

River Basin Management It works!



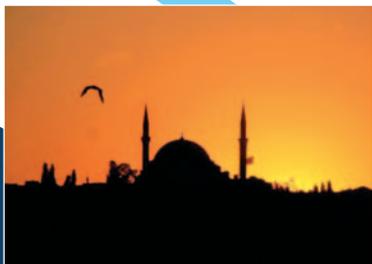
Saragossa - July 2008 - MENBO



Sibiu - October 2008 - Europe-INBO



Rio de Janeiro - November 2008 - LANBO



Istanbul - March 2008 - 5th WWF

In 2008, INBO Member Organizations and their partners mobilized themselves to prepare the next 5th World Water Forum of Istanbul in March 2009. They learned the lessons from their experiments in basin management and transboundary cooperation, in order to make collective awareness advance and to propose realistic solutions to face the challenges of the coming years.

Huge progress has been made for 15 years in the implementation of effective basin policies on all continents.

Basin management thus seems today a credible approach to organize a new governance of water resources and aquatic ecosystems enabling to better meet the stakes of economic and social development, pollution control, and natural and accidental risk prevention.

It is also at basin level that we will be able to act effectively to anticipate the probable consequences of climate change on the hydrology of rivers.

An organization at the level of the whole basin is especially essential for consistent and sustainable management of transboundary rivers, lakes and aquifers to the benefit of all the riparian Countries.

Strong political will and the participation of all the stakeholders concerned are the keys to success, with the development of financing systems and suitable planning and monitoring tools.

These lessons learned are gathered in a "**Handbook for IWRM in Basins**" that INBO and GWP will present in Istanbul on next 20 March in the evening.

These experiments will feed the discussions during the Istanbul Forum in the five official sessions of topic 3.1. on "Basin Management and Transboundary Cooperation", coordinated by INBO and UNESCO, and which will be held on Friday 20 and Saturday 21 March 2009 in Istanbul-Sutluce. All the interested partners are invited to actively participate.

Let's get mobilized to promote river basin management in Istanbul!

5th World Water Forum - Ist

The International "Water and Film" Events



Launched in Mexico in March 2006 during the 4th World Water Forum, the International "Water and Film" Events are a joint initiative of the International Secretariat for Water (ISW) and the French Water Academy.

This international event is to take place every three years during the World Water Forums.

The event aims at:

- Enriching the World Water Forum program;
- Informing the public and raising awareness about the challenges in water resource management;
- Promoting audiovisual material on the theme of water;
- Building up the image banks available on this topic.

Towards Istanbul 2009

The next International "Water and Film" Events will be held from 18 to 21 March 2009 in Istanbul, during the 5th World Water Forum, with the overall theme of "Water, People and Sustainable Development".

Around one hundred films and clips selected over a two-year period will be screened.

Participants in the 5th World Water Forum will be able to attend the screenings and debates held with the film directors in the Citizens' House for Water and its "Fountains of Knowledge" area.

The general public will be invited to attend screenings at various locations around Istanbul so they can learn more about water-related issues around the world.

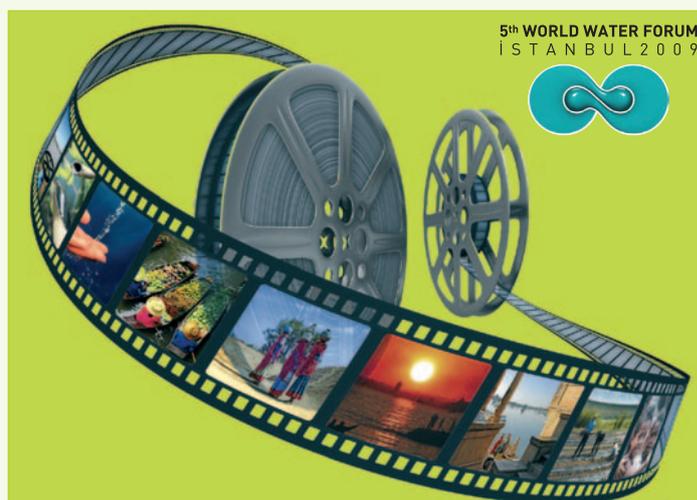
Film festivals are mobilized around the world

Some of the works presented in Istanbul in March 2009 will be selected in collaboration with several film festivals and competitions around the world.

This selection will also include works directly registered and chosen by a selection committee based in Montreal.

Non-competition Categories

- Films over 60 minutes long (documentaries, animations, fictions);
- Video-Art.



Competition Categories

- Clips less than 90 seconds long made by young people aged from 17 to 30;
- Films less than 60 minutes long (documentaries, animations, fictions);
- Films of a scientific and pedagogical nature.

International Jury

In Istanbul, an international jury of experts in water and cinema will designate the winners in each competition category. The results will be announced during an official ceremony as part of the 5th World Water Forum.

Films produced in a language other than English must be sub-titled in English or, if necessary, accompanied by a print-out of the dialogues in English, French or Spanish.

INBO will give a prize to an original project on basin management

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INVITATION



Basin Management and Transboundary Cooperation at the 5th World Water Forum in Istanbul

- **17 March 2009** (17:00-19:00) **Regional European Session - Sutluce**
European Water Partnership - INBO - Role of Europe in the world - Transboundary Basin Management
- **18 March 2009** (14:30-19:00) **Side event - European Union - China River Basin Management Program**
Yellow River Commission - INBO - RM&C French Water Agency - University of Liege - Pô River Basin Spanish Ministry for the Environment
- **20 March 2009** (08:30-19:00)
(08:30-10:30) **Topical sessions 3.1 - Basin Management and Transboundary Cooperation - Sutluce**
(11:00-13:00) **session 3.1.1.:** Hydro-solidarity successes and failures
(14:30/19:00) **session 3.1.2.:** Water users' participation
session 3.1.3.: Institutional tools for Transboundary Cooperation
- **20 March 2009** (19:00-20:00) **INBO - GWP presentation: "Handbook for Basin Management" - Sutluce**
- **21 March 2009** (08:30-13:00) **Topical sessions 3.1 - Basin Management and Transboundary Cooperation - Sutluce**
(08:30-11:00) **session 3.1.4.:** Technical tools for River Basin Management
(11:00-13:00) **session 3.1.5.:** Work synthesis and conclusions
(13:00-14:30) **IWRM side event: Governance of River Basins - French Pavilion**
French Water Partnership - French RM&C and Artois-Picardy Water Agencies



INBO and UNESCO coordinators of topic 3.1: "Basin Management and Transboundary Cooperation"



5th WORLD WATER FORUM
I S T A N B U L 2 0 0 9



The International Coordination Committee (ICC) of the 5th World Water Forum, which will take place in Istanbul from 16 to 22 March 2009, has designated **INBO** and **UNESCO** as coordinators of topic 3.1: "**Basin Management and Transboundary Cooperation**".

During the Forum, **100 topical sessions**, involving all the stakeholders, should propose practical solutions, by allowing free discussions on all topics to reach consensus.

In their second meeting in Istanbul in February 2008, the partners decided to focus their proposals for topic 3.1 on the four following issues, which will be the subject matter of a topical session **on Friday 20 and Saturday 21 March, in the Conference Center of Sutluce A - Kagithane Hall:**

- ① **What are the success stories and failures of hydro-solidarity and IWRM at basin level?**
- ② **How to organize and facilitate the participation of all stakeholders?**
- ③ **How can transboundary water resources be managed more sustainably by all the riparian countries concerned?**
- ④ **What are the tools to use for better basin management and sustainable transboundary cooperation on surface and groundwater resources?**

A synthesis session will conclude work on 21 March 2009 from 11:00 to 13:00.

The proposal for organizing the sessions of topic 3.1 on "Basin Management and Transboundary Cooperation" was widely disseminated and submitted to discussion with the partners.

MORE THAN 190 ORGANIZATIONS PARTICIPATED IN THIS PRELIMINARY DISCUSSION AND HAVE SENT PROPOSALS.

In 2008, several international meetings were organized with all the interested parties for working in open and fruitful dialogue:

- International Symposium on the management of water-related extreme phenomena, **ECWATECH, Moscow, Russia** from 4 to 5 June 2008;
- 4th International Conference on River Restoration, **Venice, Italy**, from 16 to 21 June 2008;
- International Water Exhibition - Water Tribune, **Saragossa, Spain**, from 7 to 10 July 2008 - Thematic Week 4 - INBO-MENBO-EWP Session: "basin management and transboundary cooperation in Europe and the Mediterranean", on 8 July 2008;
- WWF round table on the UN Convention on the management of transboundary water resources at the **Stockholm Water Week**, in August 2008;
- IWRA General Assembly, session on Transboundary Water Management, **Montpellier, France**, from 1 to 3 September 2008;
- IWA Symposium on River Basins, **Budapest, Hungary**, from 4 to 6 September 2008;
- "EUROPE-INBO 2008", session on the implementation of the Water Framework Directive, **Sibiu, Romania**, from 2 to 4 October 2008, "Flood and drought management, transboundary water management and WFD Programs of Measures";

Coordinators' meeting in Istanbul in February 2008



- 4th International Symposium on Transboundary Water Management, **Thessaloniki, Greece** from 15 to 18 October 2008;
- 6th workshop of ISARM - Americas, **Dominican Republic**, November 2008;
- General Assembly of the Latin American Network of Basin Organizations and the National Forum of Brazilian Basin Committees, **Rio de Janeiro, Brazil**, from 19 to 21 November 2008.

FIRST DRAFT CONCLUSIONS

River Basin Management works!

- Tangible outputs can be obtained with strong political will;
- Significant progress has been made since the 1990s;
- Integrated Water Resources Management should be organized at the level of local, national or transboundary basins of rivers, lakes and aquifers;
- This management should be based on a strong participation of all the basin's stakeholders and on the involvement of their representatives in Basin Committees;
- The partners should agree on a "shared vision" of the basin, which results in a medium and long-term Management Plan, Programs of Measures and priority investments;

- Suitable financial mechanisms should be developed, based, in particular, on the application of the "user - polluter - pays" principles;
- Basin Information Systems should allow following up the implementation of policies and measuring their results;
- Clear legal frameworks should allow a lasting application of these principles, which will be facilitated by the creation of Basin Organizations or Agencies;
- Transboundary rivers, lakes and aquifers should be paid special attention and be managed through dialogue between the riparian Countries;
- The creation and strengthening of International Commissions or Transboundary Basin Authorities facilitate dialogue, the exchange of information and the joint implementation of the actions necessary for better management, anticipating the future and allowing controlling possible conflicts between the Countries concerned.

Everything becomes possible when there is the will to do so!

www.inbo-news.org

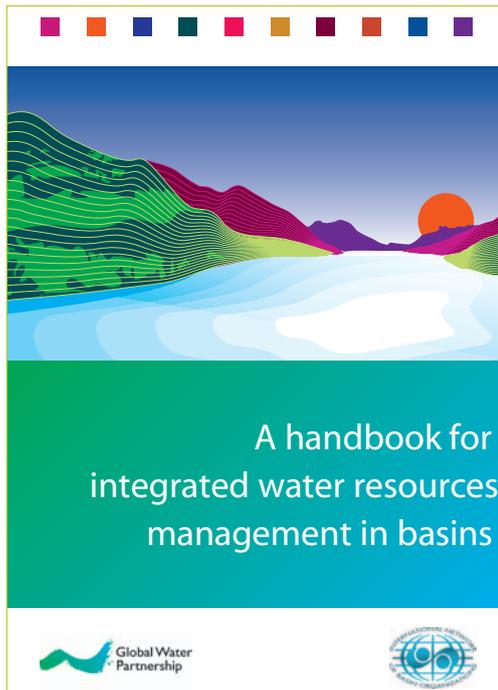
www.worldwaterforum5.org

www.unesco.org



"Handbook for IWRM in Basins"

The result of an effective collaboration between INBO and GWP



problems of water resources and impacts of regional planning on these resources. Many experiments of integrated basin management were initiated in the world these past years.

The International Network of Basin Organizations (INBO) and the Global Water Partnership (GWP), with the financial support of the French Ministry for Foreign and European Affairs, have joined to produce the "Handbook for

IWRM in Basins", based on these experiments and know-how, practices and knowledge acquired sometimes for several decades.

This handbook is intended for professionals of water resources management of the public and private sectors.

It is also addressing representatives of local authorities, economic sectors and NGOs, involved in basin management.

The handbook aims at providing them with examples of tools and practical advice to facilitate their decision-making regarding the governance and management of water resources, either for the creation of new basin organizations, or for improving and modernizing already existing basin management bodies.

After introducing fundamental notions, then problems and challenges encountered by the managers, the document analyzes the tools and mechanisms available for establishing basin management systems as well as the types of possible basin organizations and their roles, according to the situation.

The handbook deals, in a pragmatic way, with mechanisms used for an equitable share of the resource between the various uses (domestic, agriculture, energy, industry, transport, tourism, fishing, environment), with instruments for conflict prevention and

resolution or protection against risks, especially those caused by climate change. The aspects of financing the water sector, stakeholders' involvement, long-term strategy and action plans, communication and development of follow-up and information systems are analyzed while focusing on the practical elements, dealing both with the improvement of institutional arrangements and working practices.

More than fifty experiments or case studies implemented in the five continents are used to illustrate the various topics and are references likely to help decision-makers in their search for solutions to their problems.

Designed for providing practical assistance to catalyze the changes towards sustainable development, this handbook, published in English and French, aims to be a dynamic document. The first version of which, presented on 20 March 2009 at 19:00 at the 5th World Water Forum in Istanbul - Sutluce Conference Center, will be regularly updated thereafter.

A "Brief" for better basin management

The Technical Committee (TEC) of the Global Water Partnership (GWP) and the International Network of Basin Organizations (INBO), in collaboration with "the Global Evaluation of Water Management in Agriculture (CA)" have published, in English and in French, a "Brief" on the issue of water management at basin level.

This brief analyzes basin governance in the context of increasing competition for water between agriculture and the other uses, of impacts of water pollution and deterioration of ecosystems.

This analysis shows that, to face all the challenges, it is necessary to create arrangements for governance which take into account the various geographical scales.

The basin is a particularly relevant level for the field implementation of integrated management associating all the stakeholders related to water.

The note gives an overview of the various functions which must be fulfilled on this scale, advisable institutional arrangements for effective governance, roles which the Basin Organizations can play according to the national context, to criteria which determine the quality of the operation of Basin Organizations.

The "brief" also emphasizes the need for a preliminary institutional characterization, so that the type of Basin Organization to be created is suited to the challenges to face and is consistent with the actions of all the other Institutions which usually already exist in the same area.

The new body should be a privileged place for coordination and dialogue.

Download the document file on: www.inbo-news.org www.gwpforum.org

TWINBASIN^{xn}

For promoting twinning between Basin Organizations



The **International Network of Basin Organizations (INBO)** has acquired experience for many years in fostering twinning agreements, especially in managing the TwinBasin project (2004–2007) financed by the European Commission and coordinated by the International Office for Water.

The TwinBasin project demonstrated the real added-value of developing twinning agreements between River Basin Organizations for improving Integrated Water Resources Management.

Indeed, by exchanging field experience, Basin Organizations can:

- strengthen participation of stakeholders and civil society in decision-making processes;
- improve methodologies for mid-term and long-term planning;
- set up the data bases required to organize Information Systems and decision-making supporting tools;
- build staff capacity;

- design sustainable financial mechanisms.

TwinBasin gathered more than 70 Basin Organizations around the world, which were involved in 40 twinning agreements.

The project:

- gave strong credibility to the Twinning process;
- proposed a framework for agreements between partners;
- organized calls for proposals for selecting the best and more adapted Twinning arrangements;
- required technical reports with specific added value after the realization of experts' missions.

It is worth saying that average support made by **TwinBasin** has been of 4,000 Euros for each twinning, covering less than 40% of the direct expenses. **For such a reasonable investment, benefits have been much higher!**



Thus, for any future Twinning project, **INBO proposes a 3-steps methodology:**

- 1 **Explaining the needs**, which depend on the topics to be tackled with (institutional, legal, economical, technical, communication) and the practical methods used for exchanges (awareness, training, capacity building) as well as the contacts to establish (political people in charge, representatives of the economic sectors, managers of basin organizations, technicians, specialists, etc.).

- 2 **Identifying the most compatible "Twins"**, in particular thanks to the regional networks of Basin Organizations.

- 3 **Proposing a precise content for twinning agreements** specifying the objectives, expected outputs, missions' duration, foreseen period, expert(s) profile(s), local counterparts, performance indicators, financial arrangements, etc.

Under these conditions, twinning agreements have more chance to be truly effective and to become genuine tools for sharing experience and know-how.

www.twinbasin.org

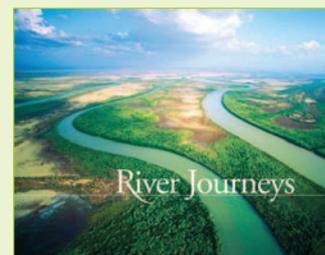
International Riverfoundation

"River Journeys"

International Riverfoundation (IRF) has recently published its book "River Journeys" at the International Riversymposium in September 2008 in Brisbane, Australia.

This book features interviews with winners of the Thies Riverprize and presents their long and challenging river restoration journeys worldwide.

"River Journeys" showcases the human face of river restoration projects and provides insights into "how we can live with rivers more sustainably in the future".



St. Johns River wins International Thies Riverprize 2008



The St. Johns River Basin Project in Florida is a large wetlands restoration initiative which addresses environmental degradation and flood control within a 30-year collaboration between Florida State and Federal water managers.

This Project uses innovative approaches to combine environmental benefits with flood control over 60km of river length and 60,000ha of floodplain.

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"Financing IWRM pays back!"



From 5 to 16 May 2008 in New York, the participants in the Commission on Sustainable Development of the United Nations drew up an evaluation of the "water and sanitation cycle" launched during CSD-13 in 2005.

The French Ministries for Foreign Affairs and Ecology had mandated the **French Water Partnership (FWP)** for organizing a side event, on May 12, on the topic of IWRM financing on a national and transboundary scale.

The FWP was created in 2007 after the 4th World Water Forum of Mexico City and gathers the public and private French water stakeholders intervening worldwide. It is a forum for exchanges on governance and management of water resources.

This side event was presented by Mr. Stefanini, the French Ambassador's representative in charge of the Environment, and by the representative of the State Secretary in charge of the Environment of Slovenia, Mrs. Iskrenovic, on behalf of the EU Presidency.

Mr. Donzier, Permanent Secretary of the International Network of Basin Organizations, made an introductory speech on the financing of IWRM in the world.

The Chief of the Environment and International Relations Department of the Walloon Region of Belgium, Mr. Wauthier, President of **EUROPE-INBO** Group 2005-2006, was the facilitator.

In his introductory speech, Mr. Donzier reminded that IWRM was certainly making progresses, but some countries are only at the beginning of its development and still have an approach primarily based on the build-

ing of traditional infrastructures and the sharing of available resources. He underlined that, today, beyond access to the resources, "we must also develop integrated policies for sanitation, the reduction and treatment of polluting discharges, take into account the quality of the ecosystems, as being the true natural infrastructures essential to water cycle operation, and of course it is necessary to prevent the natural erosion, flood and drought hazards".

