list of "priority substances"** with concentrations to comply with.

Using a database of **15 million analyses collected in 28 countries**, **IOWater** created a website for experts, in a first step, and summarizes on sheets the available data for each substance.

The site in English will be accessible to everyone after the publication of the new list. The collection tool used to gather these data will also be available.

It will allow collecting analyses on water, sediment and biota, in accordance with the needs of the European Commission and European Environment Agency.

It includes procedures for data import and export in XML format and automatic checks that allow for distribution in decentralized services and the gathering of structured files.

More information on:

[www.priority.substances.wfd.oieau.fr](http://www.priority.substances.wfd.oieau.fr)



## EUROPE

### France

#### Landerneau-Daoulas Community: support to the Community of Municipalities for the transfer of responsibility for sanitation

The decision to transfer the responsibility of a municipal water or sanitation utility to a Public Authority for Intercommunity Cooperation is always a time for doubt and uncertainty for elected officials. Indeed, the proposed service, the investment choice and the pricing policy will no more result from a decision of the municipal council but from a community compromise that elected officials want to understand before committing themselves.

Problems related to this transfer are complex and involve all aspects of the service. They are technical, administrative, regulatory and financial.

Therefore, the **Landerneau-Daoulas Community of Municipalities** involving 22 towns and nearly 50,000 inhabitants turned to the AETEQ-IOWater-Water Industry group to help define its future wastewater community service and identify the challenges faced at the time of its establishment.

#### The study is divided into three phases:

- **First**, an inventory of existing sanitation facilities was made as well as of their equipment, condition and level of adjustment to regulations and requirements. Meanwhile, the organization and means of administrative and technical services were reviewed and a retrospective financial analysis was conducted in each service, in order to identify their strengths and weaknesses within the future community service;

- **Secondly**, a technical and financial assessment of the facilities to be created over the next ten years had to take into account the needs for facility renewal, the zoning extensions planned, the regulatory developments (WFD) and the local constraints regarding the protection of land and sea environments (Master Plan for Water Management - SAGE- of Elom). Having sized the future service in terms of human and material resources, a prospective financial analysis proposed a pricing for the sanitation tax.

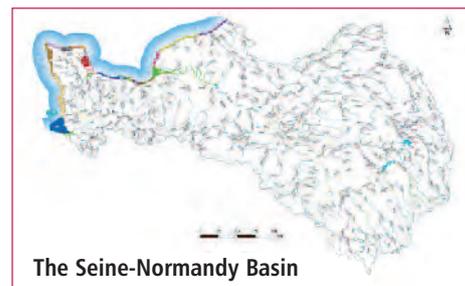
- **Finally**, the group will help the new Community utility to, on the one hand, set up an efficient organization and estimate the first budget and, on the other, to establish job descriptions and procedures for carrying out the tasks entrusted to it.

Started in June 2010, the first two phases of the study are completed. The final adjustments, financial simulations (pricing and investment plan) presented in September 2011 will allow the elected officials to make the choice whether or not to transfer responsibility.



#### Seine-Normandie Water Agency

#### Hazardous substances in household products



IOWater, associated with the University of Limoges, is entrusted by the Seine-Normandie French Water Agency to carry out a study of the discharges of hazardous substances contained in household products in the Seine-Normandie Basin.

The first stage of this work was to create a database of more than 740 substances used in household products and their dangerousness as identified by various European or international organizations or by the Water Agency.

It identified a list of products to be studied in more detail in a second stage to estimate the quantities of these products used in the basin and the flows of substances discharged into sewerage systems.

IOWater will then estimate the contribution of these discharged substances after conventional treatment, to the pollution of rivers in the basin.

This step will provide a number of clues and recommendations for future actions of the Agency in this area, whether in the increase of knowledge on this issue or the use of unconventional treatments or incentives for restricted use of these products.



### On-Site Sanitation

#### Analysis of the life cycle to better choose on-site sanitation

IOWater is continuing its knowledge acquisition and characterization of on-site sanitation in partnership with the French National Agency for Water and Aquatic Environments (ONEMA) and the French Ministry of Ecology (MEDDTL).

It is part of the integration of environmental values in recommending technical choices.

