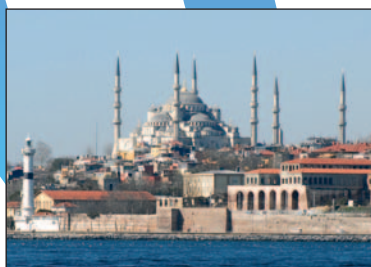


5th World Water Forum: Everyone in Istanbul for better basin management!



The 5th World Water Forum will take place in Istanbul from 16 to 22 March 2009 at the invitation of the Turkish Government and the World Water Council.

It is a major meeting not to be missed!

The International Network of Basin Organizations - INBO calls its Members and Observers to get mobilized and come to Istanbul to present their experiences, to exchange and discuss in order to develop and improve basin management and transboundary cooperation in the world.

What progress has been made since the 1990s!

Management at the level of basins of rivers, lakes or aquifers experienced a quick development in many countries, which made it the basis of their national legislation or tried it in pilot river basins.

The European Water Framework Directive of 2000 sets, for example, an objective of good ecological status in the national or international River Basin Districts of the 27 current Member States and the Countries applying for accession to the European Union.

The management of the transboundary basins of the 263 rivers and hundreds of aquifers is taken more and more into account within Commissions, Authorities or International Basin Organizations, which are being created or strengthened on all the continents.

The Forum of Istanbul will give us the opportunity of reporting on these progresses, but also on the difficulties which remain and the way still to go.

The International Steering Committee of the Forum confirmed the nomination of INBO and UNESCO as coordinators of topic 3.1, dealing with **basin management and transboundary cooperation**, in partnership with all other interested Organizations.

**Our ideas are progressing, let's get mobilized
to make our results known in Istanbul in March 2009!**

www.inbo-news.org

www.worldwaterforum5.org

7th World General

Debrecen - Hungary - 7-9 June 2007



Madeleine de Grandmaison
and Laszlo Kothay

DECLARATION OF DEBRECEN

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

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

However, findings are alarming all over the world!

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

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

Integrated Water Resources Management at the level of river basins is obviously essential worldwide!

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

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

Significant progress has already been made since the 1990s.

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

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

- 1 **on the scale of local, national or transboundary basins of rivers, lakes and aquifers;**
- 2 **based on Integrated Information Systems**, allowing knowledge on resources and their uses, polluting pressures, ecosystems and their functioning, the follow-up of their evolutions and risk assessment. These information systems will have to be used as an objective basis for dialogue, negotiation, decision-making and evaluation of undertaken actions, as well as coordination of financing from the various donors;
- 3 **based on Management Plans** or master plans that define the medium and long-term objectives to be achieved;
- 4 **through the development of Programs of Measures** and successive multiyear priority investments;

5 **with the mobilization of specific financial resources**, based on the "polluter-pays" principle and "user-pays" systems;

6 **with the participation in decision-making** of the concerned Governmental Administrations and local Authorities, the representatives of different categories of users and the associations for environmental protection or of public interest. Indeed, this concerted participation will ensure the social and economic acceptability of decisions. Decentralization is the basis for effectiveness in water policies.

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

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

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

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

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

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



217 delegates coming from 46 countries



Adaptation of water management to climate change.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Addresses on the progress made in river basin management over the world



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



TWINBASIN^{xn}

For promoting twinning agreements between



The TWINBASIN^{xn} project, directed by IOWater and INBO, was completed at the end of 2007.

In 4 years, the project has obtained very interesting results: **41 technically and financially supported twinning agreements, more than 100 missions for the exchange of experience, involving 70 Basin Organizations from 42 countries.** The representatives of the two largest basins in the world in particular – those of the Amazon and Congo Rivers – met, thanks to the project support, and signed a twinning agreement.

It is clear that **twinning agreements are a powerful tool to improve the operation of Basin Organizations and to develop true and effective Integrated Water Resources Management.**

Twinning agreements allow for the capacity building on technical and institutional issues needed by Basin Organizations.

The decision-makers should be aware of this relevance to mobilize the resources needed for implementing effective exchanges.

The lessons learned from the project are summarized on line on the website: **www.twinbasin.org**. All the events organized by INBO and by its regional networks will allow a better dissemination of these lessons, especially on the topics related to "Governance", "Participative processes in decision-making" and to the "Economic analysis".

Emanuella Nanova

International Office for Water
Tél.: +33 4 92 94 58 14
e.nanova@oieau.fr

The Rochehaut seminar

Economic component of the Water Framework Directive

With TWINBASIN^{xn} support, an important seminar, held in Rochehaut (Belgium) in April 2007, gathered representatives of Basin Organizations from 6 countries (Bulgaria, Romania, Latvia, Malta, Walloon Region and France) particularly motivated by the economic dimension of IWRM and Management Plans.

They worked on the economic component of the European Water Framework Directive and drafted a "guide", available on the TWINBASIN^{xn} project and the French Artois-Picardy Water Agency websites.

This seminar allowed the drafting of a proposal for the implementation of Programs of Measures in Bulgaria, within an institutional cooperation between the Bulgarian Water Authorities and the French Artois-Picardy Water Agency.

The program especially focused on the following main topics:

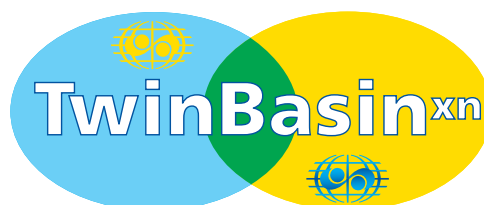
- input of the cost-effectiveness analysis in the development of the Program of Measures,
- potential derogations,
- cost-recovery.

This seminar has also given to the participants the opportunity to perform **a session on "ECO WHAT?"**, which allows, under interactive and "real" conditions and using the economic analysis, justifying a River Basin Management Plan towards decision-makers.

