

INTERNATIONAL NEWS

Capacity building for better water management



*International
Office
for Water*

TRAINING
INFORMATION
MANAGEMENT
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N° 24 - English version - March 2014



Capacity building for better water management

In 2013, about 6,000 trainees attended the training courses proposed by the French National Water Training Center (NWTC) of the International Office for Water.

In its two centers in the towns of Limoges and La Souterraine, the NWTC thus trains every year professionals in water, waste and environment, anxious to perfect their knowledge and technical skills on the unique IOWater educational units.

Every year, it also trains some 2,000 professionals directly on their workplace. In this context, training may be complemented by an audit of the installations and technical support.

Thus, field practitioners, technicians and engineers, heads of services, elected officials, etc, all of them involved in the organization and good operation of facilities and services, find at the NWTC all the training courses useful and essential to the good control and evolution of their work or position.

In addition to its usual training offer, proposed in the "Water" catalogue, the NWTC has developed three specific catalogues since several years:

- The "Waste, Environment, Sustainable Development" catalogue;
- The "Water in the industry" catalogue;
- The "Water - Irrigation - Agriculture" catalogue.

The NWTC's professional trainers, supplemented by the best experts as lecturers, design and develop training programs based on existing case studies and putting the students in real working situation on educational facilities, reproducing working conditions, which are unique in France and Europe.

Participants thus benefit from their training which can be measured with tools to assess the knowledge acquired.



In order to help the professionals in their evolution process and/or career adaptation, the NWTC conceived training programs on "Jobs". Being a combination of selected training courses, these programs gather the knowledge and skills essential to the corresponding job. Evaluated by a jury of professionals, the participants in some of these courses obtain a "qualification".

The NWTC is certified ISO 9001, Version 2008.

Upon request, all these training courses may be carried out in English for groups of trainees.



The "Water" catalogue for 2014

The "Water" catalogue for 2014 regroups 294 training programs divided into 440 training courses and 8 main topics:

- Discovery of water jobs.
- Management of water supply and sanitation utilities, 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 networks, urban wastewater treatment, treatment of sludge, odor and waste, self-monitoring and quality control, maintenance, energy, automation and remote management.
- Water for recreational activities.
- Water in nature.
- Water in agriculture.
- Water in industry.
- Decentralized cooperation.



For 2014, the NWTC has designed and proposes 14 new courses in its catalogue.

As part of a training curriculum, the sessions can be selected to achieve, over several months or even a year or two, a customized training program according to the needs.

Qualifying training programs are proposed to meet regulatory requirements and needs for professional skill validation: maintenance of back-flow preventers, welding of polyethylene tubes and butt welding (in collaboration with the "Syndicate of pipes and fittings in polyethylene - STRPE)", handling of chlorine in bottles, determining of taste and odor of drinking water, water sampling, sampling of hazardous substances in the environment, control of facilities supplied by another water resource, control of connections to the sewerage system, treatment and control of water in swimming pools, river hydrometry, the job of gauger.



These courses are carried out at our Centers of Limoges and La Souterraine on dedicated teaching facilities and with a range of selected materials, representative of the market.

Moreover, due to the increase in constraints and needs, NWTC, in partnership with the Loire-Brittany Water Agency (AELB), is creating a new educational platform dedicated to alternative techniques in storm-water management.

Real showroom of these technologies, this facility will, as part of training programs or visits, allow viewing different devices, understand how they work, and address the problems of their sizing and implementation.



2014 training program for "Industry"

In this catalogue 2014, the NWTC proposes 53 training modules, divided into 70 training courses on the following topics:

- Regulation on Classified Facilities for Environmental Protection, self-monitoring, hygiene and safety, pollution removal on polluted sites, etc.;
- Drilling, pumping, maintenance and automation;
- Production and distribution of industrial water, fire fighting system, internal network and health protection.
- Treatment of industrial effluents, odor removal and sludge treatment, valorization of biogas exploitation of a unit;
- Effluent treatment in surface hardening ;
- Sustainable development, energy savings, carbon footprint, and industrial waste characterization and management.



The emergence of new professions, needing specialized skills, requires well-trained and qualified staffs.

Thus for 2014, NWTC has included two new courses in the catalogue carried out in cooperation with VWR International: high-performance liquid chromatography (HPLC), laboratory practice: the basics; introduction to ion chromatography.



Industry and NWTC... The winning choice...

12% of the trainees of the National Water Training Center (NWTC) are employees in the industry, 56% of whom are trained in tailored courses.

Water is a strategic resource for industry as it is at the core of the production process (manufacture, cleaning, etc.).

Thus, more and more industries are seeking to comply with the law and reducing production costs and also investment and operating costs in the treatment of discharged wastewater, while limiting their water consumption.



Water management has thus a significant impact on the economic performance of the company and on its development.

By optimizing the management of this raw material, the industry contributes to create value.

Industry requires specialized and polyvalent skills often with very specific and urgent needs.

In 2013, NWTC helped and supported many industrialists in their search for tools or ways for optimizing their processes.

For example, NWTC trained and technically supported an industrialist in agribusiness to improve the quality of discharges and thus enable him to maintain a high production rate watched by the Water Police.

Foreign countries were not left out, in many projects today (Malaysia, Switzerland, Poland, ...) manufacturers have specific and urgent needs to ensure the sustainability of their sites.

The industrialist can often save money, even make additional gains and returns on investment from NWTC work. ✓

NWTC's complete training offer, as well as the planning for the whole year 2014, can be consulted on the website:

www.iowater.org/nwtc

Training in 2014 on "Waste, Environment, Sustainable Development"



In its 2014 catalogue on "Waste, Environment and Sustainable Development, the NWTC proposes 47 training programs organized in 51 training courses on the topics:

- **Waste:** regulation, service management, hygiene and safety, communication, collection and selective sorting, maintenance of facilities, treatment and reuse of waste and wastewater treatment sludge, leachate, biogas, odor treatment, etc.;



- **Air:** measurement of pollution in open air;
- **Noise:** noise at work in water and sanitation utilities;
- **Sites and soils:** pollution appraisal and removal from polluted sites and soils.
- **Energy:** electric energy savings, strategy for the use of renewable energy;
- **Sustainable development:** carbon footprint, sustainable development approach, sustainable purchase, integration of hydraulic structures into the landscape, storm water recovery.

In 2014, NWTC is proposing a training program for operators of Waste Storage Facilities (WSF). This program includes the 4 following training courses:

- Operator of a Non Hazardous Waste Storage Facility (NHWSF);
- Biogas: adjustment and optimization of a NHWSF;
- Valorization of biogas;
- Leachate treatment in a NHWSF.

A positioning confirmed

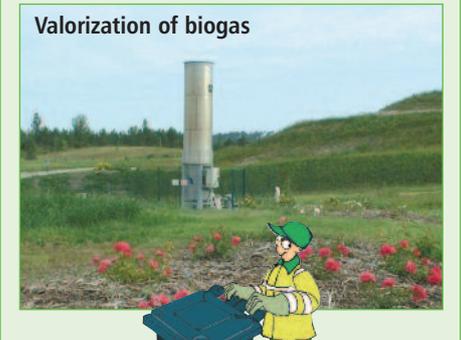
NWTC has trained 3,000 professionals since the launching of its "Waste" training activity.

Professionals in the waste sector were particularly looking for training and information on biogas utilization.

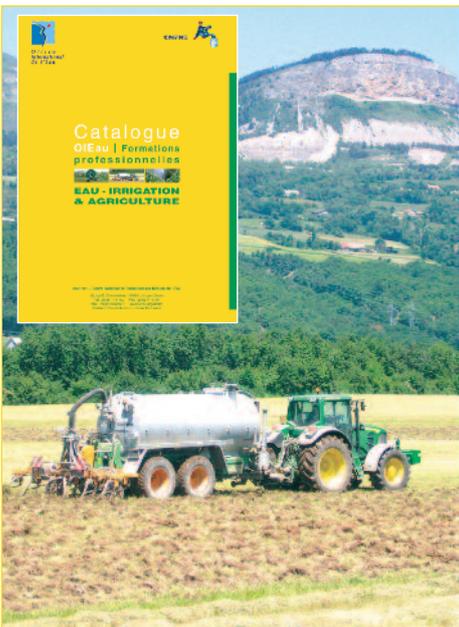
As part of its international involvement in the waste sector, in 2012 and 2013, the GIZ group entrusted **IOWater** with the implementation of a training plan and coaching activities in Algeria.



Valorization of biogas



2014 Training on "Water - Irrigation and Agriculture"



Since 2013, the NWTC has been proposing a catalogue specifically addressed to professionals in irrigation and agriculture, with 18 training modules, divided into 26 sessions on the topics:

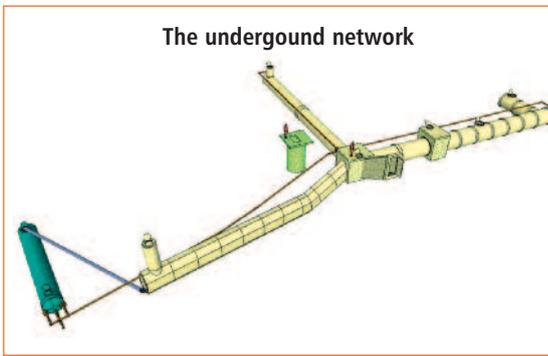
- Design and sizing of irrigation systems,
- Management and operation of irrigation systems,
- Water resources for agriculture,
- Treatment and recovery of agricultural effluents.

Precise management of water resources, reuse of agricultural effluents, control of land application ... are matters that require specialized skills and trained and qualified professionals.



Upon request, all these training courses may be carried out in English for groups of trainees.

Proficiency Certificate for Working in Confined Spaces (CATEC®)



NWTC is the first Training Center authorized in France to provide training for the Proficiency Certificate for Working in Confined Spaces (CATEC®), which aims to prevent the risk of accidents, albeit infrequent but often severe because lethal, facing staff working in some drinking water supply or sanitation facilities, such as sewers, pumping stations or water tanks.

The concepts always developed by NWTC, i.e. practical training, delivered on secure facilities, models of real structures, are indeed included in the frame of references.

For CATEC®, NWTC has developed sanitation structures that can be visited constituting a unique tool in France, including its associated educational units.

The most spectacular facility is an underground network of 100 m long, supplied with water and very realistic. It allows the participants to work safely in conditions very similar to real ones. It also allows the simulation of alerts and accidents for comprehensive training of the trainees.



Training reference frames on "water samples"

Training course for better controlling sampling

In early 2012, the French National Agency for Water and Aquatic Environments (ONEMA), "AQUAREF" and the International Office for Water established a working group to develop training reference frames relating to the sampler's job and based on existing "AQUAREF" guidelines and documents.

These reference frames are intended primarily to improve and homogenize practices and thereby promote better recognition of the sampler's profession.

Two first training reference frames were developed by IOWater:

- "Sampling of water and phytoplankton in rivers;
- "Water sampling in the context of the monitoring program for Water Bodies in France: Core curriculum".

Upon request of the French Water Agencies, NWTC is organizing training sessions based on these reference frames.



Trainees making samples

Two other training reference frames are being developed:

- "Sampling of water and phytoplankton in lakes";
- "Sampling of wastewater to search for priority and emerging micro-pollutants".

These reference frames are to be disseminated so that samplers can benefit from homogeneous training consistent with current technical requirements.



New sanitation processes

The Working Group on the Evaluation of New Sanitation Processes for Small and Medium Communities (EPNAC) aims to acquire, share and disseminate knowledge on wastewater treatment processes for small and medium Communities. IOWater participates in the "EPNAC group", alongside the French Water Agencies, IRSTEA, the Technical Services for Assistance to Wastewater Treatment Plant managers (SATESE) and some Departmental Planning Directorates (DDT). ✓



9th World General Assembly of the International Network of Basin Organizations

Declaration of Fortaleza



The opening ceremony © IOWater - C.Runel

The 9th General Assembly of the International Network of Basin Organizations took place in Fortaleza, in Brazil, from 13 to 16 August 2013.

It gathered 319 delegates, coming from 49 countries.

The meeting dealt with the adaptation to the world great challenges that are population growth, increasing food and energy demand or the effects of Climate Change, which were discussed during five round tables:

- 1 **Water management in the new post 2015 Sustainable Development Goals of the UN;**
- 2 **Adaptation to the effects of climate change and prevention of extreme phenomena of floods and droughts;**
- 3 **Institutional frameworks for action of Basin Organizations and participation of local authorities, water users and the public;**
- 4 **Management of transboundary rivers, lakes and aquifers,**
- 5 **Financing of water management and of basin organizations.**

From the debates, it emerged that integrated water resources management in basins, whether local, national or transboundary, is essential worldwide.

The experiments of integrated basin management carried out today in many countries, some of which are fifty years old, show the relevance of this approach.

The General Assembly reaffirmed some conditions to guarantee the success of basin management:

It is compulsory to **develop approaches which integrate surface, ground and coastal waters**, seek cross and inter-sectoral solutions, reduce pressures on available resources, restore the hydro-morphology of rivers and protect or restore aquatic ecosystems.

Integrated information systems should allow having knowledge on resources and their uses, on polluting pressures, ecosystems and their functioning, risks and evolution follow-up.

Production and availability of reliable information and data are essential to enable a **constructive dialogue between partners**, facilitate decision-making and evaluate the results of the implemented policies.

These information systems should take data on climate change into account.

Basin management plans or master plans, established through dialogue with all the stakeholders should define the medium and long-term objectives to be achieved, through the development of **Programs of Measures and successive multiyear priority investments**.

Sustainable financing of water resources management and of the basin organizations that are in charge of it must be guaranteed regarding investments and

operation and based on the application of the "polluter pays" and "user pays" principles, ensuring all necessary geographical and cross-sectoral equalizations, and true solidarity between all categories of users and combining national or local administrative taxes, the pricing of community services, and taxes specific to objectives selected through dialogue.

At the side of the relevant Governmental Administrations, active participation in decision-making of the local Authorities concerned, including municipalities, representatives of different categories of users and associations for environmental protection or of public interest should be organized.

The establishment of Basin Committees or Councils seems to be the best way of ensuring all the stakeholders' participation, provided that they have the necessary resources made available.

These Basin bodies should be involved in the decision-making related to water policy in their basin, with procedures and a mandate clearly defining their role. They allow establishing the necessary cross-sectoral links for the exchange of information and dialogue among all the partners.

Their establishment or their reinforcement should be a priority for the donors.

"The World PACT for better river basin management", initiated by INBO in March 2012 during the Marseilles 6th World Water Forum and signed today by 128 organizations from the whole world, is based on all these principles.

Adaptation to the effects of global and climate changes is a local and world priority!

The social, economic and ecological consequences may be very significant and require a quick mobilization **to prepare the necessary adaptation programs in each basin**, taking account of surface and groundwater.

"For better basin management over the world!"

This applies to many sectors such as hydropower and cooling of thermal and nuclear power plants, food production with irrigation, fisheries and aquaculture, urbanization with the needs for drinking water supply and sanitation or inland waterways transport, etc.

The water sector is one of the most directly affected by changes in the hydrological cycles, and thus in the spatial and temporal availability of resources and in impacts on all uses.

The assessment, using various scenarios, of the hydrological consequences of global changes, is quickly required in each basin!

Research and prospective efforts should be increased and accelerated to give local field decision makers the essential elements for designing appropriate and necessary diversified programs.