Financing is a key element to make effective "everybody's access to essential services and good resources management": long-term financial resources should be mobilized and common cause systems set up, which are effective today through the application of the "users-polluters-pay" principles and mechanisms of common cause/equalization between the various categories of users.

This must make the payment of the quantities of safe water essential to their everyday life bearable to the most underprivileged populations. It is also necessary to emphasize the significance of agricultural irrigation in water management.

This meeting was a success.

It gathered 150 participants and a panel of top level decision makers, coming from several continents: the President of the African Ministers' Council on Water (AMCOW), Mr. Itoua; the High Commissioner of the Organization for the Development of the Senegal River (OMVS), Mr. Ould Merzoug, also President of the Network of International Commissions and Transboundary Basin Organizations; the President of the Water Commission of the French Association of Mayors of Large Towns, Mr. Begorre; the Director of the Water Program of the International Union for Conservation of Nature (IUCN), Mr. Bergkamp; the Director of the National Water Agency of Brazil, Mr. de Cordeiro Netto, Secretary of the Latin American Network of Basin Organizations, and the President of the Mediterranean Water Partnership, Mr. Scoullios.

The conclusions of this side event, drawn by Mr. Donzier, will be presented to the 5th World Water Forum of Istanbul, in March 2009.

INBO was designated, together with UNESCO, as coordinator of topic 3.1 of the Forum on **"Basin Management and Transboundary Cooperation"**, and will be the spokesman of these exchanges.



www.french-water-partnership.fr

The law of transboundary aquifers

At its 60th session (May–July 2008) the UN International Law Commission (ILC) adopted at second reading a full set of draft articles on the law of transboundary aquifers, including a preamble and commentaries. The ILC thus completed a task it had started five years ago under the topic of "Shared Natural Resources".

The draft articles are intended to offer States a framework for their agreements on transboundary aquifers.

The text is available in all UN languages at:

<http://untreaty.un.org/ilc/reports/2008/2008report.htm>

Since 2003, UNESCO–International Hydrological Program (IHP) has provided scientific and technical assistance on hydrogeology and transboundary aquifers.

IHP has mobilized and coordinated action with other United Nations agencies, such as FAO, the Economic

Commission for Europe (UNECE), UNEP/GEF, as well as the International Groundwater Resources Assessment Center (IGRAC), IAH, the Organization of American States (OAS), the French–Swiss Geneva Aquifer Authority and Guarani Aquifer System Project.



The ILC transmitted the draft articles to the UN General Assembly with the following recommendations:

- To adopt a resolution adapting the draft articles on the law of transboundary aquifers and to annex these articles to the resolution;

- To recommend to States concerned to make appropriate bilateral or regional arrangements for the proper management of their transboundary aquifers on the basis of the principles enunciated in these articles;

- To consider, at a later stage, the elaboration of a convention on the basis of the draft articles.

In November 2008, during the 6th Committee (Legal) of the General Assembly more than forty States commented the achievement of the ILC on the law of transboundary aquifers and expressed their satisfaction and their support of the two steps approach recommended by the ILC.

Resolution A/RES/63/124, following the recommendations of the ILC, was adopted by the UN General Assembly on 11 December 2008.



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UNECE

A new practical guide to the Water Convention

Georgia and Macedonia recently requested support to accede and implement the Convention on the Protection and Use of Transboundary Watercourses and International Lakes in Europe.

This presented an entirely new challenge for the Convention, as never before had a country requested "pre-accession" assistance.

The two countries underlined the real need for concrete guidance on the legal, practical and economic implications of accession to and implementation of the Convention.

The Convention's Bureau agreed that the most effective way to handle these requests would be through a practical guide.

Developing such a guide is no simple task, however. It will entail coming up with clear, easy-to-follow explanations. It should be a multilateral exercise, as the guide is an extremely strategic product, which must be designed carefully. One of the major challenges will be to find the right balance between a practical tool responding to country-specific needs, and one that at the same time is general enough to be applied in many different situations.

The guide will offer Parties the opportunity to share their views on what the Convention means in practice, as well as the good practices they have developed in the past 16 years. It will provide explanations on legal issues related to the

Convention, such as the polluter-pays principle and international liability.

It will also be an important tool for promoting the Convention outside the UNECE region.

The guide is expected to be submitted for adoption to the Convention's Parties at their fifth meeting in Geneva, on 10–12 November 2009.

As a first step, specific provisions which need clarification have been selected.

For each of them, the guide will include legal and practical explanations as well as minimum requirements for their implementation.

These explanations will be complemented with practical examples and case studies.

INBO members are invited to contribute with examples of good practices that could be included in the guide.

Francesca Bernardini

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"ECWATECH 2008"

Moscow - June 2008

"Water Resources Management under Extreme Conditions"



The International Conference on "Water Resources Management under Extreme Conditions" took place in Moscow on 5 and 6 June 2008 within "ECWATECH 2008", the main Water Forum of the Eastern European countries.

This Conference was organized by the Russian Federal Water Resources Agency, the Dutch Water Partnership, the World Water Council, the International Water Resources Association, the World Meteorological Organization (WMO), the European Water Partnership (EWP) and the **International Network of Basin Organizations (INBO)**.

The objective of the Conference was to allow a meeting between water management specialists coming from all over Europe, Caucasus and Central Asia.

During this Conference, the participants dealt with various topics, such as forecasting extreme phenomena; assessing flood and drought risks and associated resources management; monitoring; land use; technical status of infrastructures; lessons learned from management practices, causes and impact of extreme phenomena; social and economic factors in decision-making; damage prevention and limitation.

INBO facilitated a special session, on 5 June in the afternoon, on the new tools introduced by the European Water Framework Directive and its "daughter" Directives and announced the creation of **a Regional Network of Basin Organizations from Eastern Europe, Caucasus and Central Asia (EECCA-NBO)**.

www.ecwatech.com



ECRR

4th International Conference on River Restoration

Venice, 15-21 June 2008



The European Center for River Restoration (ECRR) is a platform providing scientists, planners, project managers and decision-makers with the opportunity for meeting regularly to discuss about existing practices and look into the impacts of human activities on river restoration.

The 4th ECRR International Conference on River Restoration, held in Venice on 16-19 June 2008, aimed at identifying the key issues on river restoration, especially in the European Union.

The presentations and discussions of the 300 participants, coming from 36 countries from all continents, demonstrated an increasing number of river restoration projects being implemented during the last 10-15 years. Among stakeholders, there is a growing awareness of the need to use new approaches and a better understanding of opportunities and benefits related with river restoration.

The embedding of river restoration into an appropriate policy is crucial. In the European Union, the Water Framework Directive is an effective driver although slow to produce its effects. In other regions (e.g. Eastern Europe, Latin America), legislations and policies

exist, but the Governments do not seem to be enough motivated or interested to apply them; in such cases the academic institutions and civil society can act to support policy implementation. In most cases there is a gap between policy development and practice.

The ECRR delegates underlined that, on the one hand, river restoration practices are being supportive to the implementation of various EU Directives, while, on the other hand, the obligations under the EU Directives often are a driving force for the implementation of river restoration projects.

There is a common understanding that river restoration, based on an integrated ecosystem approach, is a good instrument to implement EU Directives (Natura 2000, Habitat, Bird, WFD and Flood Directives); it can foster a more sustainable relationship between man and nature by creating habitats, reducing flood risk and pollution.

The conference proceedings are downloadable from the ECRR website.

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For Integrated River Basin Management

According to the OECD Environmental Strategy, Member Countries should "apply the ecosystem approach to the management of freshwater resources, based on integrated river basin management". **OECD Environmental Strategy** also requires Member Countries to "ensure cooperation for the environmentally sound management and efficient use of transboundary water resources to reduce flood risks and to minimise potential conflicts from the use or pollution of transboundary water resources".

Even though management on the scale of a river basin has been carried out in practice only in a few OECD countries, significant progress has been made in recent years.

Some European countries have had experiments of basin agencies (e.g. France, Spain), and many are now creating them. **The EU Water Framework Directive (WFD)** is remarkable since, for the first time in history, 27 countries are committed to jointly managing all their freshwater resources on a basin scale, in an integrated way. Even though it focuses heavily on water quality and ecology, it includes many

of the important elements, such as holistic management on a river-basin scale, public participation and consultation, cost recovery, and use of the polluter pays principle. The WFD is binding, sets time-bound measurable targets, and allows for transboundary water management. It also includes floods, drought and aquifer management.

In Australia, the 1992 Murray-Darling Basin Agreement between south-eastern States heralded the beginning of a more comprehensive approach that widened the initial concerns over water volumes to water quality, salinity and ecological aspects. **The Murray-Darling Basin Cap agreement** for limiting water losses and **the Living Murray Initiative**, aiming at restoring the Murray River to good ecological health, recently followed.

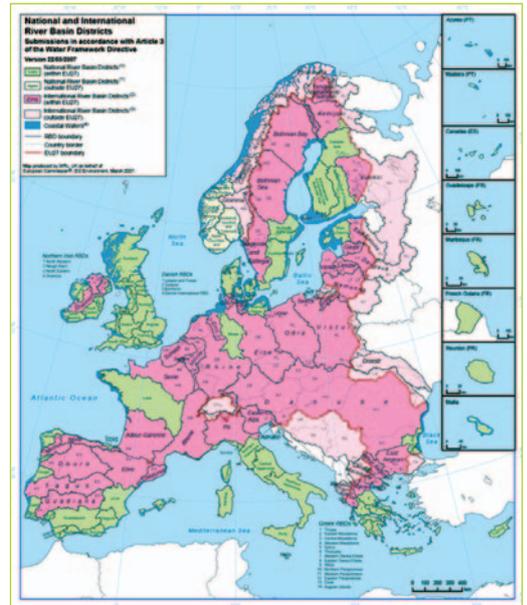
In Japan, a most encouraging development was the adoption of **the Sound Water Cycle** approach with the definition of objectives and the formulation of basin plans that will involve ministries, local authorities, residents and the civil society.

In the United States, one program offers incentives for stakeholders upstream of New York City to protect the city's water supply sources from pollution.

The USEPA supports trading in **water pollution credits**, modelled on the air pollution credit trading.

Cross-border cooperation has to be an integral part of integrated river basin management.

Approximately 61 treaties referring to 200 **shared river basins** have been signed over the last 50 years. However, few treaties contain references to water quality management, monitoring and evaluation, conflict resolution, public participation, and flexible allocation methods.



Most existing international water agreements continue to lack the tools necessary to promote long-term, holistic water management.

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A Certificate in Water Conflict Management

This Certificate of **the Oregon State University**, which addresses decision-makers, graduate students and water professionals, goes beyond the traditional physical hydraulic systems

approach and integrates human, policy and scientific dimensions to enhance capacity in Water Governance, Water and Ecosystems, Water and Society, and Water and Economics.

Upon successful completion of the Certificate, students will be able to:

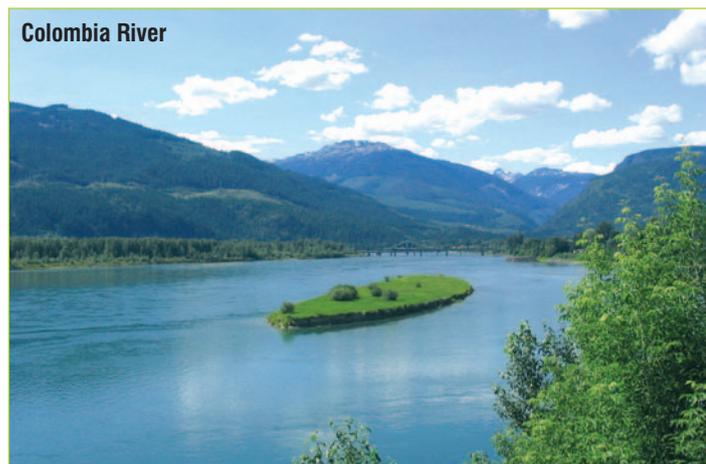
- Increase their understanding of water conflict issues;
- Assess conflicting water use interests;
- Analyze the institutional frameworks for water resources management in terms of potential for cooperation and conflict;
- Demonstrate knowledge of a variety of management, negotiation, and decision-support scenarios;
- Successfully work and communicate in a multi-disciplinary, multi-cultural environment.

The development of new online courses will provide candidates with an opportunity to successfully complete the entire program online.

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www.transboundarywaters.orst.edu



Columbia River

Towards the creation of the African Water Information System - AWIS



AWIS is a project financed by the Water Facility of the European Union. It is managed by a consortium of partners from Northern and Southern Africa: the African Network of Basin Organizations (ANBO) and its secretariat, the Organization for the Development of the Senegal River (OMVS), the Regional Center for Drinking Water Supply and Sanitation (CREPA), the International Office for Water (IOWater), the Solidarité-Eau program (PS-Eau) and the Water Engineering Development Centre (WEDC).

The project aims at testing the feasibility of an African Water Information System. The major objective of the project is to offer an instrument which allows sharing African expertise, information and abilities.

The consortium, which manages **AWIS**, carried out, from the start, a survey involving about twenty bodies distributed throughout the African continent to identify the interest of the African stakeholders in this project, their needs and their expectations, their technical potential to collaborate.

AWIS principle relies on two large components:

- ◆ **A network of partners** located on the entire African continent, made up of information management organizations, public or private documentation centers, basin managers, NGOs, engineering firms, etc.
- ◆ **An information system** in the form of a website, "**AWIS portal**", including articles, bibliographical notes, tools for integrated water resources management, links to other websites, etc. Its update is carried out by the partners' network.

The partners' network

AWIS steering committee identified 12 partners, called Focal Points - FPs, distributed over French and English-speaking Africa. A Focal Point is a body with its network specialized in the field of water (drinking water supply, sanitation, IWRM, basin management, etc.).

It contributes to feeding **AWIS** portal and participates in the development of products of common interest on topics



AWIS launching workshop
Ouagadougou, 27-30 October 2008

predefined by **AWIS** community: topical newsletters, guidance documents, topical or geographical summaries, conferences, etc. The project is committed to train the people in charge of these Focal Points on the practical methods for information management and on all the skills required for feeding **AWIS** portal.

Sub-networks may be created to develop **AWIS** products.

The information system

"**AWIS portal**" is a window of Pan-African information; it does not create information but directs towards information. It identifies and indexes the information available with its partners having the information (FPs) and sends the visitor towards their website.

A knowledge base is at the core of the system. It consists of documentary notes filled up by the Focal Points;

a search engine allows making an inventory of the studies available with the partners.

Next steps

The **AWIS** system entered a field testing phase during a kick-off workshop held from 27 to 30 October in Ouagadougou for launching and training the FPs. For 6 months, the Focal Points will test the tool and make comments to improve the system. The **AWIS** preliminary phase should be completed at the beginning of 2010. **AWIS** could then be extended to all the other African organizations working in the water field.

The public website is being developed. It will soon host "**AWIS portal**":

www.african-wis.org



Performance Indicators for the African Transboundary Basin Organizations



The International Network of Basin Organizations (INBO) launched a project aiming at developing, testing and comparing Performance Indicators for the African Transboundary Basin Organizations.

This project is carried out in partnership with the **African Network of Basin Organizations (ANBO)** and with the support of the **International Office for Water** and **Ecologic**.

The project is financed by the European ACP Water Facility and the French Ministry for Foreign Affairs.

It will last 3 years and will involve ten African basins during 2 test phases.

After a seminar organized in Ouagadougou in November 2007, a first list of indicators was proposed.

These indicators belong to two categories:

- the first one (Governance) aims at describing the operation of the bodies in charge of implementing integrated management on a transboundary basin scale,
- the second one (Technical) gathers indicators related to the field

practical outcomes of this basin management approach.

The testing of this first list of indicators in the Niger, Congo, Senegal, Lake Victoria and Orange basins allowed analyzing their relevance and usefulness. A seminar for the presentation and analysis of the first results was organized in Kinshasa in October 2008. This Workshop associated the representatives of the project basins and partners.

It prepared the launching of the second testing phase in 2009 in 10 transboundary basins to refine the results and to lead to a final list of performance indicators truly suited to the African situation.

For further information:

<http://aquacoope.org/PITB>

Water for a more prosperous Africa



AMCOW (African Ministers' Council on Water) and AfDB (African Development Bank) organized the first African Water Week in Tunis, on 26 - 28 March 2008.

This first meeting gathered many water specialists coming from the entire African continent: technicians, politicians and scientists came to discuss essential problems related to water (control, supply, consumption,

security, etc.), to lay the first stones of the building which will guarantee the long term socioeconomic development of Africa, so much hoped for.

Formulating strategies, policies and proposing practical actions for water resources development and supply in a context of climate change: this event also allowed outlining the main environmental and social challenges of the continent.

The discussions of this water week dealt with crucial issues, including:

- ❖ lessons learned on an international scale, related to water security;
- ❖ challenges related to drinking water supply and sanitation;
- ❖ investments for infrastructures to give access to water;

- ❖ efforts necessary for improving expertise and information systems;
- ❖ social and environmental challenges related to the development of hydraulic infrastructures;
- ❖ roles of the involved parties and the development of partnerships.

Mr. Jean-François DONZIER, INBO Permanent Technical Secretary, was invited to co-chair the session on "institutional capacity building for water security in Africa" and presented an introductory report analyzing the situation of these issues on the African continent.

www.afdb.org

Organization for the Development of the Gambia River (OMVG)

Governance of African transboundary basins



The Organization for the Development of the Gambia River (OMVG) carried out an institutional reorganization in 1991, which allowed a new approach, the starting of true basic studies and the concretization of a good-will for regional integration (1991-1997).

The following decade (1997-2006) allowed the maturation of priority projects, especially a strategic "Energy" project consistent with the WAPP (West African Power Pool).

In the current economic and environmental context, the benefits expected from this Energy Project are very interesting:

- Production of 1,350 GWh/year of clean energy to contribute to meeting the increasing demand in the area;
- Exploitation of renewable natural resources with a concern for sustainable development with the reduction of CO2 emissions;
- Cost price of the energy quite lower than the alternative thermal solutions;

- Improvement of the total reliability of the electric sector thanks to an ambitious interconnection.

More than 550 MEuros were already gathered for dams, hydropower units and interconnections, nearly 65% of the total budget of 857 MEuros.

This Energy project is strategic for the sub-region. However, **OMVG** has not yet an overall and integrated vision of water resources management in its river basins in order to:

- ◆ better guarantee management sustainability, especially of the planned structuring works;
- ◆ prepare the future actions to be carried out in the short, medium and long term, beyond the already identified projects.

In such a context, the French Ministry for Foreign Affairs mandated IOWater to provide strategic support to the Organization for the Development of the Gambia River (OMVG).

The analysis made by IOWater showed that it is very important to support OMVG in its institutional and technical capacity building, and 2 priority lines can be retained for 2009/2010:

- ❖ **thorough assessment of governance** at the national and transboundary basin level, in synergy with the studies already undertaken by NBA (case of Guinea) and OMVS (case of Senegal);
- ❖ **development of a true Master Plan for Water Development and Management and of a medium-term Investment Plan.**

It is also important to reinforce the institutional structure of OMVG, to develop monitoring and decision-making supporting tools, to train staffs, to increase participative approach, etc.