Arnaud Courtecuisse

Artois-Picardy Water Agency
Tél.: +33 3 27 99 90 60
a.courtecuisse@eau-artois-picardie.fr

www.eau-artois-picardie.fr



www.twinbasin.org

UNO – ECOSOC

INBO has obtained special consultative status

INBO was granted special consultative status by the **United Nations Economic and Social Council (ECOSOC)**.

The non-profit making and voluntary Non-Governmental Organizations can thus develop a mutually advantageous collaboration with the United Nations.

The rights and privileges, detailed in ECOSOC resolution 1996/31, allow the qualified organizations to contribute to the objectives and work programs of the United Nations, as technical experts, advisers and consultants to the Governments and UNO.

In practical terms, this implies INBO participation to the **ECOSOC** and its various related organizations by attending meetings, by addresses and written reports on issues on the agenda.

The organizations to which the status was granted are also invited to attend the international conferences organized by the United Nations, the special sessions of the General Assemblies of the United Nations and other inter-governmental organizations.

Currently, only 2,719 NGOs have this status over the world.

www.un.org/ecosoc

Basin Organizations

Twinning between Murrumbidgee and Davao



This twinning agreement was signed in 2006 within the **TWINBASIN[™]** project.

It aimed at the transfer of innovative tools and smart technologies for irrigation and urban water use from Murrumbidgee River Basin, Australia, to Davao River Basin, Philippines.

One of the innovative tools is the hydrological model, SWAGMAN (Salt Water and Groundwater Management), which is already being used both as an educational and management tool by environmental officers and farmers in the Murrumbidgee River Basin, Australia. This twinning agreement aims at adapting it to the Davao River Basin, Philippines.

Professor Shahbaz Khan from UNESCO HELP, Australia, and Dr Ruth Gamboa from PCEEM Davao Foundation, Inc, Philippines, are working together to develop this twinning with the main actors, which include the City Government of Davao, Department of Agriculture, National Economic Development Authority, University of the Philippines, PCEEM, CRS and KFI.

The institutions within the Philippines are generally better established for managing water supply for the demands of the various drivers (population, industrial, agricultural, irrigation etc.) as opposed to managing water in an integrated sustainable approach.

Under this twinbasin cooperation, the involved institutions are being engaged to learn from the policies and laws adopted in the Murrumbidgee Catchment to help conserve the Davao River Basin.

The **TWINBASIN[™]** missions proved to be an opportunity to acquire and share best practices and lessons learned. This twinning brings new ideas and innovative strategies and approaches in environmental and economic management.

It has been acknowledged through the Australian Government's Eureka Water Prize.

Prof. Shahbaz Khan
UNESCO HELP, CSIRO/CSU
Fax: +61 269332647
Shahbaz.Khan@csiro.au

www.csiro.au



WBCSD

A "Global Water Tool"

The **World Business Council for Sustainable Development (WBCSD)**, a global association of 200 companies, launched its **Global Water Tool** during the World Water Week in Stockholm in August 2007.

The tool should help companies and organizations map their water use and assess risks relative to their supply chains.

The tool is downloadable from the WBCSD website.

The Global Water Tool allows companies to answer such key questions as: How many of our industrial sites

are in extremely water-scarce areas? Which sites are at greatest risk? How many of our employees live in countries which lack access to improved water and sanitation? How many of our suppliers are in water-scarce areas now? etc.

It does not provide specific guidance on local situations, which require more in-depth, systematic analysis.

Eva Haden

World Business Council for Sustainable Development
Fax: +41 22 8393 131
haden@wbcsd.org

www.wbcsd.org

UNECE

A metadatabase on water

The **French Ministry of Ecology (MESD)** wishes to develop international cooperation actions in the field of Water Information Systems.

It participated in the 8th meeting of the working group on monitoring of **UNECE** (UN Economic Commission for Europe), held in Helsinki on 25-27 June 2007. This meeting gathered experts from the water sector of the European Union, Eastern Europe, Caucasus and Central Asia and allowed the presentation of the French experience in the administration of metadata on water, developed with the **French Water Information System (WIS)** and the feasibility study for a Regional Water Information Mechanism in the Mediterranean region.

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

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



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

International Riverfoundation

"River Heroes"



"River Heroes", a report by the International Riverfoundation (IRF), is about the efforts of people to save rivers around the world. The report tells us what their collective lessons and insights are for managing rivers in different contexts and different countries.

For several years now, the Australian Brisbane-based International Riverfoundation (IRF) and Riverfestival have assisted in the restoration of rivers and their ecosystems around the world. Together they have awarded the Inter-

national and National Thies Riverprizes to 16 organizations that have initiated best practice.

Over 50 finalists have been acknowledged for their exemplary work.

This report brings together 13 case studies from winners and finalists.

The IRF examined what makes up best practice in restoring and managing rivers from a perspective of 5 key criteria: partnerships and collaboration, community mobilization, holistic approach, planning, evaluation and monitoring, and long-term sustainability.

The final outlook chapter discusses the future of rivers and water and looks at the changes that governments, societies and communities need to make to sustain rivers and water into the future.

"River Heroes" is available for free download on:

www.riverfoundation.org.au



UNEP

"Dams and Development"

The **UNEP Dams and Development Project (DDP)**, established in November 2001, was completed in April 2007. The project initial task of promoting multistakeholder dialogue on the core values and strategic priorities of the **World Commission on Dams (WCD)** was widened to producing non-prescriptive practical tools to help decision-makers.

The DDP convened five Dams and Development Forum meetings and five issues-based workshops. It facilitated national multistakeholder dialogue and activities in about 20 countries and regions around the world and produced a compendium of relevant practices for improved decision making on

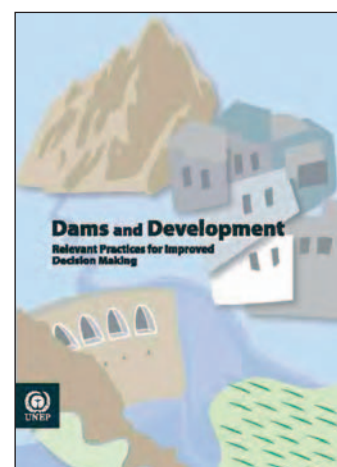
dams and their alternatives, published under the title of **"Dams and Development: relevant practices for improved decision making"**.

