Report of Activities
2010 - 2011 - 2012 - 2013
under the Presidency of High Commission
of the Organization for the Development
of the Senegal River (OMVS)

www.inbo-news.org
Events 2010

8th INBO World General Assembly

Dakar - 20 - 23 January 2010

Adapting to the effects of climate change in basins: tools for action

From 21 to 23 January 2010, 268 delegates coming from 41 Countries, representatives of Governmental Administrations in charge of water management, of Basin Organizations, of interested bi and multilateral cooperation agencies and associations, met in Dakar in Senegal, during the eighth World General Assembly of the International Network of Basin Organizations (INBO).

The five round tables organized on this occasion allowed defining field actions for adapting the integrated and participative management of basins of local, national and transboundary rivers, lakes and aquifers, as well as of related coastal waters, to the probable consequences of Climate Change on the hydrological cycles.

At the end of the meeting, the Delegates adopted the "Declaration of Dakar", whose main points are as follows:

Floods, shortages, pollution, wastage, water-related diseases, destruction of ecosystems: the seriousness of the situation in many countries requires that comprehensive, integrated and consistent management of water resources, respecting the aquatic ecosystems and territories is implemented to preserve the future and the human heritage.

It is thus necessary to especially take into account the situation of the 276 rivers or lakes and several hundreds of aquifers over the world, whose resources are shared by at least two riparian countries or sometimes much more: their joint management is thus strategic and a priority.

Adaptation of water management to the effects of climate change is urgently needed worldwide!

Global warming now seems to be unavoidable and one of the first consequences will be to increase the frequency and impact of extreme hydrological phenomena.

Should ambitious measures be globally taken by all the countries to appreciably reduce their emissions of greenhouse-effect gases, the effect on climate would only be perceptible at best at the end of the century.

During the past forty years, the number and intensity of floods and droughts have already increased, sometimes in a spectacular way.

It is necessary to react quickly, before it is too late and it is clear that the control of gas emissions alone is insufficient to change this evolution within the deadlines.

Freshwater resources will be directly affected in the coming years, with significant impacts depending on the regions and foreseen scenarios.

Indeed, these effects will cumulate with the significant pressures linked to demographic growth, urbanization and development.

The demographic, economic and ecological consequences are likely to be very significant.

"If the greenhouse-effect gases are responsible for global warming, freshwater is the first victim!"

Quick action will allow reducing costs and damage. INBO is worried about the "no-action cost!"

The basins of rivers, lakes and aquifers are the relevant territories for organizing participative management of water resources and aquatic environments, transboundary cooperation and indispensable adaptation policies to anticipate the hydrological and hydrogeological consequences of these changes.

Protection against floods must pass through a coordinated approach and it is first necessary to make the "upstream-downstream" common cause a main item of consistent management on the scale of basins and sub-basins.

In the transboundary basins in particular, cooperation between riparian States should be promoted. The availability of freshwater, in sufficient quantity and quality, may become, in a generation from now, one of the main limiting factors of the economic and social development in many countries.

Climate change will also worsen the structural problems which already lead to water scarcity in many areas: on this subject it is useful to make a distinction between drought and scarcity, the latter being initially related to a permanent and structural imbalance between available resources and abstractions.

The prevention of recurring droughts can, no more, be done on a case-by-case basis, but must be planned in the long term, by solving the structural problems which occur.

It is essential to intensify efforts for better managing water demand and thus reducing the pressures on the resources especially in time of drought, by reducing, in particular, abstractions for irrigation, which are the most significant in many areas.

Mobilizing new resources and creating reserves should be planned, but after rationalizing water demands and only when it will be ecologically acceptable and economically reasonable.
The development of hydropower may contribute to the adaptation to climate change, while improving the living conditions of the poorest populations. But building new dams will not be enough without the implementation of water saving and recycling programs, proactive water management together with constant incentive measures for more rational uses, facilitated by education, innovation and new technologies.

Water saving, leak detection, recycling, the reuse of treated wastewater, groundwater recharge, the desalination of sea water and research on low-consumption uses must become priorities.

In a context of increased pressure on water resources, the significance of irrigation should be stressed, as continuing the "business as usual" scenario would be irresponsible.

Feeding the world population today and in the future implies using, in all the countries, agriculture which is less water-consuming and less sensitive to climate hazards.

The farmers will be among the first victims of the fluctuations of water supply due to the variations of the climate.

Since the 1990s, river basin management has experienced a quick development in many countries, which made it the basis of their national legislation on water or experimented it in national or transboundary pilot basins.

Participation in decision-making of the representatives of different categories of users and associations for environmental protection or of public interest at the side of the concerned Governmental Administrations and local Authorities should be organized in Basin Committees or Councils in particular.

Basin Management should also rely on integrated information systems, allowing knowledge on resources and their uses, polluting pressures, ecosystems and their functioning, risks assessment and the follow-up of their evolutions. These information systems will have to be used as an objective basis for dialogue, negotiation, decision-making and evaluation of undertaken actions, as well as coordination of financing from the various donors.

Systems for warning against floods, droughts and pollution should be improved and coordinated for better facing the natural disasters caused by water or men and for protecting human lives and properties.

If climate change can no more be doubted, significant uncertainties remain regarding its local impact and the best way of facing it in each situation. It is clear that it is necessary to reinforce research on climate in each large basin or area.

Adaptation will be based on Basin Management Plans or Master Plans that define the medium and long term objectives to be achieved.

The basin planning process is the best mechanism by which the demands could be adjusted to the available water resources in the long term, in order to avoid persistent shortage and to give a clear response to the necessity of also managing the increasing flood hazards in most areas of the world.

The investments necessary for sustainable management of water resources and ecosystems and for the operation, maintenance and renewal of public utilities require huge financial resources.

Adaptation to climate change will also require additional financial resources.

It is thus necessary to consider specific and additional financial resources by combining national or local administrative taxes, the pricing of community services, geographic and inter-sectoral equalization mechanisms and specific basin charges as incentives to limiting wastage and to removing pollution.

Cooperation between riparian Countries should be strengthened in particular for the management of transboundary rivers, lakes and aquifers. It is now essential that cooperation agreements, conventions or treaties be negotiated or signed between the riparian countries of these shared river basins to achieve indispensable common cause at the basin level and develop a common vision of the future.

Mobilization is essential for humanity to win the “water battle” and prepare the future and an organization on a basin scale is an effective solution, which deserves to be developed and supported.

INBO Member Organizations have experience and expertise which they intend to pool and put them at the disposal of all the countries and institutions which would like to follow them in an effective Basin Management approach.

At the end of the meeting, the Assembly congratulated the Hungary authorities, and in particular Mr. László Kóthay, Hungarian State Secretary in charge of Water, for the way they have fulfilled INBO World Presidency since the Debrecen General Assembly in June 2007.

The Assembly unanimously nominated Mr. Mohamed Salem Ould Merzoug, an academic, a former Minister and current High Commissioner of the Organization for the Development of the Senegal River (OMVS), as the new INBO World President until next General Assembly which will take place in 2013 in Brazil.
**Events 2010**

**8th INBO World General Assembly**

**Dakar seen by the Hungarian delegates**

For us, Hungarians, this Assembly was important as we transferred the INBO world presidency to our highly esteemed friend M. Mohamed Salem Ould Merzoug, High Commissioner of OMVS. During our Presidency from 2007 to 2010, INBO achieved very good results at regional and global level.

After the Hungarian team, OMVS took over the task of catalyzing the coming events and strengthening cooperation inside the INBO Family.

Why was this event so important for us?

It was a great opportunity for us to introduce the Hungarian culture in Western Africa. Since Mrs. de Grand-maison’s initiative, every past President of INBO has the task of organizing an evening with his country folklore during INBO General Assembly.

The Hungarian evening was accompanied with specialties: “eau de vie”, the “Pálinka”, and wine offered by the famous Hungarian wine growers from Tokaj and Villány. Then the Hungarian folklore band “Törkölly” started to play.

This music included four common types of dances that are still played in festivals and other events inside Hungary.

The dancers of the “Hajduság Dancing Team” stepped onto the stage and introduced folk dances: “Transylvanian Whirling”, “bottle dance” from Somogy Region, the “Hortobágyi botos” (Dancing with sticks on the Puszta of Hortobágy), and the well-known quick “csárdás” from Trans-Tisza area.

After this dance show, the guests had the opportunity to taste some Hungarian cuisine specialties which were prepared under the guidance of two famous Hungarian master chefs who won medals and were world champions.

Mr. László Köthay
Past World President of INBO 2007 - 2010
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**International Forum: “Climate Change Impacts on Water”**

**Washington - USA**

**28 - 29 January 2010**

The Association of Metropolitan Water Agencies (AMWA), the Water Research Foundation (WaterRF), the Water Utility Climate Alliance (WUCA), the International Water Association (IWA) and the American Water Works Association (AWWA) organized an International Forum on “Climate Change Impacts on Water” in Washington on 28 - 29 January 2010.

This forum aimed to encourage American Water Utility Managers to network with their international colleagues for raising the policymakers’ awareness on climate change impacts on the water cycle and on the need for adaptation of the water utilities.

Mrs. Jacqueline McGlade, Executive Director of the European Environment Agency, presented the situation in Europe and Mrs. Jane Lubchenco, Administrator of the National Oceanic and Atmospheric Administration, unveiled the priorities of the US Federal Government.

Mr. Jean-François Donzier, INBO Secretary, was invited to present, as an introduction, the recommendations of INBO World General Assembly, which had just been held in Dakar the previous week, on “the Adaptation to the effects of climate change in Basins”.

[www.waterclimateforum.org](http://www.waterclimateforum.org)
**Events 2010**

**Lebanon**

*A workshop on private sector participation in water infrastructure*

From 8 to 10 March 2010, the DG-RHE of the Ministry of Water and Energy and MENBO (Mediterranean Network of Basin Organizations) organized in Beirut an International Workshop on ‘Private Sector Participation in water infrastructure in Lebanon’.

The attending experts presented their experiences, both technical and economic, in the presence of the new Minister.

**Eastern Europe - Caucasus - Central Asia**

**Creation of the Regional Network of Basin Organizations**

The international workshop on the development of the Network of Eastern European, Caucasian and Central Asian Basin Organizations (EECCA-RBO) was held in Moscow on 31 May 2010. 50 representatives of research, design, manufacturing and information institutions from Russia, Ukraine, Belarus, Moldova, Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Azerbaijan took part in this workshop.

The participants:

- Recognized the importance of exchanges of information and experience between water professionals, water users and other stakeholders in EECCA Countries;
- Decided the creation of an EECCA network within the International Network of Basin Organizations (INBO);
- Adopted the objectives and methods of the International Network of Basin Organizations as working basis for promoting Integrated Water Resources Management at a river basin level while meeting goals, specific to EECCA Countries.

The participants thanked the UN Economic Commission for Europe (UNECE) and the Government of the Russian Federation for supporting this event and SIC-ICWC and the Moscow State University of Environmental Engineering for their organization of the workshop.

The Constitutive Convention of the Network of Basin Organizations from Eastern Europe, Caucasian and Central Asia was approved.

Mr. PA. Polad-zadeh was unanimously elected President and Prof. V.A. Dukhovny Executive Secretary of the Network.

The Board of Directors comprises 15 representatives from all EECCA countries.

The working languages of the Regional Network are Russian and English.

SIC-ICWC is taking charge of its Secretariat in Tashkent, Uzbekistan.

**The Moscow workshop on 31 May 2010**

Jean-François Donzier, INBO Secretary, presented in particular the basin management principles established by our network.

Their presentations are available on INBO website.

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

All information is available on the Web

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

1 Million visitors in 2012
A “Kick-off Meeting” for launching the process

Some 400 personalities coming from the entire world gathered in Paris then in Marseilles on 2, 3 and 4 June 2010 to launch the preparatory process of the 6th World Water Forum which was held in Marseilles in France from 12 to 17 March 2012.

The participants, among whom we noted the presence of Mr. Mohamed Salem Ould Merzoug, INBO World President and Mr. Jean-François Donzier, Permanent Technical Secretary of our Network, were received at the Elysée Palace, in Paris, on June 2 by the President of the French Republic, Mr. Nicolas Sarkozy, then took part, in Marseilles, in two days of round tables and workshops intended to format their ideas and projects for the Forum.

Twelve “Priorities for Action” and three “Conditions for Success” were chosen. A participatory and partnership approach open to all stakeholders concerned was organized, particularly at the level of each of the four major regions of the world: Africa, America, Asia and Europe.

The European Regional Process

Mr. Jean-François Donzier, IOWater Manager and INBO Permanent Technical Secretary of our Network, was in charge of leading the preparation of the Forum at the level of the “Europe” Region.

A first meeting of all European organizations, heads of networks, was held in Brussels at the headquarters of the Walloon Region, on 21 December 2010, to involve all partners concerned and clarify the priorities specific to water management for the European Union, the Balkans, Russian Federation, Caucasus and Central Asia, when concerned, and of course the EU’s outermost regions.

The Thematic Process

Among the fifteen selected priorities, IOWater, INBO Secretariat, and OECD were in charge of coordinating, with their partners, the topic of “good governance”.

INBO and UNESCO coordinated priority 1.5 “contribute to cooperation and peace”, which related to transboundary river and aquifer basin management over the world.

A “second partners meeting” took place in Paris on 17 and 18 January 2011 to bring all organizations interested by the Forum in working order to ensure its success.

INBO is committed for a "Forum of Solutions"

INBO: 188 full Members or permanent observers in 71 countries
Events 2010

CAP-Net - INBO

Improving Water Governance at the River Basin Level
Stockholm World Water Week 2010

This seminar aimed at exploring:
- key water governance issues at the river basin level and at discussing success factors and bottlenecks drawing from experiences from several developing countries.
- the issue of performance measurement, showcasing the results and insights of the “Key Performance Indicators (KPI) in Africa” project.

A selection of case studies, together with two discussion sessions provided the participants with an improved understanding of the environment necessary to facilitate water governance on the river basin scale and insights into the potential application of performance monitoring of a River Basin Organization.

More information:
www.worldwaterweek.org

"Champlain 2010 Talks"
when water and history bring men together

Integrated river basin management was at the core of the discussions of the second “Champlain Talks”, which gathered nearly 200 participants in France on the banks of the Charente River in Rochefort, Saintes and Angoulême on 2, 3 and 4 September 2010 at the invitation of the Charente Public Basin Body (EPTB) under its twinning agreement with the Committee for Dialogue and Development of the Richelieu River Basin (COVABAR).

Let us recall that in the 16th century the French navigator, Samuel de Champlain, left the mouth of the Charente River to build the City of Quebec on the bank of the St. Lawrence River.

The discussions dealt with the link between regional planning and water management, a central issue for both the EPTB Charente, under the Water Development and Management Scheme (SAGE) of the Charente Basin, and “COVABAR”, in charge of drafting the Water Master Plan (WMP) of the Richelieu Basin and of the Richelieu / St. Lawrence Management Area.

The challenge of having better joint planning documents in the fields of water and urban planning has been emphasized as well as the importance of marshes and watercourses in the development and structuring of the territory.

The participants evidenced that organization is not always coherent and discussed the concept of “water territory” and different levels of competence and responsibility.

Emphasis was given on the need to integrate water into all the regional planning policies and to have a competent operator on the appropriate scale such as an “EPTB” or basin organization.

Finally, as we are all water stakeholders, citizen involvement was the focus of the debates.

Many elected officials and managers signed the “Twinning Charter of the Charente River and Richelieu River Basins”, which is the founder act of the cooperation between cousins from both sides of the Atlantic.

www.jumelage-charente-richelieu.net
The 8th conference of the “EUROPE-INBO” Group for the implementation of the Water Framework Directive (WFD) took place in Megève, in France, from 22 to 24 September 2010, at the invitation of the French Water Agencies. It gathered 177 participants, representatives of national administrations and basin organizations as well as of NGOs and companies, coming from 42 countries.

As the conference was taking place in the Alps, special attention was paid to hydrology in mountains and to the measures to be taken for adapting to the effects of climate change.

The work of the Conference was organized around six topics:

1. Drafting of the WFD Management Plans,
2. The Programs of Measures 2010-2015 and their financing,
3. Combined implementation of the WFD and the other water-related European Directives,
4. Strategies for prevention of drought risks in Europe,
5. Measures for adapting Water Bodies to the effects of climate change,
6. Cooperation with the neighboring Countries.

The Conference allowed reaffirming that integrated and sound water resources management is more than ever a priority, if we do not want that this vital resource becomes the limiting factor for sustainable development in Europe and in the World.

Organizing management on a basin scale seems effective, as evidenced by the action started in Europe with the successful implementation of the WFD.

However, there are still significant challenges for achieving “Good Status” within the very short time left before 2015 and delays are recorded in the publication of some WFD Management Plans.

To promote their appropriation by the stakeholders concerned and thus ensuring their effectiveness, the Programs of Measures must be detailed at the level of sub-basins and involve the municipalities and all the local economic sectors concerned.

Government authorities must also get mobilized in the field, imposing basis measures, controlling the effective enforcement of regulations and accompanying local stakeholders in their projects.

In Transboundary Basins, the positive role of International Commissions was stressed, especially for the coordination of actions, harmonization of practices, decision-making by consensus, conflict prevention and exchange of information between riparian countries. But the Management Plans of Transboundary Basins must be more than a mere assembly of parts of national plans.

The cost of the WFD implementation will imply significant financial efforts raising the question of acceptability by users of an increase in the water price.

Frank and open discussions on financing should be organized on appropriate scales.

Of course, citizen participation is a guarantee for the implementation of the Management Plans. It should be oriented towards the general public and use suited tools according to the targeted audiences, geographic scale, objectives of the consultation and territory specificity.

The combined implementation of the WFD and the European “groundwater”, “floods” and “marine strategy” Directives implies better coordination between the Basin Organizations and the proper Authorities, which is essential to guarantee the necessary synergy between these Directives.

Adapting water management to climate change is needed and urgent for prevention of drought risks in Europe in particular.

It is necessary to work out a strategic approach at basin level, which guarantees the adoption of effective and coherent adaptation measures by the various sectors and the various levels of governance.

Upstream-downstream common cause should be strengthened while keeping in mind that the mountains are the water towers of Europe and of the World and that climate change involves modifications in the water regime of all the large European rivers.

With the WFD, the European Union has an advanced tool which must also be used to develop strategies for adapting water resources management to climate change as soon as the 2nd implementation phase from 2015 to 2021.

Several European countries are already developing a national plan for adaptation to climate change.

The WFD is a successful example of regional initiative which can inspire other areas in the world.

Its principles and method can be applied in the neighboring countries of the European Union, especially in the Transboundary Basins, in Eastern Europe, the Balkans or the Mediterranean Basin.
The "General Assembly on Water in Mountains" took place on 22, 23 and 24 September 2010, in Megève (France), simultaneously with the 8th Conference of the "EUROPE-INBO" Group of European Basin Organizations for the implementation of the Water Framework Directive.

They drew attention to the need for anticipating the consequences on hydrological cycles of climate change in the European mountains and for urgently proposing essential adaptation measures.

The Conference gathered 600 participants, representatives of national administrations, Basin Organizations, municipalities, researchers, NGOs and companies, coming from 41 countries of the European Union, the Balkans, the Mediterranean, Eastern Europe, Caucasus and Central Asia, as well as from Australia and China.

The participants noted that the European mountains are already among the first victims of climate change:

In one century, the average temperature of the Alps has increased more than the double of total global warming.

The models forecast in the Alps an increase in temperature by 2100 ranging between +2.6 and +3.9°C. Warming could be significantly higher in upper mountains to reach +4.2°C above 1,500 meters.

The alpine glaciers, which have already lost between 20 and 30% of their volume since 1980, could still lose from 30 to 70% of their volume by 2050; almost all the smallest ones would then have disappeared! Snow cover will be reduced, especially at low and medium altitude…

With the decrease in snow cover and glacier melt, the water regimes of all major European rivers coming from mountains are now changing and this phenomenon does not only affect Europe: all the world’s large rivers and their main tributaries have their headwaters in mountains.

The flows of the large European rivers with snow-glacier regime will be significantly modified in the next decades: on the average, there would be before 2100 an increase of 20% in the winter flows, but a reduction of 17% in spring and up to 55% in the summer flows, especially in the Central and Southern Alps. Aquifer levels could also lower by 25% in the Southern Alps.

In the basins of all large European rivers having their headwaters in mountains, flood frequency and intensity will greatly increase in autumn, winter and spring, as well as summer droughts.

The other consequences of climate change in mountains will be severe erosion, landslides, degradation in river quality and an increase in water temperature.

Climate change will also have a significant impact on hydropower production, the cooling of thermal and nuclear power plants, river navigation…

Competition between water uses will become fiercer particularly for irrigation in the south and with widespread snowmaking, which will become essential for the 666 current alpine ski resorts to ensure proper winter season.