2003-2008: From the first Audit to the "Shared Vision"

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

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

Thus, it was asked that a **"clear and shared Vision" of the NBA** be developed with the support of the World Bank and other development partners, to create an "enabling environment" for cooperation and to draw up a **"Sustainable Development Action Plan (SDAP)"** accepted by all the basin stakeholders.

A fundamental asset of the process is **the Declaration of Paris** on "The principles of management and good governance for sustainable and shared development of the Niger Basin" signed in April 2004 by the nine Basin's Heads of States and Governments.

Within this "shared Vision" process, the **Niger Basin Authority** received subsidies from the European Union

(**Water Facility**) to implement a project entitled "Formulation and Development of an Investment Program".

NBA, with **IOWater's** support, especially dealt with the following topics:

- Drafting a Water Charter;
- The necessary consistency of the **SDAP** with the national and regional processes of Integrated Water Resources Management;
- Preparation of the investment program, including project formulation and implementation methods.

This work accompanied the last stages of the Shared Vision process:

- ◆ Formulation of the **SDAP** and Development of the Investment Program and Projects over 20 years;
- ◆ Summit of the Heads of State;
- ◆ Roundtable of the donors in June 2008, in which a total amount of 5.5 billion euros was presented, covering the four next five-year plans.

The **Niger Basin Authority** has now to "act" to invoke in the future practical and lasting outcomes for the Countries, the users, the citizens of the basin.

It is, in any case, the ambitious but necessary objective of this stage.

Example of the SDAP

Approved in 2008, the **Sustainable Development Action Plan (SDAP)** and its Investment Program are now in effect.

The Niger River Basin is home to over 100 million people and 180 million expected by 2025: the main challenges for the future consist in sharing water resources in an equitable manner and preserving aquatic ecosystems.

The **NBA**-approved approach consisted in determining the present and future water demands for drinking water supplies, irrigation, livestock breeding and hydropower production. A hydraulic water resource allocation model was used to test several river basin development scenarios contemplated by the Niger River countries (the impact of building certain large dams). Decision supporting tools were created to calculate economic and environmental data from the hydraulic calculations: agri-

cultural production, hydropower, the sharing of the benefits obtained from water, etc. A territorial, transnational approach, based on "development zones", allowed looking beyond the administrative boundaries of the States.

Close working relations between **NBA** partners nurtured a real sense of belonging to the shared approach in a very short time. The **SDAP** is now supported by several international donors who pledged more than 900 MEuros for the first five years of implementation of the Investment Program. Innovative in its transboundary management-directed demand-prioritizing choices and development zones, this approach allowed raising the decisional framework and the development options to river basin level.

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A Model for the Niger River Basin Management

In the past 3 decades, the Niger Basin was affected by series of extreme hydrological events causing low flows, droughts and floods: for example, in June 1984, the river Niger was completely dry in Niamey for the first time in history. This phenomenon was almost repeated during the 2002/03 hydrological year.

The model constitutes for **NBA** a simulation and decision supporting tool for the management of water resources and water requirements in the Niger Basin. The use of the model served first of all to provide the hydraulic background required for the development of the **Sustainable Development Action Plan (SDAP)**.

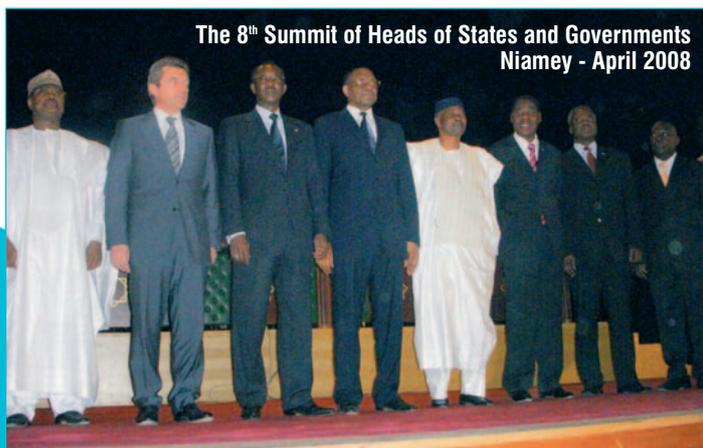
The calibration was made over the period 1966-1989 for which there are sufficient data available; this period is also considered to be representative of the various hydraulic patterns (wet, average, dry, and very dry years) and

the trend of climate change. The model application allows creating coherence between the identified hydraulic projects, in terms of storage or diversion structures, or in terms of environmental constraints.

The model was finally adapted for the operation of reservoirs and to the irrigation objectives for downstream schemes with a view to optimizing energy production and managing future scarcity and to allow for real-time adaptation of releases, considering the current hydrological situation. Finally, the model is used for anticipating emergencies and deficits, managing hydraulic structures, within management commissions in particular, in scarcity situations for preventing conflicts among the stakeholders.

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The 8th Summit of Heads of States and Governments
Niamey - April 2008

Governance of African transboundary basins

How to stop "country" logic?

The call from Professor Hippopotamus in the Niger River Basin



In 2002, the riparian States of the Niger and its tributaries agreed about an active dialogue for the formulation of a sustainable development action plan for the basin together with an investment plan: the "Shared Vision" process had thus started.

In April 2008, after nearly six years of dialogue, studies and mobilization of the financial partners, the Summit of

the Heads of States and Governments, met in Niamey for the adoption of the investment plan and the priority actions to undertake from 2008 to 2012.

On this occasion, the "famous professor Hippopotamus", descendant of a dynasty of "wise men" and founder of the "school on the life of the Niger river", asked, on behalf of the citizens, to the International Secretariat for

Water, to make public its appreciation of the result of the work made by the students of its "special class" ...

Good marks were obtained by this "special class" in several subject matters, such as political good-will and financial support, the institutional reform of the NBA or theoretical and practical planning.

But the students have been requested to further study an essential matter: the choice of the development scenario.

Indeed, Professor Hippopotamus thinks that the development scenario retained by the States at the end of the studies made for formulating the sustainable development action plan for the basin has negative impacts and no compensation guarantee is given for the moment to the populations who will be affected.

Also, he requested efforts as regards transparency in impact studies on infrastructures, international cooperation between financial donors and in the development of a participative process involving all the partners, particularly those which associate the inhabitants of rural and peri-urban areas and of small cities.

To be clear, Professor Hippopotamus says that the action plan cannot be a superposition of national projects because basin development is to disregard borders.

He requests that the basin needs are jointly assessed as regards energy and food security, etc., and to implement investments where they will be most judicious in terms of production and benefits for the greatest number and with the least damage.

Will Professor Hippopotamus be heard?

Future will tell.

Raymond Jost

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Nigeria

Towards Sustainable Water Resources Management in the Lake Chad Basin

The Hadejia-Jama'are Komadugu-Yobe Basin (HJKYB) drains a catchment of approximately 84,000 km² in northeast Nigeria before discharging into Lake Chad. The basin is shared by six northern States, (Kano, Jigawa, Plateau, Bauchi, Yobe and Borno states).

Over 15 million people are supported by the basin through agriculture, fishing and livestock keeping.

In the Hadejia river system, the runoff pattern has been modified by the construction of the Tiga and Challawa dams, the Kano Irrigation Scheme and by the Hadejia valley irrigation project.

In 1998, studies, carried out by IUCN in the Hadejia-Nguru Wetlands Conservation Project, indicated that the estimated demand for surface water in the Hadejia river system exceeds available supply by 2.6 times.

To support sustainable water resources management within the Nigerian sector of the Lake Chad Basin, various efforts

were made by various individuals, groups, organizations and institutions: **the Hadejia-Jama'are-Komadugu-Yobe Basin Coordinating Committee** was created for coordinating the water resources development and management activities.

Various stakeholder meetings, workshops, consultations, awareness campaigns, studies have been taking place to increase the stakeholders' awareness about the problems of the basin, especially the National Workshops held in 2004 and 2006 in Kaduna and in 2005 in Kano.

State IWRM Committees (SIWRMC) and a local council representing all wetland communities have been conceived for policy influencing, advocacy, communication and awareness raising, preparing work plans and providing platforms for

improving sustainable water resources management in the HJKYB.

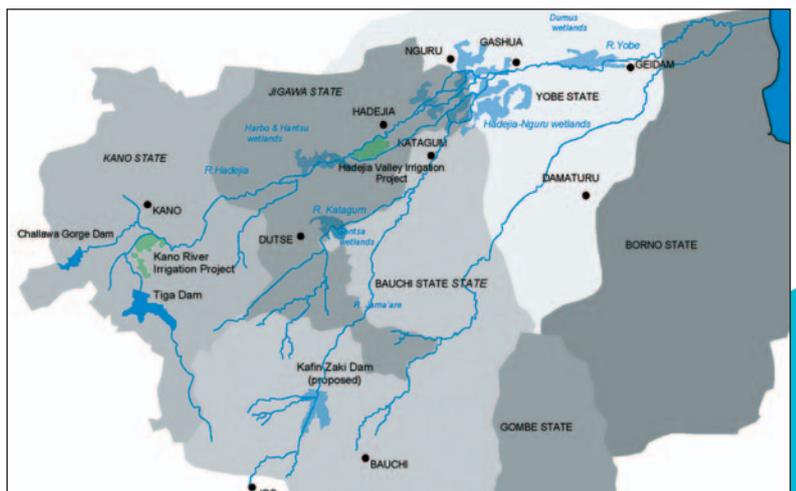
A Basin Management Plan was developed and endorsed by the stakeholders.

Finally the Summit of Governors of the HJKYB convened in June 2006 to solve the problems affecting the basin as outlined in the Basin Management Plan. It led to the signing of a Memorandum of Understanding and to the

establishment of a Trust Fund which is intended to provide a sustainable funding mechanism for undertaking the activities of the basin management plan.

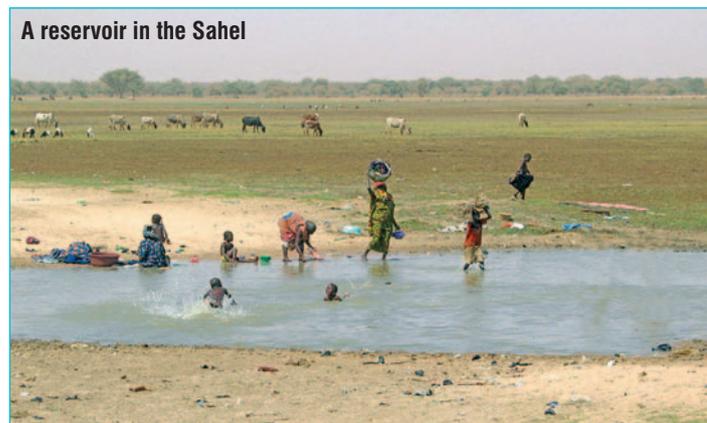
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Senegal

**Reservoirs:
A means for fighting
against poverty in the Sahel**



Water control is for NEPAD the first pillar of its **Comprehensive Africa Agriculture Development Program (CAADP)**, especially for the very vulnerable Sahelian States due to the rainfall irregularity and severe drought encountered in the previous decades.

But in the Sahel, billions m³ are lost each year through runoff during rainfall for lack of storage basins.

With regard to these problems and anxious to implement a sustainable policy for improving the ecosystems and living conditions of the populations, the President of the Republic of Senegal initiated, in May 2000, an important **"national program for reservoirs and artificial lakes"** for the mobilization and reclamation of runoff waters.

This program concerns all the Senegalese villages having sites potentially suitable and favorable for agro-sylvo-pastoral activities.

Thus the first research carried out allowed identifying 5,000 potential sites including 200 already developed. Several reservoirs of different sizes and uses are built on the entire territory and in most areas without perennial rivers.

They allow agricultural diversification and intensification, the development of off-season mixed-farming, the improvement of biodiversity, fish-farming, anchoring rural young people on their respective lands.

The promising results recorded since 2002 have raised a strong demand from the populations. The implementation of this program showed that the reservoirs are small developments for great purposes. They are technically and socially viable on Sahelian lands and economically profitable.

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OMVS

A participative process for formulating the SDAGE

The Organization for the Development of the Senegal River has started the formulation of a Master Plan for Water Development and Management (SDAGE).

This project fits in with the ongoing institutional reform of **OMVS**. It is a strong action, insofar as the SDAGE will be a common reference for joint action of all the water stakeholders of the basin, meeting equitably the needs for human activities while respecting the natural environments.

The SDAGE will reflect the identities, consensus and ambitions in the Senegal River Basin.

Indeed, **OMVS** wishes to associate, at all the development stages of the SDAGE, all the interested parties in the basin development: the civil society, users, various user groups, local authorities, private sector, institutions, etc.

At this stage, an information process is planned, then a wide consultation on the basin characterization to define the priorities for elaborating the SDAGE and its investment plan. Then, a "consultation of adhesion" phase could complete the process.

A participative process at various stages

A specific methodology will be thus developed. Indeed this means going beyond the only system of validation workshops and having a proactive step for "seeking the populations".

Thorough work will be undertaken regarding the objectives, geographic zones, populations and target groups of stakeholders, the identification and training of the relay actors, the communication supports, the types of local actions, etc.

This consultation on the SDAGE will also be an opportunity for the Basin Committee, body planned within the institutional reform of **OMVS**, to base its legitimacy on a process essential for the future of the basin.

The final objective of the process is for **OMVS** to have a consistent SDAGE, guaranteeing suitable implementation of the actions and investments necessary for the sustainable development of the Senegal River Basin.

This **OMVS** project, ambitious and innovative in size and methodology, is financed by the **French Development Agency (AFD)**, with an amount of 2 million Euros.

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INVITATION

5 Topical Sessions 3.1:

20 March 2009 - 8:30 - 19:00

21 March 2009 - 8:30 - 13:00

**"Basin Management
and Transboundary Cooperation"**

Sutluce A - Kagithane Hall - Istanbul

Canada

Integrated Basin Management and the Province of Ontario's Conservation Authorities

Conservation Ontario is the umbrella organization that represents Canada's Province of Ontario's 36 Conservation Authorities, which are local basin management agencies.

Conservation Authorities, created in 1946 by an Act of the Provincial Legislature, are mandated to ensure the conservation, restoration and responsible management of Ontario's water, land and natural habitats through programs

that balance human, environmental and economic needs.

The scope of integrated basin management has evolved considerably since the 1950's when the process was, for the most part, single issue-based e.g. flood management.

Today, integrated basin management includes consideration of surface water, groundwater, and natural infrastructure (terrestrial habitats, wetlands, woodlots) and stream morphology.

Integrated basin management:

- Is built on the concept of shared responsibility for environmental protection;
- Shares implementation of plans across jurisdictional agencies;

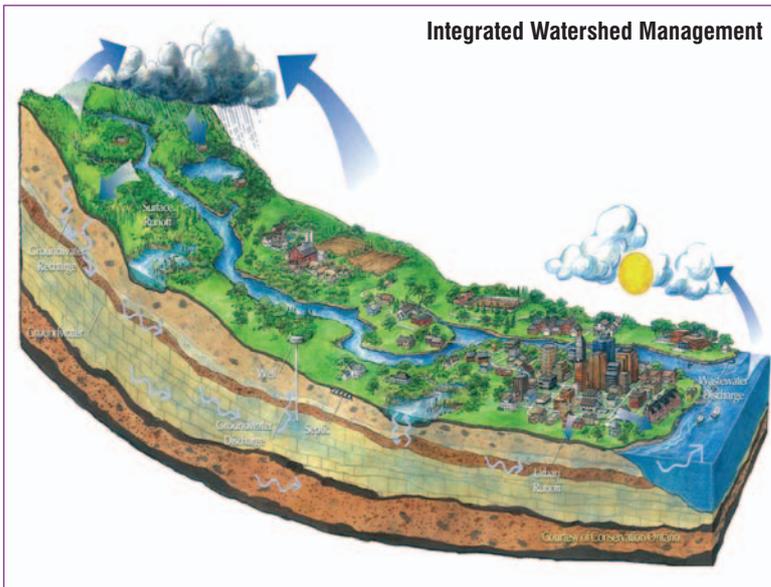
- Strives for continuous improvement through the use of adaptive environmental management;
- Is using boundaries that are ecological;
- Uses a broad spectrum of tools including regulation, the land use planning process, best management practices, incentives, education, and volunteer actions.

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A new Quebec Water Policy

The Quebec Water Policy (QWP), adopted in November 2002, addresses the reform of water governance and the implementation of basin-based management by regrouping all the stakeholders.

Thus, basin organizations were created for 33 major watercourses. These organizations are supported financially and technically by the "Ministère du Développement durable, de l'Environnement et des Parcs".

Their mission is to organize an integrated basin-based management in their respective basins, based on concerted efforts by local and regional stakeholders, on the coordination of actions that could have an impact on water and the associated ecosystems and on the participation of the population.

The objective is to implement a procedure to coordinate all efforts efficiently as they strive to protect, restore or develop the basin by eliminating overlapping, maximizing benefits, taking into account the cumulative impacts of each action, and managing possible or existing user conflicts.

The main mandate of the basin organization is to establish a Master Plan for Water (MPW) by informing and having the public participate in its implementation. In November 2008, nine MPWs were officially tabled with the Ministry for government approval; five of those have been officially approved.

Since 2003, the government will have invested a sum over C\$20 M from the recurrent budgets (human and financial resources) to support the implementation and development of integrated basin-based management.

Madeleine Paulin

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Latin America LANBO

General Assembly of the Latin-American and Brazilian Networks of Basin Organizations Rio de Janeiro - Brazil – 10-14 November 2008

The National Forum of Brazilian Basin Committees



Rio de Janeiro hosted the **National Forum of Brazilian Basin Committees** from 10 to 14 November 2008.

Every two years, this event gathers all the Members of the Basin Commit-

tees, created within the Law on Water Resources of 1997. To date, about 130 Basin Committees have been created in Brazil, either related to the federal rivers or to the rivers under the sole responsibility of the Federal States.

Participants in LANBO General Assembly



More than 2,000 representatives, coming from all the Brazilian regions, participated in this exceptional event.

The **3rd General Assembly of the Latin-American Network of Basin Organizations (LANBO)** also took place on 11 and 12 November 2008, gathering the representatives of the main Basin Organizations of Central and South America, of the Governments developing basin policies and of the regional Organizations concerned.

A strong Spanish delegation, led by Mr. Teodoro Estrela, Deputy Director at the Water Ministry, also took part in the work.

Work was chaired by Mr. Oscar Cordeiro Netto, Director of the **National Water Agency of Brazil (ANA)** and by Mr. Jean-François Donzier, Permanent Technical Secretary of the **International Network of Basin Organizations (INBO)**.

The Assembly discussed ongoing experiments and developments of basin policies in the represented

Countries. It approved a reform of LANBO Statutes and elected the new Executive Committee of the Network.

Mr. Edgar Bejarano-Méndez, Director General of the "Regional Autonomous Corporation of Cundinamarca" of Bogota in Colombia was elected **LANBO President** for the 2 coming years.

The Intermunicipal Consortium of the Piracicaba, Capivari and Jundáí River Basins - São Paulo State - Brazil, will take care of **LANBO Technical Secretariat**, with the support of ANA.