The Life Cycle Analysis thus appears to be useful and adapted to the environmental qualification of technical treatment facilities.

This approach is carried out by IOWater in close collaboration with IRSTEA which is studying the use of this method in community sanitation treatment facilities.

Ultimately, simultaneous studies will complement the choice grids for on-site sanitation facilities by integrating the environmental value. It will also introduce more efficient comparisons between community and on-site sanitation.



## EUROPE

### France

**”PACA Region”:  
2011, regional water year  
in Provence-Alpes-Riviera**



The "Promenade des Anglais" - Nice

**The "PACA Region" is emerging as one of the major stakeholders of a territorialized water policy**

In 2009, the Provence-Alpes-Riviera (PACA) Region, with all its regional stakeholders, organized the first Regional Water Meetings and launched the **Orientation Plan for rational and joint use of water resources (SOURCE)**, in which the **International Office for Water** participated in 2010-2011 for the prospective analysis phase 2, following the assessment phase.

**A prospective approach**

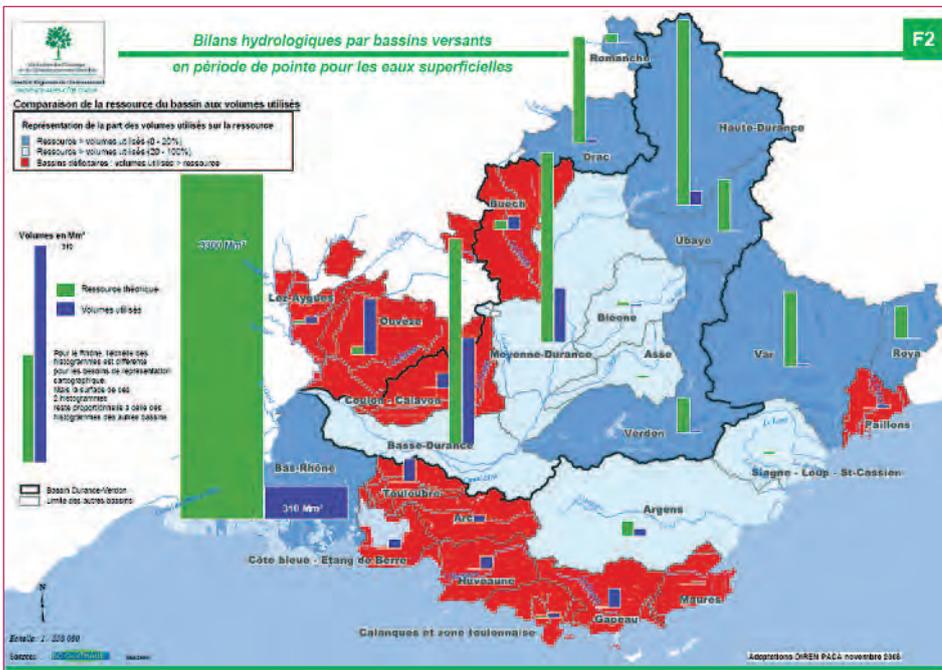
Phase 2 was to establish contrasting and plausible prospective scenarios. About ten key variables, including demographics, land, climate change or environmental protection, were selected, and then adapted according to two series of assumptions which led to a set of four scenarios, after a series of meetings

and working groups with elected representatives, user representatives and concerned institutions of the Region.

These global scenarios were then adapted to six territories in order to highlight local challenges, through a series of public meetings.

Phase 3, currently in progress, should help define the quantitative targets and the means to mobilize.

The **International Office for Water**, with its center in Sophia-Antipolis, is also a dynamic regional party and participates in various phases of the exercise, due to its twofold thematic (adaptation to climate change, integrated water resources management, WFD implementation, etc.) and geographic expertise (confirmed knowledge and practice of French, European and Mediterranean Partner Countries' institutions and water stakeholders). ✓



### Urban Community of Agen

**Support to DWS and sanitation**



Canal Bridge in Agen

In relations with the recent transfer of the municipal responsibilities in drinking water supply, sanitation and storm water, the Urban Community of Agen (about 70,000 inhabitants) wished to launch in 2010 three functional assessments (urban sewerage, drinking water supply and stormwater drainage) and carry out infrastructure Master Plans for its area.