This multistakeholder dialogue helped advancing the dams debate, bridging the diverse perspectives in the context of sustainable development, for poverty alleviation and meeting the MDGs.

The dialogue at its various levels helped clarifying the contents of the WCD strategic priorities addressing sensitive and conflicting elements. A set of key issues resulting from a prioritization was adopted for the elaboration of the compendium on relevant practices.

The issues are: identification of options, stakeholder participation; social impact assessments and outstanding social issues; compensation policy with focus on benefit sharing mechanisms; environmental management plans, compliance and international policy on shared rivers.

This publication provides a characterization of the issues, information about current state of the normative frameworks and implementation of these issues, illustrated by a number of selected case studies of good (and not so good) practices.



Alberto T. Calcagno

Dams and Development - UNEP

Fax: +254 20 762 4763

alberto.calcagno@unep.org

www.unep.org

Our next Big Meeting

"ECWATECH-2008"

Moscow - Russia - 4 - 6 June 2008

Within the International Symposium on the management of water-related extreme phenomena:

EUROPE-INBO session - Thursday 5 June - 14:00 - 17:00

"First lessons learned from the implementation of the European Water Framework Directive"

& Constitutive Assembly of the Network of Basin Organizations from Eastern Europe - Caucasus and Central Asia "EECCA - NBO".

This event is in line with the European preparation process for the 5th World Water Forum of Istanbul in 2009, in cooperation with the European Water Partnership.



www.inbo-news.org



Making Integrated Flood Management Part of the Development Agenda



Why a new approach is required?

Floods play an important role in maintaining the natural functions of rivers and flood plains and are source of fresh water and other natural resources, which provide livelihood opportunity. Therefore, historically, flood plains have been a preferred place for human settlement and socioeconomic development. At the same time, floods are also a source of risk when people and their activities are exposed to flooding. For sustainable development in flood plains, socioeconomic activities have to adapt to these risks.

Flood control measures, in the past have largely relied on structural solutions, such as embankments, bypass channels, dams and reservoirs. Although structural measures have been complemented with non-structural measures, such as flood forecasting and land use regulations, **the need for a paradigm shift from flood control to Integrated Flood Management (IFM) has been recognized only during the past decade.**



This new approach aims at:

- Maximizing the net benefits from flood plains,
- Minimizing loss of life as a result of flooding,
- Reducing flood vulnerability and risks,
- Preserving ecosystem and their associated biodiversity.

What is Integrated Flood Management?

IFM is based on the following principles:

- ◆ Adopting a basin approach to flood management;
- ◆ Bringing multi-disciplinarity;
- ◆ Addressing climate variability and change;
- ◆ Enabling stakeholder participation;
- ◆ Ensuring equity and fairness.

Stakeholder participation

Risk management decisions are driven by the perceptions about the risks, which can differ among stakeholders, even within one country.

Further, certain societal objectives such as protection of ecosystems are not amenable to economic efficiency. Therefore stakeholders' participation in all such decision making processes becomes vital. There are certain pre-requisites for ensuring the successful and sustainable involvement of stakeholders in a given situation.

The role of each of the stakeholders needs to be specified through appropriate legal and institutional setup. Mechanism of stakeholder participation should be planned in advance and clearly articulated and clarified. The most important of all is to build trust through information sharing and repeated interactions.

It is important that River Basin Organizations are able to provide such an institutional framework to enable stakeholders' participation not only for addressing water resources management issues but also the flood management issues.

International cooperation is required for Transboundary Rivers since the flood management measures may have the impacts on the magnitude of floods beyond the national boundaries. Arrangement should be made preliminary with the participation of riparian countries sharing the basin.

The organizations in charge can help develop a consensus and rules on flood management. Exchange of information between riparian countries and establishment of database is a basis for consensus building on a suited flood management policy.

Sharing knowledge and experiences between different Basin Organizations and participating countries are beneficial and effective to formulate and promote basin flood management.

THE ASSOCIATED PROGRAM ON FLOOD MANAGEMENT

Realizing the need to facilitate the efforts of countries, developing countries in particular, in making the paradigm shift from flood control to flood management to achieve sustainable development in a basin, the Associated Program on Flood Management (APFM), a joint initiative of **the World Meteorological Organization (WMO) and the Global Water Partnership (GWP)**, has been promoting the integrated flood management approach and published Flood Management Policy Series Papers.

APFM focuses on the implementation of IFM concept on the ground with seeking to develop capacities in the countries by supporting local and regional actions. It provides guidance and helps organizing field demonstration projects.

To facilitate these objectives APFM has set up a **Reference Center on Flood Management**, which provides information on "Institutions and Agencies involved in Flood Management", "Flood-Prone Areas", "Flood Management Policy and Legislation" and "Literature on Flood Management".

Toru NAGATA

Associated Program on Flood Management HWR
Department, WMO
TNagata@wmo.int

www.apfm.info



African Water Documentation and Information System (AWIS)

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

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

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

AWIS aims to promote and facilitate the provision of information and knowledge on water in Africa via a Pan-African Web portal, which relies on associated local partners.

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

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

AWIS activities will aim at facilitating:

- the sharing of experience and access to the information on know-how in the African water sector;
- the translation of key documents coming from the French-, Portuguese- and English-speaking countries;
- the dissemination of research results to the end-users. Better dialogue between stakeholders and researchers will be organized, as well as a better integration of research results to meet the needs and requests coming from people in the field.

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



AWIS, A PARTICIPATIVE PROCESS

In addition to the 5 partners, initiators of the project coordinated by **OMVS**, the African local partners will be involved in a Coordination Committee to validate the tool feasibility during the preparatory phase.