Planning, development and protection of mountains are thus considerable stakes on a European and worldwide scale, especially for the regulation of the fresh water resources often used several hundred kilometers downstream in the plains.

For all the participants in the Conference, the question is no more to discuss about the reality of climate change, especially in mountains, but to launch different programs as fast as possible for adapting to it, mainly with regard to fresh water resources management, before it is too late!

Taking into account the great diversity of local situations, it is essential to quickly identify these changes and their consequences, basin by basin, and in each sub-basin, and to better analyze the ecological and socioeconomic consequences on the various activities.

The “General Assembly on Water in Mountains” presented field experiments, which were successful and gave results, which can be generalized or inspire others to progress.
Many solutions already exist: it is necessary to disseminate them and develop their implementation.

Three main categories of actions can be considered:

1. Firstly, saving water and facilitating recycling: leak detection, re-use of treated waste water, ground-water recharge, desalination of sea water, research on low water-consumption uses must become priorities. New low water-consumption techniques for snow management of skiing areas are, for example, already used in Megève, in particular…

2. Then, rethinking the management of mountain water, lakes, wetlands and soils by taking into account, better than today, the strategic constraints of water supply to the populations and agricultural, industrial and tourist economies at the foothills and in plains downstream, and by developing a “new risk culture”. Conservation and storage of water resources, development of slopes and lands to hold water during rainfall, management of plant and forest cover, protection of wetlands, development of protection areas, natural flood plains, recovery of degraded river beds…, the new regional planning policies will have to optimize the water reserves available for the community and to prevent natural hazards.

3. Finally, better recognizing the role of mountains for the community as a whole and better helping the mountain dwellers, within integrated basin policies, so that they can manage the territories, ecosystems and mountain water resources, build the integrated equipment necessary upstream for continuing to protect downstream areas against risks and provide the plains with abundant quality water, which they will increasingly need…

It will then be necessary to establish institutional and financial mechanisms for payment by the main downstream beneficiaries of the services provided by the managers of mountain ecosystems in the upper basins.

It is necessary to develop “win-win” strategies and to quickly launch programs of measures “with no regret”, whose implementation will be anyway required in all possible scenarios, since water is essential in almost all the sectors whose development depends on its availability and its quality.

Planning must be made in the basins of large rivers and based on strong intersectoral and also international cooperation when river basins are transboundary.

With the Water Framework Directive, the European Union has an effective tool which should also be used to develop these strategies of adaptation of water resources management to climate change.

Several Member States of the European Union are already developing such strategies; for instance, France has just launched a public consultation for its National Adaptation Plan.

In 2011, a European Information Center on the effects of Climate Change should be created and, in 2013, the European Commission will propose a Common Strategy to the Member States.

The measures needed for adapting water management to climate change will have to be integrated in the next Management Plans and Programs of Measures (2015 - 2021, then 2021 - 2027) of the European Water Framework Directive (WFD).
The Meetings of Decentralized Cooperation were held in Haiphong on 5 and 6 November 2010 on the theme “Increase in decentralized cooperation between France and Vietnam, for sustainable development”.

Co-organized alternately in each country, these meetings aim to assess project efficiency and difficulties and find solutions.

These 8th Meetings dealt with the challenges of sustainable development in Decentralized Cooperation from four areas:

- Integrated Coastal Management;
- Urban planning;
- Water resources management;
- Climate change.

A delegation of the French Loire-Brittany Water Agency, led by Mr. Lepeltier, President of the Basin Committee and former Minister, and Mr. Oudin, President of the International Commission, Editor of the Law “Oudin-Santini” participated in this event.

The delegation presented the strategy of the Loire-Brittany Agency under Decentralized Cooperation and the Pilot Project of the Dong Nai River Basin, whose aim is to transfer in the Vietnamese context, the principles and tools of Integrated Water Resources Management implemented in Europe under the Water Framework Directive.
The National Forum of Brazilian Basin Organizations mobilized more than 1,400 participants in Fortaleza, from 22 to 25 November, to discuss arrangements for reviewing the National Water Resource Management Plan.

The 2nd International Symposium of the “Inter-municipal Consortium” of Piracicaba-Capivari and Jundiaí Rivers (PCJ) was held in parallel in Atibaia (State of São Paulo) from 23 to 26 November 2010, in the presence of all partners in water management of the States of São Paulo and Minas Gerais and neighboring countries of the International Parana River Basin.

A strong delegation from the Loire-Brittany Water Agency, twinned with the PCJ Consortium, presented the French experience in river basin management.

The INBO Permanent Technical Secretary participated in both events to support the development of the Brazilian Network (REBOB) and the Latin American Network (LANBO) of Basin Organizations and mobilize their members in view of the 6th World Water Forum in Marseilles in 2012.
Europe is preparing the 6th World Water Forum

It is traditional that the host country, organizing the World Water Forum, coordinates the Regional Preparatory Process in its own region.

The International Forum Committee (ICF) entrusted the International Office for Water (IOWater), INBO Permanent Technical Secretariat, with the coordination of the European preparatory process for the 6th World Water Forum.

Many European countries have developed effective tools and techniques for water management, both at the level of the large hydrologic cycle and of community utilities or of the control of individual uses.

The enlarged Europe is the continent where there is the greatest number of transboundary rivers, lakes and aquifers.

This theme is clearly strategic, especially in the case of climate change.

The European experience could be made available to all interested countries in the world.

During two meetings, held in Brussels on 21 December 2010 and in Paris on 18 January 2011, the European Process Steering Committee and the main European partner networks identified a first set of Specific Regional Priority Targets:

- Improving transboundary cooperation in Europe, particularly in the context of the UNECE Helsinki Convention of 1992;
- Ensuring Good Ecological Status of European Water Bodies in 2015, by applying the Water Framework Directive;
- Adapting to long-term water challenges related to climate change and preventing extreme phenomena;
- Reforming the Common Agricultural Policy and ensuring a better balance between the objectives of food security and water management;
- Coordinating the transport and water policies relative to inland waterways navigation in Europe;
- Developing knowledge and know-how on river hydromorphology, restoration and protection of aquatic ecosystems;
- Improving drinking water supply and sanitation services in Europe;
- Better coordinating the water policies and renewable energy policies in Europe;
- Adapting water management to the specificities of European outermost regions;
- Developing public awareness and the skills of water professionals;
- Promoting technological innovation, the “Science - Policy” interface and dialogue between researchers and water managers;
- Developing European cooperation with third countries in the field of water.

Depending on their specialization, it was proposed to each major European partner network to lead or co-organize thinking on each Specific Regional Priority Target, retained as part of the WISE Process which should enable the greatest number of interested partners to participate.

Several general meetings took place on a regional scale, including:

- Central and Eastern Europe and the Balkans (Plovdiv - Bulgaria, from 20 to 23 March 2011), at the invitation of the Bulgarian Government and CENBO;
- Countries bordering the Black Sea (Istanbul - Turkey, from 3 to 5 May 2011);
- Central Asia (Tashkent - Uzbekistan, from 10 to 12 May 2011), together with the Coordinator of the Specific Sub-Regional Process of Central Asia;
- The Euro-Mediterranean Countries (Oporto - Portugal, from 27 to 30 September 2011), at the invitation of the North ARH Basin Organization and Portuguese District Authorities, as well as Europe-INBO and MENBO.

Other general meetings were organized for the three Caucasus countries and for the Russian Federation.

http://european-region-wwf2012.eu
China - Yangtze River Basin:  
a development respecting the environment

The Fourth Yangtze River Forum, jointly organized by the Government of Jiangsu Province and the Yangtze Water Resources Commission, was held in Nanjing from 18 to 19 April 2011. The topic of the Forum was “The Yangtze River and its regional development” and was organized around five specialized sub-forums.

The five sub-forums focused on integrated river basin management, control of the river regimes and of the use of river banks, climate change, protection and restoration of the ecology of rivers, and finally on the commitments from enterprises.

300 representatives of the provinces and cities, located along the Yangtze River, and from 16 invited countries participated in the Forum. A “Nanjing Declaration” was adopted, which proposes to ensure the socioeconomic development of the basin, taking better account of environmental conservation.

On this occasion, Mr. Jean-François Donzier, IOWater General Manager and INBO Secretary, chaired the sub-forum on river basin management.

At the opening on 17 April, a conference was also held on the project of establishing a “Platform for European Union-China cooperation on river basin management”.

www.mwr.gov.cn
www.yangtzeforum.com

Yangtze River Water System Map (Click to enlarge)
Events 2011

Brazil: National Forum of Basin Committees

In Brazil this year, the REBOB (Brazilian Network of Basin Organizations) and the National Forum of Basin Committees (COB) organized, from 29 to 31 August 2011 in Rio de Janeiro, a preparatory event for their National General Assembly 2011, the topic of which was water management in metropolitan areas.

Each year, the National Meeting of the Basin Committees (ENCOB) gathers, on the average, 1,500 participants from all sectors of Brazilian water resources management.

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

The INBO Secretary presented the organization of Water Management in the Paris region in France.

www.encob.org
www.inbo-news.org

7th Ministerial Conference on "Environment for Europe"

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

As part of its "special consultative status" with the UN ECOSOC, INBO was accredited to participate in the conference.

The Conference focused on the challenges of the protection of water and water ecosystems and on the transition to a green economy. It was organized by the United Nations Economic Commission for Europe (UNECE) and the Government of Kazakhstan.

The main agreements obtained dealt with:

- Improvement of environmental protection and promotion of sustainable development in the UNECE region;
- Importance of the participation of the civil society, women and non-governmental organizations in decision making to improve the environment;
- Cross-sectoral cooperation within dialogues at the national level;
- Additional financial resources needed to improve the water sector;
- The ongoing environmental assessment process and the Shared Environmental Information System (SEIS);
- Energy efficiency as one of the most effective ways to address climate change and the transition to a green economy;
- Contribution of Regional Centers for the Environment in promoting the green economy and better environmental governance.

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

"ASTANA WATER ACTION" (AWA)

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

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

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

www.unece.org/env/efe/Astana/welcome.html

Report of Activities 2010 - 2013
The ninth Conference of the "EUROPE-INBO" group was held in Oporto, Portugal, from 27 to 30 September 2011, at the invitation of ARH Norte.

The "EUROPE-INBO 2011" conference gathered 254 participants, representatives of National Administrations and Basin Organizations as well as NGOs and companies from 46 Countries.

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

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

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

75 papers were presented during the five round tables.

The recommendations and proposals will be presented at the World Water Forum in Marseilles, from 12 to 17 March 2012, under the Regional European Preparatory Process:

1. Transboundary Water Management

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

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

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

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

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

It is necessary to strengthen and widen the mandate of International Commissions and their means for carrying out their tasks of exchange and coordination at the level of their entire transboundary basin.

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

2. Cross-sectoral integration and adaptation to climate change

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

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

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

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

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

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

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

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

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

"For facilitating the implementation of the European Water Framework Directive"
9th Conference of EUROPE-INBO Group

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

Coordination of policies on water and renewable energy

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

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

Old infrastructure should be rehabilitated to meet the new requirements.

The infrastructures that are no longer economic should be “erased”.

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

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

A review of old hydropower concessions should be quickly considered.

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

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

Improvement of European and Mediterranean drinking water supply and sanitation services

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

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

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

The vocational training of the employees of water utilities is essential to guarantee the good design, development, operation, maintenance and renewal of infrastructures and the quality of the services provided to the users.

It is essential to make them a condition for assistance from the European institutions and donors.

Rehabilitation and protection of aquatic ecosystems

It is a priority target of the Water Framework Directive.

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

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

Strengthening of European cooperation in the field of water

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

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

It is appropriate to continue and strengthen the EU Water Initiative (EUWI), ten years after its launching, by providing it with real means for institutional supports.

Water should be a priority of the EU assistance-to-development policy.

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

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

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

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

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

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

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

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

www.inbo-news.org
Events 2011

Guadeloupe: The “SIAEAG” Water Days

2 - 7 October 2011 - Guadeloupe - The Caribbean

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

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

- “Water management in the Outermost Regions of the European Union and cooperation with non-European neighbouring countries”, chaired by Mr. Daniel Chomet, President of the Basin Committee of the Martinique, and facilitated by Mr. Jean-François Donzier, INBO Secretary, Coordinator of the European Regional Process.

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

Preparatory Conference for RIO+20

19 - 20 October 2011 - Dushanbe - Tajikistan

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

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

As part of its “special consultative status” with the UN ECOSOC, INBO was accredited to participate in the conference.

Work focused on three points:

- Strengthening cooperation and dialogue to achieve the Millennium Development Goals;
- Presentation of best practices from all over the world, in terms of cooperation at local, national and regional levels, to improve access to safe water and sanitation, and effective use of water resources for development and environmental protection;
- Making recommendations on approaches and mechanisms to be implemented for a joint use of water resources in the basins of transboundary rivers, aquifers and lakes.

The recommendations and guidance document adopted at the end of the Conference were presented in the program of the Rio+20 Conference held in Rio de Janeiro from 20 to 22 June 2012. 2013 was declared “International Year of Cooperation for Water” by the United Nations.

Regional Meeting for Caucasus countries

14 - 15 November 2011 - Tbilisi - Georgia

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

The INBO Secretary addressed the participants, reminding in his welcoming speech the importance of regional cooperation for the success of transboundary river management.

The INBO Secretary addressed the participants, reminding in his welcoming speech the importance of regional cooperation for the success of transboundary river management.

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

The parties thought the meeting very productive and very informative and agreed to advance regional cooperation and dialogue, related to the water consumption increase and effects of climate change on the hydrological cycles to face future challenges.
The General Assembly of the Latin American Network of Basin Organizations (LANBO), took place in Panama from 24 to 25 November 2011 at the invitation of the Panamanian Authorities. Ms. Lucia Chandeck, Panamanian Minister for the Environment, was unanimously elected new President of LANBO, succeeding to Mr. Edgar Alfonso Bejarano, Director General of the Autonomous Corporation of Cundinamarca - Bogota - Colombia, who brilliantly fulfilled the Presidency the past three years. LANBO Permanent Technical Secretariat will now be the responsibility of the Brazilian Network of Basin Organizations (REBOB), which takes over from the Piracicaba-Capivari-Junin-dial Intermunicipal Consortium - PCJ (Brazil), which has taken care of it with great success since the Rio de Janeiro General Assembly. The Assembly thanked Messrs. Edgar Alfonso Bejarano and Dalto Favero Brochi, for the work they have done over the past three years. Mr. Jean-François Donzier, Secretary of the International Network of Basin Organizations (INBO), welcomed the progress made by LANBO in Latin America and the Caribbean and presented “the World Pact for better basin management”. He invited all Members present to come and solemnly sign it in Marseilles on 16 March 2012, during the 6th World Water Forum. LANBO Technical Secretariat rebob@rebob.org.br www.agua.org.br www.ana.gov.br/relob www.rebob.org.br

The Mediterranean

Under the Mediterranean Intercontinental Process for the 6th World Water Forum in Marseilles in 2012, a “Mediterranean Water Forum” was held on 19 and 20 December 2011 in Marrakech on the topic ‘What are the water demands and the current and future supply sources in the Mediterranean countries.’ The stakeholders concerned in the Mediterranean area, representatives of States, local and regional authorities, parliamentarians, donors, companies and professionals, regional networks and the civil society, were able to lay the foundations of a platform for dialogue and exchange, to promote cooperation between the Mediterranean countries in the field of water. INBO and MENBO actively participated in the two-day work.

www.remoc.org
www.inbo-news.org

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All information is available on the Web

www.inbo-news.org
1 Million visitors in 2012
The International Committee of the Sixth World Water Forum, Marseilles 2012, appointed UNESCO and INBO as coordinators of priority 1.5: "Contribute to Cooperation and Peace through water", which mainly dealt with Transboundary River Basin Management.

During the Forum, 100 thematic sessions, involving all stakeholders, proposed practical solutions, allowing free discussion of all issues to reach a consensus.

For this priority 1.5, the partners decided at their second meeting (Paris, January 2011) to focus their proposals on the following nine targets, each of which dealt with in an official thematic session from Tuesday 13 to Thursday 15 March 2012, at the Conference Center of Marseilles - Parc Chanot:

1. Increase the political acceptance and implementation of the principles of existing international, regional and local water law in the international community;
2. Increase the number of new agreements and enhance the quality of existing agreements related to transboundary surface and/or groundwater;
3. Develop or improve cooperation mechanisms for joint management of transboundary aquifers within the framework adopted by the United Nations General Assembly;
4. Increase the number of transboundary basins organizations or aquifer systems capable of ensuring sustainable water resources management;
5. In local and international conflict situation, develop pragmatic solutions to water related issues through cooperation and dialogue involving the principal actors;
6. Create sustainable financial mechanisms for transboundary organizations;
7. Develop mechanisms to share and validate information and data at transboundary basin level;
8. Increase training in transboundary water management and conflict resolution of decision makers, senior and high-level water professionals, junior water professionals, journalists and the public at large;
9. Establish and support twinning programs between basin organizations to foster knowledge and exchange.

A synthesis session concluded work on 16 March 2012. The proposed organization of priority 1.5 sessions on Transboundary Basin Management has been widely disseminated and submitted for discussion to the partners who sent new proposals for solutions.

CONCLUSIONS:

River basin management it works!
- Tangible results can be obtained when there is a strong political will;
- Significant progress has been made since the 1990s;
- Integrated Water Resources Management should be organized at the level of local, national and transboundary basins of rivers, lakes and aquifers;
- Transboundary rivers, lakes and aquifers should be given special attention and be managed in cooperation between riparian countries;
- Clear legal frameworks should allow the continued application of these principles, which will be facilitated by the creation of Basin Organizations or Agencies;
- The creation and strengthening of International Commissions or Transboundary Basin Authorities facilitate dialogue, information exchange and joint implementation of the actions needed for better management, anticipating the future and allowing the solving of potential conflicts between the countries concerned.
- Partners must agree on a "shared vision" of the basin, resulting in a medium and long term Management Plan and Programs of Measures and of priority investments;
- Appropriate financial mechanisms should be established and based, inter alia, on the application of the "user-polluter pays" principles;
- Basin Information Systems should allow monitoring the implementation of policies and measuring their results;
- This management must be based on a strong participation of all basin’s stakeholders and on the involvement of their representatives in Basin Committees.

Where there a will, anything is possible!
The International Water and Film Events (IWFE) first appeared in Mexico in 2006. They prompt meetings among the general public, people from the world of movies and media around water management. The IWFE took place in Marseilles during the 6th World Water Forum.

At this occasion, the International Secretariat for Water (ISW) invited all movie directors, producers, water stakeholders, youths and all citizens who wish to express their views on water issues to participate in this competition. The leitmotif of this World Water Forum was “The Time for Solutions”. What better than images to show all the wonderful solutions that do exist, the local and regional solidarity actions led throughout the world, the simple idea of a man, woman or child that made all the difference or even a funny story that portrays that water is an essential issue for all human beings and their environment?

All films meeting the 5 categories could compete:

- **The “Soft Spot”** category for short films (10 minutes) produced by young people aged between 11-16 in collaboration with film professionals;
- **A “VidéEau”** category for clips of less than 60 seconds made by 17-30 year-olds;
- **Personal stories-type documentaries** (max. 26 minutes) made by civil society organizations, local stakeholders, etc.;
- **Scientific or educational films** (max. 26 minutes);
- **Documentaries made by film professionals** for screening in cinemas or on television.

An International Jury gave out 15 awards during a special ceremony at the opening of the 6th World Water Forum on 11 March 2012 in the presence of HE Mr. Ould Merzoug, INBO World President.

The films were shown at the “House of the Citizen and Water” within the Forum and public screenings were organized in Marseilles and its region (Aix en Provence, Barjols, La Ciotat, etc.), and in other regions in France and internationally before, during and after the Forum.

A partnership with Dailymotion, TheWaterChannel and pS-Eau, through its Pédag’Eau data base, enabled an online access to the movie catalog and to some IWFE films.

**At conclusion time...**

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

- The European Commission and UNECE also coordinated two sessions of the European process on "the Water Convention" (Helsinki 1992) and on the implementation of the European Water Framework Directive (WFD), in liaison with “Europe-INBO”.
- INBO had the honor of being invited to be a key note speaker at the ministerial round table on transboundary basins, chaired by the United States of America, Tajikistan and Zimbabwe.
- INBO Member Organizations were also invited to present their experiences and recommendations at an event dedicated to the management of large transboundary basins, organized at the “French Pavilion” by the International Office for Water, INBO Secretariat.

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

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

**The International Secretariat for Water (ISW) is an international non-governmental organization created in 1990. Based in Montreal, it undertakes field projects on access to drinking water and sanitation.**

ISW works in close partnership with networks worldwide, especially the International Network of Basin Organizations.