For this purpose, the Urban Community of Agen selected **International Office for Water (IOWater)** as an assistant to the contracting authority.

Thus, in 2010, **IOWater**, firstly made an assessment of the administrative and technical situation and gathered all available documents that the enterprises in charge of the studies, after calls to tender, could rely on.

**IOWater** provided assistance to the Urban Community in the drafting of all the consultation documents for the calls to tender to select the consulting firms and analyzed and scored the bids of the tenderers.

Finally, **IOWater** monitored the progress made in the studies by the selected consultants for each Master Plan: IRH, SAFEGE and SOGREAH-Local Authorities.

This follow-up focused on the coordination of the consultants' activities, on the analysis and receipt of deliverables for each phase, on facilitating the necessary discussions and meetings and, of course, on checking compliance from the consultants. ✓



### France / Romania

#### Water for... beers "Made in France" and "Made in Romania"!



The malt house of Nogent-sur-Seine

For many years **IOWater** has been working with the malt houses of the Soufflet Group for tailor-made training activities on the its French sites of Arcy-sur-Aube and Nogent sur Seine and for a diagnostic study on the malting wastewater treatment plant at Pithiviers.

In 2011, **IOWater** was asked for a series of diagnostic studies for the new wastewater treatment plants chosen by the Soufflet Group on its sites of Nogent-sur-Seine, Polisy and Pithiviers.

For the newest plant of Nogent-sur-Seine (the largest production plant of the French group), the objective was to check and define the operating instructions.

But it did not stop there...

Recently the group has built a production plant in Buzau in Romania: the site was equipped with a wastewater treatment plant and the treatment results showed some fluctuations making it unreliable in relation with local standards.

The objective of the on-site assessment was to validate the sizing and operating instructions.

These assessments enabled us to recommend actions to be carried out on the very short and medium term in the plants for optimizing and reliabilizing their operation.



### Prince Albert II Foundation

#### A "Water Think Tank" for local Authorities in the Mediterranean

##### An International Public-Private Partnership

Since 2010, the International Office for Water has been involved in the Water Think Tank (WTT), along with Prince Albert II Foundation, the United Nations Institute for Training and Research (UNITAR), Veolia Environment and the Blue Plan.

The official launching of this initiative of Prince Albert II Foundation took place at the 5th World Water Forum in Istanbul. The objective is improving the capacity building of local Authorities in the Mediterranean basin for implementing effective governance in water resources management through increased inter-and intra-sectoral cooperation, beyond the administrative barriers at local, regional and national levels.

The **WTT** aims to improve understanding of the mechanisms for local governance in order to define solutions to shared water resources management.

The students of the Master of Paris Sciences Po Institute on Local and Urban Strategies, with the support of Veolia Environment, have drafted a report that details the context and analysis. This report includes six case studies and a dozen topical factsheets.

##### A symposium for enhancing results

**Feedback on this work took place at a symposium chaired by the Sovereign Prince on 10 November 2011 in Monaco, in which the International Office for Water participated.**

The four workshops dealt with:

- Conflicts of water use in the Mediterranean;
- Water governance in the territories;
- Technology as a solution to conflict?
- The economic and financial issues of conflict regulation.



#### A Side Event at the 6<sup>th</sup> World Water Forum in Marseilles

This event took place on 14 March in the presence of the Sovereign Prince, and has successfully brought together around HE Bernard Fautrier, Foundation Vice-President, the "Water Think Tank" partners, as well as EMWIS President, several Ministers and Senior Officials of Local Authorities and Senator Jacques Oudin, promoter of French decentralized cooperation.

It was an opportunity to present the work conducted by the WTT, disseminate the summary paper on local governance mechanisms for water in the Mediterranean and to present the new WTT thinking especially on the issue of conflicts of use in the major Mediterranean cities.



## EASTERN AND CENTRAL EUROPE

### Albania



#### Updating of national technical standards

Albania significantly needs to renovate and develop its water and sanitation infrastructure.

The Albanian current standards for studies and construction dating back to 1974 for the water and sanitation sector are outdated and inadequate.

The issued requirements will be accompanied by technical guides and sheets for educational purposes for the operators and contracting Authorities.