A conference in Paris will complete the feasibility phase, gathering about fifty participants coming from African organizations, wishing to get involved in the **AWIS** process, and prospective users and donors.

AWIS will closely work with the local stakeholders to identify their needs

for capacity building and to find solutions (human resources, organization, equipment, etc.).

AWIS is not only a technological tool but can also organize and direct a network of African partners, producers and users of water information.

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



Performance Indicators

FOR AFRICAN BASIN ORGANIZATIONS

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

In order to propose an approach to the adaptation and integration of African specificities in this field, **the International Network of Basin Organizations, through the African Network of Basin Organizations (ANBO), with the support of the International Office for Water and Ecologic,**

has just launched a project aiming at developing, testing and comparing Performance Indicators for the African Basin Organizations.

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

Organization for the Development of the Senegal River (OMVS)

For promoting sustainable development in the Basin

The Organization for the Development of the Senegal River (OMVS) was created in March 1972 by Mali, Mauritania and Senegal, focusing on "promoting and coordinating the studies and work for the development of the River". Guinea, the 4th country sharing the basin, joined the organization in 2006.

French Cooperation and the Organization for the Development of the Senegal River: a long shared history.

The bonds between **OMVS** and France are strong and old. From 1981 to 1995, about 236 million euros were thus granted by France to **OMVS** and its management and development companies, especially by the **French Development Agency (AFD)**. This financial support, further to the resources devoted to research, studies and institutional support, focused on infrastructures, with the building of the Diama dam (in Senegal), of its protection dikes, the hydro-power installations of the Manantali dam (in Mali) as well as hydro-agricultural areas and infrastructures in the river valley.

After this first phase of developing infrastructures, some supporting measures were implemented. Thus, since 2000, two projects of the French Global Environment Facility (FFEM) have aimed at establishing, inside **OMVS**, an environmental information system and a management chart for water resources and needs. At the same time, institutional technical assistance is also provided by the French Ministry for Foreign Affairs to **OMVS** High-Commissioner.

A new commitment of OMVS to IWRM for promoting sustainable development in the Senegal River Basin

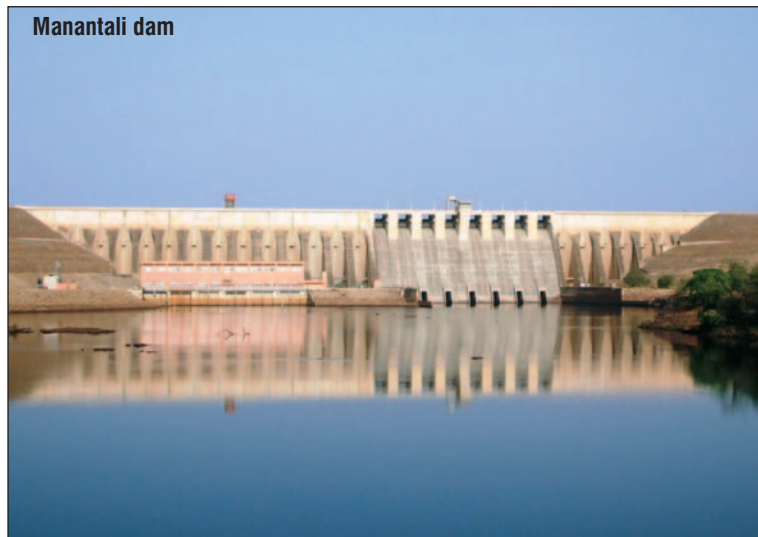
At the end of 2006, AFD, the World Bank, Dutch Cooperation and the European Commission committed themselves to a program for the Senegal River Basin on "Integrated Water Resources Management - development of multi-purpose uses".

navigation, traditional activities, etc.) and thus to reduce the risk of conflicts related to water resource availability or accessibility, thus contributing to peace and stability in the sub-region. They must also allow improving the living conditions of the populations, by reducing the impact of water-related diseases.

The **AFD**-financed project is today in its launching phase and is organized around two topics:

- ◆ **Health:** organization of the control of endemic schistosomiasis on the basin scale, with support for implementing activities and initiatives for integrated control of water-borne diseases. This health component also aims at ensuring consistency in national health policies and will implement demonstration projects on "environmental health".

OMVS is today getting strongly mobilized on these stakes, as illustrated in this extract from the Declaration of the Heads of State and Government of **OMVS** Member States, made in Nouakchott on 21 May 2003, on the strategic orientation framework for **OMVS**: *"After construction it is now time for management. The hugeness of the challenges to meet, the stakes related to the shared management of the resources and to the necessary integration incite taking control, on the basin scale, of planning of development"*.



Manantali dam

The support objective is to contribute to **OMVS** capacity building for promoting sustainable development on the basin scale. **OMVS** is the agency which coordinates and implements the project on behalf of the four Member States. For this purpose, it has just created a multidisciplinary team, including public health specialists for the first time.

AFD support, in the form of a subsidy of 7 million Euros to **OMVS**, aims at establishing a regional framework for sustainable water use in the basin, using an integrated and participative approach.

The recommended actions will enable to guarantee the users the sustainable development of productive activities (agriculture, electricity,

- ◆ **Institutions:** **OMVS** capacity building, strengthening of the environmental information system, consolidation of the management of water resources and demands. The participative approach used for the **Master Plan for Water Development and Management** will increase dialogue between the four Member States, allowing the creation of a strategic framework for IWRM planning and the sustainable development of the Senegal River Basin.

Tamsir Ndiaye

OMVS
tamsir.ndiaye@omvs-soe.org

Martin Parent

AFD Paris
parentm@afd.fr

Gilles Chausse

AFD Dakar
chausseg@afd.fr

www.omvs.org

www.afd.fr



Niger Basin Authority (NBA)



27 years at the service of NBA



Mr. Oumar Ould Aly

Our friend Ould Aly, first ANBO President, left us suddenly on 5 August 2007. Since October 1980, he has spent twenty seven years at the service of the Niger Basin Authority (NBA).