**www.sie-isw.org**

**www.riec-iwfe.org**
The 6th World Water Forum

European Regional Process

This Process, coordinated by INWater, INBO Permanent Technical Secretariat, involved the Pan-European region as defined in the UN Commission for Europe, i.e. the European Union and candidate and associated countries, the Balkans, Eastern Europe, Caucasus and the Russian Federation. The five Central Asian countries, members of the UNECE, also participated in the concerned target groups.

Strong involvement of European Commissioners and Ministers:
Four European Commissioners, Connie Hedegaard, Climate Action, Andris Piebalgs, Development, Janez Potočnik, Environment, and Kristalina Georgieva, International Cooperation, Humanitarian Aid and Crisis Response, as well as the Director General of the Joint Research Center, Dominique Ristori, actively participated in the European sessions on their field of activity.

Several Ministers in charge of water in the 27 EU Member States and Candidate Countries, in the Caucasus and the Russian Federation have been active in the sessions of the European Process as well as European Members of Parliament.

Conclusions and proposals of the European region:
Work was concluded by four round tables organized around the reports of the twelve European official sessions on:

- Management of European basins: to ensure cooperation and peace, promote economic development, prevent risks, achieve good status of Water Bodies and adapt to climate change.

- Multiple water uses: for economic development and health of Europeans - urban and rural water, agricultural water, industrial water, hydropower, inland navigation, fisheries and fish farming, domestic tourism ...;

- A new green and blue growth: to protect and restore aquatic ecosystems and develop natural infrastructure;

- Strengthened European cooperation with the neighboring pan-European countries and with the entire world: for better water management.

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

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

In the European Union, many Directives have organized water management since 2000, in particular the Water Framework Directive (WFD) and its “Daughter” or associated “Groundwater”, “Floods”, “Marine Waters” Directives, setting ambitious goals and strict procedures and deadlines for the Member States.

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

This site has received over 652,000 visitors since its opening in March 2011.

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

http://european-region-wwf2012.eu
Initiated by the International Network of Basin Organizations (INBO), its Regional Networks in Africa, America, Asia, Europe and the Mediterranean, and French metropolitan and overseas Basin Committees, the first ceremony was organized for signing the “World Pact” on Friday 16 March 2012 in Marseilles during the World Water Forum.

Among the 69 signatories present in Marseilles, there were European and African Transboundary Basin Organizations, as well as the Basin Committees of Quebec or the Brazilian Basin Committees represented by their national associations, and the pilot Basin Organizations of Cambodia, Laos and Vietnam in the Mekong River Basin.

The signatories commit themselves to apply in their respective basins the management principles recognized as the most relevant and most effective using the field experience acquired by the INBO Member Organizations for almost 20 years.

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

- improving water governance, facilitating the creation of Basin Organizations where they do not exist yet, strengthening existing organizations;
- organizing dialogue with the stakeholders recognized in their basins;
- based on prior assessment, facilitating the agreement of the various stakeholders on “a shared vision of the future of their basin” and developing, through dialogue and transparency, Management Plans for setting out the goals to be achieved in the medium and long term;
- developing successive action and investment plans that meet the economic, social and environmental priorities of the basins;
- making better use of water and ensuring low consumption of this scarce resource by better control of the demand, while encouraging more efficient uses, and according to the case, the use of non-conventional resources;
- better taking into account the significance of ecosystems and of the services they provide in making decisions for the development and management of river basins;
- mobilizing the financial resources needed for carrying out governance reforms, ensuring a long-term good basin management and implementing the action and investment plans needed and ensuring their lasting operation;
- organizing in each basin a harmonized data collection as part of Integrated Water Information Systems;
- supporting initiatives of Regional Cooperation Institutions for harmonizing policies and legislation in the field of water and for developing joint action plans at the basin level;
- strengthening institutional and technical cooperation with counterpart Basin Organizations in their region or other parts of the World;
- organizing better liaison with Research Organizations to better focus their work on the priority aspects of basin management and rapidly disseminate their findings in the field.

They also committed themselves to promote the Pact to other Basin Organizations, that have not signed it yet, for inviting them to join and also becoming signatories quickly.

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

The French Basin Organizations committed themselves in Marseilles to increase to 1% of their budget, their cooperation activities with least developed countries and to double their twinning arrangements with basins abroad.

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

Ceremonies for the signing of the pact were also organized:

- in Beirut (Lebanon), on 27 April 2012;
- at Lac Beauport (Quebec-Canada), on 23 May 2012;
- in Rio de Janeiro (Brazil), on 19 June 2012 during the UN Conference RIO+20;
- in Vouge (France) on 15 November 2012 during the General Assembly of the French Public Local Basin Bodies (EPTB).
The Central and Eastern European Network of Basin Organizations (CEENBO) was created in February 2002 in Sinaia, Romania, as a Regional Network of INBO. The general objective of CEENBO is to promote integrated water resources management at the level of river basins, as an essential tool for sustainable development.

The Presidency of the Network was assured between 2002 and 2004 by Romania, through the National Administration “Apele Române” (Romanian Waters). The countries which took the Presidency were, chronologically: Poland, Czech Republic and, beginning in 2011, Bulgaria.

CEENBO Permanent Secretariat was assured for the whole period by Romania, respectively by the National Administration “Apele Române” and since the beginning of 2007, by N. A. “Apele Române” through the National Institute of Hydrology and Water Management (NIHW), Mrs. Daniela Radulescu being the Permanent Secretary of the Network.

The 10 years of activity of the Central and Eastern European Network of Basin Organizations were celebrated with the outstanding event which took place in Sofia, Bulgaria from 20 to 22 May 2012, at the invitation of the Bulgarian Authorities.

The International Conference on “Water Management in Central and Eastern Europe: Problems and Challenges”, was organized within the “Green Week”, which, this year, had “Water” as a theme with the motto “Every drop counts”.

This event emphasized the actions and activities developed by CEENBO during this 10-year period, the most important being:

- Warsaw, Poland, July 2002 - Workshop on “Impact and pressures”;
- Calimanesti, Romania, November 2002 - Workshop on “Delineation of surface Water Bodies - Designation of Heavily Modified Water Bodies”;
- Tulcea, Romania, September 2003 - Workshop on “Characterization of river basin districts: steps and procedures, case studies. Specific aspects of wetlands”;
- Bucharest, Romania, June 2006; Workshop on “Good Ecological Status”;
- Sibiu, Romania, October 2008 - CEENBO Liaison Bureau jointly with the plenary meeting of EUROPE-INBO, 196 participants;
- Paris, France, European Water Directors Meeting, November 2008; INBO paper on WFD contribution in transboundary basins;
- Plovdiv, Bulgaria, March 2011 - CEENBO Liaison Bureau meeting jointly convened with the Conference on Integrated Water Management in the Balkans and Eastern Europe, 120 participants;
- Ljubljana, Slovenia, November 2011, participation in the International Seminar “Forging Targets and Solutions for Rivers and Water Ecosystem Restoration”, organized by the European Center for River Restoration (ECRR) and the Water Institute from Slovenia (lčVRS).

INBO Regional Networks are a bridge for dialogue, cooperative action and exchange of know-how and experience in the water management field.

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1st Water Conference

Provincial challenges and international exchanges

On 23, 24 and 25 May 2012, the Regrouping of the River Basin Organizations of Quebec (ROBVQ) and its partners organized the first Water Conference. Some 160 representatives from River Basin Organizations (RBOs) and their partners attended the event addressing current issues related to water in Quebec and Integrated Water Resources Management (IWRM) worldwide.

International exchanges

The first day of the Water Conference was organized in collaboration with the North American Network of Basin Organizations (NANBO) and aimed to initiate international exchanges on water management. A first block of the day dealt with the topic “integrated management of the Great Lakes and St. Lawrence Basin”, while the second part of the day explored different approaches to IWRM worldwide.

Signing of the World Pact for better basin management

About twenty River Basin Organizations of Quebec, Ontario, the United States and Mexico took advantage of this event to add themselves to the list of the seven Quebec organizations which had already signed the World Pact for better basin management during the World Water Forum in Marseilles in March 2012. This signing ceremony was attended by Mr. Jean-François Donzier, INBO Permanent Technical Secretary and Mr. Pierre Arcand, then Minister of Sustainable Development, Environment and Parks of Quebec.

Provincial challenges

The other two days of the Water Conference addressed major current water management challenges in Quebec. Collaboration with “Nature Quebec” allowed dealing with water challenges in the Northern Territory, including hydropower development, the establishment of protected areas, ecological land planning and protection of wetlands.

The issues of oil and gas exploration and exploitation were discussed between representatives of the Quebec Government, industry and community groups.

The role of young people in water management and the tools available to mobilize them were discussed, together with the Dialogue Panel of the Regional Youth Forums of Quebec.

In addition, the topic of public health, and more specifically the problems of drinking water supply, cyanobacteria proliferation and contamination of recreational waters, were discussed, with the collaboration of the National Institute for Public Health of Quebec.

The issue of adaptation to climate change, particularly in terms of resilience, was discussed with the University-Community Research Alliance on the challenge of coastal communities.

Finally, the principles of sustainable forest and ecosystem development were dealt with in collaboration with the Hydro-Quebec Institute for Environment, Development and Society.

The “RBOs’ Meeting” was made possible thanks to support from the Ministry of Sustainable Development, Environment and Parks (MDDEP), Desjardins, Bionest and the Quebec Metropolitan Community.

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A platform on climate change adaptation in transboundary basins

Following the adoption of the Guidance on Water and Adaptation to Climate Change in November 2009, Parties to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes decided to foster the implementation of a program of pilot projects and a platform for the exchange of experience to support countries in their efforts to develop adaptation strategies by disseminating positive examples showing benefits of and mechanisms for transboundary cooperation.

The program includes pilot projects in Eastern Europe, Caucasus, Central Asia and South-Eastern Europe, which are directly supported by the UNECE Secretariat in cooperation with partner organizations under the Environment and Security Initiative (ENVSEC)- such as the projects on the Chu Talas, Dniester, Neman and Sava - as well as other ongoing projects on the Rhine, Danube, Meuse and Amur/Argun.

The third workshop on water and adaptation to climate change in transboundary basins: “Making adaptation work”, which took place in Geneva on 25-26 April 2012, was the latest in a series of workshops organized within this framework. The global workshop concluded that:

- more severe water scarcity situations are expected, even in regions previously considered as water-abundant.
- vulnerability should be seen as an opportunity towards better organizing water management.
- ecosystem-based adaptation often has indirect benefits, such as improving the livelihoods of people, and is therefore relatively cheap and cost-effective.

A study was presented in which it was estimated that the benefits of adaptation can be 4 times higher than the costs.

The full conclusions from the workshop are available on the web.

The Water Convention is expected to open up in 2013 for countries outside the UNECE region.

UN ECE and INBO aim to transform the program of pilot projects into a true global platform of basins devoted to sharing experiences, comparing different methodologies for adapting to climate change and fostering a shared vision between the participating basins, as a follow-up to the commitments made during the sixth World Water Forum.

Several transboundary basins from outside the UNECE region, such as the Mekong, the Senegal or the Congo, as well as national river basins, already expressed interest in joining the network.

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Brazil

A Water Integration Debate at Rio+20

The State of São Paulo was the pioneer with a water resources management policy in 1991, inspired from the French water management model. In the Piracicaba, Capivari and Jundiaí River Basins (PCJ Basins), all the instruments set forth in the São Paulo State and Federal Government laws of 1997 have been applied: Water Resources Management Plan, water bodies classification, Water Information System, concessions for the use of water resources and taxes for the use of water.

The implementation of taxes achieved several positive results, including the reduction by 40% of water abstractions.

The PCJ Basins are responsible for supplying water to 14.5 million inhabitants, including nine million from São Paulo Capital City and the main industrial complexes of Brazil.

As the PCJ Basins Rivers cross more than one State of the Federation, three basin committees had to be created, operating by integrated means, with joint deliberations and shared actions.

During low-water periods, supply has been provided thanks to efficient water resources management, by reserving back-up volumes in regulating reservoirs (Cantareira System) which also work as a flood mitigation system.

During Rio+20, the UN Conference on Sustainable Development, a special panel named “International Cooperação as a tool for searching water solutions” was organized by the PCJ Consortium and was attended by several Brazilian States.

The Secretary of the International Network of Basin Organizations (INBO), Jean-François Donzier, presented the experience and good practices of INBO members.

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Events 2012

RIO + 20

Can you better manage water resources by disregarding the reality of river basins?

Under the “Special Consultative Status” of the UN Economic and Social Council (ECOSOC), which it obtained in 2007, the International Network of Basin Organizations (INBO) was accredited to participate with “Major Groups” in the RIO+20 International Conference, held from 13 to 22 June 2012 in Rio de Janeiro - Brazil.

With the participation of 191 UN Member Countries represented by their Heads of State or of Government and their Ministers, RIO+20 was a great event for all those who campaign for more sustainable development, and who came in great number to support the emergence of new ambitious agreements in this direction ...

Everyone and the official delegations were disappointed with the final declaration pompously entitled “The World We Want”, as in times of economic crisis and in spite of the efforts of hundreds delegations, especially of the European Union, many governments have opposed to new constraints, reaffirming the primacy of national sovereignty ... The Diplomats, to achieve unanimity on the text, had to settle for a declaration with no real new progress and without firm commitments and a specific timetable.

Except, perhaps, on the protection of the ozone layer, they were able to agree only on the fact that almost none of the targets set in Rio in 1992 had actually been achieved, despite some progresses which are too individual. Management of freshwater resources and access to drinking water and sanitation were the subject of a small chapter, for which it was necessary to fight hard, and quotes were made here and there when agricultural irrigation, floods or drought were mentioned: it’s better than nothing and something at least!

Besides the official international slackness, the civil society, in all its forms, has shown its vitality and ambitions in speaking in all the spaces that were reserved or open to it.

INBO, and IOWater, which takes care of the former’s World Secretariat, were able to bring their vision of modern management of local, national and transboundary river basins, as it is now applied in more than seventy countries, on the occasion of various events giving it high visibility:

- The round table, as a “TV Talk Show”, organized by the French Water Partnership (FWP) at the French Pavilion, which had asked IOWater to act as a facilitator, presented the experiences of the Lake Chad, Mekong and Scheldt Basins, of Brazil, New Caledonia, Turkey and France (Artois-Picardy), and the viewpoint of large operators such as “EDF” or “IRD”;

- The “Water Dialogue”, for which INBO representatives had been selected under the “Major Groups” and which finally passed a proposal calling on governments “to develop plans for integrated management and efficient use of water resources to guarantee their sustainable use, at all levels, as appropriate”. Figure it why, in an International Conference, just writing “basin” is still taboo?!

- The “Water Day” organized by UN Water “Recognizing Progress, Taking Action for the Future We Want”, June 19, 2012, ... to which INBO was officially invited to present its experience in transboundary water management and its recommendations, during a round table chaired by the Directors General of WMO, UNESCO and UNECE, in the presence of the President of the Republic of Tajikistan, followed the Preparatory Conference held in Dushanbe in November 2011;

- The seminar of the elected representatives and partners of the PCJ Inter-municipal Consortium of the State of Sao Paulo in Brazil, which together with REBOB takes care of the secretariat of the Latin American Network of Basin Organizations (LANBO), which organized this official event on basin management under the Brazilian Federal Law of 1997 on the occasion of the Rio + 20 Conference.

On Monday 16 June at the French Pavilion, representatives of “Green Cross International”, LANBO, REBOB (Brazilian Network of Basin Organizations), Brazilian Basin Committees of the PCJ and Sao Joao Lagos officially signed “the World Pact for better river basin management”, initiated at the Marseilles Forum, in the presence of INBO Secretary General, thus increasing the number of signatories of the pact, which is to date over 128.

Water is at the core of sustainable development. It is the common denominator of all major global challenges: health, food, energy, inland navigation, peace, security, poverty eradication ... RIO+20 has finally given it an official place in the strategies of the United Nations ... but still far too small, given the stakes!!!
The workshop “Tools to support and improve Integrated Water Resources Management: STRATEAU and AQUATOOL – A Mediterranean Perspective” was organized on the 20th of September 2012 in Valencia (Spain) by the Mediterranean Network of Basin Organizations (MENBO) and the Technical University of Valencia (UPV) in collaboration with the Water Embassy and support from the Global Water Partnership Mediterranean (GWP - Med).

This event brought together more than 50 experts from the Mediterranean region and it mainly focused on two tools that support integrated water resources management: AQUATOOL and STRATEAU, developed respectively by the Technical University of Valencia (Spain) and the Water Embassy (France). Both tools may be used in a complementary way.

Three round tables have been organized on:
- Perspectives for the application of the decision-making supporting tools;
- Integrated water resources management in education;
- Integrated water management tools in the Mediterranean region.

As a final result, the participants underlined that the implementation of simulation tools like AQUATOOL and STRATEAU is an important support for water managers.

All papers and results of the workshop can be found on the MENBO website.

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9th INBO World General Assembly
Fortaleza - Brazil - 12 - 16 August 2013

"For better river basin management over the World"

- **Tuesday 13 August 2013**
  - 19:30 OFFICIAL OPENING CEREMONY - WELCOMING COCKTAIL

- **Wednesday 14 August 2013**
  - 09:00 Presentation of water issues in Brazil and over the World
  - 11:00 First topical round table: Water management, first priority of the UN Sustainable Development Goals.
  - 14:30 First statutory session of INBO General Assembly
  - 16:45 Second topical round table: Adaptation to the effects of climate change and prevention of extreme phenomena of floods and droughts.
  - 20:30 Evening of the Senegal River (to be confirmed)

- **Thursday 15 August 2013**
  - 08:45 Third topical round table: Institutional frameworks for action of the Basin Organizations and participation of local authorities, water users and the public, role of the basin committees.
  - 11:00 Fourth topical round table: Management of transboundary rivers, lakes and aquifers.
  - 14:45 Fifth topical round table: Financing of water management and of basin organizations.
  - 16:45 Forum of International Cooperation Organizations
  - 17:45 Second statutory session of INBO General Assembly
    - Fortaleza Declaration
    - Final resolutions
  - 18:30 Closing of the General Assembly
  - 20:30 Cocktail and cultural events

- **Friday 16 August 2013**
  - 07:00 THIRD OFFICIAL DAY
    - Technical Visit
Chile is encountering serious problems in water resources management: increased water shortages in the North due to climate change, high loss of freshwater to the sea, lack of river basin management and of long-term planning tools for infrastructure development, limitation of rights of use, etc.

Faced with these challenges, the National Irrigation Commission (CNR) of the Ministry of Agriculture and the Latin American Association for Hydrogeology Development (ALHSUD), in collaboration with GWP-Chile, the Center for Research and Water Resources Development (CIDERH), the Corporación Minera de Coquimbo (Coquimbo mining corporation - CORMINCO), the Association for Irrigation and Drainage (AGRYD) and the Water Center for Agriculture (CAA) organized on 27 October 2012, the “Second International Summit on Water” (2ª cumbre internacional del agua), with conferences held simultaneously in five cities of the country and transmitted by videoconference.

INBO Secretariat, made an opening speech in Santiago, Chile, on the topic “How to improve data management to strengthen water resources management”.

The main topic of this event which was held in Zhengzhou (China) at the invitation of the Yellow River Conservancy Commission (YRCC) was: “Ensuring Water Right of the River’s Demand and Healthy River Basin Maintenance”. This topic was addressed as follows:

- Efficient management of river basins and water resources in relation to social and economic development;
- Access to water through a strategy and measures to maintain the “Good Status” of the river;
- Sound and effective water resources management in the basin;
- Measures for adaptation and water resources management in river basins in the context of global climate change;
- Ecological protection and sustainable use of water in river basins;
- Structural and non-structural measures related to new technologies to ensure access to the river;
- Advanced technologies for safety, transfer and water saving, and for monitoring equipment;
- Culture and civilization throughout the history of exploitation of the river;
- Management of sediment and reservoirs with high silt content;
- Experience and new technologies for water resource management.

The International Network of Basin Organizations - INBO was invited to organize two special events at the Forum dealing with:

- Integrated Basin Management;
- Organization of a dialogue and users’ participation.

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All information is available on the Web

www.inbo-news.org

1 Million visitors in 2012
River basin management is truly the most appropriate way to manage water resources, allowing more consistency between the different sectors, including between water, energy, agriculture, and food and inland navigation and better integration between land management and water resources management to cope with present and future challenges, including those related to global change.

Despite progress made, the WFD which resolutely adopts this approach in the European Union, as well as its “Daughter Directives” or the basic measures of its annex A, must improve their articulation with the “Floods”, “Marine Waters”, “Renewable Energy” Directives, with the Common Agricultural Policy (CAP) and the official aid system. Similarly, coordination is needed between different administrative services, sometimes located in different ministries, which implement them, e.g. between the services that manage floods and drought plans and those which are directly in charge of implementing the WFD.