Given this situation, the **Ministry of Public Works and Transport** has asked **IOWater** regrouped with SAUR to update the technical requirements for design and construction in the area of water and sanitation as part of a funding by the French Ministry for Economy (FASEP).

All the topics of the water and sanitation sector will be discussed: drilling, treatment, pumping, drinking water supply, wastewater collection and treatment and on-site sanitation.

Under this project, **IOWater** will carry out a series of training courses for the stakeholders of the sector, who will need to use the drafted documents, and it will create a web platform for appropriate dissemination of this technical documentation.



### Ukraine



#### Twining between France and the Ukraine on Municipal Water Utility Management



The institutional twinning arrangement, "Strengthening institutional capacity of the Ministry of Housing and Municipal Economy to streamline water utility management at municipal level", financed by the European Union, started in March 2011.

The project, aims at enabling the Ukrainian Public Authorities to improve their water utility management according to EU standards.

The duration of this European institutional twinning is 15 months up to June 2012.

France is the Member State, main partner of the project through the Ministry of Ecology, Sustainable Development, Transport and Housing that entrusted the implementation of the project to the **International Office for Water**.

The following institutions are also involved:

- Rhine-Maas and Artois-Picardy Water Agencies and the French National Agency for Water and Aquatic Environments (ONEMA), as well as "AgroParisTech",
- The State Secretary for Water of Hungary,
- The State Energy and Water Regulatory Commission of Bulgaria.

About 25 experts from EU Member States Administrations will intervene in this project.

Ukrainian, French, Hungarian and Bulgarian partner are involved to achieve the following results:

#### ➤ Review of legal framework:

- Elaboration of proposals for organizational and technical improvements,
- Human Resources Development and public participation.

#### ➤ Financial management of the sector

- Development of concession and lease contract models,
- Training courses on the execution of these contracts.

#### ➤ Additional reforms:

- Water Utility Management,
- National Regulator,
- Water Information System. ✓

[www.iowater.org](http://www.iowater.org)

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#### Towards a common water information and knowledge hub

The democratic impulse instilled by the Arab Spring in the Mediterranean region is accompanied by a strong need for access to information so that citizens can fully participate in the socioeconomic development of their country.

In the water sector, this "thirst" for information had already been identified by the civil society during the Dead Sea Ministerial Conference on Water in December 2008.

**The Ministers had already included in their declaration the need for reliable and harmonized data on water resources and their uses, organized in National Water Information Systems, whose establishment is a prerequisite to the development of sustainable management policies.**

The strengthening of information networks was highlighted at the last meeting of the Water Expert Group of the Union for the Mediterranean on 18 May 2011 in Barcelona.

Thus a project was presented to the Secretariat of the Union for the Mediterranean. It is being formalized for its approval, in cooperation with Lebanon and the Arab League.

It plans for:

- the preparation of technical and organizational guidance documents, as well as tools based on the international standards and specifications used in other regional systems;
- the creation or improvement of the National Water Information Systems in pilot countries primarily to improve data collection, management and dissemination;
- several training programs on the management of data and statistics on water;
- the voluntary collection of data to feed a base of regional indicators.

This project is the "data and information" component of a larger program of gradual establishment of **a Mediterranean water knowledge hub.**



The latter would also include components on vocational training, prospective analysis, research and development (R & D), transfer of know-how and technologies, etc.

This project is part of the extension to Mediterranean Partner Countries of the enlarged Shared Environmental Information System –SEIS introduced within the European Neighborhood Policy.

**The national component focuses on pilot countries which started creating their National Water Information System (among the approached countries are Morocco, Tunisia, Lebanon, Jordan, Albania, Bosnia or Montenegro).**

These national systems rely on an interministerial approach using the standard of the United Nations System of Environmental and Economic Accounting for Water - SEEAW. This approach allows analyzing the relations between the water sector and development.

The project is open to the integration of other countries and all the Mediterranean countries are concerned by the activities of regional dialogue and exchange of good practices.

**Information as a vehicle for cooperation and peace**

This project was presented at a side event of the World Water Forum in Marseilles in March 2012.

In this Forum, **EMWIS** has coordinated Target 7 of the Priority "Contribute to cooperation and peace", related to the implementation of transboundary Water Information Systems.