It is also essential to prepare future generations by developing educational tools and youth participation, relying particularly on **Youth Water Parliaments**.

Anticipation, the taking into account of uncertainty and the capacity to plan on the long term should be the new bases of water management policies.

The exchange of information on good practices is essential: UNECE and INBO have started to establish **a network of pilot basin organizations to test measures for adapting to climate change**.

With regard to floods, the "upstream-downstream" common cause should be the basis of consistent and coordinated management on the scale of basins and sub-basins both for prevention and protection. This is especially true in transboundary basins where cooperation between riparian States should be promoted.

The prevention of droughts must be planned in the long term in each basin, by solving the structural problems which occur, in order to prevent, in the best possible way, their effects and to avoid the total degradation of water resources.

All the uses are concerned, especially water use in agriculture, which must be rationalized as well as possible.



319 delegates coming from 49 countries © IOWater - C.Runel

Pressures on water resources require looking for new ways, such as the use of non-conventional water and reuse of treated water.

Mobilizing new resources and creating new reserves are needed; this should be done after making sure that water demands are rationalized and that projects are ecologically acceptable and economically reasonable. "No regret" approaches should be sufficiently flexible to adapt to highly fluctuating situations in the future.

Cooperation between riparian Countries of transboundary rivers, lakes and aquifers should be improved.

It is urgent that existing cooperation agreements, conventions or treaties be broadened and strengthened.

Where there is no agreement yet, it is essential that the riparian countries establish one and create common institutions necessary for its implementation.

The 1992 Helsinki Convention on the protection and use of transboundary watercourses and international lakes, on the one hand, and **the United Nations Convention of 1997** on the other give a framework for improving transboundary cooperation in the field of water.

In addition, **the European Water Framework Directive (WFD)** proposes regional cooperation in the field of water based on the principles of integrated basin management. It may inspire other regions of the World.

While thinking has started for defining **the UN post 2015 Sustainable Development Goals**, INBO considers essential to include

water resources management in the top priorities as this more and more scarce resource is essential for economic, social and environmental development.

It intends to get mobilized for the next major world events on water, especially for the 7th World Water Forum, the United Nations Climate Conferences and for the first International Environment Forum for Basin Organizations to be organized by UNEP in 2014.

INBO member organizations have more and more recognized experience and know-how which they intend to share, disseminate and put at the disposal of all the countries and institutions which would like to follow them in an effective basin management approach.

The General Assembly thanked **the National Water Agency (ANA) and the Brazilian Network of Basin Organizations (REBOB)** for their outstanding welcoming in Fortaleza.

It congratulated **the Organization for the Development of the Senegal River (OMVS)** and its two High Commissioners, Their Excellencies M.S Ould Merzoug and R. Komara, for the masterful way in which they have assumed the World Presidency of INBO since the General Assembly in Dakar in 2010.

Mr. Lupercio Zirolto Antonio, President of REBOB, was elected new INBO President until the next General Assembly that will take place in Mexico in 2016.

www.inbo-news.org

The website of basin management worldwide.

OECD

Initiative on water governance



1st meeting of the OECD initiative
Paris - 27 - 28 March 2013

The OECD Initiative on Water Governance gathers representatives of national Governments, regional, local and basin Authorities, the private sector, NGOs, service providers, regulators, international organizations, donors and independent experts.

In total, 25 countries are involved.

The Initiative was developed in partnership with Suez Environment, ASTEE, the International Network of Basin Organizations, the International Office for Water, UNESCO, the Water Integrity Network, Stockholm International Water Institute and Transparency International which facilitate various working Groups.



Several institutions emphasized the lack of information on relevant case studies, best practices and expertise, which often hinders decision makers in the water sector and prevent the effective implementation of appropriate policies.

Participants mentioned the need to share knowledge, encourage peer-learning and allow benchmarking.

It is particularly important to involve stakeholders coming from outside the water community: the Initiative associates representatives from the energy and agricultural sectors, Parliamentarians and Elected Officials, media, consumer associations, trade unions, private companies and the civil society.

www.oecd.org



UN

Ban Ki-moon: Water is the key to sustainable development

During **the Water Summit** held in Budapest last October, Mr. Ban Ki-moon, UN Secretary General, stressed the important role of water in sustainable development.

He presented three priority areas where water is essential for development: food security, adaptation to climate change and sanitation.

Mr. Jean-François Donzier, **IOWater** General Manager, was invited to lead the session on Water Governance in the Civil Society Forum organized within the Summit, during which he presented an introductory framework paper.



Mr. Ban Ki-moon at the opening of the Water Summit
Photo: UN/Paulo Filgueiras

www.un.org



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on the Web**



**7,550,000 visitors
in 2013!**

UNESCO

Closing ceremony of the International Year of Water Cooperation



The closing ceremony of the International Year of Water Cooperation took place in Mexico on 5 and 6 December 2013.

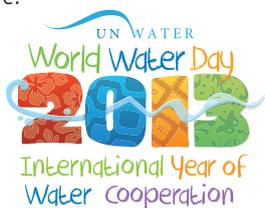
It was organized by UNESCO on behalf of UN-Water, with support from the Government of Mexico through the National Water Commission (CONAGUA).

During the first day devoted to lessons learned from the International Year, **Mr. Jean-François Donzier, Secretary of the International Network of Basin Organizations, made an introductory speech on River Basin Management worldwide**, in the high-level session on "cooperation, a key to peaceful water sharing".

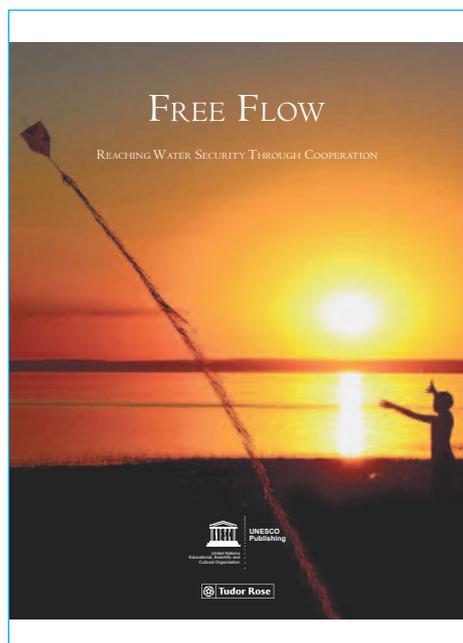
The second day, entitled "Beyond the International Year: recommendations for action" was an opportunity to specify the action to take for the future.



✓



Free Flow : Reaching water security through cooperation



Written on the occasion of the International Year of Water Cooperation coordinated by UNESCO, this publication was officially presented at the Water Summit in Budapest on 9 October 2013.

"Water Cooperation is about fighting against poverty and hunger, as well as protecting the environment", said the Director General of UNESCO, Irina Bokova. "It is about peace on the basis of dialogue between States and Regions".

This publication, through the presentation of field experiments, demonstrates that collective commitment is required to foster a culture of cooperation in the long term between all water practitioners.

A chapter devoted to the participation of water users in the Senegal, Niger and Congo River Basins, was prepared by **the Secretariat of the International Network of Basin Organizations (INBO)**.

www.unesco.org

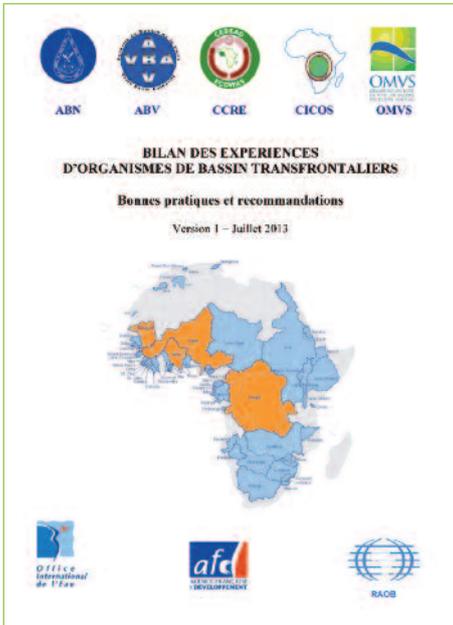
✓



AFRICA

Good practices in Basin Management

Assessment of the experiences of five African organizations



The document "Assessment of the experiences of transboundary basin organizations - Good practices and recommendations", coordinated by IOWater, was presented and discussed at an exchange workshop, held in Ouagadougou (Burkina Faso) in November 2013.

The partner institutions involved are the basin organizations of the Senegal (OMVS), Niger (NBA), Congo (CICOS) and Volta Rivers (BVA) and the Water Resources Coordination Center (WRCC) of the Economic Community of West African States (ECOWAS).

The assessment is built around practices related to four key topics:

- Governance;
- Search for autonomous and sustainable financing;

- Strategic planning and implementation actions;
- Optimization of monitoring.

The workshop gathered the concerned organizations, the French Development Agency (AFD), which finances projects in these organizations, the African Network of Basin Organizations (ANBO) and IOWater.

The objective was to exchange and capitalize on best practices based on the assessment document, which was amended at the end of the meeting.

An electronic forum on monitoring was also held in September 2012.

Finally, many documents relating to the four topics will be available soon on the African Water Information System (AWIS) web-site. ✓

SITWA

For better knowledge management



The "Strengthening Institutions for Transboundary Water Management in Africa" (SITWA) project aims to strengthen regional cooperation at the political, economic and stakeholder level for sustainable management of transboundary water resources in Africa contributing to peace and security, stability and poverty alleviation.

This Project, financed by the European Union and implemented by the Global Water Partnership (GWPO) with ANBO Technical Secretariat taken care of by the Organization for the Development of the Senegal River (OMVS), is organized in two phases:

an inception phase and an implementation phase which will start in 2014 for the capacity building of African River Basin Organizations.

During the inception phase, OIWater and INBO experts were called to assess the needs and identify priority actions for SITWA/ANBO support services in relation with Information, Knowledge management and Communication.

The final results of this study were presented during a validation workshop organized in Addis Abeba in October 2013.

After a description of the services which could be provided by the SITWA/ANBO project in

relation with "Knowledge management", a global action plan related to this topic was proposed and adopted by the project management team, and then latter included in the program validated by the Steering Committee of the SITWA project.

Thus, the following main actions related to "data and knowledge management" are planned to be implemented in the coming years with the support of the SITWA project:

- Development of the African Water Information System (AWIS) web platform;
- Definition of the main procedures for metadata, data and information exchanges;
- Production of information outputs at pan African and regional level;
- Strengthening of the tools and procedures for data exchange and information systems in two selected pilot transboundary basins, in collaboration with the concerned Regional Economic Commissions (RECs).

✓



AFRICA

Volta Basin Authority (VBA)

Implementation of priority actions of the 2010-2014 Strategic Plan



The project for capacity building of the Volta Basin Authority (VBA) is funded by the European Union (ACP-EU Water Facility), the Seine-Normandy Water Agency (AESN) and the French Development Agency (AFD).

Since 2012, INBO has been implementing the project, which aims to build the capacity of:

- The Stakeholders Forum for Basin Development, an advisory body of VBA;
- The Experts' Committee, VBA executive body,
- The Executive Directorate.

In January-February 2013, Members of the Experts' Committee and Executive Directorate made a visit to the Seine-Normandy and Adour-Garonne Water Agencies and met in Toulouse

members of the planning commission, DREAL (Regional Directorate for the Environment, Development and Housing) and of the Coteaux de Gascogne Development Company (CACG).

The project also allowed the participation of the VBA Executive Director in **INBO World General Assembly held in Fortaleza, Brazil, from 12 to 16 August 2013**. He was able to participate in the topical roundtable "Institutional frameworks for action of Basin Organizations, of local authorities, water users and the public, role of Basin Committees" and exchange with his counterparts in charge of Transboundary Basin Authorities.

Finally, the second meeting of the VBA Stakeholders' Forum was held from 21 to 23 October 2013.

It has strengthened the relations between the various stakeholders of the six VBA Member States.

At the same time, an expert from the Adour-Garonne Water Agency presented the dialogue process in the river basin and made recommendations for the functioning of the Stakeholders' Forum and an **IOWater** expert led a session on the preparation of the Master Plan for Water Development and Management.

Particular attention will be paid to information and communication to the general public about the VBA activities.

www.abv-volta.org



The Nakanbé and Mouhoun Water Agencies

The Nakanbé River



The Water Agencies were established in Burkina Faso by the orientation law on water management of February 2001.

The Decree of June 2003 determining the areas of responsibility of the structures in charge of water resources management, has divided the country into five areas: Cascades, Gourma, Lip-tako, Mouhoun and Nakanbé.

In October 2010, the Loire-Brittany and Nakanbé Water Agencies signed a Memorandum of Understanding for cooperation in the development of joint actions in the field of Integrated Water Resources Management with **IOWater** as executive agency.

An institutional cooperation project was also implemented in late 2013 by the Adour-Garonne and Seine-Normandy Water Agencies and the Mouhoun Water Agency.

Since 2013, an institutional cooperation project has associated the Loire-Brittany Water Agency with the White Volta Basin Board in Ghana, downstream continuity of the Nakanbé River Basin.

In addition to direct collaboration between agencies, these institutional cooperation projects strengthen the policy framework and facilitate the implementation of common

cause projects in connection with the Water Development and Management Plans of the concerned river basins.



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AFRICA

CICOS



Towards the SDAGE - Strategic planning in the Congo River Basin

The International Commission of the Congo-Ubangi-Sangha Basin (CICOS), which was mandated by its Member States to ensure sustainable development in the region through a fair and consistent water resources management in the basin, has developed a **Master Plan for Water Development and Management (SDAGE)**.

Given the hugeness of its basin (3.8 Mkm²) CICOS wanted to start the process of developing the SDAGE on two fundamental bases:

- **Good SDAGE ownership**, ensuring the participation of the basin's stakeholders and water users;

- **The creation of a hydrological modeling** to better understand the functioning of the river basin and its possible resource allocations.

Two projects are going to support this initiative:

- **Project for support to water resources management in the Congo River Basin financed by the European Union and managed by IOWater.** This project includes a training cycle on operational hydrology for the National Hydrological Services (NHS) and CICOS, and support to the implementation of the participatory component of the SDAGE;

- **Project for monitoring water resources and prospects for the Congo Basin, funded by the French Global Environment Facility** and managed by CICOS with a technical assistance from the French Development Agency. A component corresponds to the development of a resources allocation model on the basin scale.

These bases being completed by early 2015, the SDAGE then will be initiated with the objective of giving people what they really need in a shared and sustainable manner, respectful of the environment.



Institutional audit of CICOS

In 2013, the International Commission of the Congo-Ubangi-Sangha Basin (CICOS) asked IOWater to carry out an audit of its activities in Integrated Water Resources Management (IWRM), jointly with GIZ for its shipping activities.

CICOS made significant progress in recent years and should continue to assert itself as a major stakeholder in development in Central Africa, particularly through its IWRM mandate conferred in 2007.

Although CICOS has developed its Strategic Action Plan, it still lacks the precise definition of a framework in which to place all of its projects.

The Master Plan for Water Development and Management should remedy this.

Without prejudging the decisions of the Ministers' Committee, various measures could be considered.

The General Secretariat should be strengthened to aim for better implementation of the mandate.

CICOS must be an active party in the implementation of large transboundary hydraulic structures. Besides the technical aspects, it also has an institutional role in this kind of project, alongside the economic commissions for regional integration (CEMAC and ECCAS).

The recent accession of Gabon allows the definition of common specific activities.