The evaluation policy (fitness check) implemented by the European Commission (which resulted in the publication of a “Blueprint” at the end of November 2012), already shows several areas for improvement: the need to reduce water demand by integrating efficiency requirements in the various water uses especially in buildings (public and private, apartment blocks or houses, industry) and agriculture, better regulations on drought and flood control, by strengthening the link between water planning and land use planning in particular, the clear definition of the cost recovery principle and the wider use of economic instruments, improving availability of quality information on water resources, especially when uncertainty increases.

The participants in the “EUROPE-INBO 2012” Conference consider that, at this stage, it is advisable to make efforts primarily on the application of the current water legislation and not to produce a new legislation.

Better cross-sectoral integration must necessarily be sought for to achieve sustainable water resources management in the future, especially with the Common Agricultural Policy, regional policy, renewable energy and inland navigation policies, and with land use, while also taking into account the need to adapt to climate change.

It seems necessary to find a balance that allows both effective implementation of the Water Framework Directive and compliance with the objectives of renewable energy production that Europe has set and the objectives of the CAP.
Discussions on adaptation to global changes, especially climate change, should be introduced as soon as possible for preparing the second phase of River Basin Management Plans (RMBPs) 2015-2021 especially for analyzing their effects and vulnerability and for defining adaptation measures to be recommended in a context of uncertainty. Within such a framework, the choice of appropriate indicators to assess the “water Footprint” of the different uses and improve efficiency in relation to water scarcity is fundamental.

It is also necessary to develop new approaches to river restoration and protection of water ecosystems, by passing from a point approach to large-scale restoration projects, articulated with different multi-purpose planning mechanisms on appropriate scales. To do this, we need to promote the sharing of information, expertise and best practices, as well as improving knowledge through appropriate actions in R&D, hydromorphology and restoration of rivers and wetlands.

Water governance in transboundary basins should be improved especially in the “International Districts” created for the EU-WFD implementation, which requires cooperation agreements signed by riparian countries to establish the conditions for appropriate governance, based on mutual confidence, common understanding of the basin problems, on available and shared accurate data and analysis and with the involvement of stakeholders.

The role and means of the International Commissions for transboundary rivers, either existing or being established, should be strengthened to enable effective WFD implementation in the concerned EU countries.

To cope with the challenges related to global change (climate and socio-economy) and to the prevention of extreme phenomena, it is necessary to integrate adaptation to these changes in the key steps of the drafting of River Basin Management Plans, taking care to introduce an uncertainty logic to define sufficiently flexible measures. Policies should be adaptive enough to allow progressive adaptation and basin experiments involved in such a process should encourage the building of new institutional and individual capacities that are required.

The WFD can be used as a toolbox for addressing adaptation to climate change in areas at risk, to reduce the impacts of droughts and flood risks. Regarding the economic analysis, it is necessary to improve knowledge on how subsidies were considered in the RBMPs and to clearly define cost recovery.

The assessment of Environmental and Resource costs requires better methodology and data availability while the economic approach to ecosystem services is to be strengthened.

Monitoring and information systems should be strengthened and adapted to the objectives to be achieved and better compared between Member States, but the issue of their investment and operation costs arises in many situations.

The high cost of implementing the WFD and “daughter” directives raises a problem, in the context of an economic and budgetary crisis, to achieve the set-out ambitious goals on schedule.

The goals of controlling non-point pollution and restoring degraded water ecosystems may not be achieved for many Water Bodies in any case for the 2015 or even later deadlines.

New measures will be required implying additional means which are not currently planned or have been pushed back to the end of the 2021 - 2027 period.

Finally, the involvement of stakeholders and the public is crucial to improve water resources management, their early information and participation in the decision-making processes should be further increased.

Appropriation by all decision-makers and users of the water-related policies and of the resulting measures is essential for progress and effectiveness of undertaken actions.

Recognizing, on the one hand, the interest of the WFD principles and methods for other regions of the world, and on the other, the sharing of some transboundary water bodies with neighbouring countries of the EU, community cooperation with Partner Countries from the Mediterranean, the Balkans and Eastern Europe, Caucasus and Central Asia is to be pursued and increased.

In particular, this cooperation should primarily focus on topics for dialogue and transboundary surface and groundwater management with the support of regional institutions, for strengthening national information systems and their harmonization with international reporting mechanisms, for training managers or planners of water resources and for the participation of users, local authorities and associations.
The African continent has many trans-boundary river basins, which cover 64% of the surface area of Africa and concern a little more than 93% of its surface water.

In 2006, the African Ministers' Council on Water (AMCOW) designated the African Network of Basin Organizations (ANBO) as a platform for a common approach to transboundary water management in Africa.

The European Commission decided to support a ‘SITWA’ project to increase regional cooperation for sustainable management of transboundary water resources in Africa, through the institutional strengthening of ANBO.

On 13 and 14 December 2012, the Coordination Office of ANBO, representatives of AMCOW and the Regional Water Partners (RWP) of the five regions of Africa, the Global Water Partnership Organization (GWPO), the International Network of Basin Organizations (INBO), the World Bank (WB) and several European bilateral cooperation bodies, met in Dakar, at the home office of the Organization for the Development of the Senegal River (OMVS), which takes care of ANBO Permanent Technical Secretariat.

The main objective of the workshop was to discuss and validate the action plan for the first year (October 2012 - October 2013) of this project for Institutional Strengthening of Transboundary Water Management Institutions in Africa (SITWA) and define the priority work areas of this plan.

A two-year implementation phase will be considered afterwards, according to the results of the first year of operation.

www.anbo-raob.org
**Events 2013**

**Lebanon**

**4th Beirut Water Week**

Technology and financing mechanisms for IWRM to complete water-related diplomacy and efforts to adapt to climate change

At the initiative of the Mediterranean Network of Basin Organizations (MENBO) and within the 4th Beirut Water Week, a conference on the development of a new strategy for water in the Mediterranean and Middle East took place from 20 to 22 February 2013 at the University of Notre Dame Louaizé (Lebanon).

The countries of this region cannot indeed achieve sustainable development, both human and economic, social stability and environmental protection without appropriate governance of water resources. This involves the application of an integrated water resources management (IWRM) policy under national water laws and precepts of the European Water Framework Directive (WFD).

These issues were discussed during various debates, which focused on the proper tools, both technological (for decision-making support, models and innovative tools, control and risk management systems) and economic (public-private partnership for infrastructure financing) to meet the future challenges: climate change adaptation and preservation of a harmonious use of water resources for the supply of energy and food production.

In addition to an active water-related diplomacy (especially for management of river basins and transboundary aquifers), these elements will make water an instrument for peace rather than a cause of war.

The INBO Permanent Technical Secretary presented the WFD principles and described its implementation process.

He also stressed the importance of a concerted management of transboundary water resources to meet the challenges exacerbated by climate change.

www.remoc.org

**Peru - Bolivia**

**Analysis of the situation of Lake Titicaca Basin**

The Binational Autonomous Authority of the Water System (TDPS – ALT), in coordination with the various institutions involved in the preservation and conservation of the basin in Peru and Bolivia, organized on 7, 8 and 9 March 2013 the “Second International Symposium on 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 generate proposals for 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 took place in Puno, on the shores of Lake Titicaca in Peru, at the National University of Altiplano, and brought together more than three hundred participants.

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

INBO Secretary, Jean-François Donzier, was invited to make the introductory speech to the conference on the topic of the best experiments of basin management worldwide.

www.alt-perubolivia.org
**Asia Europe Meeting - ASEM**

**ASEM is working for the conservation of water resources**

At the initiative of Vietnam, a second meeting took place in Can Tho in the Mekong Delta, from 20 to 23 March 2013, on the topic of water resources and river basin management, in accordance with a green growth program under the chairmanship of the Vietnamese Prime Minister who reminded the importance of water management as a priority of his Government.

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

Thus, new approaches to poverty reduction and food security, more effective measures relating to infrastructure construction, and the establishment of institutions to adapt to climate change were proposed.

Mr. Jean-François Donzier, General Manager of the International Office for Water and INBO Permanent Technical Secretary, made a speech on French and European practices in Basin water management and cooperation actions on this issue carried out in Asia.

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

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**High-level meeting on national drought policies**

**11 - 15 March 2013 - Geneva**

At the instigation of the World Meteorological Organization (WMO), the Secretariat of the United Nations Convention to Combat Desertification (UNCCD) and the United Nations Food and Agriculture Organization (FAO) in collaboration with a number of UN agencies, international and regional organizations as well as key organizations at the national level, a high-level meeting on national drought policies was held in Geneva, from 11 to 15 March 2013.

It was intended to encourage countries to move progressively from a post approach to a risk anticipation policy, as already done for tropical cyclones and floods.

The gathered Experts gave an overview of practical initiatives to address the drought episodes: anticipative mitigation measures and planning, risk management, public awareness and resource management; improved observation networks and systems for disseminating information at the national, regional and global levels; financial strategies and insurance systems to take into account; definition of a safety system for emergency relief, based on good natural resources management and common cause at different levels of governance; effective coordination, focusing on users’ needs, between programs on drought and response measures.

The ultimate goal is to build societies best adapted to the problem.

The INBO Permanent Technical Secretary was invited to speak during the ministerial session. He presented the active contribution of INBO to essential efforts to adapt to water scarcity, thanks to the experience and expertise of its members, and reminded the Network’s will to make this know-how available to all countries and institutions which would like to follow them in an effective approach to river basin management.

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

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**Report of Activities 2010 - 2013**
First meeting of the OECD Initiative on Water Governance

The first meeting of the OECD Initiative on Water Governance was held at the OECD Head Office in Paris on 27 and 28 March 2013. The meeting gathered 75 delegates: representatives of national Governments, regional, local and basin authorities, private sector, NGOs, service providers, regulators, international organizations, donors, independent experts. In total, 25 countries were represented.

The initiative is being developed in partnership with various institutions (International Network of Basin Organizations, International Office for Water, UNESCO, Water Integrity Network, Stockholm International Water Institute and Transparency International).

A Core Group includes 90 Delegates from 25 countries and spearheads of water governance in different regions (Middle East / North Africa, the Americas, Africa, Asia, Europe) and from the OECD and partner networks.

A Chairman will be nominated before the 2nd meeting of the Initiative on 5 and 6 November 2013 in Paris.

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

The Delegates also mentioned the need to share knowledge, encourage peer-learning and allow benchmarking. They also noted the relevance of linking the Initiative with partner networks such as INBO, AMCOW, ADB, GWP, WBCSD, and the UN task forces.

Given that water is a cross-cutting issue, the importance of involving stakeholders outside the water community was reminded. The Initiative must reach out to a wider public: representatives of the energy sector, Parliamentarians and Elected Officials, media, consumer groups, unions, and the private sector (agro-food companies, leisure businesses) and the civil society at large, etc.

INBO and UNESCO will jointly facilitate the working group dedicated to the governance of river basins and groundwater.

www.oecd.org

Quebec

2nd Water Conference in Quebec

From 27 to 29 May 2013, a 2nd Water Conference took place, jointly organized by the Regrouping of the River Basin Organizations of Quebec (ROBVQ) and the North American Network of Basin Organizations (NANBO).

This meeting gathered 170 partners involved in integrated water management in Quebec and initiated exchanges on topical issues related to water.

The ROBVQ and NANBO Partners facilitated work sessions on the four priority issues in Quebec: conservation and development of wetlands, protection of drinking water supply sources, participation of the First Nations in integrated water management and regional planning, and safety from floods.

The ROBVQ has signed an agreement with "Ducks Unlimited", an association involved in wetland conservation, which will allow both organizations to join forces in the conservation and management of wetlands in Quebec. Through this collaboration, the RBQs will, among other things, improve their knowledge of wetlands and better integrate their challenges into the Water Master Plans (WMP).

The ROBVQ also signed a new partnership agreement with the French Association of Public Local Basin Institutions (AFEPTB), which seeks to formalize the exchange of experiences between the River Basin Organizations of Quebec and French Public Local Basin Institutions (EPTB).

www.robvq.qc.ca
At the invitation of the General Directorate for Water Management of the Turkish Ministry of Water and Forestry, the second high-level international symposium on river basin management was held from 16 to 18 April 2013 in Nevsehir (Cappadocia, Turkey).

It gathered representatives of the European Commission, EU member countries (Spain, Greece, Bulgaria, Portugal, Netherlands, France, Hungary, Croatia) and experts from institutions and Non-Governmental Organizations, including INBO.

Professor Ahmet Mele Saatçi, President of the Turkish Water Institute and President of Europe-INBO, opened the debate, while Mr. Jean-François Donzier, INBO Permanent Technical Secretary, presented INBO organization and actions, in perfect keeping with the theme of the symposium.

The first day was used to report on the evolution of the water sector in Turkey and on the work done in the field of river basin management.

In particular, cooperation between Turkey, Bulgaria and Greece on the IPA project (Strengthening resilience to disasters in the Balkans and Turkey) was presented.

The second day was devoted to presentations of practices and experiments in the different represented countries in river basin management, including the drafting of river basin management plans, how to overcome the problems, the difficulties in the implementation of the cost recovery principle, the implementation of the European Blueprint and its consequences, etc.

The third day was devoted to technical visits (Kayseri WWTP and Yamula Dam).

www.suyonetimi.gov.tr

9th INBO World General Assembly
Fortaleza - Brazil - 12 - 16 August 2013

"For better river basin management over the World"

► Tuesday 13 August 2013
19.30 OFFICIAL OPENING CEREMONY - WELCOMING COCKTAIL

FIRST OFFICIAL DAY

09.00 Presentation of water issues in Brazil and over the World
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  ● Fortaleza Declaration ● Final resolutions
18.30 Closing of the General Assembly
20.30 Cocktail and cultural events

► Thursday 15 August 2013
07.00 THIRD OFFICIAL DAY

08.45 Technical Visit
Inbo Action Plan

For developing and strengthening river basin organizations

Four main outputs are expected

The goal of the "INBO Action Plan" is to support all initiatives for the organization of Integrated Water Resource Management at the river basin, lake and aquifer level, whether national or transboundary. It also aims to develop many experiments to reconcile economic growth, social equity, environmental conservation, water protection and participation of the Civil Society.

**Output 1**
L’organisation de jumelages entre les Organismes de Bassin

Proposed services:
- Direct exchanges of experiences between twin basin organizations.
- "TWINBASIN" Project

**Output 2**
Mobilization of professional support capacities of Basin Organizations

Proposed services:
- Assistance with the implementation of institutional reforms,
- Initiation of pilot projects,
- Support to several countries sharing a transboundary river basin,
- Design of monitoring networks and databases,
- Assisting new basin organizations with the setting-up of technical teams,
- Establishment of institutional mechanisms for the water users’ participation in decision-making and activities of Basin Organizations,
- Financial simulation,
- Audits, ...

**Output 3**
Synthesis and dissemination of available knowledge and know-how

Proposed services:
- Assessing the performance of the different systems,
- Contributing to the improvement of knowledge and know-how in the area of Basin Organizations and IWRM,
- Making available a set of common performance indicators,
- Training to good practices.
- "IWRM.NET"
- "WFD COMMUNITY"
- "KEY PERFORMANCE INDICATORS"

**Output 4**
The networking of water documentation systems

Proposed services:
- Exchange of information, documentation and data, definition of common standards,
- Assistance with the structuring of Documentation Centers and Databases in each country concerned,
- Dissemination of information to professionals and decision-makers.
- AWIS
- EMWIS

INBO: 188 full Members or permanent observers in 71 countries
Guinea, Mali, Mauritania and Senegal, meeting within the Organization for the Development of the Senegal River (OMVS), decided, with funding from the European Union, AFD and the World Bank, to draft a Master Plan for Water Development and Management of the river (SDAGE), to establish basic guidelines and a precise action plan to give a coherent framework for development activities, while protecting the water resources and environments. The deadline for thought was set at 2025.

The aim of the OMVS was to create a comprehensive vision of the Senegal River Basin development, including, for the first time so significantly, the various sectoral targets - sometimes conflicting - such as hydropower, navigation, development of drinking water and sanitation, transport, rural development, mining and industry, based on a detailed analysis of the basin water resources and ecosystems that depend on them.

It is necessary to avoid overexploitation of natural resources and environments, allowing their effective, equitable and sustainable management, while permitting the development of human activities in the Basin.

The SDAGE is based on a basin characterization validated in 2009, a true knowledge base shared by all stakeholders, partly relying on a rich bibliography of studies commissioned by OMVS, governments or institutional partners, and secondly on meetings held in each country with water stakeholders.

Seven sectoral programs, illustrating the land use policies of OMVS Member States, were prepared and validated in 2010: they helped establish the minimal conditions for water management to be respected from a quantitative and qualitative viewpoint.

To adopt an optimal scenario for 2025, OMVS has implemented a tool for modeling the impact on water resources of the hydraulic works planned in the basin.

The outputs of this model have allowed defining trends and assessing the positive and negative impacts of basin management options and choices of management procedures. This optimal scenario is accompanied by an action plan articulated around 6 basic guidelines, with a cost of 280 billion CFA francs for the 2011-2025 period.

This development scenario and the Program of Measures have been validated by the various stakeholders concerned in a regional workshop held in February 2011.

OMVS adopted the SDAGE and shared it on the regulatory front with the four Member States.

OMVS plans to develop the SDAGE in the various territories included in the river basin, through Master Plans in sub-basins.
Example of our World President’s river basin

Organization for the Development of the Senegal River (OMVS)

A participatory approach in drafting the SDAGE

The Master Plan for Water Development and Management of the Senegal River (SDAGE) is the document that guides the mobilization of water resources while integrating climate change and limiting impacts on the natural environment.

It allows establishing a comprehensive vision of the development of the Senegal River Basin by integrating various sectoral objectives.

OMVS has wished to associate all categories of stakeholders, involved in water resources development in the basin, to the SDAGE development process.

This approach better enhances the Local Coordination Committees (LCC).

For a wide dissemination of the SDAGE content to all the stakeholders, it was necessary to mobilize field facilitators, who would support the LCCs.

The implementation of this participatory process includes:
- The recruitment of 33 facilitators who speak the local languages and know the relationships in the area covered by each LCC;
- The formulation of messages to be disseminated;
- The development of communication tools (picture boxes, community radio broadcasts, leaflets...);
- The training of facilitators to use these tools and in their field work;
- The feedback of field work and stakeholders’ responses to the LCCs.

Management Chart for the Resources of the Senegal River

Since its creation in 1972, OMVS has participated in the economic and cultural development of Guinea, Mali, Mauritania and Senegal, through joint exploitation of water resources of the Senegal River Basin.

The basin water balance is changing due to:
- increase in water consumption,
- changing of priorities between uses (hydropower, etc.),
- emergence of new environmental constraints,
- evolution of natural hydraulics in the basin.

We also noted a downward trend of the natural inputs, observed over the last fifty years in the basin. Will it continue in a context of global climate change and with what effects?

Faced with such a situation, OMVS wanted to have a monitoring tool, the Resources Management Chart (RMC).

The tool allows:
- Monitoring and knowing the hydrological status of the basin, by centralizing information regarding water resources, climate parameters and uses in the basin.
- Understanding the observed phenomena, by establishing volume balances explaining, in retrospect, the distribution of the resource.
- Operational decision-making support: the RMC proposes water allocations for each use which are compatible with the resource as well as a forecast of water releases in the coming seasons.
- Evaluation of actions carried out: collected data are used as indicators for evaluation in particular by comparison between predicted and achieved values in water balances.

A renovated Documentation Center and a new website

Thanks to this investment, OMVS provides the general public, researchers, students and stakeholders in the water sector, with a modern documentation center on the Senegal River Basin, equipped with the latest technologies for the processing and consultation of information resources.

With the portal www.portailomvs.org/cda, scientific and technical data on the basin are now available for the whole world, and staffs of the OMVS system can access and share internally information resources recorded in databases.

In a next step, the DAC is to become an African Water Training and Documentation Center, with the support of strategic partners such as the International Office for Water, INBO Secretariat, and the French Adour-Garonne Water Agency.
Target 1: Twinning arrangements between basin organizations

Congo-Ubangi-Sangha - Lake Chad

Cooperation between two large African River Basins (CICOS·LCBC)

The International Commission of Congo-Ubangi-Sangha Basin (CICOS) and the Lake Chad Basin Commission (LCBC) are belonging to the same geographical region of Central Africa. Mr. Simon SAKIBEDE, Secretary General of "CICOS", received his counterpart Mr. Sanusi Imran Abdoulaye, Executive Secretary of LCBC, in Kinshasa on Tuesday, July 12, 2011, to reactivate the cooperation between their two institutions.