It was proposed to develop mechanisms to share and monitor information: online inventories, establishment of water information systems, indicators and guidelines for monitoring programs, etc.

**Intercontinental Mediterranean process for the 6<sup>th</sup> World Water Forum**

The Regional Committee, set up for the 6<sup>th</sup> World Water Forum and coordinated by the Mediterranean Water Institute of which **EMWIS** is part, once again showed the consistency of the partnerships and geopolitical authorities of the region.

**EMWIS** especially contributed to the sessions on governance and organized the session on sustainable financing of sanitation in the Mediterranean.

This session proposed to launch **an information system on sustainable recovery of the costs of water and sanitation services**, in partnership with public and private operators, local authorities, national institutions and donors.



The objectives are to improve knowledge on cost recovery, to raise the awareness of users and decision makers on the benefit of an equitable and transparent pricing strategy, and finally to exchange experiments.



## THE MEDITERRANEAN

### Algeria - "Algérienne des Eaux" (ADE)



#### Seminar on Skills Management for Human Resources Managers



Seminar on Skills Management

Under the cooperation between the "Algérienne des Eaux" (Algerian Waters -ADE) and the Belgian Development Agency (CTB - Algeria) regarding the component "Technical Assistance to Water Training Centers", **IOWater** was selected to organize a Seminar in Algiers on Skills Management for thirty ADE key executives in charge of managing human resources.

The staff of the "Algérienne des Eaux" is approximately 27,000 people spread over five major regions of Algeria.

The methods and tools for Provisional Management of Jobs and Skills presented at this 3-day Seminar, held in January 2011, helped to reinforce the strategy for modernizing Human Resources Management implemented by the "Algérienne des Eaux", by meeting the expectations of the participants on the following:

- Strategic challenges of Skills Management;
- Principles and basic choices structuring the skills management policies;

- Skills Development: adaptation, development, optimization and anticipating needs;
- Formalization of a skills management policy;
- Career management and development system;
- Performance evaluation system and management by objectives;
- Management of staff mobility;
- Management of replacement and transfer of acquired know-how;
- The role of continuing education.

Numerous exchanges with the participants showed their keen interest.



#### Handbook on Educational Engineering for ADE's Training Center in Algiers

**IOWater** was selected to draft a Handbook on Educational Engineering to structure and coordinate the training offer of the new Training Center of the "Algérienne des Eaux" currently nearing completion on the site of Cherarba, near Algiers airport.

The handbook should be consistent with the strategic objectives of the center.

It should:

- **Anticipate** its evolution by integrating concepts, tools and modern requirements;
- **Use** the full potential of educational support that the planned educational units will provide to the training center of Algiers;
- **Take into account** the need for controlling training costs and optimizing training investments;
- **Develop** a participatory approach to allow involving all stakeholders;
- **Provide** a transfer of know-how in educational management and engineering.

**IOWater** selected the "ADDIE" (Analysis, Design, Development, Implementation, Evaluation) or "ISD" (Instructional System Design) models that were developed in the United States for drafting this Handbook.

This innovative action, reflects the interests of the "Algérienne des Eaux" in acquiring the latest methods to improve the skills for its personnel, as part of a quality approach applied to vocational training.

**IOWater** expert mission was completed in November 2011 with a training course for ADE's staff on the use of these methods.



Algiers

#### Training of trainers

In parallel to the construction of the water training center's infrastructures in Cherarba near Algiers, the "Algérienne des Eaux" is selecting and training the future trainers.

It entrusted **IOWater** with a mission to assist in this recruitment focusing on:

- Definition of the trainers' team;
- Support to the development of professional references and trainers' skills;
- Advice in the selection of trainers;
- Development of the trainers' training plan,
- Training of the recruited trainers.

The training of trainers will especially focus on the handling of the educational units adapted to training in real working situation.



## THE MEDITERRANEAN

### Morocco



#### ONEP and IOWater: a lasting collaboration



Started 5 years ago, the collaboration between the Water and Sanitation Institute (WSI) of the National Office for Drinking Water Supply (ONEP) in Morocco

and IOWater's National Water Training Center (NWTC) continued in 2011 with KFW funding and focused on:

- Completion of two training courses in Morocco on the modeling of sewer systems and wastewater treatment plants and on the design and sizing of pumping stations;
- Facilitation of 3 workshops on the cleaning of anaerobic lagoons, subcontracting at ONEP and management of a sanitation project.