The next General Assembly of the Network will take place in Colombia in 2010.

www.ana.gov.br/relob



ECLAC

Integrated sustainable water resources management is dependent, inter alia, on efficiency and equity: inefficient management has negative effects on equity (especially considering underprivileged groups), as it limits benefits and transfers costs and externalities.

It is possible to relate these factors to some specific regulatory requirements:

- Not to undertake public projects without carefully evaluating the economic, social and environmental repercussions;
- Not to finance public projects with a negative rate of return or grant generalized subsidies, unless this is justified by unquestionable economic, social and environmental considerations;

- To provide the public with accurate, precise, transparent and timely information;
- To ensure the ecological sustainability of water supply sources;
- To reserve minimum or ecological flows for environmental protection;
- To prevent water resources from being monopolized by special interests;
- To ensure that the basic needs of underprivileged populations are satisfied;

- To respect the customary uses and rights of indigenous populations.

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Ecuador

A River Basin approach as a tool for citizen participation

With the new Constitution of Ecuador, approved by referendum on 28 September 2008, the importance of water resources has finally been recognized through the creation of the Ministry of Water (**Secretaría Nacional del Agua -SENAGUA**). Through this decision, the Government hopes to solve the main problems of this sector.

Some of the main guidelines of the **National Plan for Water**, currently elaborated by **SENAGUA**, are the integral and decentralized water management at river basin level; public participation; dissemination of a new water culture and the true application of the human rights to water.

The creation of basin organizations and councils will foster the organization of all the users, as actors directly responsible, for water to really be for everybody and for solving existing and latent conflicts.

As water does not stop at the border, Ecuador is paying special attention to cross-border cooperation to improve

river basin management: thus the creation with Peru of a **Binational Authority for the Zarumilla Basin**, which will have to solve common problems related with extreme climatic events, lack of water resources and environmental degradation of this river basin. The Ministry of Water is also proposing a South American agenda for the conservation and sustainable management of water, as well as the creation of an International Center of Hydrological Information "from the Andes to the Amazon".

Ing. Nathalie Weemaels

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FONAG: a fund for water protection



"Water cannot be spoken about without referring to river basins..."

The Metropolitan Area of Quito (DMQ), capital of Ecuador, has an environmental fund, **the Fund for Water Protection (FONAG)**, for the protection, rehabilitation and conservation of river basins.

The water users, living in the DMQ, are requested to reinforce the Fund by paying a tax levied by the drinking water supply, sanitation and electric power utilities. This patrimonial fund is governed by the Market Law; it is made up for 80 years and invests in environ-

mental actions, such as the rehabilitation of woodlands, environmental education, communication, follow-up and monitoring of the protected sectors and training.

This new strategy for water management, which establishes a financial mechanism, is a way of making the citizens accountable to protect the resource, to rationalize its consumption and its use.

Nancy Puente

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Costa Rica

Water resources conservation in the Rio Cocoa sub-basin in Atenas

The Agro-ecological Association for the protection of the Rio Cocoa sub-basin (APROSUCUENCA) gathers Associations Administrators of Rural Water Supply (ASADAs), the association of the handicraft women of San Isidro, municipal associations and the citizens interested in the conservation of natural resources.

The Association's area for action includes the upper section of the sub-basin, located in the Biological Corridor of Aguacate Mountains, important zone for the recharge of aquifers, with 92 referred springs managed by seven ASADAs, which supply about 40% of the population of Atenas.

Financial support from the GEF/UNDP Program for Aquifer Recharge allows the implementation of two main components of the project:

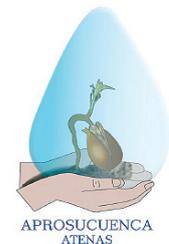
- **The protection of springs**, by the reforestation of aquifer recharge zones;
- **An Environmental Education Program**, including educational workshops and round tables, using teaching equipments, which mainly aims at changing practices and habits in water use and management, and fostering the consolidation of groups of **"guardians of natural resources"**.

The project started in January 2008, "pupils' incubators" were created in two schools of the community and about 1,000 trees were planted in the neighborhoods of the springs.

A workshop was organized to motivate the ASADAs to introduce a tax in the domestic water bills to create a revolving fund for the purchase of lands in the aquifer recharge zone.

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Latin America

Brazil

Itaipu Binacional



"Cultivando Água Boa"

The "Cultivando Água Boa" program includes 21 projects and 64 actions being carried out in the area of influence of Itaipu hydropower station in the Paraná River Basin, on a surface area of about 8,000 km² and in 29 Municipalities in the western part of Paraná State, in Brazil, where more than one million inhabitants live.

The "Cultivando Água Boa" program is based on partnerships for the implementation of joint actions by Itaipu Binacional and federal institutions, State institutions, municipalities and the whole Brazilian civil society.

For everybody's participation to be effective and for the project to be technically feasible, the program has

adopted a management model based on:

- the adoption of procedures in conformity with the NBR ISO 14001 standard, without however aiming at certification;
- the organization and dissemination of information;
- a participative management for the joint development of solutions applicable to the difficulties encountered by the various partners;
- a program-based management aiming at ensuring the organization, the structuring and the harmonization of the projects.

Towards transboundary cooperation

In the logic of the "Cultivando Água Boa" program, Itaipu Binacional started a process aiming at creating an **international organization for preserving the Plata Basin**, shared by five South American countries: Brazil, Paraguay, Bolivia, Argentina and Uruguay, and comprising the four main sub-basins of the Paraná, Iguazu, Paraguay and Uruguay rivers.

In June 2007, the 1st Trinational Meeting for the Management of Border and Cross-Border Waters was held in Foz do Iguazu and gathered the representatives of governmental agencies of Brazil, Paraguay and Argentina, with the aim of:

- disseminating and exchanging information between the three countries;
- promoting activities of the technical section of transboundary water resources management in the Brazilian National Council of Water Resources;
- discussing concepts and legal and institutional instruments for transboundary water resources management;
- identifying opportunities for technical assistance between the institutions of the participating countries.

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Environmental Flows Training in Latin America

"Environmental flows" is the practice of ensuring that the amount of water in rivers, that are regulated by dams, meets the needs of both ecosystems and people who depend on those ecosystems.

More than 30 people from the Latin American and Caribbean region took part in a regional learning workshop,

from 11-15 February 2008, on "Environmental flows" or "Reserved Flow Regimes", in Foz do Iguazu, Brazil.

There can be few more appropriate locations for such an event than Iguazu, adjacent to the Itaipu dam, the world's largest hydropower plant.



Participants in the workshop

The workshop was organized by the IUCN Water Program, in partnership with the IW:LEARN project of the Global Environment Facility (GEF) and The Nature Conservancy (TNC). It was hosted by the dam operating Company, Itaipu Binacional, and the Itaipu Technology Park.

You have to have some understanding of how ecosystems respond to changes in river flows. For example, you have to be able to decide what sort of flow regime is needed to make sure that fish catch in a wetland downstream of a dam is maintained. Environmental flows for a river might therefore seem to be a problem for hydrologists or ecologists to solve but it also involves economics, law and the participation of communities.

The workshop was designed to allow participants to use these disciplines in practice. Case stories from Latin America and other regions of the world were

used to explore different methods for making environmental flow assessments. Participants also developed negotiation scenarios for river basins, as a means of understanding how legal and institutional reform, and economic and social trade-offs, play vital roles in environmental flows.

The participants developed action plans for taking practical steps towards wider application of environmental flows in the region.

The participants are planning to collaborate through www.eflownet.org, the website of the Global Environmental Flows Network.

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Brazil

Rehabilitation of Araruama Lagoon

The Araruama Lagoon, the biggest lagoon of Brazil, has been polluted for years by discharged sewer water.

At the end of 1990's, it started to present eutrophication characteristics.

A Consortium, created in 2000, integrating city halls, State services, private companies and NGOs, started two actions: the interruption of the sewer discharges into the Lagoon, and the dredging for water renewal.

The Consortium fought for the modification of the Concession contract of the water and sanitation service in the Region, which did not plan for short term investments in a sanitation system: after a long discussion process, a system of collection and treatment of sewer waters started being implanted.

The system was at first planned to collect the waters discharged into the Lagoon by the drainage systems: after two years, it was possible to see the recovery of the Lagoon.

All the stakeholders decided to sign an agreement for a gradual increase of the water price as the system would be finished in 20 years, end of the concession.

This work is a practical demonstration of social mobilization and integrated solutions in sanitation services.

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The Araruama Lagoon



Río Pardo Basin Committee: Management of the Guaraní Aquifer System in Ribeirão Preto

The municipality of Ribeirão Preto is entirely supplied by water from the **Guarani Aquifer System (GAS)**: the water demand has a strong pressure on the availability of the resource and caused, with the passing of years, an anarchistic multiplication of boreholes, which led to a progressive reduction in the piezometric levels, mainly in the central area of the city.

Faced with such a situation, the Río Pardo Basin Committee approved, on 9 June 2006, a deliberation which limits uncontrolled borehole drillings.

Since the application of the resolution which defines the restriction and control zones for intakes in Ribeirão Preto, a new process for managing the use of groundwater was set up. Currently, no

water abstraction is possible without preliminary information of the proper authorities.

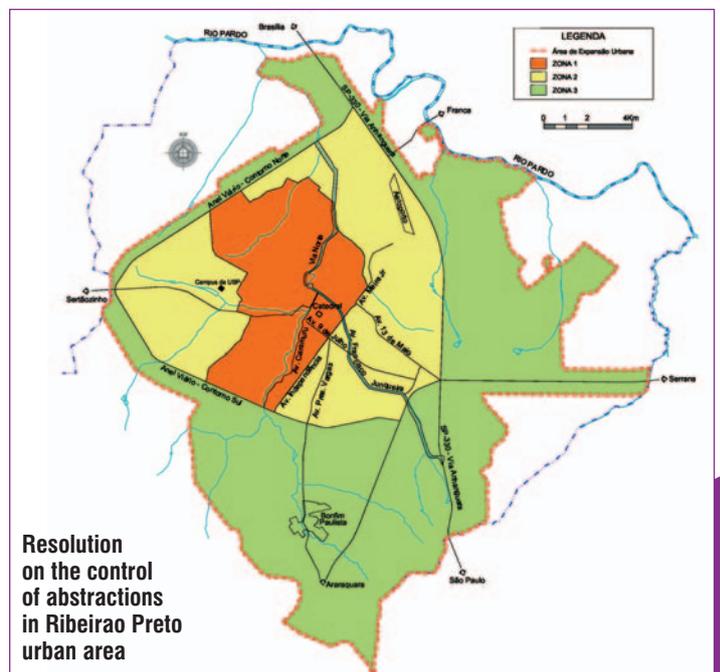
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Resolution on the control of abstractions in Ribeirão Preto urban area



Latin America

Brazil

Master Plans for the Rio Manuel Alves and Rio Palma Basins



Vereda and Burutis palm trees in the upper Rio Palma Basin

In the Tocantins State, in the middle of the Brazilian Cerrado, the Master Plans for the Rio Manuel Alves and Rio Palma Basins are impatiently awaited by the populations.

The Cerrado hosts more than 6,000 species of trees and 800 species of birds. It is thus a priority zone for the conservation of the Earth biodiversity.

In 2007 and 2008, thanks to a financial support from the World Bank, the Consortium - made up by the Brazilian consulting firm Gama Engenharia and the

International Office for Water - worked with the technical departments of the Tocantins State in charge of the Environment and Water Resources (SRHMA) to propose these two Master Plans.

The studies revealed how the Uruçua-Bambuí hydrogeological system operates and guarantees the outstanding water resources of the area. Under the huge Serra Geral tableland, the Uruçua aquifer extends over several Brazilian States and allows the infiltration and storage of huge quantities of water.

This water percolates towards the Bambuí karstic system downstream, and gives rise to resurgences at the foot of the Serra Geral in wetlands called Veredas.

But this system is fragile. To protect the resurgence areas it is necessary to create a Natural Reserve, combining water resources management and regional planning.

The repeated droughts, which occur in the area, are not caused by the lack of water resources, but by the lack of infrastructures and organization of human activities according to these resources.

The Master Plans propose Action Plans to counteract, and could be implemented by the Tocantins State Government and by the municipalities of the area.

One of the main stakes for the future of the region will be the capacity of the local stakeholders to set up a decentralized and participative management

system to implement the Master Plans: Basin Committees, Water Agencies and Inter-Municipal Associations, which are best suited to the local context and constraints.

In the Rio Manuel Alves and Rio Palma basins, taxes paid by the water users would contribute to the sustainability of these new bodies.

But the most dynamic economic activity of the area, the hydropower sector, is also the most difficult to mobilize, as in Brazil, the hydropower plants with power lower than 30MW are, for the moment, exonerated from financial compensations. Many Basin Committees throughout the country want to change this situation.

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Chile

Water Offices: A public/private initiative for IWRM

The Directorate-General for Water (DGA) of the Ministry of Public Works (MOP), with the support of the "Chile" Foundation, has fostered for three years the creation of "Water Offices" mainly in Northern Chile.

The DGA and regional Governments commissioned many studies to know the hydrological situation of surface and ground waters and glaciers, main source of water supplies.

It is one of the first stages towards the establishment of Basin Committees in Chile.

There is also a public/private initiative in the Cachapoal and Tinguiririca Basin, in Southern Chile, to improve water quality: in 2005, the members of the Environmental Office project, called "**Clean Water for Colchagua**", signed a voluntary agreement to protect water quality in the Tinguiririca River, with the support of the National Commission for the Environment (CONAMA).

As the preceding efforts, focusing on the creation of Basin Corporations and in particular of a "Basin Corporation" for the Bio Bio River, did not succeed for lack of support from the local stake-

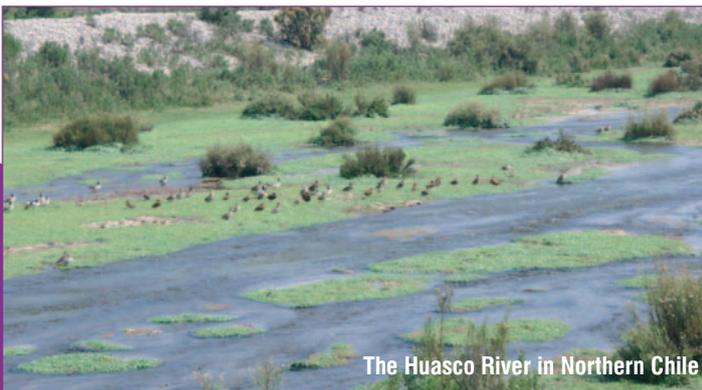
holders and were not approved by the Congress, these new projects are a great progress.

These "Water Offices" take into account the interests of the governmental organizations at local, regional and national level and private interests.

At the national level, a "National Strategy for Integrated Basin Management", coordinated by CONAMA and proposed by the Presidency, will allow for an enabling environment.

Axel C. Dourajeanni

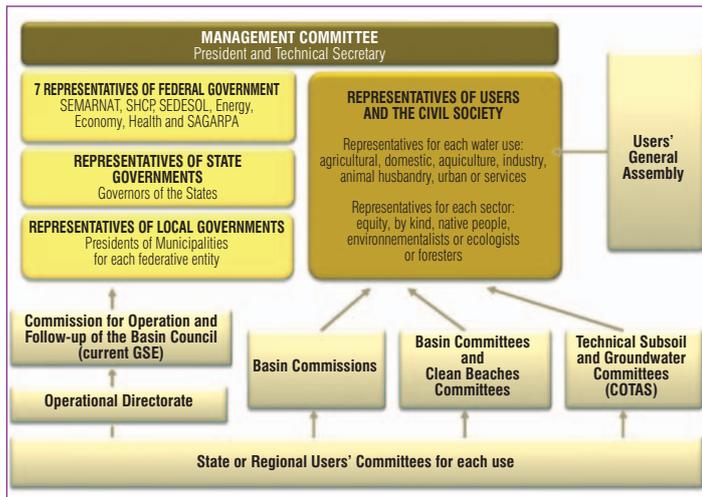
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The Huasco River in Northern Chile

Mexico

Reform of the Basin Councils



The Basin Councils are defined by the Law on National Waters as being the authorities for coordination and dialogue, support and advice, between the National Water Commission, the River Basin Organization of the area concerned, the federal, state and municipal

departments and the representatives of the water users and the civil society.

Currently, the Basin Councils are being reorganized, with the integration of representatives of the federal institutions, municipalities and the citizens.

This improvement also implies a new organization to facilitate the operation of the Basin Councils.

Development prospects

It is necessary to strengthen the role of the Basin Councils in water management for them to be able to influence public policies.

A first requirement is to increase the participation of the civil society in the Basin Councils.

It is necessary that the Committees of the Basin Councils are forums guaranteeing an organized, active and effective participation of the society:

- They must be highly representative of all the stakeholders and interested groups;
- The process must guarantee an equal participation of the various parties, with a common informa-

tion platform and means to perform their duties;

- An active involvement of all the stakeholders and the public is necessary, in order to have a true impact on the decision-making process, from the initial phases of identifying the problems onwards.

The Basin Councils should have a real impact in the basin and on its natural resources.

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For an alternative management model in the State of Chiapas

Due to the natural disasters that Chiapas encounters, the Government and the civil society initiated a project for the development and conservation of natural resources at river basin level.

A study identified the main obstacles: lack of effective integration of the institutions, discontinuity of actions for years, disregard of the integrated basin management concept and little use of the existing legal framework.

This study proceeded in 3 phases:

- **Phase 1:** Diagnosis, which consisted in collecting information on the experiments made in basin management, an analysis of the existing legislations in the States and at the federal level.
- **Phase 2:** Organization of a participative workshop to validate the information resulting from the diagnosis and to determine the bases of an alternative management model.

- **Phase 3:** Formulation of the proposal for an alternative model for integrated and sustainable basin management.

This model aims at reorientating public management, passing from the usual sectoral and centralized vision to an effort of coherence between the policies and the investments of the various public and private stakeholders in the basins. It includes:

- **The "FOCUENCAS" Fund**, to integrate into a sole financial instrument the financing from the various stakeholders involved in basin management.
- **A "Collegial Group"**, which will be the authority administrating the fund.
- **A scientific and technological support network**, which will function as technical support to the decisions of the "Collegial Group" and will create an information bank for sharing experience.

- **Training programs**, to allow producing while preserving and reducing vulnerability to natural disasters.
- **A team of experts** to promote participative processes in the field, to diagnose problems, their causes and their effects, to plan integrated basin management, to identify the local available resources and to follow up the initiated actions.
- **Selection of pilot basins**, to initiate demonstration projects in the short term, to organize the stakeholders and to introduce a stage-based working method:
 - a) diagnosis and situation;
 - b) planning;
 - c) implementation of actions;
 - d) monitoring and evaluation.

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The Montebello Lagoon in the Chiapas State



Mekong River Commission (MRC)



Adopting an IWRM approach, the **Mekong River Commission (MRC)** is currently implementing its 2nd Strategic Plan 2006-2010 of which the overall goal is "to support Member States for more effective use of the Mekong's water and related resources to alleviate poverty while protecting the environment".

Its strategic goals are:

- to promote and support coordinated, sustainable and pro-poor development;
- to enhance regional cooperation;
- to strengthen basin-wide environmental monitoring and impact assessment;
- to strengthen the IWRM capacity and knowledge base of line agencies.