For over three decades, Lake Chad has suffered from severe drying up. Its surface area decreased from 25,000 km² in 1970 to 2,500 km² in 2000.

The Congo Basin, considered the second freshwater reservoir in the world with a surface area of 3,822,000 Km² is not spared by climate change with as result recurrent low flows that threaten the inter-state waterways transport in the sub-region. The Ubangi, one of its main tributaries, saw its navigability decrease from 12 months to 6 months in less than 20 years.

To address the environmental consequences and threats posed by the drying up of Lake Chad on the survival of the populations of the sub-region, the LCBC countries thought, several years ago, to transfer part of the Ubangi water to Lake Chad.

With studies which have been initiated for several years, this project is a common obstacle between the two sister Commissions, who since 2006 have decided to join forces through a Memorandum of Understanding to jointly follow up this difficult issue.

Loire-Brittany - Nakanbé

Nakanbé River Basin

Support from the Loire-Brittany Water Agency to the Nakanbé Water Agency (NWA)

The Cooperation Agreement between the two Agencies was signed in 2010 for developing joint actions in Integrated Water Resources Management and decentralized cooperation under a 2012-2013 Action Program developed in late 2011.

The project focuses on three essential pillars of IWRM on the Nakanbé basin scale:

- Consolidating governance and planning of water resources management in the basin;
- Improving water data management at the basin and national levels;
- Studying sustainable financing mechanisms through the application of the user-pays and polluter-pays principles.

The various activities undertaken in 2012 allowed:

- Participation of the NWA in the 6th World Water Forum in Marseille;
- A Kick-off Seminar and focus on the Nakanbé Master Plan for Water Development and Management;
- Participation in a meeting of NWA partners;
- Training on data management;
- Participation in the Forum of Local Water Committees of the NWA.
Donghu Lake restoration project in Wuhan

As part of the agreement signed in September 2010 between the Wuhan Water Authority and the French Adour-Garonne Water Agency, a mission was carried out from 9 to 17 June 2011 by Jean-Pierre Rebillard from the Adour-Garonne Water Agency, Alain Dutartre from Cemagref Bordeaux and Alain Daut from Ecolab, University Toulouse III. It dealt with Donghu Lake recovery of its quality to allow for aquatic recreational activities.

This expert mission focused on five points:
- Techniques for sampling and analysis;
- Indicators for monitoring and assessing the aquatic environment of the lakes;
- The data pattern to be set up;
- Techniques for water quality restoration;
- Evaluation and monitoring to assess the impact of any restoration operation (management of aquatic plants and sediments, etc.).

This lake, which has for a long time received wastewater from nearby urban and industrial areas, saw its water quality deteriorate and has a large amount of sediments rich in organic matter and nutrients.

One of the projects presented by the Wuhan Water Authority to improve lake quality involved pumping water from the Yangtze River (40 m³/s) for diluting the nutrients found in the lake waters.

Brazil - France

Technical cooperation: Loire-Brittany Water Agency, Piracicaba-Capivari Jundiaí Basin Organization (PCJ)

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

- Comparison of the Brazilian Water Resources Management System with WFD

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

- Water resources planning

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

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

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

- Financing of water resources management

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

The results obtained in this project will be presented in a side event at the 6th World Water Forum of Marseilles in 2012.

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**INBO Action Plan n° 1**

**France - Quebec**

**Twinning between the Charente and Richelieu Rivers**

The “Twinning Charter of the Charente River and Richelieu River Basins” is the founder act of the cooperation between cousins from both sides of the Atlantic.

This cooperation between the Charente Public Basin Body (EPTB) and the Committee for Dialogue and Development of the Richelieu River Basin (COVABAR) dealt with the link between regional planning and water management, a central issue for both the EPTB Charente, under the Water Development and Management Scheme (SAGE) of the Charente Basin, and COVABAR, in charge of drafting the Water Master Plan (WMP) of the Richelieu Basin and of the Richelieu/St. Lawrence Management Area.

Having better joint planning documents in the fields of water and urban planning is a challenge as well as the importance of marshes and watercourses in the development and structuring of the territory.

The concept of “water territory” and different levels of competence and responsibility is central.

Emphasis was given on the need to integrate water into all the regional planning policies and to have a competent operator on the appropriate scale such as an EPTB or basin organization.

Finally, as we are all water stakeholders, citizen involvement was a major issue.

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**Rhone-Mediterranean & Corsica**

**Dynamic international cooperation**

In line with the orientations of French foreign policy and of the LEMA, the French Rhone-Mediterranean & Corsica Water Agency is conducting international cooperation activities in its areas of expertise, pollution control and water resources conservation.

It operates in two ways that are mutually enriching on the same priority areas:

- Providing expertise through technical and institutional collaboration;
- Financial support to projects carried out by public or private authorities in the Rhone-Mediterranean and Corsica basins, or French NGOs.

The Agency focuses its action on areas located:

- In French-speaking Africa (Burkina Faso, Morocco, Niger, Senegal, Chad) and Madagascar;
- In Haiti.

**www.eaurmc.fr**

On the occasion of the World Water Forum in Marseilles in March 2012, the French Basin Organizations committed themselves to increase to the maximum the legal amount of 1% of their budget for their cooperation activities with LDCs and multiply by two their twinning arrangements with foreign river basins.

The Departmental Water Offices of French Overseas Departments are committed to creating a Network of Basin Islands, to integrate into the development concepts the insular nature and specificity linked to the smallness of the territory and the strong bond between inland waters and coastal waters, including coral lagoons.

**www.jumelage-charente-richelieu.net**

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### IN BULGARIA
On 20 April in Blagoevgrad (Bulgaria), Messrs. Radoslav Georgiev, Director of the West Aegean Basin Directorate and Marc Abadie, General Director of the Adour-Garonne Water Agency, signed a three-year partnership between their two institutions in the presence of Mrs. Ivelina Vassileva, Deputy Minister for the Environment and Mr. Pierre Augey, Chairman of the Commission on International Relations of the Adour-Garonne Basin Committee.

The West Aegean Basin is that of the Struma River which has its headwaters south of Sofia and receives tributaries from Serbia and the former Republic of Macedonia (FYROM) before joining the Aegean Sea across the northern part of Greece.

In accordance with the wishes expressed by the Bulgarian partners, this partnership agreement consists in sharing experience on three topics related to the implementation of the Water Framework Directive:

- Development, monitoring and updating of the West Aegean Basin Management Plan;
- Restoration of the morphodynamics of rivers and of ecological continuity;
- Economic analysis.

### IN POLAND
To give a new impetus to cooperation between France and Poland in the field of water, a meeting was held on last 7 June in Warsaw with the participation of the Adour-Garonne and Artois-Picardy Water Agencies.

One of the major lines of this cooperation is the problem of flooding.

On this occasion, the Artois-Picardy Water Agency signed a partnership agreement with the Regional Water Management Board in Krakow - RZGW (Upper Vistula).

In 1993, the Adour-Garonne Water Agency had signed a partnership agreement with the Regional Water Management Authority in Warsaw (Middle Vistula), which was renewed on 21 July 2010 for three years.

In October, a videoconference seminar was organized on the implementation of the Nitrates Directive and on the analysis of diffuse pollution pressures.

www.eau-adour-garonne.fr
www.eau-artois-picardie.fr

### Spain - Italy

Twinning between the Júcar and Arno Basin Authorities

The Júcar River Basin Authority (JRBA) has been since 1934 an autonomous organization with a wide experience regarding integrated water resources management gained in several decades.

In past years, the JRBA realized twinning agreements with other river basin organizations from countries in Europe (Greece, Romania and Bulgaria), Central Asia (Uzbekistan) and Africa (Morocco); some of those in the context of the Twinbasin Project (2007), with the support of the Mediterranean Network of Basin Organizations (MENBO).

Following first contacts during the 8th EUROPE-INBO Conference in Mégève (2010), the JRBA has signed a twinning agreement with the Authority of the Arno River Basin (Italy).

The hydrological characteristics of the Arno and Júcar River Basins are similar.

Both river basin organizations collaborated during one year (2011-12), working on the technical aspects of the implementation of the Water Framework and Flood Directives. During the World Water Forum, the JRBA presented a comparative analysis on the state of compliance with the Good Status goals for Water Bodies to be fulfilled by 2015 in several Euro-Mediterranean river basins: Júcar, Duero (Spain), Arno (Italy) and all the French basins.

The experience of the twinning has been satisfying and interesting for the involved parties. Both organizations depending on the national central administration, count on similar management organs and instruments.

However, the methodology used by each country to implement the European directives depends on the internal administrative structure of each Member State, which sometimes made difficult a real comparison of the proposed works during the twinning, especially regarding the economic analysis, cost recovery, program of measures and its financing.

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Success of the institutional twinning for the implementation of the Water Framework Directive and Economic Instruments

The 2-year twinning agreement between the Bulgarian Ministry of Environment and Water and the French Ministry of Ecology and Sustainable Development (MEDDTL) ended in October 2010. This project, financed by the European Commission, was implemented by IOWater and the French Artois-Picardy and Rhone-Mediterranean-Corsica Water Agencies.

On the French side, this twinning mobilized a full-time resident adviser in Sofia, Mr. Arnaud Courtecuisse, and many specialists from the MEDDTL, the 6 Water Agencies, IOWater and BRGM ... a total of about 40 experts, 80 expert’s assignments in Bulgaria and 2 study tours in France.

On the Bulgarian side, this twinning mobilized officials from the Ministry of Environment and Water and the 4 Basin Directorates: Eastern Aegean (Plovdiv), Western Aegean (Blagoevgrad), Danube (Pleven) and Black Sea (Varna). The project had two main objectives:

1. Providing support to the implementation of the Water Framework Directive (WFD) in Bulgaria;
2. Strengthening water policy in Bulgaria through better use of economic instruments.

It was implemented through a large program of institutional assistance and capacity building at different levels:

- at national level, the Bulgarian Ministry and Basin Directorates gathered a Working Group to monitor the project activities and coordinate the drafting of Management Plans in the 4 basins. This Group benefited from training on different aspects of the WFD (presentation of methodologies, practical case studies, and tool for monitoring POMs);

- in each basin, the Basin Committees were associated to the development of the Management Plan and Program of Measures, and since the Urban Waste Water Directive emerged as the main measure, the actions targeted municipal officials responsible for investments in sanitation, with specific workshops and the development of an operational guide for project preparation.

The support to WFD implementation in Bulgaria took place in 3 phases:

- Until December 2009, the European calendar deadline for the publication of Management Plans, support to the development of Programs of Measures for basins, with: analysis of the work of the Basin Directorates; presentation of the methods used in France (to assess the effectiveness of measures, identify and justify the exemptions, address the lack of data ...); consultation with interested parties and the public ...;

- A 2nd phase from January to March 2010, with support to the implementation of reporting directly to the WISE website of the European Commission, which has resulted in a “green card” from the Commission confirming compliance with the WFD timetable by Bulgaria;

- The 3rd phase included support to the effective implementation of planned measures. This last component is particularly important because achieving Good Status by 2015 will depend on the speed with which the concerned contracting authorities (mostly municipalities for networks and wastewater treatment plants) will make the necessary investments in the field.

The strengthening of water policy through the use of economic instruments focused on two components:

- Improving the tax system:
  It aimed to provide support to review the method of calculating the taxes levied by the Basin Directorates and donated to a National Environmental Fund; a gradual increase in the tax amount from the water sector should provide financial support to the WFD Programs of Measures.

Actions on this topic, led by the RM&C Agency, focused on the definition of taxes (pollution parameters, rate ...), on improving the information system and on the process for levying taxes.

- The economic analysis in plans and programs:
  The work carried out under the twinning helped introduce the methods used in France and test them in the field in Bulgaria; it led to:

- A simple tool for calculating the potential increase in water prices, following the implementation of the Programs of Measures,
- A guide on cost recovery in water utilities, dealing with pricing policies and their social acceptability,
- A guide on the economic analysis when preparing Management Plans, its objective is to propose ways of improving the analysis for the next cycle from 2015 onwards,
- A Bulgarian version of ‘Ecowhat’, a training module organized around a role play designed to understand the use of economic analysis in Management Plans.

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The objective of the EU-funded twinning is to harmonize Croatian legislation and its implementation with the EU “acquis” in this area.

The European Directive on hazardous substances requires that these are:
- Prohibited for the most dangerous of them,
- Subject to protection measures and to reduction of discharges for the other substances.

Many activities produce or use hazardous substances and are at the origin of discharges into the environment: industry, agriculture, but also infrastructure, urban facilities, hospitals and medical activities, craftsmanship and even domestic activities.

France and Austria are associated for this European twinning with Croatia.

The immediate challenges of this twinning are knowledge of these products uses, the pollution they create in the country and the implementation of measures planned in the Directive on Hazardous Substances and Water Framework Directive:
- Inventory of substances used and discharged, and their presence in surface waters, groundwater and marine waters,
- Establishment of monitoring networks,
- Implementation of new performing analysis equipment,
- Development of tools and quality procedures to ensure the reliability and representativeness of the results,
- Exploitation of data and exchanges between the different partners.

A substantive action on data management was undertaken with the drafting of a catalogue of data sources of the Water Information System and harmonization of production formats between the Croatian interested parties.

The Croatian institutions, beneficiaries of this project are the Ministry of Agriculture and Croatian Water Company.


On the French and Austrian side, the twinning partners are: the French Ministry of Ecology, Sustainable Development and Energy (MEDDE), the International Office for Water (INBO Permanent Technical Secretariat), the National Institute of Environment and Industrial Risks (INERIS), the National Environment Laboratory (LNE), the Office of Geological and Mining Research (BRGM), the French Water Agencies as well as the Austrian Environment Agency (UBA) and the Austrian Ministry of Agriculture, Environment, Forestry and Water.

In total, about forty French and Austrian experts are involved, in collaboration with their Croatian colleagues to carry out the activities of this project, which receives funding from the European Union for a period of 12 months until mid-2013.

Adopted in 2007, the Floods Directive imposes its timetable that will eventually be synchronized with that of the Water Framework Directive.

Austria, France and the Netherlands won the European twinning agreement with Croatia on the implementation of the Floods Directive.

The 15-month project will especially focus on the mapping of flood risk in priority areas.

The pilot areas are spread over the Black Sea Basin and the Adriatic coastal rivers with specific flood characteristics.
INBO Action Plan n° 1

Egypt

European twinning on water quality: application to Lake Nasser

For 2 years, the Egyptian Ministry of Water Resources and Irrigation has been the beneficiary of this European twinning with Austria, France and Italy. France is coordinating support to the implementation of an IWRM (Integrated Water Resources Management) policy through testing the preparation of a pilot Management Plan for Lake Nasser, using a methodology taking advantage of the fresh experience of the European countries in the implementation of the EU Water Framework Directive.

- The first stage was the collection of information on the different studies undertaken on the lake, such as the Lake Nasser Development Plan that has been used for the calculation of the potential pollution of activities and for building a baseline scenario of the pressures on the quality of the Lake in the future. The project created a web-based catalogue of water data that will be further fed by the Egyptian partners and will be used as a basis for the development of the Water Information System with support from EMWIS (Euro-Mediterranean Water Information System).

- The second step was to undertake an analysis of the different water uses. This sectoral review allowed collecting and modeling the data needed for the development of the different parts of the plan. This analysis was undertaken by IWWM, INBO Permanent Technical Secretariat, for domestic and agricultural water uses, by the Rhine Navigation Commission and Strasbourg Navigation Service for shipping and by INRA for fishing and aquaculture activities.

- An assessment of the Lake Nasser monitoring program and environmental characteristics has been undertaken by the Austrian Environmental Agency and Italian experts.

This study showed that the maintenance of good quality of Lake Nasser waters is possible with carefully controlled urban development. Nevertheless, agriculture and aquaculture development will have to be limited to avoid eutrophication of the lake. When using an approach of calculation of potential polluting flows, attention also could be drawn to the nutrients brought by the upstream activities from Sudan.

Turkey

Three European twinning arrangements on water management

As part of the accession process, the European Union is financing twinning arrangements with Member States to facilitate the implementation of the European Water Framework Directives in Turkey.

Capacity building on water quality monitoring

This twinning on the implementation of the Framework Directive has been carried out by the Netherlands, France and Spain since September 2011.

It aims to support the Turkish Ministry of Forestry and Water in drafting monitoring plans for six pilot river basins and a national monitoring plan.

During the first year of the project, the activities focused on assessing the institutional and methodological gaps that Turkey is still facing on monitoring. In addition, many training courses were carried out in spring/summer 2012 on the various biological quality elements that have to be followed in order to assess the ecological status of rivers and lakes.

Implementation of the Floods Directive

The institutional twinning project on capacity building of the new Water Directorate of the Turkish Ministry of Forestry and Water for implementing the Floods Directive is carried out by France and Romania.

Activities started in August 2012 for two years on the following issues:

- Transposition of the Floods Directive in Turkey and adaptation of the institutional organization;
- Methodological support to the practical implementation of the 3 steps of preparing a Flood Risk Management Plan in the pilot "Bati Karadeniz" river basin flowing into the Black Sea.

Then, dissemination of the experience gained in this pilot basin to the 25 other Turkish river basins is planned;

- Preparation of the National Plan for Implementation of the Floods Directive integrating economic analysis.

Transposition of the Bathing Water Directive

The Turkish Ministry for Health and its new Public Health Agency are the contracting authorities of this twinning agreement awarded to France and Italy.

The activities, coordinated by IWWM, INBO Secretariat, that started in January 2013 will be carried out in three pilot regions and results will be disseminated to all Turkish regions.

Mr. Veyssel Ergul, Turkish Minister for Forestry and Water at the Kick-Off Meeting on Floods in Turkey on 2 October 2012 in Ankara

www.tbmm.gov.tr
INBO Action Plan n° 2

Target 2: Mobilization of professional capacities of Basin Organizations

ECOWAS - WRCC

Selection of priority projects of major hydraulic infrastructures

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

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

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

The aim is to contribute to a harmonious development of West Africa and regional integration.

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

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

During a second phase, carried out in 2011, a list of projects of great priority hydraulic works was drawn up, because having a significant impact on regional integration.

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

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

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

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

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Large dams in West Africa

Legend:

- Project de barrages
- Barrages en cours
- Barrages existants

Countries:

- Algeria
- Mauritania
- Morocco
- Senegal
- Niger
- Mali
- Gambia
- Guinea

Bassins hydrographiques:

- ABN
- OMVS
- OMVG
- ABV
- Autres

Kilomètres

0 125 250 500 750 1 000
Towards dams with shared benefits in Africa

The Program for Infrastructure Development in Africa (PIDA) is a joint initiative of the Commission of the African Union, NEPAD Secretariat and the African Development Bank. Its purpose is to promote regional integration in Africa through the development of infrastructures at regional and continental levels.

PIDA concerns future infrastructures, a Priority Action Plan was drafted for 2020. It covers four sectors: energy, transportation, information and communication technology and transboundary waters.

The African Water Facility (AWF) is financing the transboundary water component. The definition of PIDA’s Strategic Framework and Development Program has been entrusted to a consortium led by SOFRECO, which involved an expert from IOWater, INB O Secretariat, for the Phase on prioritization of major hydraulic infrastructure projects at transboundary level.

The selection of these projects is made on the scale of large transboundary river basins (Lake Chad, Congo, Gambia, Niger, Nile, Okavango, Orange-Senqu, Senegal, Volta, Zambezi) and groundwater systems (Nubian Aquifer System, North Western Sahara Aquifer System, Iulлемened Aquifer System).

Various economic, environmental and social, technical and institutional criteria are used for prioritization.

The Regional Economic Commissions, as ECOWAS, and Transboundary Basin Organizations will play an important role in the implementation of the projects to be selected.

This implementation will be accompanied by a progressive institutional capacity building of the organizations.

Volta Basin Authority (VBA)

Capacity Building for implementing its 2010-2014 Strategic Plan’s priority actions

This VBA capacity building project started in January 2012 for a period of 40 months and received funding from the European Union (ACP-EU Water Facility), the Seine-Normandy Water Agency (AESN) and the French Development Agency (AFD).

The International Network of Basin Organizations (INBO) is supporting the Authority for the overall implementation of the project, which aims to:

- Develop the ability of the Stakeholders Forum, advisory body of the Volta Basin Authority (VBA), in basin development; this Forum is composed of about thirty members representing the different categories of water users, civil society and decentralized local authorities of each national portion of the basin as well as representatives of National Focal Points, governmental bodies of the six VBA Member States sharing the basin;

- Build the capacity of the Executive Board, VBA first executive body established in September 2006. The activities carried out in 2012 enabled to support the organization and to implement: (i) training workshops during the meeting of the Stakeholder Forum, which was held from 18 to 19 January 2012 in Ouagadougou; (ii) the 6th meeting of the Experts Committee held from 9 to 11 May 2012; (iii) a training seminar in France for 5 representatives of the Stakeholders Forum and the Executive Board on 26 and 27 June 2012, followed by their attending a statutory meeting of the Seine-Normandy Basin Committee on 28 June 2012 in Paris. Meanwhile, exchanges with the Volta Basin Executive Board helped build its abilities by developing a monitoring tool for the implementation of the Strategic Plan, as well as discussions on the methods for developing a Water Charter and the Basin’s Master Plan, which are two major pillars of future actions of the VBA Member States.