ONEP's "sanitation" responsibility is recent and many trainees, who have a large experience in drinking water supply, have discovered its specific constraints.



ONEP also entrusted IOWater with two educational engineering projects dealing with:

- Design and construction of a didactical sewer system;

- Development of protocols for practical work on the training unit for the treatment with activated sludge in Bou Regreg.



### GIZ: International Benchmarking on green jobs



GIZ Morocco and the Moroccan Ministry for the Environment are developing a strategy for the development of environmental jobs - green jobs - in Morocco.

The Kingdom has the will to acquire the skills needed for its sustainable development.

GIZ entrusted the **International Office for Water** with an assignment to draft a summary of the French and Spanish experiences on capacity building in environmental professions.

For this purpose, IOWater's National Water Training Center studied at first the importance and development of green jobs in France and in Spain (qualitative and quantitative aspects, classification of green jobs).



The roles and objectives of the institutions responsible for environmental professions and environmental training were then identified.

IOWater has also studied the strategies and action plans used for developing jobs in the environmental sector in France and Spain, and the incentives used to promote green jobs.

The lessons learned in this study, transferable to the Moroccan situation, were presented during a workshop organized by GIZ Morocco and the Moroccan Ministry for the Environment.



## THE MEDITERRANEAN

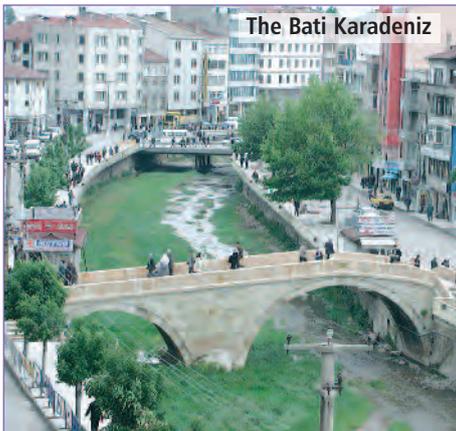
### Turkey



#### European twinning agreements

##### ► Twinning on the implementation of the Floods Directive

An EU institutional twinning with Turkey aims at implementing the Floods Directive and the capacity building of the new Water Directorate of the Ministry of Forestry and Hydraulic Infrastructures.



The Bati Karadeniz

While EU Member States are actively working to meet the deadline of December 2011 given by European legislation for submitting the "Preliminary Assessments of Flood Risk", it is recognition of the efforts made by European Authorities to implement this important directive published in 2007 and the guarantee for the Turkish partners to benefit from a transfer of a brand new experience.

This 24-month twinning project to be started in 2012 includes:

- **Support to the transposition of the Floods Directive in Turkey and adaptation of the institutional organization;**
- **Preparation of a flood risk management plan for the "Bati Karadeniz" pilot Basin,** running to the Black Sea, in which an event with important consequences occurred in 1998;
- **Preparation of the National Plan for implementing the Floods Directive,** by incorporating an economic analysis using the regulatory impact assessment method.

##### ► Implementation of the Water Framework Directive in five river basins

Turkey has 25 river basins and over 120 natural lakes.

The Turkish Government is now preparing River Basin Management Plans in accordance with the European Directives.

Collecting data to help set goals for Water Bodies is a key condition for improving the water resources of the country.

As everywhere in Europe, water quality is affected by population growth, agricultural activities, quick urbanization, and current and future water demands depending on development.

An institutional twinning is underway led by the Netherlands with France and Spain.

Initiated in September 2011 and lasting 27 months, it aims to collect data on chemical, physical and hydro-morphological characteristics and to develop monitoring plans for the basins of the Meric-Ergene, Konya, Akarcay, Sakarya and Buyuk Menderes rivers as well as a monitoring plan at the national level.



French experts of the Ministry of Ecology and Sustainable Development, the Seine-Normandie and Rhone-Mediterranean and Corsica Water Agencies, the **International Office for Water**, IFREMER, and other research institutes (IRSTEA, Universities ...) are contributing.