Ten programs of the **MRC** are on going with financial support from twenty bilateral and regional donors or international institutions and member countries' contribution: the Basin Development Plan and Flood Management and Mitigation Program, the Water Utilization, Fisheries, Environmental Protection, Agriculture, Irrigation and Forestry, Hydropower and Navigation Programs as well as the Information and Knowledge Management and Integrated Capacity Building Programs.

Its partners are continuing supporting **MRC** which signed for USD 20 million worth of funding agreements.

A Decision Support Framework (DSF) has been set up as an analytical tool for assessing the magnitude of changes and impacts caused by man-made

interventions, a tool that consolidates mutual trust among member countries.

In September 2008, **MRC** organized the first ever Regional Multi-Stakeholder Consultation on the Mekong Hydropower Program. Since the regional demand for energy is rapidly increasing and a broad range of developers are investigating about ten mainstream hydropower dams in Laos, Cambodia and Thailand, the role of **MRC** is highlighted in terms of coordination and support to member countries in technical planning, procedural application, environmental assessment and others.



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IUCN

Payments for Ecosystem Services

Are Payments for Ecosystem Services (PES) a viable way of financing management of river basins and coastal environments? What steps are needed to develop PES schemes? What lessons have been learned from attempts to develop PES in the real world?

These are the questions examined at the IUCN-GEF / IW-Learn workshop held on April 3-5, 2008 in Hanoi, Vietnam.

An increasing number of multilateral development projects have ambitions to develop mechanisms for sustainable financing of natural resource management at the level of watersheds and downstream marine ecosystems.

The workshop looked at a selection of case studies where PES schemes have been implemented in India, China, the Philippines and three

cases from Vietnam: application of user fees in parks or Marine Protected Areas, payments by hydropower companies to upstream land users to reduce erosion and implementation of sea-use rights to address excessive use of marine resources, ... all schemes requiring a pragmatic approach, based on the building of trust and sound monitoring.

The report from the workshop and presentations can be found on IUCN Website.

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India

A STAKEHOLDERS' FORUM FOR THE BHAVANI RIVER BASIN

An action research was undertaken in Bhavani basin, tributary of river Cauvery, in Tamilnadu in South India.

The research revealed that the basin water management situation is precarious due to uncoordinated actions by many stakeholders. The situation is likely to worsen further as the demand from the non-agricultural sector is growing fast and water quality issues become critical.

RAISING YOUTH TOWARDS WATER SHARING

The Shabnam Resources Trust is a charity which rescues orphans and children from broken home situations, and provides for their education.

The school going children are the best promoters of change to adults.

The program aims at creating a better awareness on water sharing, river management, sustainable development, proper building of dams and reservoirs.

These issues were discussed in a meeting of stakeholders (farmers, NGOs, different Government departments, industrialists, social activists, academicians) who have agreed to organize a "forum" for dialogue as a platform for addressing the problems.

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The school children were invited to write an essay on the subject matter in Tamil or English.

The first and runner from each school was selected for the district level competition.

Each participant was given a certificate.

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Vietnam

A French-Vietnamese cooperation program in the field of water

A memorandum of cooperation was signed in June 2007 by the French and Vietnamese Ministers in charge of sustainable development. Three priority cooperation topics were identified:

- Institutional assistance on integrated water resources management,
- Transfer of knowledge and technologies for the control of water management,
- Training on water resources conservation.

In 2008, the French partners coordinated by IOWater, developed with their Vietnamese colleagues the cooperation lines given at ministerial level into coordinated projects supported by various French donors.

Two ambitious projects thus could be studied and submitted to the Vietnamese Authorities.

Integrated Water Resources Management in the Dong Nai River Basin



This 24-month project (2009-2010) on integrated management of the Dong Nai River Basin will be implemented by IOWater, Asconit Consultants, SCE, and financed by the French Ministry of Economy, Finances and Employment, with an amount of Euros 800,000, and the French Loire-Brittany and Seine-Normandy Water Agencies with Euros 400,000.

With the metropolis of Ho Chi Minh City, the basin concentrates all the pressures on the water resource caused by strong human activity with still poorly controlled impacts.

If industrial pollution seems the most visible, it is doubled by an agricultural pollution coming in particular from the increasingly more intensive rice growing and an important urban pollution.

The quantitative and morphological stakes are also very significant with the Dau Tieng Reservoir upstream of the Saigon River, which is the largest of the country. It is exploited for hydropower and is a reservoir for irrigation and the supply of drinking water to Ho Chi Minh City.

The water transfers out of the basin towards dry coastal areas and low lands could also worsen the situation.

The institutional mechanisms for overall water management in the basin are still little developed in a context of strongly decentralized and sectoral management at the level of the 11 provinces located in the basin.

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Flood risk management on the Saigon River



In Vietnam, the vulnerability of the populations and properties to floods increases with more real estate pressures on flood plains. This situation is particularly critical in the Ho Chi Minh City area, located downstream of the Saigon River.

The project for the protection against the floods of the Saigon River thus not only plans the construction of protection works but also an institutional support component, which aims at supporting the basin's local authorities in their organizational and strategic thinking about flood hazards.

This 24-month project of the Ministry for Agriculture and Rural Development is financed by the French Development Agency with Euros 350,000.

A mission for the formalization of this institutional component, which was carried out in June 2008, had the following main objectives:

- collecting the opinion of the Vietnamese institutions concerned on the terms of reference of the project;
- analyzing the respective responsibilities of the various organizations able to control the work of this French institutional support;
- proposing a relevant institutional arrangement for its implementation;
- making sure that this project is consistent with the various current cooperation projects.

The significance of work coordination and control on the basin scale was underlined. The Dong Nai Basin Organization (DNRBO), created in 2002, could be entrusted with this task.

www.inbo-news.org

All information is available on the Web



www.inbo-news.org



European Union - China River Basin Management Program

The objective of the EU-China **River Basin Management Program (RBMP)** is to support sustainable management and use of China's water resources that are compatible with socioeconomic development and global warming.

The RBMP began in January 2007 and will run until January 2012.

The program is structured in three components, each designed to deliver specific results:

EU-CHINA DIALOGUE PLATFORM

This component aims to establish a platform for dialogue on integrated river basin and water resources management between Chinese and European policy makers, researchers and

practitioners. The dialogue will facilitate research studies, exchange visits and training programs, that are intended to assist China in further development of its policies, legislation and implementation mechanisms for integrated river basin management.

YANGTZE RIVER COMPONENT

The Yangtze River is becoming the source of water, food and energy far beyond the basin boundaries. The services that the ecosystems deliver within the Basin are now at risk due to pressures from rapid socioeconomic development, hydropower, navigation and inter-basin transfers. The RBMP activities in the Yangtze Basin therefore focus on integration of environmental and ecosystem concerns in river basin

planning and on the protection and rehabilitation of vulnerable and degraded watersheds in the mountainous areas along the water divide between the Yangtze and Pearl Rivers.

YELLOW RIVER COMPONENT

The Yellow River is among the most heavily polluted watercourses in China. The RBMP interventions on the Yellow River therefore address integrated river basin management policy, strategy and action planning focused on pollution reduction in order to improve water quality.

RBMP

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5th WORLD WATER FORUM
ISTANBUL 2009



Invitation

18 March 2009
14:00 - 19:00

Side event
EU - China - YRCC - INBO
For River Basin Management
Sutluce - Istanbul



Yellow River Commission



The Yellow River is the second largest river in China; it is the cradle of Chinese nation.

It originates from Qinghai-Tibet Plateau, runs through nine provinces:

Qinghai, Sichuan, Gansu, Ningxia, Inner Mongolia, Shanxi, Shaanxi, Henan and Shandong, and empties itself into the Bohai Sea in Shangong Province.

The total length of the river is 5,464 km, with a catchment area of 795,000 km².

The lower channel, about 700 km long, hangs high above Huang-Huai-Hai Plain and forms the famous "suspended river".

The annual average precipitation in the whole basin is 452 mm, descending from 1000 mm in the south-east to 200 mm in the north-west, 70% of which concentrates in flood period.

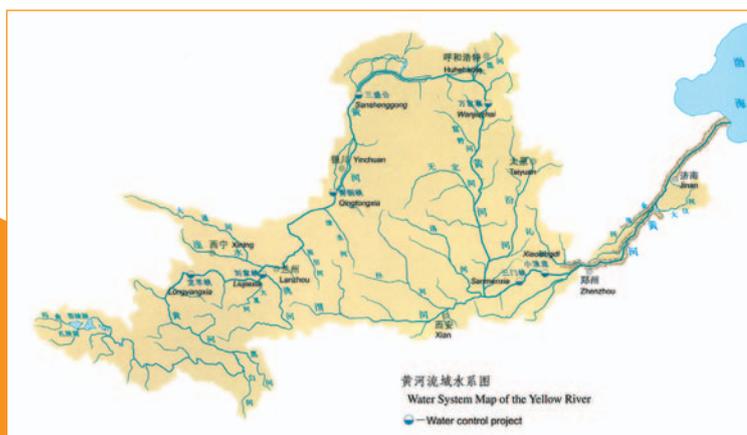
The Loess Plateau lying in the middle part of the basin is subject to severe soil erosion, which is the main source of the Yellow River sediment. The annual average sediment concentration is 35 kg/m³, annual sediment transportation amounts to 1.6 billion tons, which is the largest in the world.

In history, river management was only limited to flood control in the lower reaches. During the past half century, large-scale comprehensive management was carried out and great achievements have been made in the construction of flood control projects, harnessing of water and sediment loss, optimal use of water resources and exploitation of hydropower resources. However, threat of flood disasters, shortage of water resources and soil loss are still outstanding problems in the basin because of special natural conditions, social and economic environment, therefore the Yellow River is one of the most complex and hardest to be controlled rivers in the world.

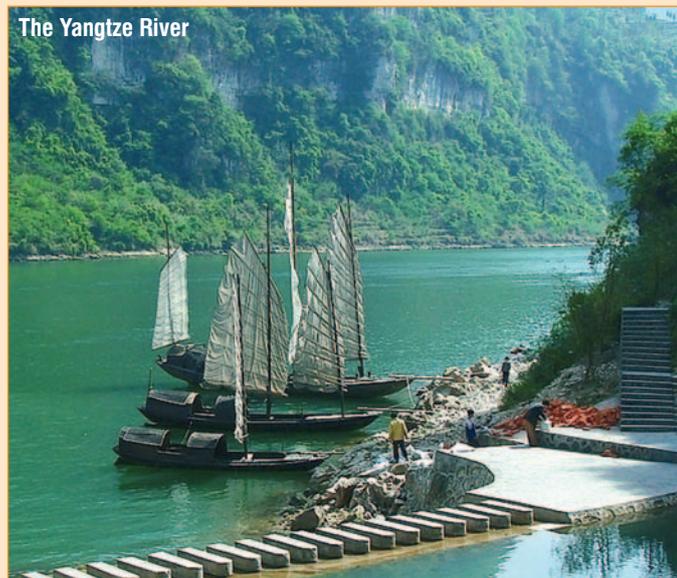
Yellow River Commission

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"For a Healthy Yangtze!"



The Yangtze River Basin, with an area of 1/5 of the nation's territory, is home to 1/3 of the nation's population and contributes 1/3 of the nation's GDP, 36.5% of China's water resources, 48% of China's exploitable hydro-power potential and 52.5% of China's total mileage of inland navigation waterways.

However, the Yangtze is faced with a lot of challenges, such as floods and water logging disasters, increasing water demands, water pollution, disordered development which has led to environmental degradation with lake shrinking, decrease of wetlands, salt-water intrusion and over-extraction of groundwater and deteriorating tendency of water and soil resources in the period of fast social and economic development in China.

In order to address these challenges and coordinate the basin development and protection, the **Yangtze River Water Resources Commission (CWRC)** put forward a new thought to better manage the Yangtze, i.e. "to ensure a healthy Yangtze and promote harmony between human beings and water".

The adopted measures are composed of strengthening integrated river basin management, building a legal system and law enforcement, improving the investment system, formulating a river basin master plan and promoting public participation.

Organized by central ministries, the riparian provinces, autonomous regions and municipalities and international organizations, as a platform of dialogue for stakeholders, the 1st and 2nd Yangtze Forums were held in Wuhan and Changsha in 2005 and 2007 respectively.

The "Yangtze Declaration on Protection and Development" and "Guiding Principles for Dongting Lake Protection-Changsha Declaration" were taken as the crucial outcomes of the Forums.

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A new strategy for Water Resources Management in the Yangtze River Basin

Changjiang (Yangtze) is the largest river in China, its complex river system and hydrological and geographical characteristics as well as social and economic development, made it very difficult for water resources management.

Current Water Resources Management relies on a water-use permits system, flood control and river channel management, water resources protection, water and soil conservation and comprehensive water resources planning.

But problems in Water Resources Management remain: consideration of integrate river basin management in laws is weak, the administrative status of **CWRC** is not clearly defined, water resources management has been fragmented and a concerted and unified management system is lacking, economic instruments have not been fully applied in water resources management and a marketing mechanism in the water sector has not yet taken shape.

Strategies on water resources management in the future have thus been put forward:

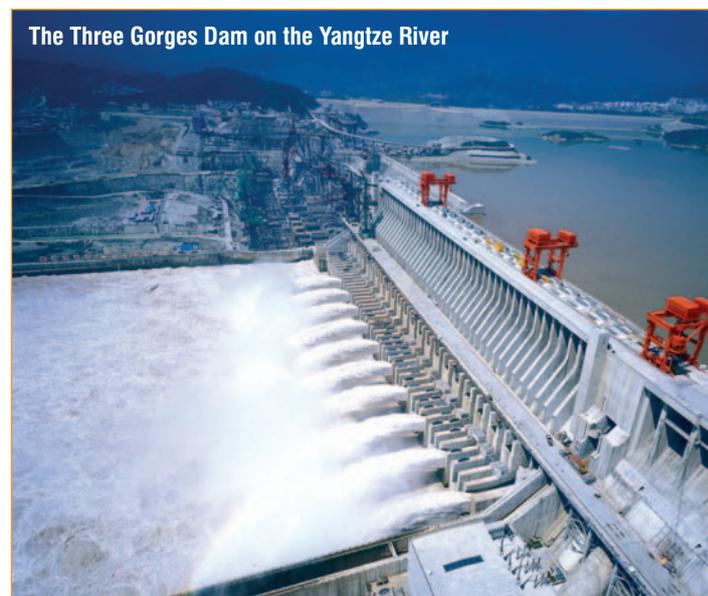
- Water resources management within a sustainable development framework;
- Enhancing water laws and regulations for river basin management;
- Integrated management taking the river basin as the unit for action;
- Promoting urban water management;
- Formulating an overall planning for joint water resources management.

Efforts should also be made to build a water-saving society, and non-construction measures on river basin management should be strengthened and enhanced.

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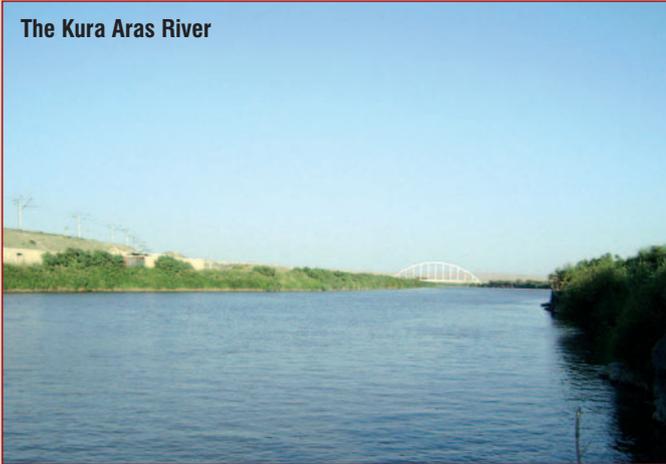


Central Asia

UNDP/GEF

Stakeholder Input for Transboundary IWRM

The Kura Aras River



Stakeholder Advisory Group



The regional NGO Forum brought together civil society organizations from Armenia, Azerbaijan, Georgia and Iran to develop proposals to include border communities in IWRM activities across the region. It also

The UNDP/GEF project aims at reducing transboundary degradation of the Kura-Aras River Basin, shared by Azerbaijan, Armenia, Georgia and Iran.

A component aims at increasing civil society involvement in the project and supported:

- an analysis to identify concerns of 36 stakeholder groups across the region,
- the creation of a **Regional NGO Forum** which resulted in the first four country agreement among civil society organizations addressing shared water resources,
- the establishment of a stakeholder Advisory Group to provide critical input into project development.

The project was able to address concerns over conflicting water resource use identified by stakeholder group interests.

formulated a charter that provides civil society representation in the various project organizations.

The stakeholder Advisory Group critically reviewed the project documents, provided feedback from a wide array of sectors, and made additional recommendations to the project that enhanced the sense of ownership.

This component enabled the next phase of the project to specifically meet the needs of impacted stakeholders in a cooperative transboundary context, creating institutions to address to the shared concerns.

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Management of Small Transboundary Rivers in the Ferghana Valley



Ferghana Valley is shared by three Central-Asian States: Kyrgyzstan, Tajikistan and Uzbekistan. Agriculture plays a crucial role in economics in the Valley.

Local development is closely connected to water availability.

Inter-state water allocation in the Valley was established in 1960-1980s by Moscow. Now these agreements are no more observed which results in social disputes in border areas.

Since 2007, a new "Small Transboundary Rivers" Component has been included in the "IWRM-Ferghana" Project, which is implemented by the Scientific Information Center of the Interstate Coordination Water Commission of Central Asia and the Tashkent

Branch of the International Water Management Institute, with a financial support from Swiss Government.

Sustainable water management was studied in 2 pilot small transboundary rivers: Shakhimardan (Kyrgyzstan-Uzbekistan) and Khodzhabakirgan (Kyrgyzstan-Tajikistan). The parties have agreed to create a Joint Commission for water resources management for each small transboundary river and developed a Strategy for Integrated Management of pilot small transboundary river basins.

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Ferghana Valley



Optimizing Agricultural Water Use

The most prominent problem in the irrigation sector in Central Asia is wastage of water due to defective water management and inappropriate irrigation norms inherited from the Soviet times and deteriorating irrigation infrastructures.

This led to conflicts between countries, between regions within countries, between upstream and downstream water users as well as to raising ground water tables, floods and increased salinity of arable lands.

Several studies related to the efficiency of the irrigation systems

showed that over 50% of the water used is wasted.

Priority should be given to the improvement of irrigation water management. This would require the complete restructuring of the irrigation sector by creating new hydrographic irrigation management and governance structures at all levels.

Volumetric water charges need to be introduced which requires the improvement of water measuring devices to allow measuring water deliveries to the WUAs and to the farmers or water users groups.

New irrigation methods and techniques have also to be introduced at farm level to mobilize the water saving potential at plot level.

At basin and canal level, the introduction of SCADA systems (with priority on data acquisition, storage and communication) will help to improve stability, equity and transparency of the water deliveries.

Several experiments in the region demonstrate the success of this approach, e.g. the Integrated Water Resources Management Project in Ferghana valley, where water intake into the South Ferghana Canal has

been reduced by 30% and water related conflicts between water users reduced by 90% within three years. Water use at plot level has been reduced by up to 35% using very simple and low cost changes in the irrigation methods, in most cases resulting in substantially increased yields.