The integration of Angola into CICOS would be an asset and would have significant consequences for the institution, which would see its "center of gravity" moving to the south.

Regarding the internal financing of the institution, the current mechanism appears satisfactory. Fee mechanisms will be studied in the medium term, once the national IWRM processes are sufficiently advanced.

www.cicos.info



AfDB

Project assessment for the African Development Bank

The International Office for Water, in partnership with Studi International and Aurecon, is participating in the assessment of projects funded by the **African Water Facility** and directly carried out the assessment of the following three projects implemented between 2008 and 2012:

- 1 **Congo (Brazzaville):** Study on the rehabilitation and extension of drinking water supply and sanitation systems in Brazzaville and Pointe Noire.

- 2 **Burkina Faso:** Feasibility and design study of a drainage and waste management system in Ouagadougou.

- 3 **Liberia:** Study for the extension and rehabilitation of the drinking water supply and sanitation system in three regional capitals.

The assessment was based on documentary investigations and interviews with the organizations in charge of the projects.



Building of latrines in Pointe Noire

The mission also plans the development of informational products designed to showcase innovative good practices implemented in the assessed projects.



AFRICA

Lake Chad Basin Commission

Conservation and development of Lake Chad



The "conventional" Lake Chad Basin (i.e. hydrologically active) covering 967,000 km² is under the jurisdiction of the **Lake Chad Basin Commission (LCBC)**, which gathers six countries (Cameroon, Central African Republic, Libya, Niger, Nigeria and Chad).

The main challenge for LCBC is to contribute to improving the quality of life of people in the basin, which passes, among other things, by controlling the drying out of the lake and its tributaries.

It is necessary to ensure a sound use of the basin's water resources, coordinate regional efforts in natural resources management and settle disputes relating to the use of these resources.

LCBC, established in 1964, initiated an institutional reform in 2008. In this context, the Conference of Heads of State and Government adopted on 30 April 2012 the **Water Charter of Lake Chad Basin**.

Various projects are implemented by LCBC, including the **"Lake Chad Conservation Project - Contribution to the Development Strategy for the Lake"**, funded by the **French Global Environment Facility (FFEM)**.

This project which started in 2012 is planned for a 3-year period and has three components entrusted, among others, to the **Research Institute for Development** (components 1 and 2) and the **International Office for Water** (component 3):

- 1 **Component 1:** Summary of knowledge and definition of management constraints;
- 2 **Component 2:** Reliability of the hydrological model;
- 3 **Component 3:** Support for the entry into force of the Water Charter and strengthening relations with other African basin organizations.



Component 3 should allow:

- The implementation of the Water Charter through its ratification by all the Member States and preparation of appendices;
- The signing of the United Nations Convention of 21 May 1997 on the Law on the use of international watercourses for purposes other than navigation;
- The exchange of experience with basin organizations of West and Central Africa.

Three workshops for disseminating the Charter, which gathered parliamentarians, decision-makers, practitioners and water users, took place in Ndjamen (January 2013), Niamey (March 2013), Abuja (May 2013) and Yaoundé (December 2013). **IOWater** is helping LCBC in the organization and facilitation of these workshops, as well as in promoting the UN Convention of 1997.

These actions should allow strengthening the legal and institutional framework of LCBC to ensure better integrated water resources management in the basin.

www.cbilt.org



Guinea



Capacity building for the executives of the Water Company of Guinea (SEG)

As part of the support provided by the **Ile-de-France Water Syndicate (SEDIF)** to the **Water Company of Guinea (SEG)** under decentralized cooperation, the "SEDIF" entrusted **IOWater** with two activities, carried out in the 2nd semester of 2013:

- ➔ **Training of executives on the management of a water utility by using a system of performance indicators to improve the efficiency of the service**

This 4-day training course strengthened the proactive management of the company, highlighting the evolution of the company's performances, the areas of improvement and the priority investments to be made.

- ➔ **Support for the establishment of a Geographic Information System (GIS) to improve patrimony management**



A first workshop was held on the premises of "SEDIF" in Paris to exchange best practices and define an action plan for the development of a GIS for "SEG".

A GIS expert from **IOWater** then carried out a mission to support "SEG" in the implementation of the action plan with the primary objective of establishing a GIS in the Kindia area.



AFRICA

South Africa

Rand Water and IOWater are confirming their partnership

Rand Water and the International Office for Water (IOWater) signed on 25 July 2013 a "Memorandum of Understanding (MoU)", which strengthens their partnership already started in 2012 and which allows foreseeing many areas for collaboration.

The MoU was signed by Mr. Moabi Mosotho PETLANE, President of Rand Water, Mr. Pierre ROUSSEL, President of IOWater and Mr. Kumalo Dinizulu Percival SECHEMANE, CEO of Rand Water.

This partnership had already been initiated in April 2012 by a visit of executives of Rand Water to the French National Water Training Center (NWTC) of IOWater.

Very quickly, under the project of creating the Rand Water Water Academy in Johannesburg, IOWater had trained a team of 8 trainers for a month in July 2012.

This training had been designed to enhance the knowledge of South African engineers on drinking water and wastewater technologies, but also to familiarize the trainers to the use of the educational platforms to carry out practical work.

In 2013, IOWater trained 15 engineers and Heads of Service on maintenance, health and safety issues. It organized a one-week study tour in France on "Management of changes in Water and Sanitation Services".

IOWater provided support for the definition, design and startup of the Rand Water Academy (RWA).

In addition, IOWater will have to define technical specifications for some educational platforms that will be located on the site of the future training center.

It is also expected that Rand Water becomes a member of IOWater's Board of Directors.



Signing of the MoU in Limoges on 25 July 2013

Finally, in 2014, Rand Water and IOWater have planned to carry out 10 inter-company training courses in South Africa, to increase the influence of Rand Water Academy over the South African training market in the water sector.

Burkina Faso

Water and Sanitation Program

Support to "CEMEAU" (Water Training Center)

Since the late 1980s, the National Water and Sanitation Agency (ONEA) has established a Professional Training Center (PTC).

Since then, new strategic orientations have been given for the water sector in Burkina Faso, mainly marked by the sector decentralization to Local Authorities.

In 2009, the German Cooperation Agency (GTZ) entrusted IOWater with a Feasibility Study on the transformation of the former PTC into a Water Training Center (CEMEAU), with a vision to open but also to expand its training offer to different audiences concerned by the sector Reform. The "CEMEAU" was established in March 2010.

The German Cooperation-SEG Water and Sanitation Program (WSP-GIZ), now in its third stage (2013 - 2015), includes a strong "Professional Skills Development" component.

The support to "CEMEAU", carried out by the GFA-IOWater group, plans seeking for a balanced budget, organizational development and the building of the skills of its management staff and its technical experts.

This component supports the ONEA HRD in improving the training plan, but also the National School of Administration and Magistrature (ENAM) in the development of a continuous and basic training offer for officers of Local Authorities for the WSS sector.

In the major actions implemented in 2013, we should mention the building of new equipment and teaching facilities (indoor workshops, outdoor training platforms), that have been made possible by



Workshop with ONEA experts - May 2013

significant financial support from Danish Cooperation (DANIDA).

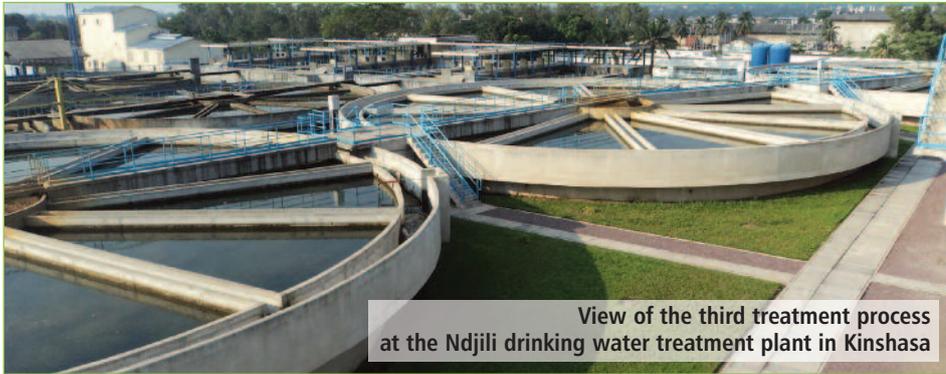
These equipments and training materials, necessary for the completion of directly operational training courses, rely on the recognized know-how of IOWater's National Water Training Center (NWTC).

AFRICA

Democratic Republic of the Congo



Developing a training plan



View of the third treatment process at the Ndjili drinking water treatment plant in Kinshasa

The International Office for Water has continued its activities in the Democratic Republic of the Congo (DRC) by developing a five-year training plan, funded by the African Development Bank, taking into account the needs for capacity building of the staffs of the "REGIDESO", the Sanitation Department (DAS), the National Rural Water Service (SNHR) and the National Action Committee on Water and Sanitation (CNAEA).

In collaboration with the REGIDESO's Training Department, IOWater has achieved an assessment of the human resource management policy of these organizations and proposed a training plan and a training policy specific to each structure.

This action confirms the collaboration, started in 2004, between the "REGIDESO" and IOWater.



Training on planning for executives from the Ministry of Water Resources and Electricity



Group of trainees being trained at the "REGIDESO"

As part of the Drinking Water Supply in Urban Areas Project, the Water Project execution Cell of the "REGIDESO", with financial support from the World Bank, entrusted the International Office for Water (IOWater) with the development and facilitation of a training seminar on planning of drinking water supply projects.

During several workshops, the participants practiced in project planning and management, risk identification and assessment of its impact, and in the development of strategies for communication to the population on drinking water supply.

This two-week seminar gathered, in Kinshasa, 12 senior executives of the Ministry of Water Resources and Electricity in charge of implementing the equipment program to double the number of inhabitants with access to drinking water by 2016.

This ambitious goal can be achieved with the establishment of an effective organization and well-trained staffs.



WORLD BANK

Kenya



Support to Mombasa Water Company

Since 2010, IOWater has been committed with SEURECA in an important project of assistance to the Water and Sanitation Company of Mombasa (MOWASCO), Kenya, funded by the French Development Agency.

During the three years of the project, IOWater conducted an audit of the organization and of all activities of the company (418 employees) to highlight the difficulties and challenges.

A new organizational chart was proposed and approved by the Directorate General, with a clear definition for each department of the company, its functions, activities, organization, number of employees and required qualifications, as well as performance indicators.

A training plan was also proposed.

The last year of the project allowed the installation of new software for billing and customer management, as well as an extensive field survey carried out to update the customer database.

The new software has been used by MOWASCO since the beginning of 2013.

The staff has been trained on new functionalities and working procedures.

An employee of the computer department has also received intensive training on the administration of the software.

A connection was established between the various agencies that now have instant access to updated information about customers, and the possibility to multiply the points of payment.

These new provisions should improve the service to users and effectiveness of the commercial department of the company.



THE CARIBBEAN

Haiti



Capacity building in a country under reconstruction



Visits of sites in Haiti

4 years after the earthquake that devastated the island, Haiti is still undergoing reconstruction.

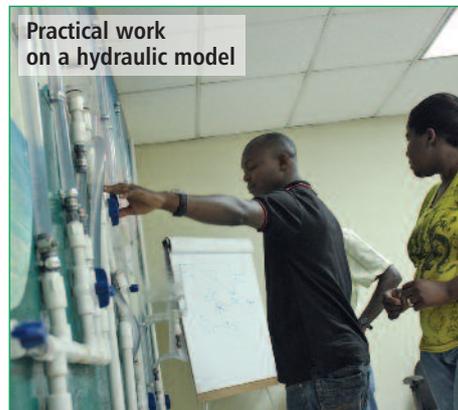
The "Lyonnaise des Eaux-Haiti", a subsidiary of the SUEZ ENVIRONNEMENT Group, is involved in this reconstruction by accompanying the teams of the **Technical Operation Center of the Metropolitan Region of Port-au-Prince (CTE RMPP)** to rebuild the drinking water supply systems.

In such a context, the "Lyonnaise des Eaux-Haiti" called **IOWater** for training the staff of the Operation and Research Departments.

IOWater's good knowledge of the Haitian situation allowed developing educational tools, dedicated to training in hydraulics and construction techniques, particularly suitable for the staffs of this country. Thus, a hydraulic model was designed and built on the premises of the "CTE RMPP". A group of students was especially trained to use and manage this tool.

They will be assigned to train local operators on the principles of hydraulic calculations and management of a water system.

The "CTE RMPP" teams, accompanied by experts of the "Lyonnaise des Eaux Haiti", will regularly use both this installation and ad-hoc training materials, that have been designed and delivered by **IOWater** as part of these missions.

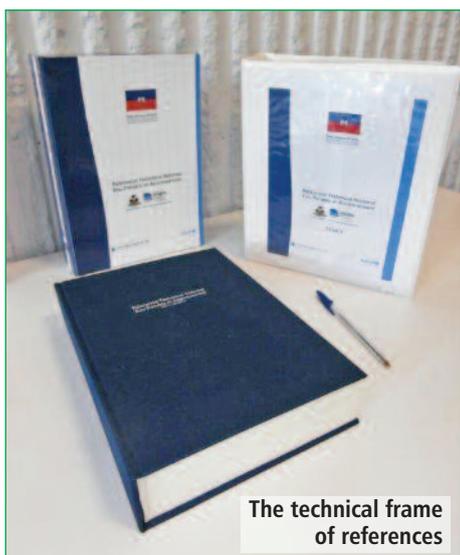


Practical work on a hydraulic model

Assistance to "Phareview"

For "Phareview", Haitian private company bottling spring water, **IOWater** looked for service providers and took care of their supervision for **carrying out an impact assessment and an eco-systemic study of the water intakes and future bottling plant.** ✓

A technical and regulatory reference frame to support the development of the water sector



The technical frame of references

The Republic of Haiti is facing many difficulties that originate from the diversity of the projects being developed.

The drinking water supply and sanitation systems are often made of heterogeneous materials and equipment which make them difficult to maintain or operate...

The **National Directorate of Drinking Water Supply and Sanitation in Haiti (DINEPA)** was created by the Water Act of 2009 to especially harmonize practices and projects implemented by its many partners in the country, whether national, international, public, private, NGO, etc.

On 22 October 2013, **IOWater** submitted to DINEPA, in the presence of the highest national Authorities, the **National Technical Reference Frame for drinking water supply and sanitation in Haiti**, after two years of work funded by **UNICEF**.

This technical and regulatory reference frame gathers more than 110 documents for approximately 3,000 pages, detailing best practices, minimum requirements or prohibitions for each type of structure, material, or process. All sectors are covered: from toilets for private homes to the building of metallic drinking water tanks, through the management of water kiosks, the building of systems, management or security rules.



Workshop for editing the frame of references with key stakeholders

This set of requirements will apply to future projects and support sectoral capacity building and increase technical knowledge.

All documents are drafted so as to be completely adapted to the current and projected capacities of Haiti and involve the mobilization of many sectoral stakeholders for validation through an effective collaborative process.



LATIN AMERICA

Lake Titicaca

Thorough analysis of the situation in the Basin



More than 300 participants at the Symposium

The Binational Autonomous Authority of the Water System TDPS - ALT in coordination with the various institutions involved in the preservation and conservation of the Lake Titicaca Basin in Bolivia and Peru, organized on 7, 8 and 9 March 2013 in Puno the "Second International Symposium: For Lake Titicaca - a shared responsibility".