A Malian citizen, recruited as expert hydrologist by the former Niger River Commission (NRC) for the HYDRONIGER project, Mr. Ould Aly took his duty on 8 October 1980.

The Niger Basin Authority (NBA) was created at the end of 1980 to replace the Niger River Commission.

The HYDRONIGER project, or Hydrological Forecasting System for the Niger River Basin, allowed the setting up of a system for collecting hydro-meteorological data in real time, a regional Center, national centers and a telecommunication system. WMO was the executive agency of the project.

The Niger-HYCOS project

Afterwards, Mr. Ould Aly coordinated the Niger-HYCOS project for the Niger River Basin, launched in 2005 by WMO and the NBA/AGRHYMET consortium.

The French Development Agency agreed to contribute to the project financing with about 3M Euros, out of a required total amount of 4.2M Euros. The financing complement was obtained thereafter from the African Water Facility.

Mr. Ould Aly had also been entrusted with the chair of the Committee for preparing the Conference of the NBA Heads of State and partners in Paris in April 2004.

He carried out with competence and devotion the presidency of the African Network of Basin Organizations (ANBO) from 2002 to 2006, of which he was one of the Founder Fathers.

At the beginning of 2007, Mr. Ould Aly wrote:

"the basin's populations are getting impatient, they observe and wait with the hope that, one day, they can finally truly enjoy the huge resources of this Basin".

All his life, our friend Ould Aly worked for this hope to come true!

Towards the achievement of the "Shared Vision"



In 2003, **the World Bank and the Niger Basin Authority (NBA)** completed an Audit, carried out by **IOWater, INBO** secretariat, aiming at proposing institutional and organizational reforms for the Authority.

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

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

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

The Niger Basin Authority is financed by the Water Facility of the European Union to implement a project entitled "Formulation and Implementation of an Investment Program", which deals with the following topics:

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

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

ABN

Fax: +227 20 72 42 08
sec-executif@abn.ne

www.abn.ne

"EUROPE-INBO 2008"

Sibiu - Romania - 2-4 October 2008

"The European Basin Organizations are getting mobilized to implement the Water Framework Directive."



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Free speech:

IWRM, WHEN?

The Niger River in Guinea



In 1992, the international community adopted several principles which are now a support for the stakeholders in their search for sustainable water resources management:

- ❖ Fresh water is a limited and vulnerable resource, essential for life, development and for the environment,
- ❖ Water use and management should be based on a participative approach involving the users, planners and political decision-makers at all levels,
- ❖ Women play a central part in water supply, management and protection,
- ❖ Water has an economic value in all its competing uses and must be recognized as an economic good.

From these principles has originated the concept of Integrated Water Resources Management (IWRM) whose implementation is under the responsibility of the Governments.

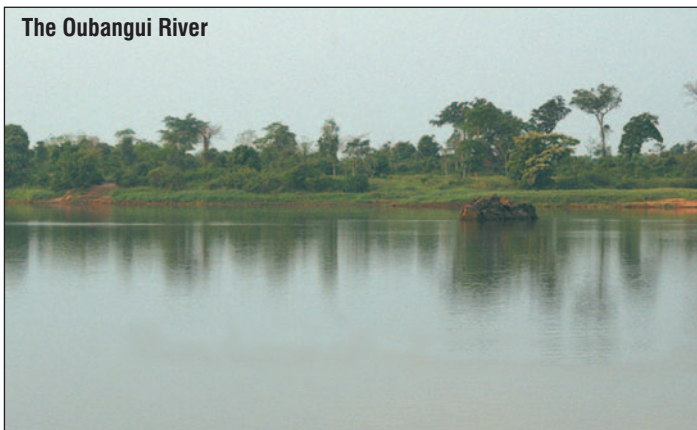
Thus, IWRM is defined as a process which aims at a coordinated use and management of water, of soils and of the resources which depend on it, in order to optimize the economic and social welfare which results from it, in an equitable way, without compromising the perenniality of the living ecosystems.

However, since the launching of the IWRM process, more than a decade ago, the concept remains too often a great unknown factor for most West African stakeholders.

Abdoulaye CAMARA

President of the Guinean Hydrological Association (AGH)
asguihydro@yahoo.fr

The Oubangui River



CICOS

The International Commission of the Congo-Oubangui-Sangha

Within the Agreement instituting a unique River Regime and creating the **International Commission of the Congo-Oubangui-Sangha Basin**, signed on 6 November 1999, and its Additive, signed on 22 February 2007, **CICOS**, whose main assignments deal with the promotion of navigation and Integrated Water Resources Management (IWRM), committed itself in 2007 to implement the first activities included in the various project documents.

WITH REGARD TO WATER AND THE ENVIRONMENT

German Technical Cooperation (GTZ) allocated to **CICOS** a subsidy of 2.5 million Euros over three years to carry out the first phase of a project aiming at improving cooperation between the four **CICOS** Member States in the navigation and water management sectors, by creating a Regional Training Center for Inland Navigation in the Basin and by developing a database on the water resources of the Congo Basin. In addition, this partnership allows harmonizing the computerization of the fleet register and publishing the directory of the river harbors of the Basin.

The African Water Facility (AWF), an initiative led by the African Ministers' Council for Water (AMCOW), granted **CICOS** with two donation agreements of a total amount of 2.443 M Euros.

These two grants concern the implementation of two priority projects which are: formulation of a **Strategic Action Plan (SAP)** for sustainable water resources management in the

Congo Basin and capacity building of **CICOS** for the management of knowledge and information on water resources of the Congo Basin. The project will last 18 months and will result in the venue of an international conference of donors to coordinate the actions planned in the SAP.

The European Union favorably answered to the request for support expressed by the Commission of the African Union by granting, within the 9th EDF, a significant donation for supporting the **AMESD** project (Monitoring of the African Environment for Sustainable Development), which began in December 2007. The topic retained for Central Africa is hydrology.