#### The Union of Turkish Municipalities

##### Project to create a Water Training Center in Turkey

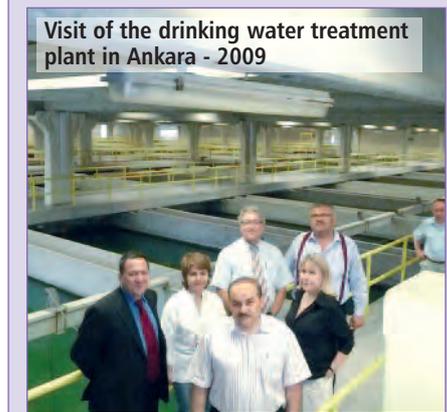
With the support of the French Embassy in Ankara, the **International Office for Water** received in June 2011 a large delegation of representatives from the Union of Turkish Municipalities (TBB), who visited the French National Water Training Center (NWTC) in Limoges and La Souterraine.

The Union of the Turkish Municipalities has begun a project for the establishment of a Water Training Center (WTC) in order to meet the practical training needs of many Turkish operators.

The strategy chosen by TBB would be implemented in two phases:

- **First phase:** adaptation of existing infrastructure on the sites of Kayseri, south-east of the country, and that of Koaceli, located north-west in the Province of Sakarya;
- **Second phase:** creation of a "main" Training Center, which would be located on the Multi-professional Training Campus in Ankara, for the technical staff of the municipalities.

An **IOWater's** expert mission was organized in November 2011 to analyze the methods for implementing this strategy and to develop a Training of Trainers program.



Visit of the drinking water treatment plant in Ankara - 2009

## THE MEDITERRANEAN

### Palestinian Water Authority

#### Feasibility Study for the creation of a Water Training Center



Bethlehem Multidisciplinary Industrial Park (BMIP)

The Project Follow-up Club is made up of the companies SUEZ Environment, Pont-à-Mousson, Saint Gobain (PAM) and Veolia through its subsidiary SEURECA.

The staffs responsible for the management, operation and maintenance of drinking water supply and sanitation facilities (about 3,500 people, including 2,000 in the West Bank and 1,500 in the Gaza Strip) are the first concerned by the training needs to meet.

The project for the establishment of a Water and Sanitation Training Center (WSTC) in the Palestinian Territories is one of the main tools of the strategy applied by the Palestinian Water Authority (PWA) under the new reform of the water sector.

The **International Office for Water (IOWater)** was entrusted with the feasibility study of this center. This study is financed by the French Ministry of Economy, Finance and Industry on the French "FASEP" Study Fund.

This implies the creation of a Training Center providing practical and directly operational training to Palestinian operators, based on real-scale educational equipment and facilities, to enable them to learn and acquire real "water professional attitudes".

The results of the feasibility study were submitted to the Palestinian Water Authority, for starting a negotiation phase with major donors.

It is already planned that this feasibility study (Phase I) would be extended by two complementary actions:

- The implementation of a priority training program for the staffs of the Palestinian water and sanitation utilities.
- A support, on the one hand, to the establishment of the Center provided at key stages of construction, and, on the other, after recruitment of the permanent staff, assistance in organizing activities and in managing the Center (development of the first training catalog, preparation of educational kits, training of the center's management team and Palestinian trainers).

The Training Center could be located in Bethlehem, as part of the Industrial Area project developed in this city (BMIP).



### Iraq

#### Training of Iraqi engineers and department heads



From 23 January to 10 February 2012, **IOWater** received in its Training Centers in Limoges and La Souterraine an Iraqi delegation made up of 19 Engineers and Department Heads of the WAB (Water Agency of Bagdad) in charge of water and sanitation management, especially of projects for the construction of new treatment plants in Bagdad (4 million inhabitants).

Financed by French "FASEP" Study Fund and managed by Suez, this 3-week training course focused on:

- drinking water production,
- wastewater treatment plants,
- reuse of treated wastewater,
- leak detection in drinking water supply systems,
- maintenance of technical equipment,

- automation of the installations,
- sustainable water resources management.