This event aimed to bring together all the experts concerned to enrich the scientific and technical debate and propose to Government Authorities, alternatives for integrated management of water resources shared by the two countries, as well as management tools for sustainable use of Lake Titicaca and its basin, fed by five tributaries: Ramis, Huancañé Coata, Ilave and Suche and the Desaguadero River.

The Symposium gathered more than three hundred participants.

The organizers wish to institutionalize the Symposium as a place for technical and scientific knowledge of the problems and potentialities of Lake Titicaca, in order to build environmental responsibility between public and private stakeholders; with a participatory approach.

Mr. Jean-François Donzier, Secretary of the International Network of Basin Organizations (INBO) was invited to make the introductory speech to the Symposium on the topic of the best experiments in basin management worldwide.

www.alt-perubolivia.org



Mexico

3rd National Congress on River Basin Management



The 3rd Mexican National Congress on River Basin Management was held in Morelia (State of Michoacán - Mexico) from 27 to 30 August 2013, at the initiative of the Mexican River Basin Network (RMCH).

The main objective of the event was to advance river basin management in Mexico to meet the urgent problems related to water resources.

Conferences, round tables, technical sessions allowed researchers, representatives of governmental institutions, non-governmental organizations and user communities to address important issues such as climate change, participatory management, the need for and interdisciplinary approach and knowledge sharing.

On this occasion, the third national meeting of the Operational Directorates of Basin Councils was held on August 27 with a view to improving the role and functioning of these institutions created by federal law in 1992.



Mr. J.F. Donzier, Technical Secretary of the International Network of Basin Organizations (INBO) was invited to present a keynote speech on best practices implemented by basin organizations in different parts of the world.

Delegates from various Mexican Basin Committees spoke about their practical field experiences.

www.ciga.unam.mx/congreso/cuencas

The National Water Commission (Comisión Nacional del Agua - Conagua) presented the national water policy for 2013-2018.



LATIN AMERICA

Brazil

Towards a Professional Water Training Center

In November 2012 in São Paulo, the "Fundação Escola de Sociologia e Política de São Paulo" (FESPSP) and IOWater signed a cooperation agreement for the creation of a Water and Sanitation Training Center for Professionals in the south-east region of Brazil.

In partnership with the Brazilian "FESPSP" team responsible for this innovative project, IOWater provides its expertise to carry out a Feasibility Study whose overall objective is to define the educational, technical and financial conditions for the establishment of the Brazilian Training Center.

The activities planned for about 6-months started in October 2013 by a study tour of a delegation of eight "FESPSP" experts to visit the educational facilities of IOWater's National Water Training Center in France. IOWater technical assistance operates under Brazilian funding.



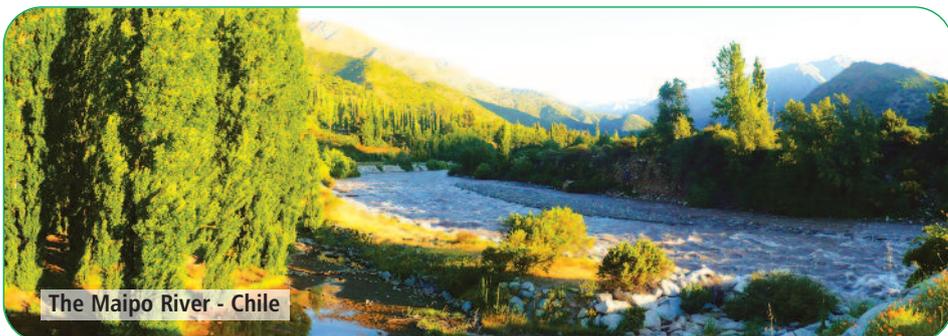
Fundação Escola de Sociologia e Política de São Paulo.
RECONHECIMENTO DESDE 1933

Chile

The market of water rights and Integrated Water Resources Management

The Chilean Ministry of Public Works (MOP) and its General Directorate of Water (DGA), are working to develop an Action Plan for improving water resources management.

It thus requested technical assistance from the World Bank to assess the situation and formulate a national strategy.



The Maipo River - Chile

Cooperation of the Loire-Brittany Water Agency with PCJ



Seminar in May 2013 in Porto Alegre

In 2006, the Loire-Brittany Water Agency signed a cooperation agreement with the Intermunicipal Consortium of the Piracicaba, Capivari and Jundiá river basins (PCJ).

It has resulted in constant exchanges between both partners with the support of IOWater, and allowed disseminating the experiences of the PCJ Consortium and Loire-Brittany Water Agency to other basin institutions in Brazil.

A new step forward in the cooperation between France and Brazil was taken in May 2013, by organizing a seminar and a technical visit in the Rio Grande do Sul (RGS), the southernmost Brazilian State, which encounters a paradoxical situation: since 1988, it has been housing the oldest Basin Committee in Brazil, which meets every

month as the 25 other committees created since, but there is not yet a Basin Agency, while the Law for its establishment was passed in 1994.

The partners defined a cooperation program for the years 2014-2015, with the aim to help the Basin Committees of Rio Grande do Sul to overcome technical and institutional difficulties that hinder better implementation of Integrated Water Resources Management.

The following actions are planned:

- Finalization of a reference document comparing the situation of water management in the RGS and the PCJ and Loire-Brittany basins;
- Organization of seminars in the Rio Grande do Sul on the topics of governance and tools for Integrated Water Resources Management (planning, funding and monitoring systems);
- Organization of a technical visit of the Basin Committees of Rio Grande do Sul in the PCJ basins (located about 1,000 km to the north).



WORLD BANK



The Chilean model is unique as all surface water resources are distributed among the holders of water rights.

The type of use is not specified and a market for water rights, without State regulation, allows the resale of these rights between private operators and users.

Aiming for integrated water resources management, having a strategic vision at basin level, promoting decentralized and participatory management, preserving the environmental flow of a river, applying the user-pays principle, are all concepts and challenges that remain very difficult to achieve with the current legal and institutional framework.



LATIN AMERICA

Colombia

National Environmental System



A reform process is underway in Colombia to improve water resources management. It plans **the short-term development of Strategic Plans** for the five major river basins regions of the country: Magdalena-Cauca, Caribbean, Pacific, Orinoco, Amazon.

Since 2012, the International Office for Water has been implementing the French-Colombian cooperation project funded by the Adour Garonne Water Agency with the Colombian Ministry of the Environment and Sustainable Development.

This institutional support focuses on three main issues:

- 1 **Methodologies for formulating the Strategic Plan for the Rio Magdalena-Cauca; regarding:**
 - The content and objectives of the Strategic Plan;
 - The organization and functioning of the Magdalena Cauca River Basin Council;
 - The installation of a Permanent Secretariat.

Given the importance of this river basin and its impact at the national level, the tasks performed exceeded the basin scale to influence **the National Policy for Integrated Water Resources Management (PNGIRH)**, by providing structuring elements.

- 2 **Improvement of data management under the Environmental Information System of Colombia (SIAC) and more specifically the Water Resource Information System (SIRH), managed by the National Institute IDEAM.**

The first two missions of **IOWater**, which took place in November 2012 and March 2013, allowed presenting the French experience in water data management in terms of establishing common languages and reference frames and enhancing interoperability between existing information systems in conformity with the "SANDRE" standards (see page 34).

The Colombian partners wish to facilitate the integration of national and regional data under the Regional Water Resources Assessment program (ERA).

An inter-administrative framework agreement was signed between the Head of IDEAM and the regional authorities in the Bogota region (CAR, Acueducto, FOPAE, SDA) in September 2013.

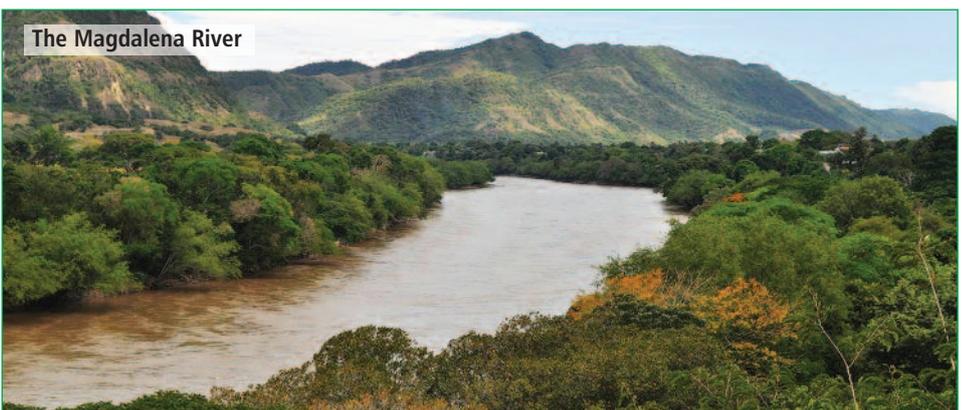
Following this agreement, a mission carried out in October 2013 helped organize the first exchanges with the regional partners and validate **the principles of the development of a data sharing platform** by increasing interoperability between systems with the first elements of a common water reference frame.

- 3 **Organization of industrial pollution control in the Rio Bogota.**

The technical discussions focused on:

- ❖ Economic and financial instruments for the management of water uses;
- ❖ Regional institutional organization necessary for the control and monitoring of polluting discharges.

The **CAR/ Rio Bogota**, the largest of the 32 Colombian Regional Environmental Authorities, and **IOWater** organized a series of visits to industrialists which helped to check the relevance of the formulated recommendations.



Peru

Establishment of economic "retributions" (fees) in river basins



Conference on French Water Policy - ANA - Lima - March 2013

Peru has started a major reform of its water policy. In 2012, a new law reformed the calculation of economic "retributions" (fees) for water use and wastewater discharge.

Today, these fees are already collected according to this new methodology.

The International Office for Water brought its expertise for the definition of this methodology, being ambitious, pragmatic but also socially and economically acceptable.

This support was realized through a project funded by the World Bank.

On 26 September 2013 in Lima, the Artois-Picardy Water Agency signed an institutional cooperation agreement with the Peruvian National Water Agency (ANA) and the "Chili" River Basin (Arequipa area) implemented with the support of the International Office for Water.

This cooperation mainly covers the collection of economic "retributions" (fees), the development of a River Basin Management Plan and the functioning of the Chili River Basin Council.

Visits to the Artois-Picardy Basin are planned in 2014.

✓



WORLD BANK

Twinning between river basins: Quilca Chili in Peru and Artois-Picardy in France

Under the agreement signed by the **National Water Authority (ANA)** and the **French Artois-Picardy Water Agency**, French specialists went to Arequipa, to share experiences with stakeholders of the Quilca-Chili Basin.

In addition to meetings with members of the Basin's Water Resources Council, the

French experts made several field visits, especially at the water intake for the supply of Arequipa (Tomilla I station) and at the Charcani I hydropower plant.

They also met with the Directorate General of SEDAPAR which presented the wastewater treatment project of the Enlozada plant.

✓

Signing of the cooperation agreement between ANA and the Artois-Picardy Water Agency



Presentation of the French and European water policy



On the occasion of the International Symposium on Lake Titicaca organized on 7, 8 and 9 March 2013, **Mr. Jean-François Donzier, Secretary of International Network of Basin Organizations (INBO)**, was invited by the President of the **National Water Authority** to give in Lima a keynote speech on the water policy applied in France for 50 years.

✓

PACIFIC - ASIA

New Caledonia



Framework agreement with the City of Noumea

Started five years ago, the collaboration between the **International Office for Water (IOWater)** and the City of Noumea has been confirmed by the signing of a 3-year framework agreement on technical assistance in drinking water supply and sanitation.

Thus, **IOWater** is committed to provide its expertise to the City of Noumea when faced with sanitation or drinking water supply problems.

In particular since 2012, **IOWater** has achieved the following technical assistance assignments for the City of Noumea:

- **Summary on the impacts of septic tanks** on sanitation systems,



Anse Vata wastewater treatment plant

- **Optimization of pretreatments at the Anse Vata wastewater treatment plant,**
- **Correction of hydraulic problems disrupting treatment efficiency at the Anse Vata wastewater treatment plant and analysis of the status of nozzles for the fine bubble aeration of the activated sludge system.**

In 2013, a training module was completed on civil engineering in water treatment plants.

Similarly, a training activity shared between different municipalities and "Caledonian Waters" was scheduled in Noumea in November 2013 on the control of odors in community sewerage systems.



Cambodia

Pilot Project for the Stung Sen River Basin

After the two decentralized cooperation projects of the Loire-Brittany, Seine-Normandy and Rhine-Meuse Water Agencies carried out in the Mekong countries, a pilot project, coordinated by **IOWater**, began in late 2012 for two years in the **Stung Sen River Basin**, main tributary of the **Tonle Sap** in Cambodia.

The Stung Sen River, with a length of 520 km, is currently being studied to build two dams for hydropower and agricultural purposes.

The work done focused on the initial stages of the planning process (assessment, characterization of the basin) and on the establishment of a sub-basin committee for the Stung Sen River.

Training courses carried out during short term missions of French experts helped provide the team of the **Tonle Sap Authority** and some key people of the **Ministry of Water Resources and Meteorology (MOWRAM)** with a solid knowledge base on River Basin Management.



Meeting with local elected officials on 20 May in Kampong Thom

Many field assignments were completed to advance the characterization of the basin.

At the end of 2013, the **Stung Sen Sub-basin Committee**, attached to the Tonle Sap River Basin District, met for the first time in the presence of the Minister of MOWRAM and a delegation from the Loire-Brittany Water Agency.

At national level, the **National Council for Water Resources Management (NCWRM)** and 7 Basin Committees were established by MOWRAM for the major river basins of the country, including the Tonle Sap.

The General Secretariat of NCRWM was designated as responsible for coordinating these Basin Committees.

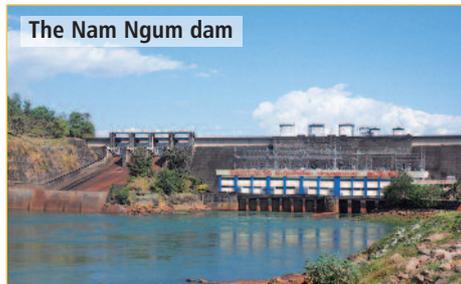


The Stung Sen River

Laos



Integrated Management of the Nam Ngum River Basin



The Nam Ngum dam

The work, which has been carried out for two years with the Nam Ngum Basin Committee and the Department of Water Resources of MONRE, aims to establish the conditions required for Integrated Water Resources Management in the basin.

In 2013, the effort focused on the methodology for the preparation of the Program of Measures (definition, prioritization and location of actions to carry out, identification of the main challenges, cost estimate and financial balance, etc.) and on the study of potential sources of funding for these measures.

In parallel, thinking about the functioning of the Nam Ngum Basin Committee (composition, responsibilities, operating rules, key objectives, etc.) was conducted with the Secretariat of this Committee.

All the work done during this first phase of the project allowed Laos to have practical experience and the management tools needed: governance, local stakeholders' empowerment, planning, financing mechanisms and data management.

A training seminar was organized in Vientiane on 3 April 2013.

The official presentation of the obtained results took place on 18 June 2013 and allowed defining priorities for the second phase of the project (2014-2015).

This second phase comes at a key time for the Nam Ngum River Basin Committee (NNRBC) formally established by Decision no. 10 of the Laotian Prime Minister on 29 January 2013.

The Committee Members, who are still largely unfamiliar with the IWRM principles, will have to be trained for their new responsibilities.