Activities will continue in 2013 along these lines with the involvement of experts from other French institutions, the Adour-Garonne Water Agency in particular.

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www.abv-volta.org
INBO Action Plan n° 2

CICOS

Hydrological monitoring and "SDAGE" in the Congo River Basin

The project to support the International Commission of the Congo-Ubangi-Sangha Basin (CICOS) started in early 2012 with funding from the Water Facility of the European Union.

The International Office for Water, INBO Secretariat, is coordinating the capacity building project focusing on hydrological monitoring on the one hand (Congo-HYCOS project) and, on the other, on transboundary planning for supporting the drafting of the Master Plan for Water Development and Management (SDAGE) of the Congo River Basin.

CICOS and the hydrological services of its four Member States (Hydrological Research Center in Cameroon, National Meteorological Directorate in the Central African Republic, Research Group in Natural Sciences in Congo and the Waterways Board in the Democratic Republic of Congo) thus benefited from three training courses organized in 2012 in the basin countries. A kick-off seminar for the Congo-HYCOS project was organized in Brazzaville in November 2012 with the collaboration of the World Meteorological Organization and support from the French Global Environment Facility (FFEM).

In 2013 to complement the training courses on operational hydrology, the Rhine-Meuse Water Agency, Solidarity Water Europe (SSEE) and “Eau Vive” will intervene to support CICOS in developing its “SDAGE”.

Niger Basin Authority

The Niger Basin Information System

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

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

Lake Chad Basin Commission

Lake Chad conservation

The French Global Environment Facility (FFEM) is funding the project ‘Preservation of Lake Chad: a contribution to the development strategy for the lake’. The recipient is the Lake Chad Basin Commission (LCBC), which gathers six countries: Cameroon, Central African Republic, Libya, Niger, Nigeria and Chad.

The project aims to develop operational proposals respecting the conservation of ecosystems and joint water resources management. It has four components:

1. Summary of knowledge and definition of management constraints and monitoring indicators;
2. Reliability/complementing of the existing model;
3. Support for the entry into force of the “Water Charter” and strengthening of relationships with the other Basin Organizations;
4. Assistance to Project Management.

Other projects underway at LCBC, the implementation of which will be coordinated with the FFEM project, are funded by the Global Environment Facility (GEF), the European Union and the African Water Facility.

This project is supplementing existing projects in the transboundary basins of the Niger, Senegal, Congo or Volta rivers and allows exchanging experiences between the Basin Organizations of sub-Saharan rivers for better management of Lake Chad Basin resources.

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First workshop of the project in Kinshasa

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www.abn.ne

Le Niger

www.cblt.org
resources of the planet for a fifth of the world population. The location of these resources is also uneven: abundant in the South, it is lacking in the West and North. Finally, water quality is threatened by pollution from industrial, urban and agricultural discharges.

To cope with these challenges, China is building significant infrastructures and modernizing water management. For such a purpose, the Chinese Government develops international cooperation, with the European Union in particular, within the River Basin Management Program (EU-China RBMP).

An agreement was signed by the Chinese Ministry of Water Resources and the French Ministry of Ecology and Sustainable Development to develop cooperation in areas of common interest such as integrated water resources management and protection.

Under this agreement, two cooperation projects are ongoing:

- **The first project focuses on water management in the vicinity of nuclear plants.** Most Chinese power plants are currently located in coastal areas, but many construction projects along the rivers are being studied. The French Government invited a delegation from the Chinese Ministry of Water Resources for a study tour in France at the beginning of 2011. The delegation met the Directorate General for Energy and Climate and the Agency for Nuclear Security. It visited the plant of St Laurent-des-Eaux, which coordinates the radioactive discharges from the four power plants of the Val-de-Loire, and encounters all the problems related to nuclear power plants on a river.

- **A second project concerns river basin management.** It associates the Chinese Ministry of Water Resources and the French Water Agencies, as well as IOWater, INBO Secretariat, which coordinates the project on the French side.

**This cooperation focuses on the Hai River, whose basin covers 318,000 km², including four provinces (Hebei, Shanxi, Henan, Inner Mongolia) and two Big municipalities (Beijing and Tianjin).** To identify specific ways of cooperation, a Chinese delegation visited France in September 2010 for the International "EUROPE-INBO 2010" Conference in Megève, which gathered the European Basin Organizations on the implementation of the European Water Framework Directive.


In addition, within the EU-China River Basin Management Program and the agreement signed by the Yellow River Commission and INBO, several Chinese delegations visited INBO Secretariat in Paris, which introduced them to the organization of water policy in France and to the French 50-year experience in basin management.

**A 4-YEAR PILOT PROJECT**

The achievement of this project for cooperation and technical assistance between 2011 - 2014 addresses the following objectives:

- Learning from each other and sharing the experiences of both countries in integrated water resources management at the basin level,
- Exchanging policies and measures to protect and restore aquatic ecosystems, as well as the implementation of “polluter-pays” mechanisms.
- Developing appropriate mechanisms for the control and reduction of water abstractions and polluting discharges of municipalities and industries in the Hai River Basin (permits, controls, standards, regulations, metering, analyses, clean and water saving technologies, wastewater treatment, leak detection, monitoring of abstractions and discharges, financial incentive mechanisms …).

This especially means testing the application in China of some mechanisms for basin management and water pollution control used in France since the Law of 1964 that created the Water Agencies.
The project partners are, on the Chinese side, the Hai River Conservancy Commission (under the supervision of MWR), and the Water Boards of Tianjin Municipality and Hebei Province, and, on the French side, the French Embassy in China, the Seine-Normandy Water Agency, the Interdepartmental Sanitation Syndicate of Greater Paris (SIAAP), the Interdepartmental Institution of Great Lakes of the Seine and the International Office for Water (IOWater).

All these partners signed the Memorandum of Understanding of the project on 4 July 2011 in Beijing, in the presence of the Chinese Vice Minister for Water Resources and the French Ambassador to China, on the occasion of a first reconnaissance mission in the pilot basin and a training course on the role of Water Agencies and local authorities and on the water management tools used in France, which was attended by 65 Chinese officials of the basin.

The project is proceeding in two phases:

A first cooperation phase allowed in 2011 better knowing on both sides the functioning of the basin institutions and the procedures and means they are implementing in France and China. The missions of French experts in China allowed establishing a first assessment of the Hai Basin and training 70 Chinese basin counterparts on the basin management tools used in France. Meanwhile, three Chinese delegations were received in the Seine-Normandy Basin.

A second phase (April 2012 – April 2015) was launched during the World Water Forum in Marseilles, on 12 March 2012.

It will allow experimenting in the Zhou River sub-basin, some French methods whose relevance has been identified in the first phase, and which focus on:

- Basin management, with the introduction of a general plan for the integrated management of the Zhou River Basin,

- Technical development, with proposed solutions and measures to deal with pollution and eutrophication, for the protection and restoration of aquatic environments, monitoring water quality and an early warning system;

- Strengthening expertise with the organization of training courses in China and France.

A multi-year program of practical actions was signed in Tianjin on 23 November 2012 to clarify the need for expertise and training, and establish a 3-year realistic achievement plan and costing of cooperation for both parties. Late November 2012, a training course was organized on the topic of basin governance with lecturers from the French Ministry of Ecology, SIAAP, the Great Lakes of the Seine and IOWater.

In Mid-December 2012, a second mission of French experts allowed making a first assessment of the basin.
Towards a Water Platform between China and the European Union

The 4th Yangtze Forum was held in Nanjing on 18-19 April 2011. On this occasion, the first China-Europe Water Platform Conference took place on 17 April for establishing a framework for dialogue, exchange of best practices and collaboration.

INBO, through its Permanent Technical Secretariat, was invited to present its experience in the exchange of expertise regarding basin management. The Water Platform will facilitate a focused and efficient technical approach to bilateral exchanges of experiences and best practices.

Since 2007, under the EU-China River Basin Management Program (RBMP), a large number of experts from over 14 EU Member States have been involved in the water dialogue on IWRM and IRBM, and over 1,000 Chinese experts and water professionals have been supported to participate in conferences, study tours, exchange visits and joint research projects.

Four guidebooks on the EU Water Framework Directive and its daughter directives and 3 guidelines on their implementation have been published in Chinese.

At the same time a virtual knowledge hub has been set up on the RBMP website. Officials from China and the EU have expressed their willingness to further consolidate the platform after the closure of the RBMP from 2012 onwards.

www.euchinarivers.org

Mekong River Commission - MRC

Hydrological monitoring of the Mekong River Basin: Final evaluation of the Mekong-HYCOS project

The final evaluation of the Mekong-HYCOS project, which has been developing since 2006 with support from French Cooperation, was conducted jointly by ISL Engineering and IOWater on request from the Mekong River Commission (MRC).

This project is part of the WHYCOS (World Hydrological Cycle Observing System) program, developed by the World Meteorological Organization (WMO) in response to the inadequacy or lack of accurate data and information accessible in real time on freshwater resources in many parts of the World.

The main target of Mekong-HYCOS is to ensure the availability of hydro-meteorological data on the basin, both at the MRC Secretariat and in the four Member States (Cambodia, Laos, Thailand and Vietnam).

Each country is responsible for the maintenance of its measurement stations with the support of the MRC Secretariat, provides flood forecasts on its territory and shares information under Mekong-HYCOS.

49 hydrometric stations are now complying with HYCOS standards and a data management system is operational and accessible through the MRC portal.

However, MRC human resources should be increased to ensure sustainability of the services. The links between national hydrological services and data users can also be improved.

www.mrcmekong.org

Hydrometric stations downstream of the Mekong River Basin
INBO Action Plan n° 2

Cambodia

Launching of the Stung Sen pilot Basin Project

A pilot project, supported by the French Loire-Brittany, Seine-Normandy and Rhine-Meuse Water Agencies, was launched in 2012 in the Stung Sen River Basin, main tributary of the Tonle Sap Lake in Cambodia, where studies are currently being carried out to build two dams for agriculture and hydropower. The Tonle Sap Authority (TSA), partner in this project, has the main task of coordinating the management, conservation and sustainable development of the Tonle Sap Lake Basin, which is a unique water system. The Tonle Sap is the largest freshwater lake in Asia. Its hydrology depends on the Mekong: during the rainy season, the river flows into the lake which absorbs 20% of its flow rate, while during the dry season, the flow reverses and the lake inputs the flow rate of the Mekong. The remaining supply of the lake comes from its catchment area through 11 tributaries, including the Stung Sen.

In the medium term, the TSA wants to develop a Master Plan for Water Development and Management of the entire Tonle Sap Lake Basin. This will be necessary to build a real action plan. But this assumes firstly to gather and prioritize the existing information, establish forums for dialogue at national and provincial level, and to organize a monitoring and follow-up system.

In the short term, the goal of the cooperation project is to test new governance in the Stung Sen sub-basin.

VIETNAM

Success of the Dong Nai pilot project

The Dong Nai Basin pilot project, funded by the French Loire-Brittany and Seine-Normandy Water Agencies, as well as by "FASEP", was structured under the Cooperation Agreement signed on 6 June 2007 by the French and Vietnamese Ministers in charge of the Environment.

It aimed to provide the Vietnamese Authorities with "Technical Assistance to the implementation of an Integrated Water Resources Management (IWRM) policy through a pilot application in the Dong Nai River Basin".

The official closing of the project with a final seminar took place on 17 April in Ho Chi Minh City in which the results of the project were presented.

IOWater, INBO secretariat, coordinated the project and followed up the institutional component. In this context, nearly 200 men/days of training on the integrated water management process, with the establishment and operation of Basin Organizations, were given by experts from the French Agencies and IOWater, INBO Secretariat, to the Vietnamese executives. Methodological support to water data management and to the strengthening of measurement networks was also provided.

Finally, a first Management Plan covering an entire river basin has been prefigured.

The different steps used for planning were inspired from the principles of the European Water Framework Directive (WFD) and the French experience in its implementation.

This project, whose kick-off seminar was held in October 2012, will allow building the capacities of the TSA, the Ministry of Water Resources and Meteorology (MOWRAM) and of its representations in the Provinces and Districts to make possible and to support:

- The technical and methodological strengthening of the Cambodian institutions and stakeholders involved in water resources management;

www.tonlesap.gov.kh

Target 2

Vietnam

The Dong Nai Basin pilot project, funded by the French Loire-Brittany and Seine-Normandy Water Agencies, was launched in 2012 in the Dong Nai River Basin. The official closing of the project with a final seminar took place on 17 April in Ho Chi Minh City in which the results of the project were presented.

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Thanks to this project, the practice of integrated water resources management in Vietnam has undoubtedly progressed as evidenced by:

- The updating of the Vietnamese Law on water resources approved on 21 June 2012 by the Parliament.
- The solemn commitment made by Vietnam during the last World Water Forum in Marseilles to start the integrated management of its rivers and streams.
- The preparation by the Vietnamese Ministry of Natural Resources of the decree for establishing a pilot Basin Organization in the Dong Nai Basin.

The implementation of that last decision is the key to the development of institutional and operational measures for the conservation of water resources and aquatic environments in Vietnamese river basins, facing strong anthropogenic pressure and high demand for hydropower production.

www.monre.gov.vn

Target 2
Laos still has a unique biodiversity and abundant water resources of good quality. But the recent economic and industrial development of the country has been accompanied by the emergence of conflicts between the various water users, including hydropower, mining and agriculture.

Environmental and socioeconomic hazards mainly related to the construction of hydropower dams, an important source of growth and foreign exchange for the country, remain difficult to understand by local institutions.

The Lao Government is pursuing a proactive action in this area, as evidenced by the adoption of a national policy for water resources management, the development of pilot River Basin Committees and establishment of a new Ministry of Water Resources and Environment (MoNRE) in 2011. The pilot Nam Ngum River Basin project, launched last year, aims to support the Lao Government in this process.

Seven assignments have already been carried out by experts from the French Loire-Brittany and Rhine-Meuse Water Agencies in close relation with the Secretariat of the Nam Ngum Basin Committee and the Department of Water Resources of MoNRE.

Efforts are focused on the definition of actions to be implemented, their location and cost estimate and on the study of potential sources of funding. At the same time, thinking on the functioning of the Nam Ngum Basin Committee, created late 2012 by decree of the Prime Minister, was completed.

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Basin Masterplans in the State of Tocantins

Even in the heart of the dry season, the Rio das Balsas and its tributaries carry clear waters.

Meanwhile, in the Rio Sao Valerio, although close, only a trickle of water is flowing, which is not even enough to supply water to the city of Sao Valerio da Natividade.

In each of these two river basins, the Government of the State of Tocantins, with the help of Japanese Consultants (Nippon Koei Lac Co. Ltd.) and IOWater, INBO Permanent Technical Secretariat, is finalizing master plans for water resources management, aimed at reconciling its multiple uses.

Hydrogeological studies have shown that the contrast between the two basins is explained by the presence of the karstic aquifer Urucuia and its resurgence, guaranteeing the basic flow of the Rio das Balsas.

In the first basin, the orientations of the Master Plan focus on the necessary arbitration between environmental preservation, the practice of ecotourism and projects for building hydropower plants.

In the Rio Sao Valerio basin, the master plan indicates the need to build a regulating dam, storing a portion of the water during the rainy season and preventing that the people suffer from lack of water during the drought that characterizes this region of Northern Brazil.

In addition to drinking water supply, the project will develop irrigated agriculture.

For the follow-up of the master plans, Brazilian law provides for the creation of basin committees. However, in the predominantly rural river basins of the Rio das Balsas and Rio Sao Valerio, the government is reluctant to create a new organization, as the population is already highly solicited to participate in multiple participative organizations, for example in the fields of health, education and tourism.

The proposed solution is thus to create an inter-municipal consortium, allowing the municipalities of the river basins to pool their resources and expertise to ensure the implementation of the master plans for water management.

Such a consortium may also receive financial resources from the taxes on water use, thereby ensuring the sustainability of its operation.

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INBO Action Plan n° 2

A new decree on River Basin Management

River Basin management exercises began in Colombia in the 80s. Unfortunately, the lack of homogeneous governance structures prevented the generalization of these experiments and achieving their long-term sustainability.

According to the reform of the constitution in 1991, the Ministry of the Environment is in charge of the National Environmental System (SINA) still in force today.

The Regional Autonomous Corps (CARs) were established.

Nevertheless, the management of natural resources in river basins did not begin until ten years later in 2002, when the Colombian Government published two decrees that govern the development, implementation and monitoring by the CARs of the first river basin management plans, the "POMCAs" (Planes de Ordenación y Manejo de Cuencas).

Although this new planning tool is a real breakthrough, some problems remain, such as the heterogeneity of the "POMCAs", planning inconsistencies between two neighboring "POMCAs" and limited community participation.

In 2007, the supervising Ministry initiated a reform of the "POMCAs".

A consultation of the stakeholders at the national level underlined the need for Macro-basin Management Plans, for structuring River Basin Councils and finally prioritizing planning tools.

The Ministry of the Environment then began to develop a National Policy on Integrated Water Resources Management.

Finally, after a 5-year process, a new decree was signed on 2 August 2012, amending the regulations on river basin and water resources management.

In such a context, the Colombian Ministry of Environment and Sustainable Development (MADS) wishes to benefit from the 50 years of practical experience of the French and now European system both at the technical and economic levels, through an institutional support project, funded by the French Adour-Garonne Water Agency.

The three areas of work of this project are:

- Implementation of the National Policy on Integrated Water Resources Management (IWRM);
- Consolidation of the National Water Information System;
- Prevention of industrial pollution.

www.minambiente.gov.co

Mexico

The Ayuquila-Armería pilot River Basin

The French Adour-Garonne and Seine-Normandy Water Agencies, which have interesting similarities with the Mexican Basin Organizations, started, with the Mexican National Water Commission (CONAGUA), a cooperation project to improve the river basin management process undertaken in the Country.

These exchanges would allow CONAGUA and Mexican Local Authorities to benefit from advice on the strengthening of IWRM and on improving their wastewater treatment systems.

Ayuquila-Armería, a pilot River Basin for cooperation

The Ayuquila Armeria River Basin was chosen because of its size, ideal for experimentation, the importance of the challenges it faces, but also its lead in terms of participation and initiatives for the conservation of the environment.

IOWater, INBO Permanent Technical Secretariat, is the operator of this cooperation program working with local structures in order to:

- Contribute to the improvement of federal and state policies, especially regarding participatory approach;
- Ensure sustainable water resources management in the experimental Ayuquila Armeria Basin.

Focus is on participation, planning and management of data and information systems.

The achievements would then be capitalized at the national level, to be disseminated to other basins of the Country.

French experts' assignments, specific studies, workshops and field visits in France and Mexico, will allow presenting the French know-how in the basin management sector and studying its adaptability to the local situation.

www.inbo-news.org

All information is available on the Web

www.inbo-news.org

1 Million visitors in 2012
New economic fees for water use?

Peru is a country globally rich with water. Unfortunately, the areas where needs are the most important are the least well endowed in terms of rainfall or groundwater resources. To cope with this challenge of more effective water management, the National Water Agency (ANA) is developing an ambitious policy to establish river basin management and a system of economic fees for water use and wastewater discharge.

Experts from INBO Permanent Technical Secretariat and from French Water Agencies have intervened in a World Bank-financed project, whose aim was to provide pragmatic elements for establishing these economic fees: how to calculate them, what economic basis to justify them to future taxpayers, what use of the collected sums?

The Peruvian context is rather enabling: the GDP growth rate reaches 4 to 5% per year with low inflation; mining companies seem willing to make an effort because they are regularly stigmatized by the Medias for their poor environmental practices.

However, the successful implementation of an economic fee system depends on solid arguments for those who will actually pay these fees.

An economic justification is required. It should not be theoretical but based on the acceptability of these taxes as compared to the added value generated by different economic activities and to the households’ budgets.

The use of the collected fees is also a fundamental element; their use for financing facilities (wastewater treatment plants, protections of water intakes, etc.) on the basin scale is obviously an argument favoring their acceptance.

Our experts from INBO Permanent Technical Secretariat and from French Water Agencies provided very practical support to the development of calculation formulas depending on water uses and wastewater discharges.