As a supplement to training, the delegation could discover the potential of the companies, members of the Environmental Limousin Center, as regards sludge treatment, membrane filtration of treated water, disinfection, recovery of polluted sites and soils, etc. ✓

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## MIDDLE EAST

### Saudi Arabia

#### National Water Company - Jeddah City Business Unit



The National Water Company - Jeddah City Business Unit (NWC-JCBU) entrusted **IOWater** with carrying out 36 training courses, corresponding to 145 training days between October 2010 and May 2011.

This first training program was mostly implemented by Arabic-speaking trainers previously trained in France at the National Water Training Center (**NWTC-IOWater**).

The educational documents used were designed by **IOWater** to meet local conditions.

The 40 training kits were developed in English and then translated into Arabic.

About 480 JCBU employees from the Water and Sanitation departments benefited from this very technical training program.

Two courses on "Electronics and remote management" and "Maintenance of mechanical equipment in water plants" were delivered in English for Indian, Filipino and Saudi trainees, as many foreign workers are involved in company operation in Saudi Arabia, as is the case for the NWC. These courses were in English for those who were not Arabic speakers.

Following the success of this training program, it is expected that **IOWater** accompanies the NWC-JCBU in the design and implementation of a second training plan in 2012.

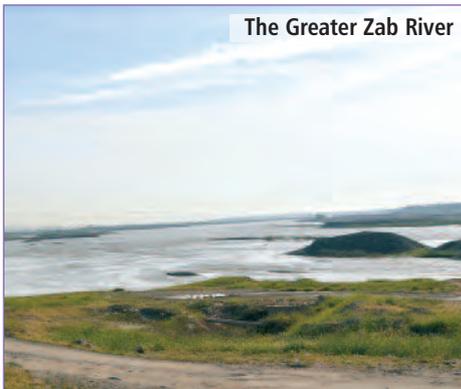


Practical work for disassembly of a pump



### Iraq - Kurdistan

#### Integrated Water Resources Management



The Greater Zab River

After decades of conflict, the autonomous region of Kurdistan in Northern Iraq has recovered the stability essential to its economic development.

The water resource shared with the upstream Turkish and Iranian neighbors and the Iraqi government downstream is a key to this development.

Integrated Water Resources Management at river basin level is a response to challenges currently facing the region where access to safe water is far from being guaranteed.

The French Ministry of Finance supports the Kurdish Government by funding a project in the pilot Greater Zab River Basin to provide the Kurdish institutions with local decision-making supporting tools which are still lacking.

A consortium of French companies, involving **IOWater**, the Canal de Provence Company, BRGM, and G2C IT, is leading the project for the benefit of the Kurdish Ministry of Water Resources.

The first phase of the project, which started in November 2010, is planning:

- The analysis of the legislative and regulatory basis with proposals for adaptation;
- A data collection and analysis to create a shared knowledge base on water, its uses, natural environments, etc.;
- The implementation of a water information system in order to facilitate decision-making support, sharing and retrieval of data by the Ministries;
- The drafting of a Basin Management Plan including prioritized measures;
- A skills transfer and training plan will be proposed.

**IOWater** is responsible for the part relating to the institutional context.

Proposals are made for the creation of a River Basin Commission in Kurdistan, as well as a Directorate for Basin Management, which would be its executive unit.



### Lebanon



#### Training for Aquarius



A training course



The Lebanese Aquarius company sells pumping and water purification systems and provides maintenance services.

On several occasions, its officers have come for training in Limoges and La Souterraine at the **French National Water Training Center**.

Early 2011, a training course on mechanical maintenance of centrifugal pumps (water intakes and sanitation), addressing technicians and engineers of the AQUARIUS maintenance unit, was carried out by **IOWater** on the premises of the company in Lebanon.

In Lebanon, the demand for such facilities is high because so many homes are equipped with a pressure module. Water is supplied through a small storage tank, which can be a reserve in case of water cut-off.



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**International Office for Water - 21, rue de Madrid - 75008 Paris - FRANCE**

**Tel.: +33 1 44 90 88 60 - Fax: +33 1 40 08 01 45 - Email: [dg@oieau.fr](mailto:dg@oieau.fr) - Web: [www.iowater.org](http://www.iowater.org)**