Participants in the training seminar on the methodology for preparing the Program of Measures

Vietnam



Second phase of the Dong Nai Basin pilot project



Kick-off seminar of October 2013

The first phase of Dong Nai pilot project, developed under a cooperation agreement, signed in June 2007 by the French and Vietnamese Ministers for the environment, has strengthened the institutional framework for the conservation of water resources in Vietnamese river basins.

An assessment carried out in November 2012 noted significant progress made (new Vietnamese Water Act passed in June 2012, decree establishing river basin organizations being drafted), and paved the way for the preparation of a second phase of the project funded by the Loire-Brittany Water Agency.

A kick-off seminar launching the second phase of the project was held in Ho Chi Minh City on 31 October 2013 in the presence of Dr. Lai, Vietnamese Vice-Minister of Water Resources, Mr. Jacques Oudin, honorary Senator and Member of the Loire-Brittany Basin Committee, as well as by the Director of the Loire-Brittany Water Agency, Mr. Noël Mathieu.

This seminar was an opportunity to gather the approached members of the Dong Nai Basin Committee.

The second phase of the project is articulated around three components:

- Establishment of an operational Basin Committee;
- Preparation of the Dong Nai Management Plan;
- Training in France for the technical team in charge of supporting the Dong Nai Basin Committee.

www.monre.gov.vn



ASIA

China

French-Chinese cooperation in the pilot Hai River Basin and Zhou sub-basin



The Hai River Basin covers four provinces (Hebei, Shanxi, Henan, Inner Mongolia) and two large municipalities (Beijing and Tianjin).

Under the French-Chinese cooperation agreement on water management signed on 21 December 2009, a pilot project was launched in this Hai River Basin for 4 years (2011-2015). It aims to test the application in China of some mechanisms for basin management, water pollution control and ecosystem protection, used in France since 1964.

The project partners are the Chinese Ministry of Water Resources, the Water Resources Conservancy Commission of the Hai River and the Water Boards of Tianjin Municipality and Hebei Province, as well as the French Ministry of Ecology, Sustainable Development and Energy (MEDDE), the Seine-Normandy Water Agency (AESN), the Interdepartmental Syndicate for Sanitation of Greater Paris (SIAAP), the Interdepartmental Institution of the Seine Great Lakes and the International Office for Water (IOWater) which coordinates the project from a technical viewpoint.

The second phase of the project (2012-2014) mainly deals with the Zhou River sub-basin: 2,114 km², 2.4 million inhabitants and main source of drinking water supply to the city of Tianjin.

This second phase prioritizes an assessment of the basin and the definition of priority measures to meet the identified challenges.

In particular, the Yuqiao reservoir, which supplies drinking water to the city of Tianjin, suffers from severe eutrophication.

A training session on governance was organized in Tianjin for about thirty managers and technicians of the Chinese partner organizations.

Three technical assignments were carried out in the Zhou River Basin (December 2012, May and September 2013), mobilizing French scientific experts from the PIREN-Seine research group on the modeling of pollutants,



from INRA and the Water-Environment Laboratory of the Public Works School ParisTech on the identification and monitoring of cyanobacteria.

These assignments also allowed presenting methodological tools useful for the assessment (method for the calculation of concentrations, equilibrium of Water Bodies, modeling) and the advanced production of a Program of Measures (on-site sanitation plan, revision of water regulations for dams, etc.).

A delegation of six officials of the Chinese partner organizations traveled to Paris area in October 2013.

It attended a meeting of the Seine-Normandy Basin Committee. It also visited the sailing port of Viry-Chatillon and the Research Center on Experimental and Predictive Ecology of Ile-de-France where exchanges on the control of cyanobacteria and stormwater management took place as well as the presentation of innovative tools for the study of the biology of a Water Body.

The Project Steering Committee met in Tianjin in late October 2013 to define the program of activities for 2014 and to clarify the articulation of related projects financed by the Chinese party for data collection and technical exchanges.



ASIA

Aquatech China 2013



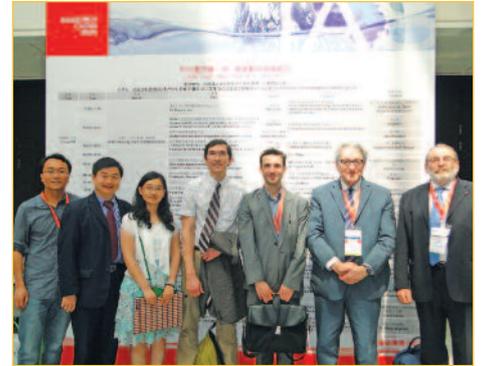
Presentation of the French expertise

At the "Aquatech China" Exhibition, which took place in Shanghai from 5 to 7 June past, a delegation was invited to present the French experience in the management of drinking water supply and sanitation utilities.

Mr. Jean-François Donzier, IOWater General Manager, presented the organization of water management in France, including the role of Municipalities and of their possible delegates for drinking water supply and sanitation.

Messrs. Daniel Marcovitch, SIAAP Vice-President, presented the role and organization of the Interdepartmental Syndicate for Sanitation of Greater Paris and **Jean-Pierre Tabuchi**, the innovative sanitation technologies that are implemented in Paris agglomeration.

More than 250 Chinese participants attended the presentation.



Asia-Europe Meeting

ASEM is working on the conservation of water resources



ASEM (Asia Europe Meeting) is an informal intergovernmental dialogue to strengthen the partnership between Asian countries and Europe.

In June 2012, a dialogue on sustainable development and the environment took place in Budapest.

In this context and at the initiative of Vietnam, a conference was held from 20 to 23 March 2013 in Can Tho in the Mekong Delta, on the topic of water resources and river basin management.

Nearly 150 delegates from 51 ASEM Member Countries and relevant organizations presented measures to assist these Countries in adopting a model for sustainable development.

Thus, new approaches were proposed for poverty alleviation and food security, infrastructure construction and the establishment of institutions to adapt to the impacts of climate change.

Mr. Jean-François Donzier, General Manager of the International Office for Water, made, on behalf of France, a speech on the French and European water management policies, and presented the cooperation actions carried out on this topic by France in Asia, particularly in China and in the Mekong River Basin.

www.aseminfoboard.org



South Korea

Preparation of the 7th World Water Forum - Daegu 2015

After Marseilles in 2012, Daegu, South Korea, will host the 7th World Water Forum from 12 to 17 April 2015.

The kick-off meeting was held from 13 to 15 May 2013 in Seoul and Daegu, with more than 500 experts from 41 countries.

A roadmap was established, divided into different processes (thematic / regional / political / technological) for the preparation of the Forum.

The International Network of Basin Organizations participated in this kick off meeting, including in the roundtable on water governance and transboundary basin management.

Mr. Jean-François Donzier also presented the Regional Process for Europe which was coordinated by **International Office for Water** and developed for preparing **the 6th World Forum in Marseilles** in 2011 and 2012.

A stakeholders' consultation meeting also took place on 27 and 28 February 2014 in Gyeongju.

<http://worldwaterforum7.org>



EECCA

Administration of transboundary water data



6th Meeting of the Parties of the International Water Convention Rome - November 2012 © IOWater - C.Runel

Integrated water management requires having a comprehensive assessment of resources and uses, based on homogeneous and consistent information.

In the case of transboundary basins, the sharing of information is building trust and facilitates dialogue between the riparian countries.

Developed since 2011 in collaboration with the secretariat at UNECE of the "Convention on the Protection and Use of Transboundary Watercourses and International Lakes", the FFEM project "Capacity building in data management for assessing and monitoring transboundary water resources in Eastern Europe, Caucasus and Central Asia-EECCA" has been successfully completed in October 2013.

With the support of SHMI (Slovak Hydro-Meteorological Institute), this project, coordinated by the International Office for Water, has achieved its objectives both at the regional level and in the two pilot basins:

- **The Dniester River Basin** in direct collaboration with the Authorities in Ukraine and Moldova;
- **The Aral Sea Basin** (Amudarya and Syrdarya River Basins involving six countries of Central Asia in collaboration with the EC-IFAS (Executive Committee of the International Fund for Saving the Aral Sea).

After an assessment carried out in 2011 in six of the concerned countries, the project has entered in early 2012 a phase for supporting the development of pilot actions proposed by the Steering Committee, including:

In the Dniester River Basin

- Creation of a **database on surface water quality in Moldova**, with the production of quality indexes and online interactive maps of surface water quality, updated by the data producers;
- "Web Processing Services" allowing the production of useful geographic data.

In the Aral Sea Basin

- ◆ A first hydrological bulletin on the **Syrdarya**, within an action initiated by UNRCCA with EC-IFAS;
- ◆ Creation of a **Web portal** integrating an interactive diagram for online viewing of data on the Syrdarya, data daily updated by their producers;
- ◆ Conceptual study of **the organization of the National Water Information System of Tajikistan**;
- ◆ **Improvement of the Turkmen legislation** to promote the sharing of water data.



Presentation to the Dniestr Basin Committee - Ukraine - September 2013

Finally, a document of recommendations highlighting the project feedbacks was presented during various international meetings, including:

- The 6th Meeting of the Parties of the Water Convention, in Rome on 28/29 November 2012;
- The High-Level Conference on International Water Cooperation, held in Tajikistan in August 2013;
- The last Dniester River Basin Committee on 18 September in the Ukraine.

www.aquacoope.org/ffem-eecca

Central Asia

The Swiss Cooperation Agency is supporting water management in Central Asia

Switzerland is committed in a new cooperation program (2014-2020) for regional water resources management in Central Asia, including **the development of a Water Information System (WIS)** in particular.

Under a Memorandum of Understanding between IOWater and the IMoMo consortium, the Swiss Cooperation Agency (SDC) supported a joint mission, in November 2013, to specify **an Action Plan for 2014 to develop monitoring and automated data exchange between the partners involved in Kyrgyzstan.**



Mr. Paul Haener, IOWater Expert, with the partners from Kirghizstan

In a transboundary pilot basin, this Action Plan includes the definition of a first hydrological frame of references (with codification of basins, rivers, lakes and canals) to develop interoperability and facilitate the exchange of water data between riparian countries.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Direction du Développement
et de la Coopération DDC

11th "EUROPE-INBO" International Conference

The opening ceremony © IOWater - C. Runel



The 11th conference of the "EUROPE-INBO" group was held in Plovdiv, Bulgaria, from 13 to 16 November 2013, at the invitation of the East Aegean Basin Directorate of the Bulgarian Ministry of the Environment and Water. It gathered 183 participants, representatives of national administrations and basin organizations as well as NGOs, companies and international and regional organizations from 21 Countries.

The conference work was organized around five major issues:

① **Feedback from the first River Basin Management Plans and the preparation of the Second Plans (2016-2021)** with focus on better coherence between the level of pressures and the Programs of Measures; integration of water quantity issues (resource allocation, drought and flood management); adaptation to climate change, better coordination between the EU Directives (Flood and Marine strategy, Habitats, fauna and flora) and the link with other sectoral policies (agriculture, energy, hydropower, navigation...) and better involvement of stakeholders.



② **Funding of Programs of Measures,** access to funds and particularly to EU Structural Funds; economic analyses for determining the most cost effective combination of measures; value of ecological services and application of cost recovery.

③ **New approaches to river and aquifer restoration:** natural water retention measures, ecological flow, ecological focus areas, reduction of agricultural impacts on water (buffer strips, changes in agricultural practices, etc.).

④ **Water governance in transboundary basins:** WFD international districts, role and means of International Commissions, Bi and Multilateral agreements and UN Conventions;

⑤ **Implementation of WFD principles in EU neighboring countries,** experiences of EECCA and Mediterranean Partner countries.

Mr. Peter Gammeltoft, Head of the DG Environment's Water Unit of the European Commission, addressed the participants via videoconference and recalled the objectives of the "Blueprint to Safeguard Europe's Waters".

The "EUROPE-INBO" group members made recommendations to further improve water resources management in the European Union and in the Partner Countries, relying in particular on their practical experience gained in the field.

The "EUROPE-INBO" group, CEENBO and MENBO support the initiative of the European Commission of greater involvement of Basin Authorities in the activities of the Common Implementation Strategy (CIS).

In such a background, they support INBO initiative to facilitate a real European Network of Basin Authorities for analyzing the best practices and dealing with issues raised by the implementation of the directives at basin level and report to the European Commission and to the Strategic Coordination Group (SCG) to which INBO is member.

It seems necessary to improve the WFD relationship and coordination with the Directives on "Urban Wastewater", "Nitrates", "Drinking Water", "Groundwater", "Bathing waters", "Flood", "Marine Strategy Framework Directive" and "Environmental Quality Standards" in particular.

183 participants coming from 21 countries © IOWater - C. Runel



13 - 16 November 2013 - Plovdiv - Bulgaria

It is imperative that issues related to floods, droughts, adaptation to climate change be addressed in the future Management Plans.

Consistency between management plans and urban planning or land use documents must be improved.

Coordination between different administrative services, that implement these directives, should be increased,

Achieving the "Blueprint" goals and improving WFD implementation require:

- **Increasing the prevention of agricultural pollution and continuing investments in domestic and industrial wastewater treatment;**
- **Achieving better integration between the Water Directives and sectoral policies (including CAP, industry, energy, transport);**
- **Increasing means for inspection and control of abstractions;**
- **Facilitating the reuse of treated wastewater;**
- **Improving the bond between the identification of pressures on Water Bodies and the measures to be taken;**
- **Grading the pressures and identifying the sectors responsible for the most significant damage.**

The "one out all out" or "limiting factor" principle should be adapted by the production of sub-indicators so that the citizens and their elected representatives may really see the positive results of the WFD implementation.

It is urgent to provide operational methodological elements and additional orientations to estimate environmental and resource costs. The same applies to the assessment and quantification of the benefits expected from improved Water Body status.



Very attentive participants © IOWater - C. Runel

New approaches to the restoration of aquatic environments, to natural retention and to the reduction of damage to the hydro-morphology of rivers, must be developed. The exchange of good practices (e.g. RESTORE) is essential.

Flood Management Plans should include the functioning of aquatic ecosystems in the planned developments and favor the use of wetlands and natural areas.

We should recommend the use of "green infrastructure".

Water Governance in transboundary basins must be improved, especially in International Districts established for WFD implementation.

The role and means of International Commissions for transboundary rivers should be strengthened to ensure effective WFD implementation.

The involvement of stakeholders and of the public is crucial for improving water resources management. Their information and participation in decision-making processes should be further developed. Special attention should be paid to the involvement of youth in water governance.

Specific cooperation with all countries neighboring the European Union, and firstly with the Candidate Countries sharing a same transboundary river basin with Member States, should be continued and expanded with the support of the regional institutions.

The national information systems and their harmonization with international reporting mechanisms, the training of managers and the participation of users, local authorities and associations should be strengthened.

The participants thanked the East Aegean Basin Directorate and the Bulgarian Ministry of the Environment for their outstanding welcoming in Plovdiv.

They congratulated the Turkish Authorities and especially **Professor Ahmet Mete Saatçi**, SUEN President, for the masterful way in which the Presidency of EUROPE-INBO Group has been conducted since the Istanbul Conference in 2012.