Simulations of the amounts that could be collected were carried out as well as the preparation of arguments towards the various economic sectors. The results of this project were presented to the “ANA” Board of Directors on 19 July 2012.
Countries of Eastern Europe, Caucasus and Central Asia are highly dependent on transboundary water resources. To develop an effective Integrated Water Resources Management (IWRM) policy, it is necessary to have a comprehensive assessment of water resources and uses, which is based on consistent and coherent information.

This project funded by the French Global Environment Facility and developed under the "Convention on the Protection and Use of Transboundary Watercourses and International Lakes", aims to improve water data administration in order to facilitate the production of the information needed.

IWAC (International Water Assessment Center), the main recipient of the funding, entrusted the International Office for Water with the technical coordination of the project activities.

Activities were launched in early 2011 in two pilot transboundary basins:
- The Dniester River Basin in Ukraine and Moldova;
- The Aral Sea Basin (Amudarya and Syrdarya river basins) which concerns Kyrgyzstan, Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan and Afghanistan.

The assessment of water data administration carried out in each country includes:
- A legislative and institutional analysis (database of the stakeholders);
- Organization of national workshops gathering the key stakeholders involved in data production and management;
- Support to the presentation of data sources by the producers (metadata catalogue);
- Production of data flow charts (who exchanges what with whom?);
- An initial needs analysis related to data management.

The developed actions provided the following results:

In the Dniester River Basin
- Procedures and tools for the calculation of indices of surface water quality, with online publication of dynamic maps updated by the partners;
- The "Web Processing Services" allowing the production of useful geographic data;

In the Aral Sea Basin
- A prototype of hydrological bulletin on the Syrdarya, within an action initiated by the UNRCCA and EC-IFAS;
- Conceptual analysis of the National Water Information System in Tajikistan;
- An online interactive diagram of the Syrdarya hydrology in Kazakhstan.

The final phase of the project (2nd quarter of 2013) will allow the transfer of the project’s feedback to the national and regional beneficiaries, and the production of guides highlighting the lessons learned for transfer to other transboundary basins of the region.

The main results are available on the website (in English and Russian) and were officially presented at the 6th Meeting of the Parties of the Water Convention in Rome on 28 November 2012 on UNECE initiative.

www.unece.org
www.ffem.fr
www.aquacoope.org/ffem-eecca

Kyrgyzstan

Towards an integrated Water Information System

The Swiss Agency for Cooperation and Development (SDC) entrusted the International Office for Water with a study on data management and information needs concerning water supply and demand for irrigation in Kyrgyzstan.

Kyrgyzstan is located far upstream of the Syrdarya, which has been the subject of inter-state agreements setting the downstream reserved water share at more than half of its internal renewable water resources. Agriculture remains an important economic sector (20% of GDP) and accounts for over 90% of water withdrawals in the country.

The study analyzed the processes of data management and use: a survey on tools (databases, forms, files, archives, software, etc.) and on the mechanisms for data collection, transmission and validation was conducted with the support of the Directorate of Water Resources and its regional services on three topics: water demand, water supply and structural data on hydraulic structures.

Two field assignments and a national seminar organized with PKTI (Institute of Metrology and Automation) validated these results which are available on the dedicated website.

www.swiss-cooperation.admin.ch/centralasia
www.aquacoope.org/sdc-ca

Schweizerische Eidgenossenschaft Confederazione svizzera Confederazione svizzera
Confédération suisse
Direction du développement et de la coopération DDC

The project partners in front of the main water intake in the Aravan-Akbur canal
Since August 2010, the French Ministry of Finance has supported the Kurdish Ministry of Water Resources by financing a pilot project in the Greater Zab River Basin entrusted to a group of companies led by the Canal de Provence Company, associating BRGM, IOWater and G2CIT. A High-level Water Committee (“Lejna Balla Aw” in Kurdish) was created. It is chaired by the General Director of Water Resources and brings together the General Directors of the other Ministries involved in water resources management: Ministry of Electricity, Ministry of Natural Resources, Ministry of Local Authorities, Ministry of Planning and Environmental Board. It invites when needed representatives of the civil society and local Authorities. The first meeting of “Lejna Balla Aw” was held in October 2012. The Directorate of River Basin Management, which is being officialized, is taking care of its Secretariat and keeps links with Local Authorities and the civil society.

On this occasion, the “World Pact for better basin management”, initiated by INBO, has been signed by the General Director of Water Resources of Kurdistan.

www.krgwaterportal.org

Kosovo

How to secure water resources?

The World Bank project entitled “Water Security for Central Kosovo” aims to help the Kosovar Government in developing a program to secure water resources in the Iber River Basin, a transboundary river with Serbia, by, in particular:

- Providing a suitable and reproducible model for integrated water resources planning and management;
- Identifying structural and non structural priority measures for sustainable socioeconomic development;
- Quantifying achievable water savings.

The Iber Basin hosts the capital Pristina and the power plant that feeds it.

Alternative scenarios, based on assumptions validated with the World Bank, will be supplemented by an analysis to identify priority investments. IOWater (INBO Secretariat) and SCE are involved in the assessment of uses, in forecasting their short-term evolution and in the economic evaluation of the various measures recommended in the proposed scenarios. One difficulty is the availability of data, mostly dating from the Serbian administration or simply not collected.

Project findings will be available during 2011.
The objective of INBO Academy, launched in 2010, is to develop the skills of Basin Organizations’ staff.

INBO is proposing training courses either in close cooperation with its Members, for exchanging good practices among Basin Organizations worldwide, or in close cooperation with external partners, more specialized in one concern or another.

INBO Academy is proposing e-learning courses, thanks to webconferences and to the Internet.

Some courses are run at predefined time (live sessions with the lecturer), and others are available 24h/7d, with an asynchronous link with the experts through the Web.

A session lasts 2 hours.

Several sessions can be combined in homogeneous modules, from 1 up to 4 sessions.

A first training course was organized in April 2010 in close cooperation with the European Center for River Restoration (ECRR) on “Basics of Ecological River Restoration”: essential tool to achieve “Good Ecological Status”.

Oversubscribed 3 times, the course gathered 20 participants, and the feedbacks were very positive.

A TRAINING PROGRAM ON RIVER RESTORATION

In 2011, INBO-Academy (International Network of Basin Organizations) and “CIREF” (Iberian Center for River Restoration), in coordination with ECRR (European Center for River Restoration), joined their forces to propose to Basin Organizations management staff, consultants, and university students a distance training program on river restoration in Spanish.

For ECRR and “CIREF”, there is a common view on River Restoration, which should target the in-depth restoration of entire ecosystems. Knowledge of river dynamics is a key feature to understand the self-sustaining capacity of river and stream ecosystems, and their ability to respond to environmental changes (e.g. climate change).

River dynamics can be used as the central process of restoration for the self-maintained recovery of ecosystems.

Between 1998 and 2005, Europe suffered from over 100 major floods.

Flood alleviation measures must be based on integrated implementation, on correct land planning which contribute to the recovery of the natural development of river ecosystems and floodplain restoration and which will allow for better protection against floods.

Linkages and feedbacks between hydrology, geomorphology and ecology along river corridors have provided knowledge that has influenced the way the rivers are managed today.

River restoration is an effective tool to implement the EU Directives, and chiefly the Water Framework Directive, which can be used in Europe but also all over the world and restore the rivers to a more natural status after years of environmental degradation.

The objective is to give to river restoration technicians the keys to understand how to use an ecological approach for reaching the Good Ecological Status of their river ecosystems and their water bodies, and to fight against floods.

The program was made up of 9 courses of 4-5 sessions each. All courses ended up on a wrap up session and round table with all lecturers to develop the discussion on most interesting matters, and answer to participant’s questions. At the end of each course, a certificate was issued.

In 2012, for the second time, INBO Academy, CIREF and ECRR offered e-training on river restoration.

Conducted in Spanish, this training course included new features:

- River restoration as seen by the media, or how to talk to journalists, communicators and news agencies to enable them to acquire sufficient knowledge to properly inform on the actions on river ecosystems,
- Applications of LiDAR (laser remote sensing) to river restoration.

The training courses, which began in September 2012, are continuing until July 2013.

Online training is an excellent way to make learning easier at a lower cost, since time and money usually spent in traveling and accommodation is saved, with no decline in the quality offered.

The syllabus is available on the CIREF website: www.cirefluvial.com/formacion.php
INBO Action Plan n° 3

Target 3: Synthesis and dissemination of available knowledge and know-how

Capitalizing on the experience of Transboundary Basin Organizations

Integrated Transboundary Water Resources Management (IWRM), by appropriate governance and investment planned in the basin, is the key to sustainable use and conservation of natural resources. With fair sharing of resources and benefits, it helps prevent conflicts between uses and between States. Transboundary Basin Organizations are the main framework for water resources management beyond national borders.

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

A Water Resources Coordination Center (WRCC), of which one of the tasks is to promote basin’s water management, was created within the Economic Community of West African States (ECOWAS) in 2004. French Cooperation supports these institutions through various projects, and by the presence of technical assistants specialized in IWRM.

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

The specific objectives are:
- Capitalization of each relevant experience and appropriation of best practices by the other institutions;
- Support to and coordination of the French technical assistants working in the institutions;
- Improving the strategic vision of their activities by the beneficiary institutions;
- Organization of benchmarking, particularly on the following topics:
  - Governance;
  - Looking for autonomous and sustainable financing;
  - Strategic planning and implementation of actions;
  - Optimization of monitoring.

Knowledge Management

GWP Partners with INBO on Knowledge Sharing

The Global Water Partnership (GWP) was created in 1996 to support Integrated Water Resources Management (IWRM).

One of its core knowledge products is the Toolbox, a free access and online database containing case studies and reference documents.

The Toolbox is also a place to engage with a broader community of professionals around the world and to share their own experiences.

The GWP Toolbox partners are institutions and organizations that have played a leading role in creating the knowledge housed in the Toolbox.

One of our important partners in this regard is INBO which has been involved in knowledge development with GWP on basin management.

An example of projects published in the Toolbox library that deserve mention is a Polish-French Twinning Project “Implementation of the Water Framework Directive in Poland” and its application in the Upper Vistula Basin.

Another example is the pilot project in Körös/Crisuri Transboundary River Basin shared between Romania and Hungary.

For more information about the GWP Toolbox, go to:
http://gwptoolbox.org
Transboundary Waters

Good practices in transboundary water resources management: publication of a report on practical experiences

The French Development Agency (AFD) is supporting a project for the exchange of best practices between Transboundary River Basin Organizations - Niger Basin Authority (NBA), Volta Basin Authority (VBA), Organization for the Development of the Senegal River (OMVS), International Commission of the Congo-Ubangi-Sangha Basin (CICOS), as well as the Water Resources Coordination Center (WRCC) of the Economic Community of West African States (ECOWAS).

The international Office for Water, INBO Secretariat, is facilitating these exchanges in coordination with ANBO.

Transboundary Basin Organizations are the privileged framework for water resources management beyond national borders. They adopt diverse practices according to the context of their respective river basins.

Thus, each Organization develops experience, special knowledge in specific fields. OMVS for instance has a significant expertise in managing infrastructures shared between Member Countries, while CICOS is a reference in terms of promoting waterways navigation.

Therefore, this should lead to operational improvement of the activities of relevant institutions, through the sharing of knowledge and know-how.

Using these experiences, a report was produced on the topics of governance, optimization of monitoring, strategic planning and search for autonomous and sustainable financing.

ECOWAS wishes, with IUCN support, to open discussions with the civil society stakeholders, especially representatives of local communities and resource users, often forgotten in dialogues.

There have been several achieved actions:

- A widely consulted website with online documents and experiences:
  www.dialoguebarrages.org;
- Coordination of an electronic forum on four topics on the issue of large dams in West Africa;
- A study on policies, decision-making mechanisms and dialogue to feed international discussions;
- Recommendations of the civil society of the five major West African river basins (Senegal, Niger, Volta, Gambia, Mano River) made in order to actively participate in the dialogue and defend their interests in multi-stakeholder spaces open to them;
- A documentary film to illustrate this dialogue and disseminate the main topics of the recommendations as widely as possible.

www.dialoguebarrages.org
The project of the International Network of Basin Organizations (INBO) for the development, testing and comparison of Performance Indicators for African Transboundary Basin Organizations ended in September 2010.

During the three years of implementation many tests were carried out in 10 pilot basins: Congo (CICOS), Gambia (OMVG), Lake Chad (CBLT), Lake Victoria (LVBC), Niger (NBA), Nile (NBI), Okavango (OKACOM), Orange-Senqu (ORASECOM), Senegal (OMVS), Volta (VBA).

They spread across the continent, had a wide variety of legal, institutional, socioeconomic or geographic contexts.

Interactive workshops for feedback and exchange between the basins allowed INBO to achieve an excellent appropriation of the project by the beneficiaries, best guarantee for the sustainability of such an approach using indicators in the river basins.

The final list of indicators includes:

- 20 indicators on the governance and operation of organizations in charge of the implementation of integrated management in transboundary basins;
- 15 indicators on each river basin, describing its condition, pressures and responses.

Basin Organizations have highlighted the entirely new and significant contribution of the project on the “Governance of a Basin Organization” aspects.

The exercise allowed the self-evaluation of organizations on their operation and achievement of their missions. It also helped to gradually include indicators in the various processes of reporting to the Councils of Ministers or to donors.

Moreover, comparison of the strengths/weaknesses of each pilot basin, through a web application for displaying results, allowed basins to consider future discussions on these specific points.

Disseminating the results of the project during the General Assembly of the African Network of Basin Organizations (ANBO), or during the World Water Week in Stockholm in 2010, showed a strong interest of basin organizations and donors on these notions of performance indicators but also the significant needs in terms of popularization and support for their future use.

INBO directed this project, in partnership with the African Network of Basin Organizations (ANBO), IOWater and Ecologic. The project was financed by the European Water Facility (ACP Water Facility) and the French Ministry for Foreign Affairs.

More information: www.riob.org/PITB

KPI Project: Performance Indicators for African Basins
1st test phase
2nd test phase
Groundwater is the only source of water for the daily needs of 2.5 billion people; its governance is still in its infancy: pollution and overexploitation of aquifers are often the result of inefficient management and badly prepared decision making.

The International Hydrological Program of UNESCO (IHP), jointly with the Global Environment Facility (GEF), the United Nations Food and Agriculture Organization (FAO), the International Association of Hydrogeologists (IAH) and the World Bank launched a new project “Groundwater Governance: a comprehensive framework for local action”, in January 2011, which INBO is closely associated.

This 3-year initiative is based on an analysis of the scientific literature as well as on a series of regional consultations to establish a comprehensive assessment of groundwater governance.

Based on this assessment, a “Framework for Action” (FA) will propose to the decision-makers a set of effective tools for governance (policies, laws, regulations and customary practices).

Dedicated to the Asia-Pacific region, the fourth regional consultation workshop was organized from 3 to 5 December 2012 in Shijiazhuang (Hebei Province, China).

Seventy experts from seventeen countries, including a representative of INBO Secretariat for Asia, participated in plenary sessions and thematic working groups to identify the challenges facing the region in terms of groundwater governance. A regional report will summarize the results of this consultation including six topics: Agriculture and increasing demand for food; Climate change and major natural hazards; Governance of boreholes; Governance and national and regional legal frameworks; Integrated management of groundwater and surface water; Groundwater governance in the Small Island Developing States (SIDS).

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

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

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

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

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

- General Directorate for Risk Prevention and SCHAPI, MEDDTL, Paris,
- INBO Secretariat, Paris,
- Méteo-France, Paris,
- International Commission for the Protection of the Rhine, Koblenz,
- Global Runoff Data Center, Federal Institute of Hydrology, Koblenz,
- Rhine-Meuse Water Agency, Metz,
- National Rhone Company (Compagnie Nationale du Rhône) in Lyons,
- and field trip in the Rhone Valley.

The delegation’s visit at INBO Secretariat - Paris
How to make sure that research results reach the water managers in charge of implementing the Water Framework Directive?

Conversely, how to facilitate the expression and account taking of research needs from the different levels (local, regional, national, transboundary and European) to implement the European Directives related to water?

These two questions allow simplifying the understanding and defining of the Science and Policy Interface (SPI).

They also reveal the challenges.

For this interface to work, it is necessary to:

- Capitalize scientific knowledge;
- Ensure that research needs are expressed in an understandable manner to researchers;
- Make research results appropriation by the water stakeholders that are supposed to use them;
- Raise awareness of all water stakeholders to initiate changes in practices.

Within the European "IWRM-Net" project, supported by the DG Research and Development and coordinated by the IOWater, INBO Secretariat, it meant organizing from 2010 to 2013 participatory workshops inviting researchers and decision-makers to work together to identify research needs, to orientate the new bids for projects by requiring researchers to integrate the practical uses of their work, to launch new research programs in badly covered fields in the implementation of the Water Directives and to present the results in a format that allow easy reading by field practitioners.

To continue this project, the French Ministry of the Environment has initiated a Scientific Coordination of Projects (SCP) funded under IWRM-Net:

www.iwrm-net.eu

One of the major challenges is to allow exchanges between donors, researchers, and water managers through forums, workshops and new online learning platforms.

Once research projects are initiated, the phase promoting their results should start.

WaterRtoM and WaterDiss:

These two projects share the goal of capitalizing on existing knowledge and supporting researchers in their efforts to make their research results valuable to be used:

- **WaterDiss** is addressing European FP6 and FP7 projects and aims to accelerate the transfer of research results to the institutional stakeholders of the public sector.

A virtual platform to facilitate exchanges between stakeholders: the "European Water Community" has now more than 400 members.

Finally, SPI concerns different geographical and administrative levels: under the Common Implementation Strategy (CIS), a specific group, coordinated by the French ONEMA and the EU DG Environment, was established.

The "EUROPE-INBO" Group is assisting these activities to compare the state-of-the-art of research with identified needs in the field and to reveal new research needs.

Working and experts groups are organized around seven topics: ecological status, groundwater, chemical aspects, floods, climate change and water, water scarcity and drought, agriculture.

Activities and their results were presented at the Conference "Water science meets policy: How to streamline knowledge to address WFD policy challenges?" that took place on 14-15 November in Brussels.
INBO Action Plan n° 3

"Waterdiss2.0"

Optimizing identification and dissemination of findings of European Water research

The "Waterdiss2.0" (Dissemination and uptake of Framework Programme water research results) project aims to promote dissemination of European research results on water.

This project is coordinated by the International Office for Water, INBO Secretariat, and includes 8 partners from France, Spain, Great Britain, Germany, Romania, Poland and Italy. It is funded by the European Union.

Thanks to an innovative methodology "Waterdiss2.0" allows:
- enhancing faster research results, with the development of individual strategies for joint dissemination, defined with the project coordinators,
- bringing together "producers" and "users" of research, through their participation in various events such as Pollutec 2011 in Paris or WWF6 in Marseilles in March 2012,
- exchanging via a platform,
- creating a network, the "European Water Community", which aims to improve water management in Europe by promoting links between research and public policy (Science Policy Interface).

www.waterdiss.eu

"AQUAMADRE"

Socioeconomic development around rivers

Considering a river as a socioeconomic force on a territory is the core topic of "AQUAMADRE".

River economics indeed integrates many aspects relating to human activities, products and services provided and requires the participation of all the stakeholders of the area.

Cost/benefit analysis, comparison between offer/demand, identification of financing sources, review of methods and means already used, e.g. payment for environmental services: "AQUAMADRE" aims to gather and share the socioeconomic benefits of the river on various scales (local and regional, national and international).

Through the establishment of a network of economic stakeholders and citizens living on large and small rivers worldwide, which are INBO partners, "AQUAMADRE" supports knowledge, exchange of experiences and best practices, dialogue and dissemination of practical programs and projects on specific topics shared between people of rivers, by giving voice to the stakeholders who live and operate in the river context.

Firstly, citizen involvement is sought through the organization of major periodic events and cultural exchanges.

www.aquamadre.org

IWRM-Net - Scientific Coordination Project

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

IWRM-Net has developed activities for cooperation and exchange in this area.

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

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

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

The www.iwrm-net.eu website has been updated and includes, in addition to a science policy information interface, links to 10 financed projects, 6 of which being multinational projects launched in 2010 on the following topics:
- Water Cap and Trade (scenarios of "water markets" in Southern Europe);
- Water2Adapt (water demand management for adaptation to climate change);
- IMPACT (model of river restoration);
- ICARUS (adaptation of ecosystems to climate change in Southern European rural areas);
- CLIMAWARE (climate change impact on river flows and their consequences on hydromorphological conditions);
- ESAWADI (ecosystem service approach for WFD implementation).

www.iwrm-net.eu

"NOVIWAM"

Novel Integrated Water Management Systems Southern European Regions

The "NOVIWAM" project (Novel Integrated Water Management Systems for Southern Europe) aims to promote interregional cooperation on tools and methods for water management in river basins.