CICOS carried out the "characterization of the Congo River Basin".

In addition, **the French Ministry for Foreign Affairs** seconded a technical expert to **CICOS** for three years.

CICOS

B.P 12 645 kinshasa (Gombé) CDR
cicos_inst@yahoo.fr



www.cicos.info

Network of Asian River Basin Organizations - NARBO

3rd General Assembly - Solo-Surakarta (Indonesia) 20 - 22 February 2008

NARBO (Network of Asian River Basin Organizations) held its 3rd General Assembly from 20 to 22 last February in Solo-Surakarta (Indonesia).

About a hundred delegates participated in the debates, which focused on **NARBO** Action Plan for 2008-2009 and on the revision of its charter. Technical visits of hydraulic installations on the Bengawan Solo River, the longest river of Java Island, as well as meetings with water users and local decision-makers enabled the participants to perceive field realities.

ACTION PLAN FOR 2008-2009

It was decided to continue the activities related to training on Integrated Water Resources Management (IWRM), preparation of topical workshops, benchmarking work and twinning programs, with the support



of the Asian Development Bank and Japanese Cooperation in particular.

An effort for informing the Members about the Network activities should be made, via the website and the newsletter. Other activities could be initiated in the IWRM field, when the conclusions of the Asian-Pacific Water Summit, which was held in December 2007 in Japan, will be officially published.

REVISION OF THE CHARTER

It was decided that the President would become Special Adviser at the completion of his mandate. The Special Adviser will be able to advise the new President and the Secretariat for promoting and strengthening **NARBO** activities.

The President will be able to recruit a "special officer" to represent and promote **NARBO**, its objectives and

activities in the region and in the world, especially to decision-makers, administrations, the media and the general public.

NARBO gathers 65 Members: 22 Basin Organizations, 17 Representatives of the States, 25 Regional Partners and 1 Cooperation Agency for Development.

Mr. Jean-François Donzier, **INBO** Secretary, was invited to participate in this General Assembly, to which he made a speech on the progress made in Basin Management over the world and a proposal to strengthen the bonds and cooperation between the two Networks.

NARBO

Secretariat: Japan Water Agency (JWA)
Land Axis Tower - 11-2 Shintoshin, Chuo-ku
Saitama City, 330-6008 (Japan)
Fax: +81-48-600-6509
narbo@water.jp

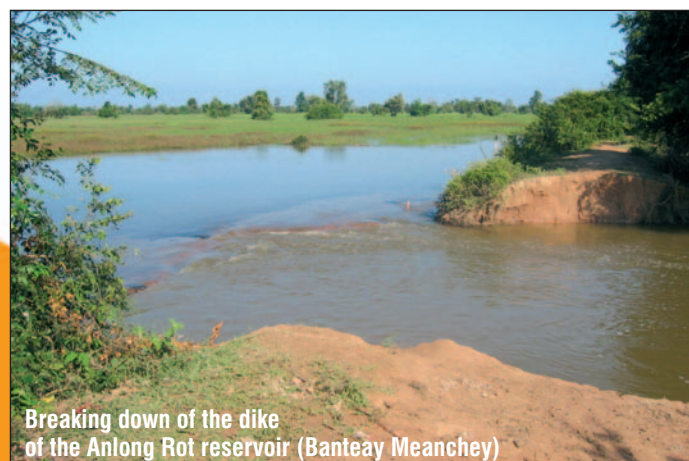
www.narbo.jp

Cambodia

IWRM IN THE NORTH WEST IRRIGATION SECTOR PROJECT

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

The study of IWRM implementation in Cambodia had already been carried out. Most of the necessary regulatory texts were written and proposed.



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

The North West Irrigation Sector Project, financed by the Asian Development Bank and the French Development Agency, includes a component for IWRM implementation in the project area.

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

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

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

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

Ministry of Water Resources & Meteorology

Fax: 023 426345
mowram@cambodia.gov.kh

www.mowram.gov.kh

India

IWRM and River Basin Management in India

In India, the National Water Policy of 2002 advocates specifically IWRM and River Basin Management, but their implementation is progressing slowly.

As water is becoming an increasingly scarce and contentious resource among Indian States, River Basin Management offers a solution for efficient and equitable water use.

A study was undertaken in two pilot river basins. It analyzed the linkages between water and population.

A national level consultation was also undertaken to identify the opportunities and constraints for an integrated approach to planning, development and management of water resources at the basin level.

The study has shown that water plays a very significant role in the livelihoods of people especially the poor. More than half of household income of the poor is accounted for by irrigated agriculture. About 60-80 per cent of agriculture income depends upon water for irrigation. Increasing problems in water management, especially pollution by industries, threaten their income, employment and very livelihood security.

Many water resources development projects are designed mainly with regard to irrigation requirements, and rarely address the issue of competing demands from other stakeholders and how these dynamics affect the poverty issues.

In 2002, the World Bank emphasized the need for integrated development of water resources at river basin / State levels.

The World Bank supported projects in Tamilnadu and Madhyapradesh. In Tamilnadu, River Basin Organizations were already created in **the Palar and Tambaraparani Basins** and more are to be set up in other areas.

A pilot project was also successfully implemented with French Cooperation support in **the Sabarmati River Basin**, in Gujarat State.

A. Rajagopal

National Institute of Rural Development (NIRD), Hyderabad

rajagopal@saciwaters.org

www.saciwaters.org

www.inbo-news.org

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is available
on the Web**



www.inbo-news.org

Free speech: a survey on River Penna status

REMEDE is non-profit NGO working on the issues related to water in Andhra Pradesh State in Southern India.

It conducted a survey on the Penna River in Nellore District.

With the onset of freshwater prawn culture, the overall availability and quality of water flowing in the Penna River are threatened.

REMEDE initiated a study to find out the impact of this environmental degradation in the District. About 125 villages were surveyed to find out the current status.