Mr. Nikola Karnolsky, Director of the Bulgarian East Aegean Basin, was elected new President of EUROPE-INBO Group until the next Assembly to be held in Romania in November 2014.

www.inbo-news.org

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

EUROPE

11th "EUROPE-INBO" International Conference

A workshop on monitoring - 13 November 2013 - Plovdiv - Bulgaria



78 participants coming from 16 countries
© IOWater - C. Runel

This workshop jointly organized by "ONEMA" and IOWater in Plovdiv on 13 November 2013 within the yearly "EUROPE-INBO" Conference (13-15 November 2013) gathered 78 participants from 16 countries, as well as the European Commission and the European Environment Agency.

This workshop gathered participants with various backgrounds, policy-makers, scientists, water managers and representatives of the private sector and has been an opportunity for sharing field experiences and good practices in monitoring, in view of preparing the second cycle of WFD implementation.

To allow for a maximum of discussions and exchanges, the workshop was organized in two main sessions:

Firstly, a general introduction of the main issues and presentations from the European Commission, the European Environment Agency, Bulgaria, Sweden and France;

Then, during the second part of the workshop, the audience was divided into working groups which successively addressed three main pre-identified issues. Each issue was introduced by a presentation on the practical experiences of a Member State.

- **Theme 1: Purpose of monitoring programs:** "Vision of The Netherlands; Rijkswaterstaat experiences";
- **Theme 2: Stakeholders' organization and role:** "Monitoring in compliance with the Water Framework Directive in Austria; experiences and outlook";

- **Theme 3 - Monitoring strategies:** "Evolution of monitoring networks in Wallonia since 1975 according to various European Directives".

A summary report was then provided by each sub-group in plenary session, followed by discussions between all the participants.

These fruitful exchanges helped to identify and highlight issues and experiences of field practitioners. They also led to draw conclusions and recommendations shared by all the participants of the workshop on the implementation and follow-up of the new Programs of Measures.

The detailed agenda, all presentations and a summary of the outcomes can be found on INBO website, "EUROPE-INBO" 2013 section:

www.inbo-news.org

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© IOWater - C. Runel

5th European Conference on River Restoration



Speech by Mr. Jean-François Donzier
© IOWater - C. Runel

The 5th European Conference on River Restoration, organized by ECRR (European Center for River Restoration), took place in Vienna (Austria), from 11 to 13 September 2013.

The experts reminded the need to move from local scale to the scale of the entire river basin, in order to maximize the benefits and make significant improvements in the river status across the European continent.

Sharing information and knowledge and establishing networks working on river management became essential to achieve this goal.

Mr. Jean-François Donzier, INBO Technical Secretary, was invited to open the session on "the rehabilitation of rivers: a collective challenge".

During this event, the International Commission for the Protection of the Rhine (ICPR) was awarded the first "European Riverprize" in recognition of achievements in the integrated management of the Rhine Basin, after inheriting a river degraded by 50 years of pollution and a devastating chemical accident in 1986.

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EUROPE

WaterPiPP

Facilitating innovation transfer in the water sector

The **IWRM-Net** Project had allowed funding 11 research projects for a total budget of € 8 million: the latest projects are being completed and an event, that will take place during the first quarter of 2014 with funding by the French Ministry of the Environment, will allow an evaluation to be done.

The **Water RtoM** and **WaterDiss** projects experimented methods to transfer research results to field practitioners: **Water RtoM**, focusing on the analysis of LIFE and INTERREG projects, and **WaterDiss** on projects funded by the DG Research and Innovation of the European Commission.

Tools were developed to facilitate access to information on research results, to support researchers to better identify the needs and inversely to help water managers to have access to new knowledge.

The new WaterPiPP project - Water Public Innovation Procurement Policies (2014-2016), focuses on public procurement procedures related to innovation in the water sector (PCP - Pre-Commercial Procurement / IOPP - Innovation Oriented Public Procurement).

WaterPiPP is part of the nine initiatives funded by the European Commission under the "innovation site" call, to which 130 projects were submitted in March 2013.

The 11 WaterPiPP project partners (IOWater (FR), ARCA (IT), UNIZAR (SP), ICLEI (DE), Puglia (IT), VTT (FI), Deltares (NL), TEHA (IT), WssTP (BE), APE (BE)) propose to test new public procurement procedures related to innovation on five initial pilot sites, which will be expanded to other sites.

www.iwrm-net.eu



Natural water retention measures

Towards an integrated information system in 2014



It signed a service contract with **IOWater**, associated with 10 European partners, for a 14-month project (September 2013 - October 2014) to identify the best "**Natural Water Retention Measures (NWRM)**".

At the kick-off meeting held in Brussels on 3 and 4 October 2013, the European Commission reaffirmed the goals of the project:

- Support the working group of the CIS (Common Implementation Strategy) on the Programs of Measures,
- Draft a technical guide,
- Identify best practices to help managers select measures suited to their context,
- Develop a structured set of definitions of terms used through a collaborative tool,
- Establish four regional exchange networks (West, North, Mediterranean and Danube) operating with a forum and Workshops,
- Develop joint actions with existing networks such as **INBO (International Network of Basin Organizations)**,
- Establish an information system including a catalogue of NWRM measures implemented locally with a reference frame to transfer it to WISE at the end of the project.

The partners organized the work so as to cover four sectors (agriculture, forestry, urban and natural areas) and three subject matters (governance, technical/biophysical implementation, and socio-economy).

With a team of more than forty experts, this project will enable, through a collaborative approach, to mobilize existing knowledge, to structure and organize it and to return it to the end users of the services of the European Commission and Member States.

The project was presented in the fall of 2013 to the various CIS groups as well as to the EUROPE-INBO 2013 Conference in Plovdiv, Bulgaria.

<http://nwrn.eu>



With the implementation of the Programs of Measures, the Water Framework Directive has entered a new critical implementation phase for the achievement of Good Water Status.

The Environment Directorate-General (ENV.DG) of the European Commission wish to improve the sharing of best practices among the Member States.

Water RtoM



From Research to Market...



In the context of European work on "Science-Policy-Society Interface", the Water RtoM - Water Research to Market - project financed by the LIFE+ Program (2010-2013), aims to accelerate the transfer of water research results to the Market and improve the Researchers-Users dialogue.

IOWater, project coordinator, its three partners ("Gdansk Water Foundation" - Poland, Amphos 21 - Spain, "Romanian Water Association" - Romania) and a committee of experts have developed a strategy divided into three components:

- **identifying innovative products,**
- **assessing them,** quickly, at first, via the ReMAS (Research to Market Assessment Strategy) tool and, then, in more details by specifying, in a language understood by the water professionals, the missing steps to make these products operational and marketable,
- **promoting them, free of charge,** via the Web e-fair tool, e-seminars or professional meetings.

The Water RtoM strategy has been successful for 12 research results that have attracted the attention of professionals.

A good practice guide also provides tools to improve the Researchers-Users dialogue.

It describes:

- **A toolbox** to facilitate the dissemination and promotion of research results to the market,
- **10 good practices** to improve the "science-society-users" interface, based on the Water RtoM experience
- **Some recommendations.**

The Guide is intended, on the one hand, for water practitioners, basin organizations, water administrations, municipal water utilities, technology providers, as well as for researchers, research funding and technology transfer institutions.

IOWater and its partners, convinced of the importance and efficiency of such a strategy, propose to capitalize the Water RtoM tools and strategy through a permanent "service".

This service would provide individual support to researchers in their strategy for dissemination of their results, support to research planners by providing in particular an analysis of the distance to the market for the results of funded projects, support to SMEs, through competitive clusters or SME networks, by providing a watch on research products tailored to their needs.

The major difficulty, revealed by the market study carried out at the end of the project, is that, although the respondents (researchers, donors and users) are very interested, they are not willing to pay for such a service.

The proposed Water RtoM service is in the making ... to see what it becomes in the future?

Contact:
contact@waterptom.eu

www.waterptom.eu



European Environment Agency



A new Topic Center on Water for 5 years

The European Environment Agency (EEA) was established in 1990 to provide the European Commission and Member States with information on the status of the environment and on the implementation of EU policies in this field.

It is based in Copenhagen. It relies on a network of 350 organizations all over Europe, EIONET, to collect environmental data.

The EEA relies on **European Topic Centers (ETCs)**, consortia of governmental or private non-profit organizations to which it entrusts the organization of data collection, analysis of information, evaluation, production of indicators and a role of technical support to Member States to implement National Environmental Information Systems.

There is an ETC on inland, coastal and marine waters, in which IOWater, as "key expert", is part of a consortium of 18 partners led by the German Helmholtz Center for Environmental Research (UFZ).

The assignments entrusted to IOWater are overseeing work on polluting emissions, and the role of key expert for monitoring, implementation of the INSPIRE Directive and establishment of SIIFs (Structured Implementation and Information Frameworks).

www.eea.europa.eu

www.eionet.europa.eu



EUROPE

Urban Waste Water Treatment Directive

A modern European information system



The Environment Directorate-General (ENV.DG) of the European Commission initiated an effort to modernize the information system on the implementation of Water-related Directives, that starts with the Urban Waste Water Treatment Directive and will gradually extend to the Directives on Drinking Water and on Bathing Waters.

This new approach introduces the concept of **SIIF (Structured Implementation and Information Framework)** that aims to pass, in a few years, from an approach of assessing past actions to providing information of the year as soon as it becomes available on a relevant scale.

This approach should allow better planning of actions to be taken by better targeting current problems.

For having support in this work, the ENV.DG launched an invitation to tender which was won by **IOWater**, together with **the Austrian Environment Agency**, for a period of 13 months.

This work started with the assessment of existing national and European information systems and of their strengths and weaknesses.

Based on these findings, the future system was globally defined regarding both its thematic component and the recommended information system.

A concept note describing the new reporting, information and assessment system was written and presented to the Member States at a workshop on 24 October 2013.

The results of this workshop allowed adjusting the proposal according to the feedbacks from the Member States which led to a concept note finalized for February 2014.

A road map and detailed work program for EEA will be drafted from this note, identifying the key steps and actions necessary to move from the current system to the SIIF for the Urban Waste Water Treatment Directive.

The experience gained in this project will then define the approach for the other Directives in the water sector.



WaterDiss

Better strategies to transfer research results in Europe



WaterDiss2.0 final workshop - Working group facilitated by G. Nion (IOWater) and J. Brils (DELTA RES)

The consortium of the European **WaterDiss2.0** project organized, on 2 and 3 December 2013 in Barcelona, its final conference entitled **"Definition of the best strategies to transfer research: exchange of Europeans ideas, methods and tools"**.

In the water sector, sharing research results between researchers and users is a slow and incomplete process: the estimated time for transferring research, before integration into

public policy, production of new products or services, is often more than 10 years.

During the past three years, the **WaterDiss2.0** project partners worked with a large number of beneficiaries of EU funding.

They defined and tested new strategies to transfer water research to end users.

The final conference of Barcelona presented the whole work and obtained results through operational and practical examples.

The conference addressed the following main questions:

- Why the transfer time of water research is currently more than 10 years?
- Why is it so important to develop specific and adaptive strategies for dissemination?
- What are the responsibilities and respective roles of water managers, scientists and stakeholders in this transfer?
- Are transfer tools and methods likely to stimulate innovation?
- What are the actions to be taken by donors to optimize the quick use of research results on water?

More information:

www.waterdiss.eu



EDF

IOWater is equipping the new Laboratory of the Engineering Division of "EDF" Chinon

Since 2007, IOWater has designed and developed equipment and several testing units for the various laboratories of Electricity of France - EDF - Research and Development Division (EDF R&D).

The "EDF CEIDRE" engineering unit (Center of Expertise and Inspection on Production and Operation) decided to entrust IOWater with the restoration of units for its future Chinon Laboratory.

This test unit consists of several test loops representative of the cooling circuit of Nuclear Power Plants (NPP) and associated equipment. The peculiarity of this unit is, in a sustainable development rationale, to be partly made up of existing units.

The units, developed, built and tested in 2013 at IOWater center of La Souterraine, will be installed next spring on the Chinon site.

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General view of the cooling towers under construction in IOWater workshops of La Souterraine

A "SAGE" - Siagne River



Kick-off meeting of the LWC June 2013

The Siagne is a permanent coastal river that flows into the Mediterranean Sea in the South of France.

Launching of the assessment:

Multiple pressures especially linked to drinking water supply and energy production have led to request that a **Water Development and Management Plan (SAGE)** be developed to preserve the resource.

This "SAGE" was launched on 7 July 2010 and the Local Water Commission (LWC) established on 14 May 2013.

ACTeon and IOWater were designated to participate in the assessment. This study began in spring 2013 and will run for two years.

Ambitious targets:

- Achieving a mobilization of all basin stakeholders to ensure their effective participation;
- Collecting and completing the relevant data on selected issues;
- Ensuring the right level of detail and quantification of analyses;
- Building contrasting and operational scenarios by using participatory methods;
- Contributing to strong governance.

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Public Consultation in the Martinique



IOWater alongside the Basin Committee



In accordance with the European Water Framework Directive (WFD), the French Basin Committees launched a public consultation to update the Management Plans and Programs of Measures for the next 2016-2021 period.

The Directorate of the Environment, Development and Housing and the Water Board (ODE) of the Martinique Island asked IOWater to accompany them in the organization of a new public consultation planned by the Directive.

The consultation allowed checking if the water issues identified in 2006 for the 2010-2015 Management Plan are still relevant:

What are now the key issues and priorities for better management of water and aquatic environments in the Martinique?

This question was submitted to the Martinique population between 5 November 2012 and 4 May 2013.

The Basin Committee of the Martinique, anxious to seek the opinion of the population, developed an innovative consulting strategy by mixing traditional tools, such as a website and consultation questionnaire, with specific tools: **20 "blue ambassadors" toured the island to inform and gather opinions, five public meetings and a seminar for water stakeholders were organized.**

IOWater helped the Basin Committee in drafting the questionnaire, in organizing and facilitating these meetings with the public and stakeholders.

2,000 people responded to the consultation.

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EUROPE - FRANCE

Mediterranean Urban Community of Perpignan



Towards a single price for water and sanitation

In 2011 and 2012, IOWater was commissioned by the Mediterranean Urban Community of Perpignan to provide each of its 36 municipalities with several investment scenarios and a pricing strategy for the 2012-2015 period.

It was followed by the development of 36 water sale prices and as many prices for sanitation with significant differences between municipalities.

During these discussions, several elected officials wanted greater solidarity in the area that would take two directions:

- Firstly, for underprivileged populations for whom a progressive and incentive pricing to save water would be considered,

- Secondly, for the most difficult areas to be supplied with water or sanitation that could benefit from the support of wealthier municipalities.

Initially applied to the publicly-managed municipalities, a single price could be extended to all municipalities of Perpignan Community for the sake of increased equality between all citizens.

In this context, IOWater was entrusted with a study of pricing convergence to propose to elected officials several pricing approximation scenarios which would not undermine previously established budget balances and investment policies nor incentive pricing to save water.



MEDITERRANEAN URBAN COMMUNITY OF PERPIGNAN



Around the Vassivière Lake

Assistance in contract management for better consistency in actions

The two Intermunicipal Syndicates "SIAEP Couze-Gartempe", and "SYMIVA" of Vassivière Lake and the Porcherie municipality mandated IOWater to guide them in their strategic choices, coordination and supervision of their studies.

So IOWater made:

- The synthesis of the drinking water resources problems of "SIAEP Couze-Gartempe" and the supervision of the consulting firms in charge of developing the technical assessments required. This led to the establishment of a Master Plan extended to global issues of resource, production and distribution.