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The Water - Energy Conflict in Central Asia

In Soviet times, the large reservoirs in Kyrgyzstan and Tajikistan were used for irrigation (i.e. water releases mainly during the vegetation period in spring and summer) and gas and oil were supplied to the upstream countries to cover their winter energy demand.

After the collapse of the Soviet Union, this system was abandoned and an increasing amount of winter energy had to be produced by the upstream countries leading to flooding during winter season and water scarcity during the vegetation period in the downstream countries.

But there is still a large shortage of electricity during winter and surplus energy during summer in the upstream countries. In recent years the problem has been aggravated by extreme climatic conditions.

The construction of Sangtuda I and II is planned downstream of Nurek as well as a series of small hydropower schemes and the development of Sarafshan River. Top priority in both countries is given to the construction of additional large storage schemes: Rogun upstream of Nurek in Tajikistan and Kambarata upstream of Toktogul in Kyrgyzstan.

The construction of a large dam on the Panj River is under discussion between Afghanistan and Tajikistan.

Uzbekistan fears that after completion of these schemes the situation with regard to water deliveries during the vegetation period will further worsen, leading to drastic water scarcity and increasing water conflicts between water users.

Uzbekistan reacted with closing down oil and gas exports to Tajikistan and with the interruption of the electric transmission line from Turkmenistan to Tajikistan, passing through Uzbek territory. This forced the upstream countries to use all water resources during the extreme winter period 2007/2008 to produce electricity and the Nurek and Toktogul reservoirs were at dead water level at the beginning of the vegetation period.

This is an increasingly irrational development. A regional agreement on the water-energy issues is one of the top priorities to safeguard water-related security in Central Asia. A negotiated agreement between the riparian States

on the operation of the combined Rogun - Nurek and Kambarata - Toktogul systems is advisable, coupled with a powerful water control tool with compensation of the commercial losses of summer water releases by the downstream countries.

A real win-win situation for all riparian States could develop at the time when electricity sales to the south (Pakistan,

Iran, Afghanistan, India) become possible as peak electricity demand in the south occur during summer season, parallel to the water demand in irrigation in the north.

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Sibiu, Romania, 1-3 October 2008



This year, the conference of the "EUROPE-INBO" group took place in Sibiu, in Romania, from 1 to 3 October 2008, at the invitation of the Romanian Ministry of the Environment and Sustainable Development. It gathered 195 participants coming from 26 countries.

This conference was an important step before the World Water Forum of Istanbul in March 2009: draft "Basin" chapter for the European regional document, joint writing of a handbook with GWP on IWRM implementation in river basins, preparation of the sessions of topic 3.1. of the Forum on "River Basin Management and Transboundary Cooperation".

A workshop on the IWRM-Net (European network of research programs on IWRM) project was organized as a side event in order to identify the needs for research related to the WFD and to prepare the second transnational research program.

The EU-non-member countries (the Mediterranean, Eastern Europe, the Caucasus, Central Asia) were very active in the discussions, due to their growing interest in the WFD principles.

The participants wished that the "EUROPE-INBO" Group had a more important place in the WFD Common Implementation Strategy (CIS), as a "spokesman of the Basin Organizations" towards the European Commission and Water Directors.

The conclusions of the Conference were reported to the Strategic Coordination Group on 6 November 2008 in Brussels and a note on the WFD implementation in transboundary river basins was presented to the European Water Directors on 25 November 2008 at their meeting in Paris.

The three workshops dedicated to the WFD presented many case studies and exchanges were particularly worthwhile.

WORKSHOP 1: PREPARATION OF THE PROGRAMS OF MEASURES

Much work has been done but significant challenges are still to be met.

➤ Relevant scales and involvement of local stakeholders

The Programs of Measures should be developed on relevant river basin scales, not only at the large river basin level, but also in a more detailed manner at sub-basin level.

In WFD field implementation, the local politico-administrative stakeholders (municipalities, provinces, counties, departments, regions), together with the local economic interested parties, will be front-liners, especially for the investments to be made.

However, the consultation process defined in the WFD is not sufficient in itself to mobilize these local stakeholders. The WFD approach should be better explained and its added value made known. The governmental authorities should mobilize themselves not only for enforcing regulations (basic measures) but also for supporting the local stakeholders in their projects.

➤ Delays and uncertainties

As the deadline of 2015 will come very quickly, it is necessary to launch now the measures for which there are no more debates, without waiting for their formal adoption at the end of 2009.

There are still many uncertainties about the real efficiency of certain measures, about the time necessary to carry out projects in the field and to obtain positive results on the quality of water and ecosystems. The time factor is indeed of prime importance and questions are raised about the timeframe of WFD implementation.

The implementation of pre-existing "nitrates" and "waste water" Directives should be at the core of the Programs of Measures. On the one hand, it is necessary to fill the gap in sanitation. On the other, as regards agriculture, INBO is concerned by the lack of ambition noted in the preparatory documents of the CAP Health Check. The Programs of Measures should include proactive measures from now on, otherwise it will be very difficult to obtain positive results in 2015 and even in 2021.

INBO thinks that without a true reform of the CAP, it will be almost impossible to change this situation.

INBO recommends increasing the means devoted to wetlands and hydro-morphology as the functional restoration of aquatic environments is of prime importance for achieving good ecological status.

It is also urgent to reinforce the protection measures for groundwater, to make for lost time.

➤ Definition of realistic objectives

The definition of objectives, exemptions and delays is still a major concern for Basin Organizations despite the work carried out within the CIS. Information has not always been fully disseminated to them and the position remains unclear. As regards the criteria of disproportionate cost, INBO proposes creating an inside working group to share information between Basin Organizations.

A survey, carried out during the workshop with the attending basin representatives, shows that the percentage of water bodies achieving good status in 2015 could vary a lot, between 25% and 75%. Exemptions will be necessary, not only because of technical aspects but also on account of financing capacities. The objectives can only be reached when the corresponding financial mobilization is possible.

However, additional financial efforts will be needed, maybe up to +30% in some districts, and this will probably imply an increase of the water price and raises the question of acceptability by users, especially in the current context of economic crisis!

The issue of overseas territories was underlined, and more widely in EU peripheral areas, especially the need to have specific references and to define a framework for regional cooperation with their non-European neighbors.

195 participants coming from 26 countries





"FOR FACILITATING THE IMPLEMENTATION OF THE EUROPEAN WATER FRAMEWORK DIRECTIVE"



Mr. DI DOMENICANTONIO (Italy) handed the "EUROPE-INBO" Presidency to Mr. POSTELNICESCU (Romania)

WORKSHOP 2: IMPLEMENTATION OF THE FLOOD DIRECTIVE

The Flood Directive provides an essential European framework. It gives a strong signal: it is no more only a question of building defense infrastructures, but of adopting an integrated prevention policy with real changes in policies, institutions, decision-making processes according to 4 pillars: **forecasting flooding events, reducing vulnerability, protecting people and goods, alerting and educating populations.**

The implementation of the Flood Directive and WFD should be coordinated. But difficulties are encountered in practice, because the administrations concerned are often distinct or act on different territories/scales.

INBO recommends integrating from now on the elements of the flood risk management plans into the 1st WFD River Basin Management Plans (2009-2015) and the totality in the 2nd management cycle (2015-2021). It would be useful to develop a guide of good practices to take into account the requirements of both directives.

The presentations showed the advantage of a proactive prevention policy. As a whole, the invested amounts are lower than the costs of avoided damages. But it will be difficult to invest as much as necessary for the prevention of exceptional floods, which will become more frequent with climate change.

The implementation of the Flood Directive requires increasing exchanges of good practices between countries, formulating national strategies and supporting Local Authorities.

WORKSHOP 3: TRANSBOUNDARY BASINS: PROGRESS REPORT

The WFD brings real added value in European Transboundary Basins, by providing a common reference framework (objectives, methods, deadlines, production of common planning documents). It increased coordination of actions between riparian States and the positive role of international commissions (when they do exist) was underlined.

But huge work is still needed. Management Plans of International River Basin Districts still too often look like a patchwork of national elements, as

each Member State remains responsible towards the Commission for the WFD implementation in what it is concerned.

Although WFD gives a common frame, the national legislations are remaining different in the same international district and the countries do not have the same priorities and deadlines, even for the same types of measures. This is particularly obvious when a river basin is shared with countries not members of the European Union in the Balkans and Eastern Europe.

The Basin Organizations concerned by this transboundary context highlighted specific needs: providing more human and financial resources to the "National" Basin Organizations concerned and to the International Commissions; improving the decision-making process in International Commissions; developing common systems for monitoring and data management; better coordinating the Programs of Measures and giving more ambition to the roof section of the management plan; developing a true public consultation on the international district scale; organizing joint management of transboundary aquifers; better coordi-

nating the management of floods, droughts and climate change.

The work completed in the river basins shared by EU and non-EU member countries is encouraging but it will be necessary to increase the institutional and financial support to non-EU countries to achieve the WFD objectives in these basins.

At the end of the conference, **Mr. Alfredo DI DOMENICANTONIO**, Director of the Tiber Basin Authority was congratulated for the last year Italian Presidency of "EUROPE-INBO" Group.

He handed the Presidency to Mr. Marius POSTELNICESCU, Director General of the National Administration of Romanian Waters (Apele Romane).

The Romanian Authorities were thanked for the organization of this conference and their warm welcome.

The 7th conference of the EUROPE-INBO Group will be held in the Ukraine in autumn 2009.

The final resolutions, presentations and photographs are available on the Website.

5th WORLD WATER FORUM
I STANBUL 2 0 0 9



Invitation

**Regional Session
Europe :**
17 March 2009

ROUNDTABLE
**"European Experience
in Transboundary Basins"**

Sutluce - Istanbul

www.inbo-news.org



Transnational research is starting



IWRM-Net is an ERA-Net (European Research Area) project aiming at undertaking joint transnational research programs related to Integrated Water Resources Management.

IWRM-Net is financed by the European Commission for 5 years (2006-2010) and coordinated by the International Office for Water. The project gathers 20 partners coming from 14 Member States.

Launching of the first joint program: a success story

The donors of the first joint program met in Berlin in May 2008 to select research projects among the submitted seventeen within the call for proposals launched at the end of 2007.

Two projects called **FORECASTER** (Facilitating the application of the Case Studies on Ecological Responses to hydro-morphological Output from Research degradation and rehabilitation) and **RIPFLOW** (Riparian vegetation modeling for the assessment of environmental flow regimes and climate change impacts within the WFD) were retained for the topic "Hydro-morphological pressures/impacts on good ecological status" and a project named **I-FIVE** (Innovative Instruments and Institutions in Implementing the Water Framework Directive) was adopted for the topic "Water Governance". Research began during the last quarter of 2008.

IWRM-Net: a network which sees far...

Using this first experiment, **IWRM-Net** is preparing its second call for projects, the launching of which is planned at the end of 2009. **Again, the method of identifying research needs is based on a series of regional workshops through Europe.** The workshops aim at drawing up the list of research priorities for each regional area considered:

- ▶ Valencia, Spain in June 2008, for the Mediterranean area;
- ▶ Sibiu, Romania, in October 2008. This workshop joined the General Assembly of the EUROPE-INBO Group of European Basin Organizations for WFD implementation;
- ▶ Stockholm, Sweden on 18 and 19 November, for the Baltic countries;
- ▶ Brussels, Belgium on 10 February 2009.

Within **IWRM-Net**, the French Ministry of Ecology organized a conference in May 2008 on the prospective stakes related to water in Europe.

A work for convergence of short and long-term topics for drawing up the 2nd joint research program will be finalized in a meeting of the potential donors in May 2009.

Simultaneously to these activities, IOWater initiated a **cycle of meetings with the other ERA-Nets dealing with water** (CRUE, SPLASH, SNOWMAN, CIRCLE) in order to plan a common strategy for the sustainability of the various networks after 2010.

The progress report of **IWRM-Net** activities and the draft program of the next call for projects will be presented at the **international conference, which will take place on 10-11 February 2009 in Brussels.**

You can join IWRM-Net community by registering on:

www.iwrM-net.eu

"NeWater"

Adaptive Integrated Water Resources Management

Presentation of results from the Project - Seville - 17 - 19 November 2008

The European NeWater project has further developed the concept of Adaptive Integrated Water Resources Management (AIWM), based on our capacity to learn from experience and adapt to change and uncertainty.

The conference, held in Seville in past November, allowed presenting the results from seven different case study basins (Rhine, Elbe, Guadiana and Tisza basins in Europe, the Amudarya in Central Asia, and the Orange and

Nile basins in Africa) and proposing an analytical framework of climate change scenarios and adaptation strategies as well as training material for implementing AIWM.

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"GoverNat"

Is there a lack of enthusiasm for participatory approaches?



Governance today extends beyond the policy making processes of governments to increasingly include Local Authorities, private partners and the civil society.

49 interviews were conducted with practitioners involved in water and biodiversity governance in 11 countries. The Water Framework Directive distinguishes:

- ❖ **consultation of the public**, who should have access to information and be given the opportunity to comment;
- ❖ **participation of the interested parties**, who should be encouraged to be actively involved in the measures to take.

The main interviews highlighted that administrations have difficulties implementing participation in water governance:

- A first attitude considers that a lack of citizens' involvement is not a problem because politicians are elected by these same people and can therefore make decisions on their behalf. The main challenge for participation is to reach agreement with other organizations having power to block decisions or obstruct implementation.
- A second view considers that mobilizing the public is useful when it serves the purpose of implementing policy.

Altogether, the way these practitioners present and analyze their experiences shows a considerable degree of reluctance to engage in extensive participation, especially with the general public. The GoverNat interviewees identified this reluctance themselves, saying that the administration is not prepared. Many interviewees recognized that organizing participation requires special skills and additional financial resources, both of which are frequently unavailable to the bodies of public administration charged with WFD implementation.

The interviews also showed that there are civil servants power struggles within the same administration and between governmental organizations.

The interviewees find that in concrete situations economic interests usually prevail over other interests such as water management or biodiversity conservation.

Successful participation ultimately means redefining roles and power relations. The "authorities' dilemma" is that they both need and fear people's participation.

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Portugal

GMES

Global Monitoring for Environment and Security

GMES is a joint initiative from the European Commission and the European Space Agency (ESA) to develop innovative and cost-effective management tools based on Earth Observation systems and technologies.

"Águas de Portugal" (AdP) and "Instituto da Água" (INAG) have been working with "Instituto Superior Técnico" (IST) on specific applications of satellite imagery for water management, which in operation at some critical locations have provided reliable and cost-effective monitoring, forecast and pollution event analysis.

The best and less costly results are obtained by combining models, in-situ data and remote sensing data.

Models allow the description of processes and are very useful as interpolation and forecasting tools.

The quality of their results improves with the detail of the field data. Data scarcity can be improved using remote sensing data.

The process will produce a more reliable modeling tool, less dependent from in situ data with obvious advantages in terms of cost.

In fact, as processes are more accurately understood and represented, less information will be required for each model run. Satellites can override the need for extensive field monitoring, with cheap, fast and reliable data.

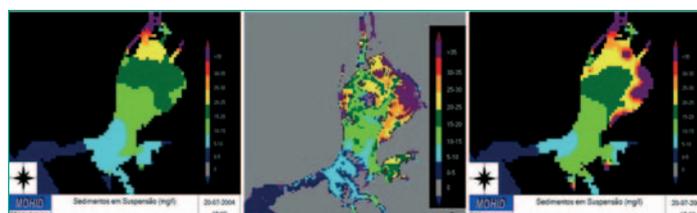
At present, the partners are implementing a demonstration project covering the Portuguese part of the Tagus Basin, with the purpose of building an information service dedicated to water managers and water users' needs.

This demonstration project, funded by ESA, will deliver relevant information to manage the implementation of the Urban Wastewater Treatment Directive (sensitive area delimitation, wastewater treatment requirements' determination), the Water Framework Directive (non compliance cause-effect relationship analysis, optimization of Programs of Measures, cost analysis) and the Environmental Liability Directive (pollution events cause-effect relationship analysis).

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400,000 replies to the public consultation 2008!

A national "Water is life. Please give us your opinion!" consultation was jointly carried out by the French Ministry for Sustainable Development and the Basin Committees from 15 April to 15 October 2008.

This official citizens' consultation was carried out pursuant to the Water Framework Directive (directive 2000/60/EC of 23 October 2000) of the European Union.

The public consultation of 2008 dealt with the environmental objectives of the Water Management Plans, as proposed by the Basin Committees (SDAGE), as well as measures (actions) to be taken to achieve them.

The consultation 2008 followed that of 2005.

The latter had allowed validating the water stakes in the basins.

In 2008, all the 7 French metropolitan Basin Committees implemented this participative approach, based on the experiment carried out successfully in 2005 in the Rhine-Meuse Basin.

A questionnaire was distributed to all the households in the basins. It was also possible to take part in the consultation via Internet. A media information plan (radios and regional press) encouraged the citizens to participate in the consultation.

Many events, organized by associative partners, supplemented the arrangement to allow for the broadest possible expression of the public.

The questionnaires included questions about the environmental objectives of the Management Plans and questions which related to "key" measures to allow their implementation.

In any case, the citizen could make comments in the free opinion section.

This national consultation is now completed with great success.

In fact, the Water Agencies received more than 400,000 answers to their questionnaires (more than 43,000 in Adour-Garonne, 54,000 in Artois-Picardy, 85,000 in Loire-Brittany, 81,000 in Rhine-Meuse, 67,000 in Rhone-Mediterranean & Corsica, 65,000 in Seine-Normandy).

With an average participation rate higher than 1.3%, the Basin Committees had echoes to their questionnaires although the participation was unequal from one basin to another, going from 0.7 to 4.3%.

The significance and representativeness of the expressed opinions and the richness of the given free opinions will allow the basin managers to take into account new elements in the

finalization of the Water Management Plans which will give the main trends of the basins' water policy until 2015.

Among the main expressed trends, the opinion appears to be interrogative on the proposed objectives and shows some reluctance in paying more.

The major concern relates to the risks linked to toxicity and health (discharges and industrial and agricultural outputs) and to water saving.

In any case, the citizen's request reaffirms his/her attachment to the polluter-pays principle and to the transparency of the decisions and results for the future of water in their areas and basins, as well as to the measures taken to protect them.

An institutional consultation of the Regional and Departmental Councils, Local Chambers, Local Water Commissions and Committees for rivers, bays and aquifers... will take place at the beginning of 2009.

You may find all the results of the national consultation on the website:

www.eaufrance.fr

Poster disseminated by the French Rhine-Meuse Water Agency for launching the Public Consultation

BLOUP BLOUP!
"Merci d'avance!"

Pour construire l'avenir de l'eau dans notre région, donnez-nous votre avis

Pour obtenir le questionnaire :

- à l'agence de l'eau au 03 87 34 48 59
- sur www.eau2015-rhin-meuse.fr
- dans votre préfecture

L'eau c'est la vie.
Donnez-nous votre avis!

CONSULTATION NATIONALE 15 avril -> 15 octobre 2008

"Water is life. Please give us your opinion!"