Key Findings

- ◆ About 10,689 acres of fertile land were found to have converted into ponds for growing prawns. Nellore, once famous for its best quality rice does not produce this variety anymore.
- ◆ Degradation of about 90 water harvesting structures and



Sunset on the Penna River

- increasing dependency on filtering stations, installed on the banks of the Penna River, have been witnessed.
- ◆ Very high levels of water mining are found in the area: prawn farms pump water for about 12-17 hours in a day.
- ◆ The prawn farms contaminate the river due to the discharge of wastewater and also generate

waste, produced by the processing and packaging of prawns in the river area.

- ◆ Sand mining from the river bed is also a major cause for the river degradation.
- ◆ In about 30% of the villages, local age-old mango and coconut gardens were destroyed to raise scampi.

Action plan

The study reveals that such kind of practices has long-term implications on the environment.

Awareness and local action among the community are vital for taking preventive steps in this regard. In addition, it is necessary that the Government evaluates any major change in land-use and also ensures that adequate monitoring systems are in place to avoid such environmental catastrophes.

T.M. Gowrisankar

Executive Director REMEDE

Andhra Pradesh

remede_ngo@rediffmail.com



Pilot project in the Đông Nai Basin

In Vietnam, all the studies carried out led to convergent analyses of the situation:

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

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

In September 2006, the **Higher Council for the Development of French-Vietnamese Economic Cooperation**, co-presided by Mr. Jacques Oudin, President of the



IOWater identification mission to Vietnam

French National Water Committee, proposed that France shares with Vietnam the experience acquired for forty years in the field of integrated surface and ground water management.

An identification assignment, led by IOWater, INBO Secretariat, was carried out in Vietnam from 27 February to 8 March 2007.

The Vietnamese delegation, led by the Minister, Mai Ai Truc, also

stayed in France from 3 to 9 June 2007.

At the end of these visits, the French and Vietnamese parties signed a memorandum, in which they commit themselves to cooperate in the Integrated Water Resources Management sector along three lines:

- ❖ Reinforcement of the institutional tools for water management in Vietnam;

- ❖ The transfer of techniques for water resources development and pollution control;
- ❖ Building of the Vietnamese capacities in the field of information and public and users' awareness.

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

China

INBO PARTICIPATION IN THE INTERNATIONAL YELLOW RIVER FORUM - DONGYING - 16 TO 19 OCTOBER 2007



The **"Yellow River Conservancy Commission"** invited INBO to organize a special session on water resources management in Europe and especially on the implementation of the Framework Directive, during the third **"International Yellow River Forum"**, which was held from 16 to 19 last October in Dongying (China).

This special "European" session was organized, of course, around broad current topics related to the Framework Directive implementation in the European River Basin Districts in 2007, and on the processes, tools and techniques for water resources management implemented in Europe.



INBO workshop

More than 500 participants, coming from China and about fifty countries, attended this large International Forum.

Messrs. Laszlo Kothay, Hungarian State Secretary in charge of water and World President of INBO, Jacky Cottet and Jean-Marc Wauthier, former and current Presidents of "EUROPE-INBO", Jean-François

Donzier, INBO PTS, as well as about ten European experts participated in this workshop together with their Chinese colleagues.

Yellow River Conservancy Commission

ijrf@yellowriver.gov.cn

<http://forum.yellowriver.cn>



"rivertwin" The Project is completed!

The RIVERTWIN Project was implemented by an International Consortium of researchers from Europe, Central Asia and Africa. The Hohenheim University (Germany) carried out the overall coordination of the Project, which developed and tested an integrated regional model to be used for the strategic planning of water resources management in three twinned river basins in Germany (Neckar), Benin (Queme), and Central Asia (Chirchik).

The Scientific Information Center of the Interstate Coordination Water Commission (SIC ICWC) of Central Asia was responsible for the Project implementation in the transboundary

Chirchik River Basin, which includes the Keles (Kazakhstan), Ugam (Kazakhstan, Uzbekistan), Chatkal (Uzbekistan, Kyrgyzstan) and Akhangaran (Uzbekistan) River Basins.

In its first stage (2004-2005) a concept was developed, key problems (political, legal, socioeconomic, ecological, etc.) of Water Resources Management were identified; the main approaches to the Project were discussed with the stakeholders.

The second and third stages (2005-2007) dealt with the following activities:

- Establishment of a database for the Chirchik River Basin and creation of a thematic base with GIS layers;

- Definition of zoning criteria and planning areas;
- Proposal of indicators of socio-economic development;
- Involving stakeholders (water, nature protection, agricultural sectors, provincial authorities and local communities, NGOs, etc.) in discussions about the future Development Scenarios;
- Development of various models and their interconnection;
- Training activities and dissemination of knowledge.

The scenario for perspective on socioeconomic development was discussed and approved by the stakeholders.

The Project has shown that the study in twinned River Basins is useful for the exchange of experience and the implementation of the European approach to water management, which recommends that each basin be considered as a planning unit, and for strengthening interdisciplinary communication.