- Follow-up, technical and administrative supervision of the assessment of water supply facilities of the Porcherie municipality.
- Argued analysis of the technical choices for sanitation and their prioritization on the whole "SYMIVA" area. This action includes protection issues and contributes to achieving the goal of excluding any discharge into the river basins feeding Lake Vassivière and to the protection of bathing areas.



Service Management Indicators



French Municipalities have a statutory obligation of reporting on the Management of Drinking Water Supply and Sanitation Services (DWSS).

It became necessary to make a didactic, pedagogical and consistent set of guidelines and recommendations on the use of indicators for the operational management of these services.

In 2014, IOWater will carry out with "ONEMA" a prospective study to establish methodologies, with, among others, the following objectives:

- Choice of variables and relevant performance indicators,
- Pedagogical description and definition of these indicators and variables,
- Development of operational recommendations for managerial management of services in connection with the selected indicators,
- Drafting of corresponding "SANDRE" specification documents (see p. 34).



WATERDOC

WATERDOC, the international documentation portal on water, offers a wide variety of services:

- **Access to the IOWater documentary base:** nearly 254,000 references and full text documents, 60 % of which are in English.
- **Tailored services on all kinds of water issues** (non-point source pollution, agriculture, aquatic environments, technologies, regulations, socio-economics, etc.) for watch solutions and informational research, drafting of customized documentary records and writing of summaries.
- **A flagship product: "The IOWater technical summaries"**, initiated in 1997 with AgroParisTech ENGREF (National School of Rural Engineering, Water and Forestry). **The collection has now more than 180 titles.**

Seven new titles were published in 2013:

- Critical analysis of management strategies and mobilization of water resources to adapt to climate change.
- Integrated management of coastal waters: Which French strategy?
- Role of Hydromorphology in achieving "Good Status".
- Reform of the Common Agricultural Policy for 2014-2020 and Water Management.
- Public procurement in the management of water supply and sanitation services in France.
- Feedback on biogas recovery - technical and regulatory constraints.
- Sustainable Cities - Water, energy and urban planning.

To be found on the website:

www.iowater.org/documentation



WATERDOC

"SANDRE"

The National Service for Water Data and Common Reference Frames Management is 20 years old!

Establishing a common language on water

In 1992, the French National Water Data Network (RNDE) was launched to make water data available in a consistent manner at all useful levels.

The "SANDRE" was established in 1993 to simplify the exchange of these data between the various stakeholders involved. For this, it provides data dictionaries and exchange scenarios in electronic formats.

The "SANDRE" thus offers a unique exchange interface and meets the need to establish a common language among partners from the water world.

Given the proliferation of the information systems used and the growing need for knowledge, **the French Water Information System (WIS) succeeded to the "RNDE" in 2003.**

Through "SANDRE", many tools for stakeholders are then developed to make **their information systems interoperable:** dictionaries and interactive exchange scenarios, specifications for web multiple domain services, reference data under ISO 9001 certification, a cartographic atlas, a metadata catalogue, audits of computer systems, compliance labels, etc.

IOWater takes care of "SANDRE" Technical Secretariat under its Multi-year Target Agreement with the French National Agency for Water and Aquatic Environments (ONEMA).

Adapting to the stakeholders' needs

For example, each year in France, more than ten million results of water analyses (drinking water, surface water, groundwater, coastal water, wastewater, ...) are produced and exchanged between analysis laboratories and partners (ARS, DREAL, Water Agencies, industrialists, ...).



Due to these findings and on the request of all the stakeholders, IOWater, as "SANDRE" Secretariat, worked out, with the support of the Ministries in charge of the Environment and Health and "ONEMA" and with the assistance of a group of experts, **a standard for data exchange: "EDILABO".**

Any laboratory must, from now on, be able to receive a request for analyses and to provide results in the "EDILABO" format and their partners must change their information systems by developing an exchange interface in conformity with the "EDILABO" standard. For this purpose, they can have software certified by IOWater.

The "SANDRE" is proposing more than 10,000 pages of data dictionaries and exchange scenarios. It also displays more than 13,000 files, which obtained a compliance label, and more than 45,000 codified elements (taxons, substances, etc.).



Under the European INSPIRE Directive, IOWater, as "SANDRE" Secretariat, is a contributing member to the writing of specifications on the exchange of water data. A first comparative analysis of "SANDRE" models to those of INSPIRE was carried out. The work of approximating these models will take 3 years.



<http://sandre.eaufrance.fr>

EUROPE - FRANCE

www.documentation.eaufrance.fr

The French national documentary portal on water and aquatic environments

This portal has been open to the public since 2009. It provides access to more than 63,000 documentary records and many full text study reports, made available by 19 contributing French public organizations:



the Ministry for Ecology, "ONEMA", the Water Agencies, Research Organizations (IRSTEA, IFREMER, INRA, BRGM), 4 relay centers for wetlands, the Water Boards of the Martinique and Reunion and IOWater.

Centered on a powerful search engine, the portal has gradually been enriched with new functionalities and services such as pre-selection of documents (news list, filtering per topic) and map interfaces.

The search interface has also been improved by the introduction of search support systems based on the Water Thesaurus©.

www.documentation.eaufrance.fr



Panorama of Research & Development work

IOWater has updated the panorama of stakeholders in Research & Development working in the field of water and aquatic environments (number of R & D jobs, number of

research units, etc.) in France and in 12 countries of the European Union.

<http://carteau.onema.fr/en>



"Naiades"

French National data bank on the quality of rivers and lakes



"Naiades" allows storing the results of measurements of the quality of rivers and lakes

IOWater, which takes care of "SANDRE" Secretariat, established a common terminology and interchange formats used by all stakeholders concerned in Metropolitan France and Overseas Departments.

The project, led by "ONEMA", involves the Agencies and Overseas Water Boards, the Regional Directorates of the Environment (Dreals), "IRSTEA", but also IOWater, which has provided training for stakeholders since 2012.



Topical guides

IOWater has written users' guides adapted to the different stakeholders involved in the process of data acquisition.

www.reseau.eaufrance.fr/sujet/naiades



Access to water data

Resulting from cooperation between "ONEMA", "BRGM" and IOWater, this website, opened in 2013, offers free access to data on water, aquatic environments and their uses, published on the "Eaufrance" websites.

"Open Data" is a process for online publication of digital data structured according to an approach that guarantees their free access and reuse by all, without any technical, legal or financial restriction.

These data are offered free of charge in usable electronic formats and under open licenses.



www.data.eaufrance.fr



www.iowater.org

The water world on the Web



7,550,000 visitors in 2013!

Croatia

European institutional twinning agreements with the 28th Member State for better water management



► **Water Framework Directive and pollution by hazardous substances discharged into aquatic environments**

For 14 months, France and Austria have successfully implemented this European twinning agreement with Croatia.

The closing ceremony took place in the prestigious hall of the Croatian Chamber of Economy on 5 July 2013 in Zagreb, illustrating the partnership forged with the interested parties in the effort needed to reduce the discharges of hazardous substances.

Many sectors of activity are producing or using these hazardous substances and release them into the environment: industry, agriculture, but also urban infrastructure and equipments, hospital and medical activities, craftsmanship and even domestic activities.

The European Directive on hazardous substances requires that those are:

- Banned for the most dangerous of them,
- Subject to measures to protect us from them and especially to reduce their discharges for the others.

The twinning agreement has thus supported the Croatian partners at different levels:

- **Inventory of substances used and discharged**, and of their presence in surface water, groundwater and marine waters;
- **Adaptation of the monitoring network** to the problem of hazardous substances;

- **Installation of new performing analysis equipment**, with a budget of € 400,000 provided by the EU through the project;
- **Development of quality assurance procedures and tools** to ensure the reliability and representativeness of the results. The National Laboratory, which benefited from capacity building, received its accreditation during the project!;
- **Improvement of governance, use and exchanges of data between the different partners.**

The Croatian institutions, beneficiaries of this project, were mainly the Ministry of Agriculture and the Croatian Water Company. On the French and Austrian sides, the twinning partners are: the French Ministry of Ecology, Sustainable Development and Energy (MEDDE), **the International Office for Water**, the National Institute for the Environment and Industrial Risks (INERIS), the National Laboratory of the Environment (ESA), the Geological and Mining Research Center (BRGM), the French Water Agencies, as well as the Austrian Environment Agency (UBA) and the Austrian Ministry of Agriculture, Environment, Forestry and Water.

A total of forty French and Austrian experts worked together with their Croatian colleagues to carry out the activities of this twinning agreement, which are a powerful boost for exchange and progress.

► **Flood Directive**

Austria, France and the Netherlands are implementing the European twinning on the Flood Directive in Croatia.

Adopted in 2007, the Flood Directive imposes its schedule to the four countries participating in the twinning agreement, thus providing rich exchanges and allowing Croatia to adjust its practices to higher levels by benefiting from the methodological development efforts made by the most advanced countries.

The Directive schedule, which will be synchronized with that of the Water Framework Directive, thus plans the following deadlines for the 3 stages of preparation of Flood Risk Management Plans to be developed in each hydrographic basin / unit:

- **Preliminary Flood Risk Assessment (PFRA)** with selection of **Areas with Significant Potential Flood Risk (ASPFR)** by December 2011;
- **Hazard and risk mapping of ASPFR** by December 2013;
- **Flood Risk Management Plan (FRMP)** including its Program of Measures by December 2015.

The 15-month project particularly focuses on the mapping of flood risk in two priority pilot areas: The Kupa on the Black Sea Basin and the delta of the Neretva, an Adriatic River with specific flood characteristics.

IOWater is in charge of the training program, which proposes to support the preparation of the Flood Risk Management Plan (FRMP) with its Program of Measures and associated economic analysis.

On the French side, in addition to the **IOWater's** action on behalf of the Ministry of Ecology, Sustainable Development and Energy, the support from the Mediterranean Technical Research Center of Public Works (CEREMA), is valuable and appreciated.



EASTERN AND CENTRAL EUROPE

Albania

Updating of national technical standards

As part of the project to "update the technical standards for design and construction in the field of water and sanitation in Albania", funded by the French Ministry of Economy (FASEP), IOWater produced eight technical booklets, which aimed at making the Albanian engineering and construction sector more independent, and at improving the quality of water and sanitation achievements:

- ❶ Earth moving work and trenches;
- ❷ Pumping station;
- ❸ Drinking water treatment;
- ❹ Reservoirs;
- ❺ Drinking water supply systems;
- ❻ Sewer networks;
- ❼ Community wastewater treatment;
- ❽ On-site sanitation and septage management.



Seminar for the presentation of the technical standards for the drinking water supply sector

These booklets detail the minimum technical requirements for the design and construction of all structures used for drinking water supply and wastewater treatment that must be compatible with the European standards.

The booklets were given in English and Albanian to the Albanian Ministry of Public Works

and Transport at the project closing seminar in the presence of the French Ambassador in Albania, the regional representative of the French Economic Department and enterprises belonging to the "FASEP club", which supported the project. ✓



Kosovo

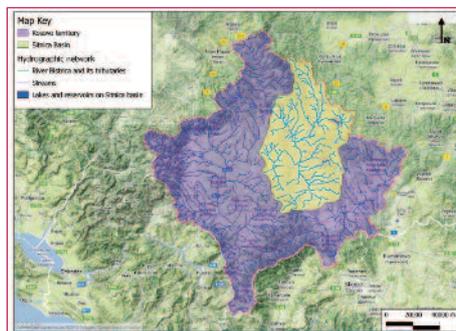
Institutional Support to the Ministry of Environment and Spatial Planning (MESp)

In December 2011, a European twinning project was launched in order to build the capacity of the Ministry of Environment and Spatial Planning (MESp) and of stakeholders to complete and enforce the legislation on water, the management of river basins, of water infrastructure, including dams, and waste, urban development, protection of nature and biodiversity.

France is participating to this twinning, as Junior Partner with Italy.

Considering the broad scope of activities devoted to legislative framework, waste and water management but also spatial planning and nature protection, the French Ministry of Ecology, Sustainable Development and Energy is coordinating the various French Institutions that are intervening in this 2-year project.

On the water component, experts from the French Ministry of Ecology, Rhine-Meuse Water Agency and International Office for Water are working jointly with their Kosovar counterparts to exchange on experiences and to draft recommendations on the implementation of the Water Framework Directive and to develop River Basin Management Plans, pollution control, and to strengthen the Water Information System in Kosovo. ✓



The Drini i bardh River



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The water world on the Web



7,550,000 visitors in 2013!

EMWIS

Better management of knowledge on water in the Mediterranean area



Establishment of Shared Water Information Systems in the Mediterranean



Union pour la Méditerranée
Union for the Mediterranean

Following the request from the Ministerial Water Conference for the Mediterranean, which took place in late 2008 in Jordan, to have comparable data, statistics and indicators, **EMWIS** and the Mediterranean Countries have worked together to define an ambitious project for **strengthening the National Water Information Systems in the Mediterranean**.

Through dialogue with the Secretariat of the Union for the Mediterranean (UfM), the Mediterranean Action Plan, the European Environment Agency and the Arab League, **the project was finalized and presented for approval to the 43 UfM member countries**.

This project includes:

- **A regional component**, to provide guides, tools, capacity building, exchange of experiences and demonstration of data flows for international reporting activities, including the Strategy for Sustainable Development in the Mediterranean, control of pollution in the Mediterranean (Med-pol), and the Water Strategy of Arab Countries. This component is open to all countries of the Union for the Mediterranean. It is based on European standards (SEIS, WISE, INSPIRE) and UN standards (environmental and economic accounting of water).
- **A national component**, which represents nearly 85 % of the budget for building **National Water Information Systems (NWIS)** in the first four pilot countries (Morocco, Tunisia, Jordan and Lebanon).



UfM seminar in Barcelona
September 2013

The interest generated by the project led the partners to launch the first actions before labeling by the UfM: thus, the preliminary stages of defining NWISs started in Morocco and Jordan, and a first implementation is underway in Tunisia.

At the regional level, an analysis of the indicators needed for integrated water resources management was carried out in partnership with the Blue Plan and with support from "ONEMA". The knowledge generated by this project allows many applications to be considered. One of them is preparing a **White Paper on Water in the Mediterranean**, initiated by the Mediterranean Water Institute and jointly presented to UfM for labeling, as part of the process of establishing a Mediterranean Knowledge Hub on Water.

A Network to improve water resources management

In order to better share experiences in Integrated Water Resources Management in the Southern Mediterranean countries and support local stakeholders in its implementation, **the International Union for Conservation of Nature (IUCN), associated with EMWIS, CEDARE and national NGOs in Morocco, Egypt, Jordan and Palestine, launched the "Regional Knowledge Network on Water" (RKNOW) project with funding from the European Commission under the EU Neighborhood Policy**.

Four themes have been selected for structuring work in thematic sub-networks for the 3 years of the project: governance, energy-food-water nexus, sustainable technologies, water and climate change.

Strategic platform for sustainable waste management in the Mediterranean

All stakeholders in waste management in the Mediterranean are facing a growth of the volume to be treated, the evolution of regulatory standards to comply with, or national and international targets to be achieved. In many countries of the Mediterranean region, there is often no pre-sorting at the landfill, the solutions for waste treatment are little known and the Authorities lack the means to implement them.

The MED-3R project, to develop integrated urban waste management systems, which are effective and adapted to local contexts, fits in with this prospect.

This project funded by **the European Commission** under the European Neighborhood and Partnership Financial Instrument in the Mediterranean is coordinated by **the Nice-Riviera Metropolis**. With a budget of € 5 million, it gathers fifteen partners, mainly including cities of five Mediterranean countries: France, Italy, Tunisia, Lebanon and Jordan.