5th World Water Forum
INVITATION

Topical Session 3.1.:
20 March 2009 - 08:30 - 19:00
21 March 2009 - 08:30 - 13:00

"Basin Management and Transboundary Cooperation"
Sutluce A - Kagithane Hall - Istanbul
www.inbo-news.org
www.worldwaterforum5.org



Public consultation in Europe

As laid down in article 14 of the Water Framework Directive, the public was consulted, firstly in 2005 on the important issues related to the achievement of good water status, and secondly from April to October 2008 about the preparation of Management Plans and Programs of Measures.

What is going on in the various States of the European Union? What lessons can be learned from the various experiments in order to improve future consultations? How to integrate public opinions into the Management Plans?

In order to learn the first lessons and share experience with the other Countries, the Loire-Brittany Water Agency organized a conference, under the aegis of the European Union and the French Presidency, on 13 and 14 November 2008 at the royal Abbey of Fontevraud.

From all over Europe, there is a panel of experiments which goes from the involvement of groups of stakeholders or citizens before or throughout the development process, to the consultations on a very large scale such as those carried out in France at key stages of the drafting of documents.

Debates allowed experts to compare methods and results and to ask questions about the costs and the required levels of implication.

They reminded the objectives of public involvement: to lead to really accepted programs, an insurance on the quality of their implementation. They also recalled the need for pedagogy towards the citizens, but also to take into account the expressed opinions. On this point however, feedback is still lacking since France is to date the only



country to have completed the stage of consultation of the citizens.

These exchanges led to the drafting of recommendations which were submitted to the meeting of the Water Directors in November 2008.

The European Commission is now preparing for March 2009 a seminar on possible improvements for the following consultations.

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"Alp-Water-Scarce"

Integrated River Basin Management in Mountains

Alp-Water-Scarce (Water Management Strategies against Water Scarcity in the Alps) is an Alpine Space Inter-reg project with 17 partners from 5 countries.

It may be difficult to imagine that water problems exist in the Alps, however, with climate change, anthropogenic pressures on natural resources are increasing. On the one hand, the idealistic concept of a green and white mountain is water consumptive. On the other hand, the temperature increase leads to higher irrigation requirements and a higher demand for hydroelectric production during summers.

With rapid diminution in glacier storage and discharge from mountain torrents over the next 30 years, seasonal limits in water resources will soon become a reality.

As aggravating circumstances there are increasing human pressures on water resources, e.g. summer and winter tourist developments without any concern for local water supplies.

Artificial snowmaking for downhill and Nordic ski runs is rapidly expanding in mountain regions, sapping locally limited water resources and creating problems during the high tourist season. As the natural altitudinal limits of snow are pushed higher and higher, so are the limits of ski and tourist developments.

This use of water resources all year round and over more extensive areas leads to inter-basin transfers and consumption transfer from the valleys to the summits.

Higher water abstraction and less available water resources will lead to conflicts.

Apart from the need to create adaptation and mitigation strategies, it is important to develop early warning systems against water scarcity in mountains over the medium term.

This requires interdisciplinary and intersectoral problem awareness and acceptance.

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The altitudinal limit of glaciers is pushed higher



Júcar River Basin Authority

Public participation

A first public consultation was carried out for the Júcar River Basin when the Júcar River Basin Authority (JRBA) was working on its report on the environmental impact of human activity and economic analysis of water use in the river basin district.

A conference, open to all interested parties, was held in order to promote the transparency of information, and works of this stage.

Works were also published on the JRBA website and DVDs and leaflets were handed out.

Since then, a more complete public participation strategy was developed.

Participation forums were created, conferences, international and national workshops, and WFD related meetings were held. Priority themes were discussed in the River Basin Council.

A new public consultation

The Spanish River Basin Authorities are working now on a new cycle of hydrological planning. Challenges have changed since earlier stages, involving important changes in the national legislation; as for example the River Basin Council that has changed its composition with an increased representation of the interested parties.

According to the WFD, Members States shall ensure, for each river basin district, that the following documents are available to the public for comments:

- A timetable and work program for the production of the River Basin Management Plan, including the consultation measures to be taken.
- An interim overview of the significant water management issues identified in each river basin.
- Draft copies of the River Basin Management Plan.

The Spanish General Directorate for Water elaborated a "Public Participation Project" document for the Spanish river basin districts.

To ensure an effective public participation, the National Parliament approved the Law of 18th July 2006, which incorporates Directives 2003/4/EC and 2003/35/EC regulations.

In the Júcar River Basin district, the following issues were especially dealt with:

- Information transparency, incorporating any relevant information on the official website of the JRBA, especially technical documents considered basic for the understanding of the key problems in the basin. Public information is completed with the dissemination of brochures. Currently, the Júcar River Basin Organization is creating a **Citizen Information Office**, which will provide answers to any questions from the public.
- Consultation of the documents on the timetable and work program, reception of contributions and consideration of opinions in the final documents.



- Active involvement in technical meetings and Working Groups in order to disseminate the works carried out by JRBA technicians. Discussions with users, ecologists, industry sector, researchers, non-governmental organizations (NGO) were also organized. In transboundary basins, the Portuguese administrations also participate.

The JRBA has created an **Information and Monitoring Committee**, which can evaluate the technical aspects contained in documents edited by the Planning Office and related with River Basin Management Plans projects and revision.

This Committee is composed by 48 organizations from different sectors - local, regional and national government, business and trade unions, users, and NGOs. It has an advisory nature, it generates proposals and coordinates the public participation process. This Committee is contained within the Public Participation Forum, representing more than three hundred organizations, all interested parties and stakeholders related to water.

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Central and Eastern Europe

Poland - Ukraine - Belarus

Transboundary Water Management in the Bug River Basin

The Water Framework Directive of the European Union states that "For river basins extending beyond the boundaries of the Community, the Member(s) State(s) should endeavor to ensure the appropriate coordination with the relevant non-member States".

All three countries sharing the Bug River Basin are parties to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

This is an essential legal act forming the basis of cooperation between Poland, Belarus and Ukraine with respect to water management. In 2008, work was focused on the "Development of a Polish-Belarusian-Ukrainian water policy in the Bug River Basin", co-financed as part of the Polish-Belarusian-Ukrainian Neighborhood Program of the European Regional Development Fund for 16% and by the TACIS/CBC fund for 60%: the whole budget amounts to 250,000 Euros.

The Project partners are the Institute of Environmental Protection in Warsaw, the Regional Water Management Authority in Warsaw, Brzesk Oblast Committee for Natural Resources and Environmental Protection, Volhynia Board of Water Facilities and Management in Lutsk.

On 19 July 2007, the Polish partners, Marshals of the Lublin, Podlasia and Mazovia provinces, Presidents of Provincial Environmental Protection and

Water Management Funds in Lublin, Bialystok and Warsaw signed an agreement for project implementation.

The general objective is strengthening transboundary Polish-Belarusian-Ukrainian institutional cooperation in water resources management, especially through the establishment of an International Commission.

Collaboration between Poland and the Ukraine

A cooperation agreement on the Bug River Basin was signed on 11 May 2006 between the Regional Water Management Authority in Warsaw and the Western Bug River Basin Authority in Lutsk.

The agreement takes into account:

- UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes in Europe,
- EU Water Framework Directive (WFD),
- Agreement between the Polish and Ukrainian Governments regarding cooperation on water management on transboundary rivers.

As a part of this agreement, missions were co-funded by the international **TwinBasin** program that aims at increasing bilateral cooperation between River Basin Organizations for integrated water resources management.

A Workshop dedicated to the Polish experience in WFD implementation was held at the home office of the Lublin River Basin Authority.

It mainly focused on the delimitation of water bodies in the Bug River Basin.

The seminar in Lutsk allowed the following issues to be discussed:

- progress of WFD implementation in the Ukrainian part of the basin;
- typology and identification of surface water bodies - methodology and implementation results in the Ukrainian part of the Bug River Basin;
- significant problems of water management in the basin.

The cooperation plan for the next two years was ratified in November 2008, in Lutsk.

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Ukraine

"National Dialogue on Integrated Water Resources Management"

The 1st Meeting of the Management Committee of the **"National Dialogue on Integrated Water Resources Management"** took place last April in the National Academy of Sciences of Kiev, at the initiative of OSCE (Organization for Safety and Cooperation in Europe), EUWI (European Union Water Initiative) and UNEP.

Representatives from **the Ukrainian National Water Committee** presented the situation of water resources in their country as well as drinking water supply and sanitation, and talked about the impact of climate change.

International experts, including Messrs. Jean-François Donzier, INBO Permanent Technical Secretary, Rainer Enderlein of UNECE and Jos G. Timmerman, of the "Center for Water Management" of the Netherlands, presented the new IWRM approaches, which could be adopted by the Ukrainian National Water Committee.

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Central and Eastern Europe

Bulgaria

A WFD institutional twinning in Bulgaria: Programs of Measures and Economic Instruments

The Bulgarian Ministry of Water and the Environment selected France as partner in the institutional twinning financed by the European Union, which will deal with WFD implementation and more particularly with the capacity building of the Bulgarian water management authorities for the preparation of the Programs of Measures and the implementation of economic instruments.

This 18-month project will be led by IOWater, mandated by the French Ministry of Ecology, Energy, Sustainable Development and Regional Planning (MEEDDAT) for following up the twinning agreements in the water sector.

As a continuation of the cooperation, which has been developing for several years between the French Water Agencies and the Bulgarian Basin Directorates, the Artois-Picardy Water

Agency will be widely involved in this project by delegating **Arnaud Courte-cuisse**, Head of the Studies and Economic Evaluation Department, who will become the twinning resident adviser in Sofia, and various specialists who will participate in short appraisal expert missions.

The Rhone-Mediterranean and Corsica Water Agency will intervene with experts' assignments and study visits supervised by **François Guerber**, Director of international activities.

Experts from the MEEDDAT, BRGM and IOWater will also contribute to the work dealing with:

- a huge training program for the Bulgarian Authorities on the development of Programs of Measures and economic analyses, with the organization of training seminars and workshops in

Bulgaria, two study tours to France, the use and adaptation of role playing games to the Bulgarian context, etc.

- assistance with the revision of the tax computation and levying system which will contribute to the financing of the Programs of Measures, and with the creation of the data-processing tool allowing the centralization of the information.

A "Program of Measures and economics" working group, made up of Bulgarian experts of the Ministry and of each Basin Directorate, was created for following up the project activities, analyzing the proposed methodologies, implementing tests in a pilot basin, contributing to the development of guidance documents and the dissemination of the experience gained to all the teams concerned by WFD implementation in Bulgaria.

Exchanges started with the organization of a 2-day seminar at the end of May 2008 at the French Embassy in Sofia.

The seminar was opened by **Mrs. Lubka Katchakova**, Vice-Minister in charge of water, who, with the support of **Galia Balusheva**, senior expert at the Water Protection Department, will supervise this project.

The seminar dealt with an introduction to the French experience regarding the development of Programs of Measures and the drafting of a work plan to quickly launch the preparation of the Programs of Measures and public consultation in Bulgaria.

Water management authorities in Bulgaria

In Bulgaria, water management at the national level is the exclusive right of the Council of Ministers through the Ministry of Environment and Water.

A Supreme Advisory Water Board was established.

Bulgaria will participate in the development of programs for the protection of transboundary waters.

Four Basin Directorates were created, supervised by the Ministry, as well as four Basin Councils.

A Basin Directorate shall:

- delimit public waters jointly with the technical services of municipalities;
- develop the River Basin Management Plan;
- issue the permits under the Water Act;
- plan and participate in the monitoring of waters, summarize and analyze the data;
- manage specialized databanks and the Water Information System;
- collect taxes for the permits issued;
- develop Programs of Measures for water improvement, protection and maintenance;

- determine the surface waters intended for household and drinking water supply in coordination with the regional inspectorates for public health protection;
- conduct public consultation on the River Basin Management Plans, etc.

The Basin Council assists with the operation of the Basin Directorate.

It is made up of representatives of the State administration, local administrations, water users and associations within the basin, as well as representatives of research organizations involved in the water sector.

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The Iskar River in Bulgaria

Central and Eastern Europe

Romania

"Apele Romane"

In Romania, the financial mechanism for water management is based on the "beneficiary/ polluter pays principle" according to the specific services and sound use of water resources.

The National Administration "Apele Romane" (NAAR) is the operator which can apply the economic mechanism system for water management, for all users.

The specific taxes for using the water resource are as follows:

- tax for using the water resource according to resource categories (surface water, Danube, groundwater) and users types (population, industry, agriculture);
- tax for discharging wastewater;

- tax for using the hydropower potential of the reservoirs under ANAR administration;
- tax for gravel abstraction from river beds.

The tax structure is developed using the effective costs for operation, maintenance and repair of hydraulic works, as well as for quantitative and qualitative monitoring of water resources.

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Kosovo

Better watched river waters

Training course on electric fishing methods



For the purpose of matching its legislation and administrative methods for water management with the European "standards", the Water Department of the Ministry for the Environment and Regional Planning of Kosovo is the current recipient of a project financed by the European Union and implemented by the European Agency for Reconstruction and the Liaison Office of the European Commission in Pristina.

A team made up of three long-term international experts, local experts and short-term international experts of

GFA Consulting Group GmbH, Bas-Rhône Languedoc International and IOWater provided **assistance to the Kosovar authorities for establishing water monitoring programs, developing Integrated Information Systems and for building institutional capacities for basin management purpose.**

During the first half of 2008, special effort was made in a **pilot basin, tributary of the Drini River.**

The undertaken activities aim at developing monitoring methods allowing defining the ecological status of rivers, better understanding the great management stakes and analyzing the data management chain in order to formulate recommendations on the monitoring of the status of water bodies in the entire country.

Within this framework, methods for the biological monitoring of rivers were developed as well as the quality indicators which were not followed up until now in Kosovo (Fish, invertebrates, diatoms, etc.).

Training programs carried out in situ allowed the collection of field data and the testing of the European tools developed by the Member States within the Common Implementation Strategy (CIS) of the European Water Framework Directive (WFD).

In order to complete the activities in the pilot basin, a working group was made up and gathers representatives

of the various departments of the Ministry for the Environment and Regional Planning, the Hydrometeorological Institute, universities but also municipalities or water utilities.

Work on modeling, definition of the structure of the future Water Information System, flood management and on wastewater management also started at the national level in parallel to the activities undertaken in the pilot basin.

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is available
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The Mediterranean

Ministerial Conference on Water - 22 December 2008 - Jordan

A timetable and field projects in 2009



The Ministerial Conference on Water, held on 22 December 2008 on the shore of the Dead Sea in Jordan, was a first concrete stage for the implementation, in the water sector, of the decisions made by the Heads of State and Government on 13 July 2008 in Paris within the new Union for the Mediterranean area.

A significant contribution of the stakeholders of the civil society was made at a meeting of the main regional NGOs concerned on 21 December.

First of all, the ministers adopted orientations for the development of a **Water Strategy in the Mediterranean area** for meeting the challenges of the climate change.

This Strategy, which will be submitted to the Ministers then to the Heads of State and Government for approval at the end of 2010, will allow tackling

with problems exceeding the means for action of a country alone or one organization.

It will include two quantified objectives concerning, on the one hand, the conservation of water quality and, on the other, the reduction of the pressures on water resources with less water consumptive uses.

Then, the Ministers wished the development, as soon as possible, of new infrastructure projects in the field of water. The first financing will be finalized for the Ministerial Conference on Sustainable Development in Monaco.

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The Conference was co-chaired by Egypt, France and Jordan

Historical reminder

Fresh water is a priority issue for all the Mediterranean partners and its importance will do nothing but grow as water resources are becoming rarer.

The first Mediterranean Conference on Water took place in Algiers in 1990. The Mediterranean Water Charter was adopted in Rome in 1992.

The Euro-Mediterranean Partnership, launched by the Declaration of Barcelona in November 1995, embraces a vast program of collaboration. A specific chapter is devoted to water.

Two Euro-Mediterranean ministerial conferences on water management in the region have taken place since, in Marseilles in 1996 and Turin in 1999.

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Joint Management of the North Western Sahara Aquifer System (NWSAS)

The geographic area for action of the **Observatory of the Sahara and Sahel (OSS)** is Africa's arid, semi-arid and dry sub-humid regions of North Africa, West and East Sahel.

The mission of the OSS is to assist the member countries and organizations in generating, managing and disseminating information that enhances sustainable natural resources management.

The **water program focuses on shared aquifers** and aims to promote joint management of water resources for economic integration and sustainable development in circum-Saharan Africa.

THE NWSAS PROJECT

The North Western Sahara Aquifer System (NWSAS) is shared by Algeria, Libya and Tunisia and is made up

of the Intercalary Continental (IC) and the Terminal Complex (TC).

It covers an area of over 1 million km² including 700,000 km² in Algeria, 80,000 km² in Tunisia and 250,000 km² in Libya.

During the first phase (1998-2002), the objective was to elaborate a common database for integrating all the surveyed information, in addition to new data collection.

Fulfilling such objective required that the national databases be adapted and homogenized. This implied homogenized data structures and codifications, a GIS interface and the elaboration of an access module with the digital model.

The Information System (IS) elaboration included the diagnosis, design and development of a common database, accessible simultaneously by each water administration in the three countries. 9,000 water points were

inventoried. The system contains all the elements for water monitoring and exploitation in the basin.

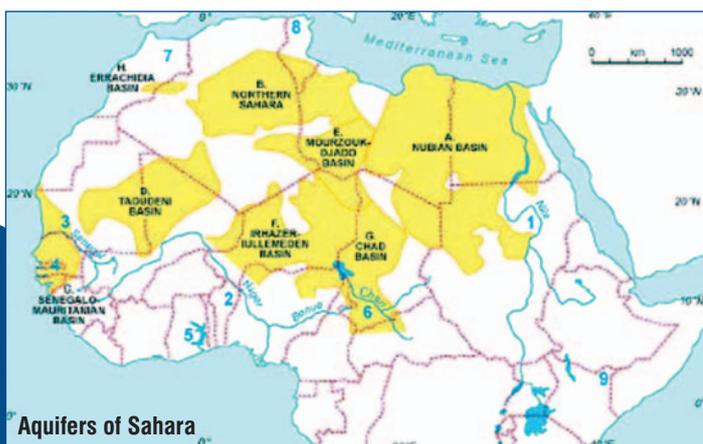
The project's second phase (2002-2006) focused on pursuing cooperation and identifying the technical tools that would lead to a permanent consultation mechanism. The project also addressed the socioeconomic issues and their relation to resource mobilization in the NWSAS.

The third phase of the project is about to start with the aim of improving the management tools and studying the socioeconomic and environmental aspects by use of remote sensing technology to estimate irrigation water consumptions as well as supporting the consultation mechanism.

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Aquifers of Sahara



The Mediterranean

SPI-Water



Facilitating the transfer of IWRM principles

Usually, the research outcomes are not easily available to the decision-makers and water managers and, on the contrary, researchers lack visibility of the users' needs.

The SPI-Water project (2006-2008) financed by the 6th EU Framework Program for Research and Development gathers 16 European and non-European partners. It proposes practical actions to fill the gaps by developing a "science/policy" interface, focusing on a mechanism for improving the use of the research outputs resulting from the implementation of the Water Framework Directive (WFD).