This project, financed by the European Union under the 7th FP, involves 5 regional partners in Albania, Cyprus, France, Portugal and Spain, in close relations with INBO and the Mediterranean Network of Basin Organizations, and should develop to neighboring countries facing the same challenges.

With the help of a feedback and sharing of know-how and technology, the partners are considering the solving of existing problems of water management in the Euro-Mediterranean climate space, in an eco-efficient, sustainable and competitive manner.

www.noviwam.eu
INBO Action Plan n° 3

Latin America and the Caribbean

Provincial water management decrypted for the World Bank

On request of the World Bank, a visit to study the multi-purpose water management model used in Provence was organized on the sidelines of the World Water Forum in Marseilles from 12 to 17 March 2012, with the support of INBO Permanent Technical Secretariat.

This meant organizing a program for twenty specialists of the Latin American and Caribbean water sector that allowed understanding the origin of the French water management system, its recent developments and the factors that have influenced it.

A region exemplary for its diversity and complexity

Over three days, with the participation of the Rhone-Mediterranean and Corse and Adour-Garonne Water Agencies, the Canal de Provence Company, the Marseilles Water Company, Electricity of France and IOWater, the Delegation studied, during many visits, the diversity and complexity of the Provence-Alps-Riviera region through the legal framework of institutional management, the main tools for planning, management and regulation, urban management of water and sanitation services, including monitoring and warning systems, customer management and quality service, public-private partnerships, management of hydraulic infrastructure (channels, hydropower structures), water demand management and water allocation rules and regional planning for multiple and balanced uses.

www.regionpaca.fr

www.inbo-news.org

All information is available on the Web

Région Provence Alpes Côte d’Azur

WORLD BANK

1 Million visitors in 2012
AWIS: access to information on the African water sector

The African Water Information System (AWIS) is an initiative launched in 2007 by a group of institutions from the North and South: OMVS (Organization for the Development of the Senegal River) through ANBO (African Network of Basin Organizations), CREPA (Regional Center for Water Supply and Sanitation) PS-Eau (Water Solidarity Program), IOWater (International Office for Water) and WEDC (Water Engineering and Development Center).

AWIS aims to build the information management capacity of organizations in the African water sector through sharing knowledge, experience and information between water professionals, communities and local and national governments on a pan-African scale.

Over the period 2007 to 2010, the feasibility and appropriateness of AWIS were positively tested as part of a project financed by the European Water Facility. It is a great success, thanks to the involvement of twenty relay partners spread across the African continent and that feed the knowledge base, news, “waterlibrarysite” of the Web portal. AWIS has expanded its network of relay organizations since 2011, continuing to build know-how in information management.

Some figures on AWIS:
20 Organizations, focal points of French-speaking and English-speaking Africa (Basin Organizations, documentation centers, administrations, associations, consulting firms), 100 current events, 500 referenced documents, 160 indexed websites, 3 topical newsletters in 2010, 90,000 visitors in the last 12 months.

www.african-wis.org

The expansion phase

Although some weaknesses have been identified, the partners noted that AWIS was a very challenging project due to teamwork and the satisfaction of knowing that the information available on the website is seen by thousands of visitors.

The launching of the expansion phase was accompanied by recommendations for improving AWIS: a facilitator from CREPA was assigned to work part-time on the project, the services jointly produced (topical documents, dissemination list, feeding the portal) were to be simplified to facilitate the network operation, and improvements were to be made to the site (ergonomics of the portal, potentials of the search engine). A roadmap has been established for the next 6 months. AWIS, during its operation phase, may be considered as a relay of the African Water Community to regional and international bodies in the sector (African Water Week, World Water Week in Stockholm, World Water Forum, etc.).

AWIS awarded by IFLA

The 76th Congress and General Assembly of the International Federation of Library Associations and Institutions (IFLA), gathered from 10 to 15 August 2010 in Gothenburg – Sweden, awarded AWIS poster.

AWIS, the African Water Information System, funded by the European Water Facility with co-financing from the Ministry for Foreign Affairs (France) and DFID (UK) currently includes twenty African English- and French-speaking organizations. This award is an encouragement to continue strengthening AWIS in the coming years throughout the African continent.

Target 4: The networking of water documentation systems

INBO Action Plan n° 4

Thanks to the contributions of partners, the www.african-wis.org portal was enriched by more than 100 current events, 200 websites and a knowledge base with more than 500 bibliographical briefs.

60,000 visitors have surfed the site since its opening.

The Network partners organized a workshop for reviewing this pilot phase in Mbandiène (Senegal) from 18 to 20 January 2010.

AWIS network of partners
INBO Action Plan n° 4

CEDEAO

Implementation of the Regional Water Information Center

The 15 countries of the Economic Community of West African States (ECOWAS) decided to create a Regional Water Information Center.

The ECOWAS’s Center for Coordination of Water Resources (CCWR), which is responsible for the management of this Information Center, developed, in association with the ANBO, tools for managing and disseminating information, using:

- The portal of the Information Center, whose content is now directly managed by the CCWR and which allows firstly to disseminate multilingual information (French/English) and, secondly, to organize the sharing of documents between the various partner countries.
- A database of IWRM indicators using the data found in the tables of the “inventory of water resources in West Africa”.

Interfaces were also developed to enable the updating and viewing of the contents of that database in the form of tables, graphs and maps, dynamically generated from the available data.

www.aquacoope.org/CEDEAO

Niger Basin Authority (NBA)

Reliable data in real time:

a prerequisite to forecasting the flow of the Niger River

In 2010, the Niger Basin Authority (NBA) developed a “Computer System for Hydrological Forecasting” (SIP) for the Niger River Basin, with financial support from the European Union and France.

This tool forecasts the flow rates of about forty hydrological stations carefully identified in the hydrometric network of the Niger Basin, which has more than hundred and fifty.

It allows forecasting floods which are often damaging particularly in urban areas, planning irrigation campaigns and guaranteeing coordinated and optimized management of existing and future dams in the basin.

The architecture of this tool is modular and allows forecasters to easily access information on each model used by the system and gives the possibility to change the tool-managed models with the capitalization of knowledge on hydrology.

The ability to attach to each station several forecasting models allows operating in degraded mode in case of non-receipt of data or errors in the information received.

Two NBA experts, trained in the use of this tool, have been making forecasts since June 2011, in the station of Niamey, in Niger, using the data provided by the upstream stations of Alcongui and Garbé Kourou in Niger, Ansongo in Mali, and Liptougou and Korizéna in Burkina Faso.

www.abn.ne
INBO Action Plan n° 4

Management of water reference frames: quality certification

SANDRE (National Service for Water Data and Reference Frames Management) developed a common language for the French Water Information System (WIS).
It provides water stakeholders with tools and techniques to enable them to make interoperable their information systems, and establishes, updates and disseminates reference frames for the WIS.
To ensure a quality service, the IOWater team, in charge of SANDRE Technical Secretariat on behalf of the National Agency for Water and Aquatic Environments (ONEMA), started a quality approach and obtained the ISO 9001-2008 certification in September 2010.

Management and record rules have been defined by working groups and allow, for example, guaranteeing the traceability of data changes and their consistency.
These rules specify the required and optional information that must be shown in each sheet.
A follow-up is also carried out in order to make sure that the time frame of processing a request for a code and/or an update is respected.
Certification covers the management of alphanumeric data sets (reference frame) as follows: fractions to be analyzed, media, parameters, measurement units, methods, taxons, participants.

Eventually, SANDRE wants to extend certification to all its services.

You can view these data sets in the ‘Online Services’ section on the SANDRE website:
http://sandre.eaufrance.fr

www.eaufrance.fr

20 years of efforts to facilitate water data management: from NWDN to WIS

It was not until the early 90s, that the French and European Public Authorities became aware of the importance of good water data management to ensure better management of resources.
Of course, we had already produced data for a long time, including on hydrology.
The National River Basin Network monitored the quality of rivers and the Departmental Directorates of Health and Social Affairs the quality of drinking water.

They began to worry about the performance of wastewater treatment plants...
But data were heterogeneous and access was difficult and sometimes had to be paid.
Above all, data aggregation for the purposes of national or European knowledge was a long and tedious work of gathering, formatting and checking the various sources.
The French Environment Institute, created the same year, regularly expressed its doubts about the reliability of the information thus obtained.

They had to react!
The creation of NWDN - National Water Data Network - in 1991 was a decisive step.
The main data producers agreed to work together to ensure the preservation of and access to data made homogeneous.

The “SANDRE”, Secretariat of the National Service for Water Data and Reference Frames Management, is a true system for the standardization of water data and for the management of national reference frames, through which it became possible to exchange and aggregate data of the same type without regard to format.
In support to the Water Directorate and Water Agencies, it took a very active part in the creation of the National Water Data Base - NWDB - in 1994, the establishment of the computerized geographic reference frame for surface waters, the BD CARTHAGE, in 1997, the creation in 1997 of the Website designed as a portal, the “NWDN portal”, with a dynamic mapping interface among the first in France in 1998.

With the Framework Directive, enacted in 2000, the need for knowledge has increased, as well as the need to make data accessible to all levels and ensure a “reporting” of the obtained results to the European Commission and the European Environment Agency.
In 2002, the NWDN became the “Water Information System” (WIS), with even greater ambitions, including the establishment of large interoperable databases.
The National Agency for Water and Aquatic Environments (ONEMA), created in 2007, is now having control of the WIS.
The “NWDN portal” was replaced by the “eaufrance Portal”, which provides an immediate and free access to the databases.
And SANDRE is needed more than ever because it ensures the homogeneity of the arrangement and the interoperability of an information system now made consistent.

www.eaufrance.fr
INBO Action Plan n° 4

www.gesteau.eaufrance.fr

The Environment Contract and “SAGE” website

“GEST’EAU” is the national website dedicated to Water Development and Management Plans (SAGE) and contracts about environments.

It has been run by IOWater, INBO Permanent Secretariat, since its inception in 2002, under the coordination of the Ministry of Ecology (MEDDTL) and the National Authority for Water and Aquatic Environments (ONEMA).

Following a satisfaction survey conducted in 2009 among web surfers, many improvements were achieved in 2010 to meet their needs:

- A more modern visual identity
- More educational texts,
- A new section devoted to Master Plans for Water Development and Management (SDAGE),
- A search engine to locate the methods for managing available water in a territory,
- A search engine for documents related to local water management (documents produced by the “SAGEs”, methodological guides, regulations, etc.)
- Key figures regularly updated.

And as in previous years, the website proposes descriptive sheets of the “SAGE” and contracts about environments with the characteristics of the river basin concerned, a progress report, the stakeholders involved and the documents produced.

These sheets are updated directly by the “SAGE” and Contract managers.

www.gesteau.eaufrance.fr

Make data on climate change available

Explore 2070 is a project of the French Ministry of Ecology that aims to pool data on different topics (biodiversity, groundwater, surface water, coastline, socioeconomic prospects) to foresee the necessary adaptations to climate and anthropogenic changes.

The specificity of Explore 2070 is to provide an integrated approach to multiple topics, on a national scale for the 2050-2070 period.

Mobilizing about a hundred experts for two years, this project gathers the best national expertise, from research institutions and specialized consulting firms.

A website is being configured, that will allow consulting these data regrouped according to four key issues (water supply and demand, biodiversity, coastal risk and extreme events) on different geographical scales (national, river basin, shoreline, wetlands, big cities).

The model will calculate the risks and costs of climate change and adaptation measures to cope with it.

Since last September, the Open Geospatial Consortium (OGC) has adopted the Water ML 2.0 Part 1 standard, a coding standard for time series in the water sector.

The International Office for Water, INBO Secretariat, is one of 12 partners involved in the development of this standard.

It is indeed involved in the Hydrology Working Group, co-chaired by the OGC and the Hydrology Commission of the World Meteorological Organization.

The new OGC standard is based on XML language for encoding and exchanging data describing the status and location of surface and ground water resources.
The Alps: a "Mountain Water Observation System"

The idea of a permanent Mountain Water Observation System is the outcome of Meetings on water in mountains organized in Megève in September 2010, with the assistance of the "EUROPE-INBO" Group. The Observation System gathers scientists, elected representatives and water managers to discuss about the fundamental issue of the role of mountains in water resource conservation. Its vocation is to improve knowledge on the functioning of watersheds, wetlands and aquatic environments in high altitude, to develop mountain system models and allow the development of management and decision-making supporting tools for elected representatives and managers.

In relation with water management authorities, the Observation System fosters innovation and action on application sites around three topics:

- Resource sharing
- Conservation of wetlands, mountain streams and lakes
- Evolution of water bodies and risks

The Endowment Fund "Living Mountain, Alpine grasslands, Water and Forests", contracting authority of the Observation System, entrusted Asters, Upper-Savoy Natural Space Conservancy, with the coordination and facilitation of this project.

The sharing of water resources has been studied since 2009 in the Megève area in France under the European Alp Water Scarce program. Since March 2011, this component has benefited from the sponsoring of the National Rhone Company.

Tools for integrated water resources management

Two tools that support integrated water resources management: AQUATOOL and STRATEAU, were developed respectively by the Technical University of Valencia (Spain) and the Water Embassy (France):

- STRATEAU is a decision making supporting tool which proposes water management scenarios.

- AQUATOOL is a decision-making supporting tool for planning. It allows quantitative, qualitative, economic and environmental analyses on the river basin scale.

Both tools may be used in a complementary way. A workshop “Tools to support and improve Integrated Water Resources Management: STRATEAU and AQUATOOL - A Mediterranean Perspective” was organized on the 20th of September 2012 in Valencia (Spain) by the Mediterranean Network of Basin Organizations (MENBO) and the Technical University of Valencia (UPV) in collaboration with the Water Embassy and support from the Global Water Partnership Mediterranean (GWP-Med).

The Endowment Fund "Living Mountain, Alpine grasslands, Water and Forests", contracting authority of the Observation System, entrusted Asters, Upper-Savoy Natural Space Conservancy, with the coordination and facilitation of this project. The sharing of water resources has been studied since 2009 in the Megève area in France under the European Alp Water Scarce program. Since March 2011, this component has benefited from the sponsoring of the National Rhone Company.

This event brought together more than 50 experts from the Mediterranean region. Three round tables have been organized on:

- Perspectives for the application of the decision-making supporting tools;
- Integrated water resources management in education;
- Integrated water management tools in the Mediterranean region.

As a final result, the participants underlined that the implementation of simulation tools like AQUATOOL and STRATEAU is an important support for water managers.

All papers and results of the workshop can be found on the MENBO website: www.asters.asso.fr

New “Meetings on water in mountains” are planned for September 2014 in Megève.
TOWARDS A CERTIFICATION BY THE UNION FOR THE MEDITERRANEAN (UfM)

One of the commitments made at the last World Water Forum organized in Marseilles in March 2012 was to build shared Water Information Systems to support cooperation and peace in the Mediterranean.

Under the impulse of the UfM Secretariat, the promoters of three regional informative projects gathered to prepare a unifying and ambitious project: the Lebanese Ministry of Energy and Water, the Arab League and EMWIS, the Euro-Mediterranean Water Information System.

This new project is made of 4 components:

- **Regional coordination**, especially with the European Union (SEIS, WISE, INSPIRE) and the United Nations for exchange of experiences, drafting of guides, recommendations, tools and standard documents, etc.;
- **Strengthening of National Water Information Systems (NWIS)**, in 4-5 pilot countries (Morocco, Tunisia, Jordan, Lebanon and under conditions Bosnia and Herzegovina);
- **Regional training programs on water data management** (reference frames, data dictionaries, quality, legal aspects, etc.);
- **Demonstration of data automation and reporting** for international initiatives such as the Water Strategy of Arab countries or the Action Plan for the Mediterranean of UNEP.

All interested parties met in Barcelona on 5 and 6 November 2012 to finalize the technical and financial proposal for certification by the 43 Member Countries of the Union for the Mediterranean (UfM).

In particular, they reiterated the urgent need to support countries in the implementation of their National Water Information Systems (NWIS).

All Mediterranean countries will participate in regional activities and may reinforce their own NWIS at a later stage on the basis of the feedbacks of this project.

OPTIMIZING MEASURES AGAINST WATER SCARCITY

One possible application of the System of Environmental-Economic Accounting for Water (SEEAW) in river basins is to optimize the choice of measures to be applied within a Drought Management Plan.

EVREN and EMWIS, in association with the Jucar River Basin Authority in Spain, are analyzing the advantage and feasibility of this approach in a project funded by the DG Environment of the European Commission.

**First steps towards a knowledge hub on water in the Mediterranean**

Impulsed by the International Union for Conservation of Nature (IUCN), EMWIS, CEDARE and national NGOs in Morocco, Egypt, Jordan and Palestine, a project for a Regional Water Knowledge Hub Network will be initiated with funding from the European Commission.

The objectives are firstly to collect, analyze and assemble the knowledge generated locally on water resources management, and secondly to make this knowledge available to NGOs, decision-makers and managers, in local authorities in particular.
Cooperation among the riparian countries is becoming imperative as pressure is increasing because of the global changes which are intensifying.

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

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

The experience gained allows today saying that it is possible to organize effective management on the basin-scale of transboundary rivers, lakes or aquifers, when there is a real willingness of the stakeholders concerned.

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

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

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

The handbook itself and its English version on CD-ROM can be obtained free of charge, subject to availability, by E-mails to: secretariat@inbo-news.org or gwp@gwp.org

Digital versions of the English, French and Spanish Handbook can be downloaded, free of charge, on GWP and INBO website: www.inbo-news.org

Guidance document on transboundary aquifer management

Aquifer systems, which represent an important part and sometimes the only water resource available in a country, are unequally known.

Much more frequently than transboundary rivers, transboundary aquifers are shared between various countries which generally use them independently, partially for drinking water supply and for industrial uses, but mainly for irrigated agriculture.

This leads more and more to cases of overexploitation and pollution which create tensions at all levels, with a risk of crises and conflicts between countries sharing the same aquifer.

For all these reasons, it is today important to improve knowledge and promote a reasonable and sustainable integrated management of transboundary aquifer systems.

To reach this objective, a methodological approach and a guidance document were developed by UNESCO, the Water Academy, BRGM and INBO, with financing from the French Development Agency (AFD).

This approach highlights the main challenges facing transboundary aquifers, their specificities, and the need for Integrated Water Resources Management (IWRM).

It then describes the different tools available to improve knowledge and the development of this precious resource: technical, legal, institutional and economic, but also educational and cooperation instruments.

Finally, it proposes a progressive and multiform approach for joint, equitable and sustainable transboundary aquifer management and it describes the mechanisms required to create the proper institutional structure for the management of shared ground (and possibly surface) water resources.

www.unesco.org

www.inbo-news.org
Publications - Communication

INBO Newsletter

21 issues have been published since 1994, year of INBO creation in Aix-les-Bains.

All their electronic versions can be unloading from our website: www.riob.org, www.inbo-news.org, www.rioc.org

Publication is made in three languages: English, French and Spanish including:

12.500 copies in French
11.000 copies in English
3.500 copies in Spanish

An electronic version is translated into Russian!
INBO Electronic Newsletter

It is sent to you whenever important information is available:

- Meetings organized by our network or our partners,
- News in INBO website,
- News from our Regional Networks,
- Diary of events,
- International news on water

41 issues have been sent since its inception in January 2004!

There are 28,000 recipients Subscribers to INBO newsletters:

French: 15,900
English: 8,600
Spanish: 2,400
Portuguese: 650
Russian: 440
The Network’s Website

With three addresses:

in French: www.riob.org
in English: www.inbo-news.org
in Spanish: www.rioc.org

It is a major international success!
It has 1.15 million visitors per year!

Our website has received over 7,000,000 visitors since its opening in 2002!

... And over 110,000 visits / month in early 2013

Part of the website is also translated into Russian!

You will find the agendas, programs, resolutions, papers and photos of all the events organized by INBO:
you can also see information from our regional networks.
Statistics on the consultation of "INBO" websites

Monthly visits through the years /
Visites par mois selon les années

www.riob.org
www.inbo-news.org
www.rioc.org

1.150.000 million visitors in the last 12 months!
The website of basin management over the world

- The International Network of Basin Organizations
- The Regional Networks of Basin Organizations:
  - Africa - ANBO
  - Latin America - LANBO
  - North America - NANBO
  - Asia - NARBO
  - Brazil - REBOB
  - Central Europe - CEENBO
  - Eastern Europe, Caucasus, Central Asia - EECCA-NBO
  - The Mediterranean - MENBO

- "EUROPE-INBO": European Water Framework Directive implementation
- The Handbook for Integrated Transboundary Basin Management
- The 6th World Water Forum of Marseilles 2012
- "The World Pact for better River Basin Management"

Privileged links with websites:
worldwaterforum6.org / worldwatercouncil.org
wgp.org / lowater.org / emwis.net
unesco.org / water.europa.eu
european-region-wwf2012.eu
unece.org/env/water