IOWater and **EMWIS** contribute to this project on the "capitalization and training on urban solid waste management" component, and for the coordination of the 13 pilot actions carried out in the eight partner cities.



Kick-off Committee
Nice - 13 June 2013



The launching of the project was organized in Nice in June 2013.

A Euromed Permanent General Secretariat has been established in Nice.



SEMIDE
EMWIS

www.emwis.net

THE MEDITERRANEAN

AquaForMed

The Mediterranean Network of Water Training Centers

The Mediterranean Network of Water Training Centers was launched at the 6th World Water Forum in Marseilles in March 2012.

Within the scope of the **International Network of Water Training Centers (INWTC)** it aims to facilitate the exchange of knowledge between professional training centers facing similar problems and build their capacity to meet the training needs of administrations and services responsible for water management and supply and infrastructure maintenance.

The Network members wish that the **essential role of vocational training be recognized in improving the quality of water services.**

Several Founder Members gathered, in November 2012 at the Secretariat of the **Union for the Mediterranean (UfM)** in Barcelona, to prepare a large project of activities to be presented to the UfM for labeling.

The Network website, initially in French and English, in Arabic at a later stage, will be a platform for exchange on professional training in the water and sanitation sector at first.

A forum will allow everyone to express themselves and feeding studies including a **cost-benefit analysis of continuing training to convince, if still necessary, decision-makers and donors of the importance of sustainable funding for training.**

The Partners of this Mediterranean network indeed recognize the need to develop a strong argument in favor of professional training on water and to have common promotional and communication tools.

The financial support granted by the **Ile-de-France Region** allowed starting these activities.

The Network is a flexible and open structure based on the principle of voluntary membership and shared wish of its members to work together.

It is also intended to be extended far beyond the founder members and has the objective of gathering the main Mediterranean water training centers within five years.

www.aquaformed.org



AQUA
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Algeria

Coaching in the field of waste management



Coaching of trainers in the waste sector Algiers, November 2013

Since the beginning of 2010, the **German Cooperation Agency GIZ** has led a project on "Training capacity building in the environmental sector in the Maghreb".

As part of the "Solid Waste" component of this project, GIZ entrusted the **International Office for Water** with a 6-week training in France and Algeria.

The Algerian recipients of these training courses were engineers from the Ministry of Regional Planning and Environment, the National Waste Agency, the National Conservatory of Environmental Training and chiefs of waste services of Annaba and Ghardaia municipalities.

Some of these participants had the responsibility of transmitting this acquired knowledge through training activities in Algeria: assignments for coaching these trainers were conducted by **IOWater** in 2013, especially as a support to the drafting of experts' reports for the cities of Ghardaia and Annaba.



giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

National Sanitation Agency

Under the water and sanitation sector support program in Algeria, led by the **Ministry of Water Resources (MRE)** with the support of the **European Union**, the **National Sanitation Agency (ONA)** entrusted **IOWater** with a mission to help in the design and launching of its **Sanitation Training Center (STC)**.

This mission consists in developing technical specifications for the educational platforms and in helping ONA in the preparation of invitations to tender for their implementation.

In November 2013, **IOWater** also carried out a six-week training of ONA trainers on the use of educational units, during practical work in **IOWater's National Water Training Center** in France.



Turkey

Three European institutional twinning projects

► Water Framework Directive, Twinning Project on Monitoring

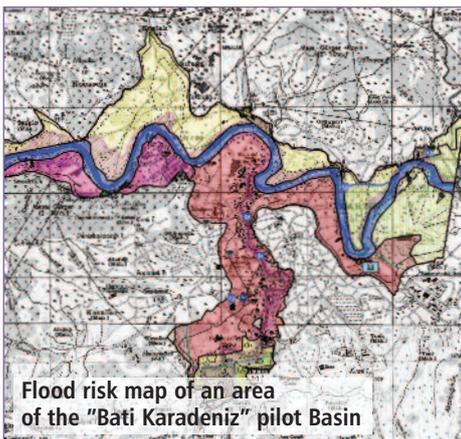
This European twinning project on the implementation of the Framework Directive has been led since September 2011 by the Netherlands, France and Spain and aims to support the Turkish Ministry of Forestry and Water Affairs in the development of Monitoring Plans for six pilot basins and a National Monitoring Plan to assess the ecological status of rivers, lakes, transitional and coastal waters.

On the French side, experts from the Ministry of Ecology (MEDDE), Seine-Normandy Water Agency, "IRSTEA", "IFREMER", coordinated by **IOWater**, are contributing to this work.

After several training courses in Turkey, a study tour in France, from 6 to 12 October 2013, allowed a delegation of 22 Turkish officials to better understand the institutional organization and practical aspects of monitoring plans in France. Several field visits allowed illustrating concretely the explanations on the roles of each institution or on the methods used.

► Flood Directive Twinning Project

The European twinning project "Capacity building for the implementation of the Flood Directive" aims to support the Water Management Directorate General of the Ministry of Forestry and Water Affairs in its new coordination mission for better flood risk management in Turkey.



Flood risk map of an area of the "Bati Karadeniz" pilot Basin



Kick-off meeting of the "Bathing Waters" twinning project - Ankara - February 2013

This project was set up for two years with the support of key French and Romanian public institutions working on this Directive in their respective countries: Directorate General for Risk Prevention (MEDDE), The Mediterranean Technical Research Center of Public Works (CEREMA), the Romanian National Administration "Apele Romane" and its Institute of Hydrology and Water Management.

The project objectives are in particular:

- **Transposition of the Flood Directive into the Turkish legislation** and adaptation of the institutional organization;
- Practical implementation of the three steps of preparing a **Flood Risk Management Plan in the "Bati Karadeniz" pilot River Basin** flowing out into the Black Sea, especially the organization of a consultation of users within a Basin Committee;
- **Drafting of a methodological guide and carrying out training courses** to disseminate the lessons learned in the pilot basin to three other basins under the twinning agreement and later to the other Turkish river basins;
- **Preparation of the National Plan for the implementation of the Flood Directive**, integrating an economic analysis.

► Twinning project on the Bathing Water Directive

Starting in January 2013 for two years, the European Twinning project on the Bathing Water Directive in Turkey is led by the International Office for Water on behalf of the French Ministry of Health and Social Affairs in cooperation with the Italian Minoprio, mandated by the Lombardy Regional Council.

The Bathing Water Directive introduces a global strategy based on:

- New calculation methods for a more representative assessment of water quality and classification of bathing areas;
- Improvement of data quality;
- Development of profiles for bathing areas, with an Action Plan to improve water quality;
- Implementation of management measures in exceptional circumstances;
- Taking into account the risks associated with cyanobacteria;
- Better public information;
- Improvement of the technical capacities of control laboratories.

The first results and the newsletter of the project are available on the dedicated website, in English and Turkish languages.

www.aquacoope.org/turkeybw



THE MEDITERRANEAN

Turkey



WORLD BANK



Presentation of the water allocation system in Southern France



Serre-Ponçon Lake
Alpes-de-Haute-Provence

The World Bank, providing technical assistance to the Turkish Ministry of Forestry and Water Affairs, wished that the operational experience of water allocation, in French river basins under conditions of water scarcity, be presented.

IOWater was in charge of identifying the main organizations: Adour-Garonne Water Agency, Canal de Provence Company, the Water Users' Associations (ASA) of the Gap and Ventavon canals in particular, who testified of their experience of managers in situation of water scarcity:

- **at the basin level**, on the definition of allocations priority between uses and their operational implementation by the Basin Water Agency and the Regional Development Company in charge of infrastructure.
- **at the local level**, Water Users Associations (ASA) were reinforced by the 2004 modernization Act, and keep on playing a significant role in the transmission of their water management experience and know-how in scarcity situation.
- ③ **The Durance-Verdon water system for multi-purpose water infrastructure management:** historical analysis, sectoral policies coordination and governance issues;
- ④ **The legal and operational conditions for water scarcity management by Users' Associations:** characteristics of the Authorized Union Associations (ASA) of the Lower and Middle Durance, the "water rights" challenges and the specific case of restrictions organized on the Gap Canal.

The 40 pages English paper is exploring:

- ① **The recently established legal and policy frameworks for French water management**, including the system of permits for water abstractions, water law enforcement activities and the latest developments in WFD implementation;
- ② **The mechanisms for planning and allocating water at basin level**, according to the Adour-Garonne Water Agency experience;

The French case described and analyzed in this study was presented in Ankara on 30 and 31 October 2013 at the international seminar jointly organized by the World Bank and the Turkish Ministry of Forestry and Water Affairs.



Morocco



ONEE and IOWater, a lasting collaboration



Started 7 years ago, the collaboration between the National Office for Water and Electricity (ONEE) in Morocco and the National Water Training Center (NWTC) of the International Office for Water (IOWater) in France continued in 2013.

The educational engineering project continued in 2013 for the design and implementation of educational units on "Sanitation systems" built at the Water and Sanitation Institute (WSI) of ONEE in Rabat.

In addition, **IOWater** drafted the protocols for practical work and carried out the training of trainers of the ONEE on the use of these educational units.



The educational unit on "Sanitation systems" of the Water and Sanitation Institute (WSI)

Moreover, **IOWater**, in partnership with the Moroccan ADI consulting firm, started in 2013 a project to develop reference frames for the design and sizing of liquid waste treatment systems.

These handbooks are intended to serve as references on the ONEE's global scale for its projects on sanitation systems, urban hydrology, pumping stations and wastewater treatment plants using activated sludge, lagooning, trickling filters and bio discs.



THE MEDITERRANEAN

Tunisia

REACH-CLP:

European twinning agreement on the management and control of chemicals

The International Office for Water participates, with the Austrian Environment Agency, "INERIS" and the Swedish Chemicals Agency, in the implementation of the European twinning agreement "Institutional Support to the management and control of chemicals in Tunisia".

This project aims to promote in Tunisia an industry more respectful of health and the environment while increasing its competitiveness and preparing the Tunisian industrial

sector to managerial, organizational and technological changes related to the implementation of the European REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and CLP regulations (Classification, Labeling and Packaging of dangerous chemicals).

The International Office for Water contributes to the strengthening of the legal basis, the establishment of an institutional organization and to the capa-

city building of the Tunisian Technical Chemical Center.

This project is funded by the European Union and is being carried out between March 2012 and March 2014.



Training courses on sanitation duties at ONAS



Under the technical assistance contract ONAS IV, of which the IGIP consulting firm is the owner, the

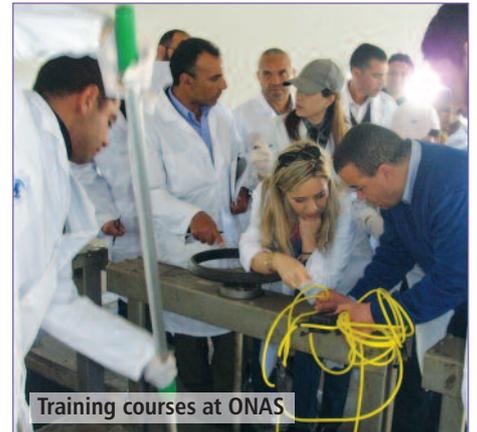
French National Water Training Center (NWTC) of the International Office for Water (IOWater) designed and carried out two training programs for the staff of the National Sanitation Agency (ONAS).

These training programs cover the duties of a "Manager of a wastewater treatment plant" and "Technician in electrical maintenance".

These two programs allowed achieving 20 training courses in Tunisia, by defining a training content very suitable to the tasks of these professionals.

Emphasis was also given on field practice by systematically planning practical work on site.

With a view to monitoring the progress of the trainees' knowledge, an evaluation system was developed for assessing the acquired knowledge before and after the training sessions were completed.



Training courses at ONAS

Management and optimization of water and financial resources



Training carried out in Kasserine

Managing water resources by optimizing budget allocation is at the core of the current problems of the Tunisian Government.

Aware of this need, Swiss Cooperation acting in the province of Kasserine in Tunisia requested the International Office for Water (IOWater) to provide training on the water-network modeling tool EPANET.

Organized in Kasserine on the premises of Swiss Cooperation, the training course was carried out for the benefit of engineers of its staff and members of the Tunisian administration in charge of projects on rural water systems in the Province. The aim was to support the system designers, to transmit them the features of the software, with all the subtleties and intricacies that are not found in textbooks, and adapt the software implementation to the conditions encountered in their region.

The experience of IOWater, its knowledge of Tunisia and its mastery of the software allowed meeting the expectations of the participants, providing them excellent transmission of knowledge and immediate implementation of the system modeling for all users of irrigation and water supply systems.



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Direction du Développement
et de la Coopération DDC

MIDDLE EAST

Palestine

Palestinian Water Authority (PWA)

Training of Palestinian staffs on the design and operation of wastewater treatment plants



Alongside the technical and financial partners (USAID, GTZ, AFD, JICA, etc.) supporting the modernization and improvement of drinking water supply and sanitation infrastructure in the Palestinian Territories, many French stakeholders of Decentralized Cooperation are implementing technical assistance projects with the Palestinian local Authorities.

Among these, **the Adour-Garonne Water Agency is heavily involved with the Palestinian Water Authority (PWA) in projects in the sanitation sector.**



The sanitation sector is one of the priorities of the Palestinian Water Authority

Just over 30% of households in the West Bank are connected to sewers. Wastewaters are not or little treated, their discharge into the natural environment contributes to contaminate groundwater. The reuse of treated wastewater is not yet developed but is wanted by the Palestinian Authority.

In the West Bank, the only large wastewater treatment unit operating satisfactorily in 2012 was that of Al-Bireh, near Ramallah.

In this context, the Adour-Garonne Water Agency asked to the International Office for Water to organize two training courses in October and November 2013 on the sizing and operating conditions of wastewater treatment plants for executives of the PWA and Palestinian local Authorities.

It is planned that after these two courses, a study visit to France of Palestinian engineers will be organized by the Adour-Garonne Water Agency.

Building on the success of these training programs, the Agency intends to extend such actions in 2014.



Jordan

"This is water", Conference on Water and Agriculture



As a continuation of the 6th World Water Forum, and under the International Year of Water Cooperation, **the Royal Scientific Society of Jordan (RSS) and the French Institute of Jordan organized in Amman, from 4 to 6 June 2013, a day of roundtables on Water and Agriculture**, inaugurated by Her Royal Highness Princess Sumaya bint El Hassan, President of the RSS and Ms. Caroline Dumas, French Ambassador in Jordan.

IOWater was invited to present the French system of water resources allocation between sectors and the participation of users and the public in this process.

In the context of the Arab Spring, of the growing imbalance between water needs and available resources in Jordan and, at a time when the Jordanian authorities are actively thinking about involving the users in water management, this presentation, followed by a discussion with the water authorities and representatives of **the Highland Water Forum**, was particularly fruitful.

The Highland Water Forum is a pilot project of the Jordanian Ministry of Water and Irrigation for the implementation of the dialogue principle in the local management of scarce and shared groundwater resources, supported by GIZ, in close cooperation with the French Embassy.



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The News N° 24 - March 2014

Publishing Director: Christiane RUNEL

**Coordination - Production: Frédéric Ransonnette - IOWater - Paris / Editing - Translation: Gisèle Sine / Photos: IOWater
Printing: GDS Imprimeurs - Limoges - N° ISSN : 1278-186X - N° ISSN Online : 2310-5895**

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