For two years, the SPI-Water project has been:

◆ **Evaluating the projects and initiatives developed in river basins for WFD implementation.** The scientific knowledge, research outputs and demonstration projects thus collected were entered into the WISE-RTD knowledge base;

◆ **Analyzing water policies in non-European countries** for facilitating the implementation of the principles of Integrated Water Resources Management.

◆ **Assessing the needs in the two Mediterranean basins of Sebou (Morocco) and Litani (Lebanon)**, while complying with the WFD methodological framework;

◆ **Studying the applicability of WFD practices in non-European countries** and identifying conditions for their implementations in these countries;

◆ **Producing recommendations** to improve the appropriation and dissemination of the obtained research outputs in non-European countries.

MENBO, in particular, and its partners reviewed the existing water policies in Mediterranean non-European countries and compared those with the current Water Framework Directive (WFD) practices in the European Union.

The recommendations were discussed at a final conference organized in Brussels in October 2008.

In a public report and a summarizing leaflet the partners explain how IWRM knowledge can be transferred within a research program to water managers: how these principles shall be adapted to regional specificities and how the communication between European and non-European researchers and water managers may be improved.

It is especially recommended to promote international networks and twin-

ning agreements between water resources management organizations to facilitate the knowledge transfer.

Visits in Spain and in France were organized for experts of pilot river basins from Lebanon and Morocco. They allowed the elaboration of proposals for future projects in the Sebou and Litani river basins.

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The Project Partners

"INECO"

INSTITUTIONAL AND ECONOMIC INSTRUMENTS FOR SUSTAINABLE WATER MANAGEMENT IN THE MEDITERRANEAN REGION

INECO is supported by the European Commission within the INCO Program - Topical priority of the Mediterranean Partner Countries (MPCs). It gathers 14 institutions from 10 Mediterranean countries (Greece, France, Italy, Cyprus, Tunisia, Egypt, Lebanon, Syria, Algeria and Morocco), including public (6), private (7) and international (1) organizations.

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

INECO deals with the various problems encountered in decision-making processes and with the difficulties of the current governance structures in the Mediterranean Basin.

Research focuses on the alternative institutional and economic instruments which allow promoting equity, economic effectiveness and environmental sustainability in water resources management.

The main goal of INECO is to develop the stakeholders' skills and constructive commitments in Integrated Water Resources Management.

The project focuses on three challenges:

● **Water sharing**, with (institutional, regulatory, legislative and economic) mechanisms to be created for allocating water resources in river basins;

● **Giving a value to water**, with cost assessment, maximization of economic effectiveness, implementation of cost recovery and of the "user-pays" and "beneficiary-pays" principles;

● **Improving the governance of water** and institutional environment which allows the implementation of Integrated Water Resources Management.

In a first step, an inventory was made of the best practices and institutional and economic instruments used in the European Union, the United States, Japan, Australia, Israel, Argentina, Chile and Canada...

The project then sought to see how some of these measures could be adapted in the Southern Mediterranean countries. It then organized, with its various partners, national workshops to analyze the water-related problems and to propose solutions. It finally organized a Conference for summarizing this work.

INECO aims at presenting these experiments and enabling local societies to change their perceptions and their water management practices. The project provides complete and adaptable recommendations

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The Mediterranean

EMWIS: Improving water information in the Mediterranean area

NATIONAL FOCAL POINTS

The 8th meeting of the Coordination Committee of **EMWIS** (Euro-Mediterranean Information System on know-how in the Water Sector) took place in Madrid (Spain) on 25 - 26 June 2008. This meeting allowed making an evaluation of the actions carried out in the countries and an analysis of the progress made in the implementation of the **National Water Information Systems** by introducing the first elements of harmonization with the **Water Information System for Europe (WISE)**.

SYNTHESIS

AND KNOWLEDGE TRANSFER

The reports of the working groups on **"treated wastewater reuse"** and **"drought and water scarcity"** have been published. These groups, initiated with the Water Framework Directive (WFD) and Med-EUWI (Mediterranean component of the European Water Initiative) Joint Process, aim at making characterizations and recommendations using the WFD principles. Additional work is undertaken on **"indicators for drought and water scarcity"**. An analysis of the monitoring networks will be presented at the beginning of 2009.

A REGIONAL WATER INFORMATION MECHANISM IN THE MEDITERRANEAN AREA?

In the context of climate change, it is impossible to circumvent having knowledge of the quantitative and qualitative status of water resources,

of abstraction and polluting discharges, to prioritize actions and to evaluate the performance of the programs undertaken in the Mediterranean Basin.

Upon the request of **EMWIS** Steering Committee, **a feasibility study on the development of a "regional water information mechanism in the Mediterranean area"** was carried out, under the technical coordination of the International Office for Water.

The analysis of the needs, carried out in 7 pilot countries and involving many regional organizations, allowed emphasizing the difficulties currently encountered in the phases of data gathering and enhancement at the regional, national and local levels. The study recommends the implementation of a program to develop the production, interpretation and dissemination of comparable information between the interested countries.

This program relies both on the development of National Information Systems in each country and of a regional and shared water information system in the Mediterranean area, based on two great principles: the voluntary partnership of the States which would like to join the project, and the respect of data confidentiality.

The study details the proposal of a multi-year plan for implementing these projects.

A Mediterranean entry in the Water Information System for Europe (WISE)

This project, initiated at the beginning of 2008 with the DG Environment of the European Commission, aims to facilitate access to quality data on water in the Mediterranean Partner Countries (MPCs) while enabling, thanks to common rules, compatibility between the National Water Information Systems and the Water Information System for Europe (WISE).

This work is undertaken in close cooperation with the European Environment Agency. In addition to the definition of technical recommendations, **the implementation of a "Mediterranean" entry point on WISE website** is also analyzed as a pilot demonstration for all the countries concerned by the Neighborhood Policy of the European Union.

Two working groups of the Mediterranean Water Initiative / Water Framework Directive joint process allowed exchanging experience on the gathering of data on, on the one hand, networks and water monitoring programs, and, on the other, on drought and water scarcity.

Finally, an on-line **metadata catalogue** of the sources of water information in the Mediterranean Partner Countries is being prepared, in accordance with the last rules for the implementation of the INSPIRE Directive on spatial data.

Information and resources: Why not a "Mediterranean water knowledge hub"?

The development of a "Mediterranean Information and Resource Network" could be equivalent to the Anglo-Saxon "Knowledge Hubs". Those are based on the principle of partnership between the stakeholders working in complementary fields: each stakeholder, recognized as leader in its field, facilitates a network, collects and disseminates knowledge; self-sufficiency of each stakeholder is required to guarantee the sustainability of the network.

The development of such a Network could start with very diverse bodies having different statutes and nationalities, since each stakeholder has its own development and management logics in its area of responsibility.

The Network is a way of sharing objectives and results, of developing synergies, of being controlled by the project managers or an Orientation Committee, and of sharing common tools and available means, human resources in particular.

It could develop quickly, starting from existing regional bodies.



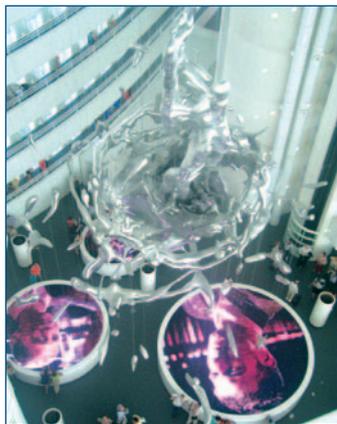
Conference of the Euro-Mediterranean Water Directors
Athens - July 2008

SEMIDE
EMWIS

www.emwis.net

The Mediterranean

"EXPO-AGUA ZARAGOZA 2008"



An International Exhibition on water and sustainable development, "Expo-Agua", took place in Saragossa, Capital of Aragon, from June to September 2008. It combined exhibitions, artistic events, shows and conferences. The "Water Tribune", a platform for discussions on the economic, social and environmental stakes of water in the world and coordinated by **Mr. Eduardo Mestre, former INBO President**, gathered some 2,000 international experts during 10 "Thematic Weeks". These meetings ended on 11 September with the organization of an International Symposium on Water and Sustainable Development and the signing of the "Saragossa Charter".

INBO and MENBO got mobilized in "ExpoAgua", especially on two strategic topics:

WATER, A UNIQUE RESOURCE

Within Thematic Week 4 of the Water Tribune: "Water, a unique resource" and the issue of "Shared Water", organized by **Mr. Raimundo Garrido, former INBO President**, Mr. Jean-François Donzier, **INBO Secretary and General Manager of the International Office for Water**, was invited to present on 9 July the Introductory Conference on the topic of "inter-basin twinning agreements, cooperation instruments".

This introductory speech was followed by a special session in which the French Adour-Garonne Water Agency and Basin Committee and the Ebro River Basin Authority shared their experience.

The organizers of the "Water Tribune" had invited INBO to jointly hold a special session on 8 July on the topic of "Basin Management and Transboundary Cooperation in Europe and in the Mediterranean area" with the Mediterranean Network of Basin Organizations (MENBO) and the European Water Partnership (EWP).

The various round tables organized on this occasion concerned:

- ◆ **Transboundary surface and ground water management in the international districts of the European Water Framework Directive;**
- ◆ **Participation of the populations and decision makers in water resources management;**
- ◆ **Operational tools for the management of river basins and aquifers;**
- ◆ **Integrated plans for the prevention of floods, droughts and extreme phenomena in the Mediterranean area;**
- ◆ **Management Plans and Programs of Measures for WFD implementation.**

These contributions were in line with the preparation of the 5th World Water Forum of Istanbul in 2009, for which INBO and UNESCO were designated as coordinators of Topic 3.1.: "Basin Management and Transboundary Cooperation".

This Saragossa Session was a complete success, and mobilized a large number of participants, including Presidents of the Spanish River Basin Authorities, and representatives from Brazil, France, Hungary, Italy, Portugal, Spain and Turkey. Many projects and initiatives were presented.

CLIMATE CHANGE AND EXTREME EVENTS

The Directorate General for Water of the Spanish Ministry of Environment, Rural and Marine Affairs organized on 24 July 2008 a **technical day on Drought Planning and Management**.

There were 120 participants, international and regional experts from different countries (France, Portugal, Italy, Greece, Germany, USA, Brazil...). The day conference had three technical sessions and a concluding round table dealing with:

- 1 Institutional aspects (European legislative framework, transboundary basins and social responsibility).
- 2 Drought characterization impacts and risks (mathematical prediction models, hydrological and drought indicator systems).
- 3 Drought planning and management in Spain (Special Drought Management Plans, public awareness campaigns).
- 4 Socioeconomic and environmental impacts of droughts.

The whole event pointed out the need of shifting from a risk/emergency to a planned drought management with agreed measures. The importance of public participation in the decision making process for adequate drought management was stressed, and drought management plans were identified as useful tools to achieve this objective.

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MELIA



MELIA (Mediterranean dialogue for Integrated Water Management) is a program selected by the European Union within its 6th FPRD. Started in 2006 for 4 years, it gathers 45 participants (public authorities, international organizations, NGOs, universities, etc.) from 16 Member and non-Member States of the European Union.

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

Its objectives are also to develop awareness on social, economic and technical issues related to water management, to propose participation mechanisms to avoid competition between the regions and the various water users, to support sustainable water policies and to provide indicators to implement the benchmarking of IWRM.

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The Mediterranean

Egypt



Erosion and sedimentation in the Nile Delta

The Nile Delta complex is the product of a continuous sedimentary process which has occurred for million years. The two current branches, Rosetta and Damietta, have developed a major promontory at their Mediterranean mouth.

The Rosetta Promontory continued growing up till the beginning of the 20th century. Since 1900, the water flow and sediments carried out by the Rosetta branch have decreased due to climate change, the construction of dams and control works along the Nile River itself, the continuous use of water for irrigation and man activities on the river banks. The eastern and western parts of the Rosetta promontory retreated about 5 km from 1900 to 2000 with an average rate of about 50m/year.

This retreat increased tremendously during the period from 1964 to 1982 to reach 125 & 170 m/year due to the construction of upper Aswan Dam in 1964, which trapped all the sediments transported by the River in its upstream part.

Two Dolos revetments along the sides of the promontory were executed from 1986 to 1991 to control the shoreline retreat.

However erosion is not the only trouble encountered, sedimentation of its outlet is increasing due to the reduction of the water flow and is causing serious shoaling which hinders the economy of the area and disturbs the ecosystem of the Rosetta branch.

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Twinning on water quality management

The twinning project on the management of water quality in Egypt, presented by the consortium made up of Italy, France and Austria, was selected by the evaluation committee and the Egyptian Ministry of Water Resources.

This 2-year project (budget: Euros 1,300,000) will be coordinated by

Giorgio Pineschi, project's permanent resident adviser.

It especially includes testing the development of a management plan for the Aswan Dam Authority and an institutional assistance for the control of accidental pollution, which will be carried out by French experts.



Meeting for contract negotiation in Cairo with the Egyptian partners

Algeria

New statutes of the Basin Agencies

The statutes of the Algerian Basin Agencies (ABH) have just been amended by the decree of 30 September 2008.

The Basin Agencies are now in charge of:

- ◆ Ensuring integrated and concerted water resources management on the natural river basin scale;
- ◆ Developing the water information system;
- ◆ Formulating surface and ground water resources management plans and developing decision-making supporting tools;
- ◆ Managing the system of water taxes on the use of public water resources;
- ◆ Providing financial assistance to actions aiming at saving water and safeguarding its quality;
- ◆ Implementing and promoting projects aiming at rationalizing the use of water resources and at preventing their pollution.

THE BASIN COMMITTEE: A SPACE FOR DIALOGUE ON WATER

The aim of the Basin Committee is to discuss and formulate opinions on all water issues in the river basin, and in particular on:

- Appropriateness of planned hydraulic work and infrastructures;
- Water-related disagreements that can occur between users;
- The distribution of water between the various users;
- Actions for the quantitative and qualitative protection of the resource;
- The action programs of the River Basin Agency.



Map of the 5 Algerian ABH

The Algiers - Hodna - Soummam Basin Committee is, for example, made up of 24 Members equally representing the Administration, Local Authorities and the various categories of users.

THE BASIN AGENCIES' WATER TAXES

At the beginning of 2008, the French Development Agency financed an institutional and legal assistance to improve the water abstraction tax adopted since the creation of the Algerian River Basin Agencies (ABH) in 1996, as an economic incentive tool for better water resources management.

This assistance was provided by the International Office for Water and the Seine-Normandy Water Agency.

It allowed two executives of the Algiers-Hodman-Soummam ABH to come for studying the water tax practices at the Seine-Normandy Water Agency.

In-depth thinking about the evolution of the water tax in Algeria led to the proposal of texts, drawn up with the main Algerian interested parties. It is especially necessary to strengthen the relations between planning and water tax.

The latter, now only applied to the industries, which represent less than 2% of the abstracted volumes, must become an incentive tool for water saving applied to all the uses of the resource.

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The Mediterranean

Morocco

Cooperation between the French and Moroccan Basin Agencies

Nine executives of the seven Moroccan Agencies and of the State Secretariat in charge of water participated in a one-week study, in Toulouse, in June 2008, at the invitation of the Adour-Garonne and Rhone-Mediterranean and Corsica Water Agencies. This meeting mainly dealt with the calculation and recovery of water taxes and the allocation of aids to water users.

Indeed, the French Agencies have a 40-year experience in this matter.

In Morocco, the application of the water law of 1995 is progressive to be bearable and the taxes on water, irrigation, electricity and supply are now generalized and those on domestic and industrial pollution are being established.

The French specialists underlined the new requirements of the European Framework Directive of 2000, integrated into the French Law on Water and

Aquatic Environments of December 2006.

Following a seminar on concerted groundwater management, which had taken place in Beni Mellal in April 2007, another seminar was held in Lyons in December 2008 on measurement tools and networks.

There are frequent cooperation contacts between the Adour-Garonne, Rhone-Mediterranean and Corsica and Seine-Normandie Water Agencies, on the one hand, and the Oum er Rbia, Loukkos, Tensift, Souss Massa and Sebou Agencies, on the other hand, bound by twinning agreements.

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The nine Moroccan executives during their visit in Toulouse



Invitation

Regional Session Europe:
17 March 2009 - 14:30 - 19:00

ROUNDTABLE
"European Experience in Transboundary Basins"
Sutluce - Istanbul

www.ewp.eu

Middle East

Propositions to overcome a deadlock in the Middle East

"Water and Peace for the People", released on 11 September 2008 by UNESCO Publishing, offers a practical guide that suggests concrete ways to resolve water crises in the Middle East. Analyzing each situation, the author examines the conflicts in the Upper Jordan River between Israel and Syria around the Golan Heights, between Israel and Lebanon over the Wazzani Spring, and the longstanding water dispute between Palestinians and Israelis. Challenges confronting Turkey, Syria and Iraq in sharing water of the Euphrates and Tigris Rivers are also assessed.



The situation is already alarming: salinity is rising in the Euphrates and half the population of the region's large cities lacks drinking water supply. A report published in 2005 by UNDP indicated that 80% of Iraqi families living in rural areas drank unsafe water.

The book "Water and Peace for the People" is also published in Arabic and Hebrew.

Buy the book at:

<http://publishing.unesco.org>

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"Management and Hydro-diplomacy of Water in the Middle East"

How to limit the effects of climate change in the Mediterranean area? How to sustainably manage the scarce water resources of the region? How to provide water to the populations in sufficient quantity and quality? How to accustom users to water-saving behaviors? How to remove the possibility of a water war in the Middle East by inciting Governments to adopt participative policy? What are the new regional hydro-diplomatic facts? How to ensure equitable water use among the countries of the area?

For launching this book, on the occasion of the French-speaking Book Exhibition in Beirut, a Conference gathered more than 250 leaders of the Area on 25 October 2008, with the participation of FAO, the Arab League, the Union for the Mediterranean area, as well as Jean-François DONZIER, INBO Permanent Technical Secretary.

Editions "L'Orient - Le Jour"

Imm Kantari Corner - B.P. 11-2488 Beyrouth - Liban

www.lorient-lejour.com

The book that **Fadi Georges Comair, Director of Water and Electric Resources of Lebanon**, has just published, tries to answer these questions, by highlighting the urgency of establishing a new world order based on the culture of water, to preserve peace and food security in this area of the world.



Participate in the sessions
"Basin Management and Transboundary Cooperation"
5th World Water Forum – Istanbul
20 - 21 March 2009 in Sultane A. Kagithane Hall

www.inbo-news.org



The website of river basin management over the world

- **The International Network of Basin Organizations**
- **The World Water Forum of Istanbul - 16 - 22 March 2009**
- **The Regional Networks of Basin Organizations:**
 - **Africa - ANBO**
 - **Latin America - LANBO**
 - **North America - NANBO**
 - **Asia - NARBO**
 - **Central Europe - CEENBO**
 - **Eastern Europe, Caucasus, Central Asia - EECCA-NBO**
 - **The Mediterranean - MENBO**
- **"EUROPE-INBO" :**
European Water Framework Directive implementation
- **The Network of International Commissions
and Transboundary Basin Organizations**

Privileged links with websites:
worldwaterforum5.org / worldwatercouncil.org
gwpforum.org / iowater.org / emwis.net
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