Yu. Khai. RYSBEKOV

Scientific Information Center - ICWC

Fax: (998 71) 166 50 97

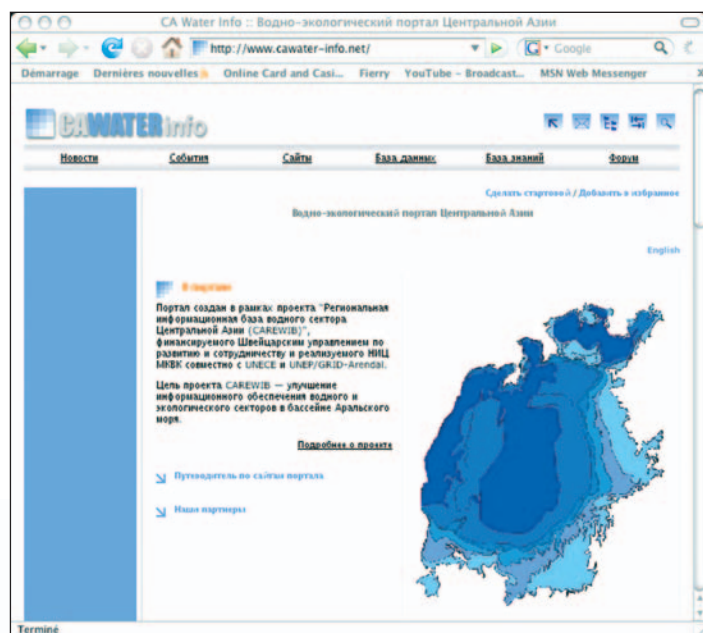
yusuprysbekov@icwc-aral.uz

Yusuf.Bek.004@rambler.ru

www.rivertwin.org

"CAREWIB"

The Central Asian Regional Water Information Base



The CAREWIB project is being implemented at the request of the United Nations Economic Commission for Europe - Special Program for the Economies of Central Asia.

It is integrated into the Swiss Regional Mid-Term Program for Central Asia and the Swiss Water Strategy for Central Asia (2002-2006).

The project aims to improve the sharing and circulation of information in the water and environmental sectors in Central Asian countries in order to increase public awareness about the need for the sustainability and rational use of this key natural resource.

In Phase I (2003-2006) of the CAREWIB Project were achieved the following results:

- A regional water information portal CAWater-Info was created;
- The Information System on Water and Land Resources in the Aral Sea Basin (CAREWIB) was created for supporting the decision-making processes in the water sector. The system gives an opportunity to permanently assess water use efficiency for all participants of joint management and specify non-productive water intakes. It is designed for general use by all the basin States and enhances the sense of trust, solidarity and responsibility among partners;
- A series of publications, targeting specific user groups is being prepared;
- A permanent network of regional correspondents was set up to provide timely information to ICWC;

- Twelve oblast-level water organizations can communicate information in a digital form thanks to the new information and communication technologies.

Dr. Iskander Beglov

SIC ICWC

Fax: (998 71) 166 50 97

iskander@icwc-aral.uz

www.cawater-info.net

www.inbo-news.org

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on the Web**



www.inbo-news.org

Central Asia

Free speech: Uzbekistan

RIVER BASIN MANAGEMENT IS NOT IRRIGATION SYSTEM MANAGEMENT.

In Central Asia, "aryk-aksakals" institutes were responsible for irrigation from small rivers ("aryk") and successfully functioned for more than one thousand years, till the establishment of Soviet Authority in the 1920s.

In Central Asia, River Basin Management has been considered for centuries only as the management of irrigation systems and river sections, on which there were structures for water withdrawal, and this vision has not practically changed till now.

For example, in Uzbekistan, the President's Decree of 4 March 2003 and the Decision of the Ministers' Cabinet of 21 July 2003 created a new organizational structure for basin management, which includes 10 Basin Administrations of Irrigation Systems (BAIS) and the Administration System for the Main Canals of the Fergana Valley (ASMC FD).

BAISs and ASMC FD include more than 50 Administrations of Irrigation Systems and for main canals, and all

these systems focus on the management of irrigation systems instead of basin management.

Under these conditions, it is imperative to reconsider the approaches to the management of irrigation systems, taking into account IWRM principles and the main differences between basin management and irrigation system management.

Indeed, the basin is a source for feeding river flows, while irrigation systems use their water...

They are two different approaches to management: that of the resource on one side, that of the uses on the other...

www.rivertwin.org

<http://sic.icwc-aral.uz>

Yu. Khaï. RYSBEKOV

Scientific Information Center - ICWC

Fax: (998 71) 166 50 97

yusuprbsbekov@icwc-aral.uz

Yusuf.Bek.004@rambler.ru

Azerbaijan

Goy-Gol Lake is a monument of natural architecture to be protected

Goy-Gol Lake



Goy-Gol Lake (the green lake) was formed in September 1139 as a result of the strongest earthquake in Ganja. The earthquake took place at a height of approximately 3000 m. The boulders of Kapaz Mountain broke off and blocked the River Agsu and other tributaries of Kurekchay River. As a result eight very beautiful lakes were formed.

Goy-Gol Lake is the largest of them.

The surface area of the lake is 72 hectares, the depth is 96 m,

length is 2450 m and the maximum width is 590 m.

One of the primary goals is studying and preserving water resources and biodiversity in this outstanding natural area.

Elshad Mammadov

Environmental Fund

Environmental Monitoring Laboratory

of Goy-Gol Lake

Fax: (994-22) 573578

eco@azeurotel.com

<http://goy-gol.iatp.az>

<http://goy-gol.ifastnet.com>



Next INBO Meetings



In 2008, INBO is organizer or partner in the following main events:

- **20 - 22 February:**
NARBO General Assembly
Solo - Surakarta
INDONESIA
- **26 - 28 March:**
1st African Water Week
AfDB - Tunis
TUNISIA
- **12 - 13 May:**
Commission on Sustainable Development EU Session on the financing of IWRM at basin level
United Nations - New-York
USA
- **4 - 6 June:**
International Symposium "Management of water-related extreme phenomena"
EUROPE-INBO session: "First lessons learned from the implementation of the European Water Framework Directive"
ECWATECH - Moscow
RUSSIA
- **16 - 21 June:**
4th International Conference on River Restoration
ECRR - Venice
ITALY
- **7 - 10 July:**
International Water Exhibition Water "Tribune"
Saragossa
SPAIN
- **1st - 3 September:**
IWRA General Assembly Session: management of transboundary waters
Montpellier
FRANCE
- **4 - 5 September:**
IWA Symposium on River Basins
Budapest
HUNGARY
- **2 - 4 October:**
"EUROPE-INBO 2008"
"The European Basin Organizations are getting mobilized to implement the Water Framework Directive"
Sibiu
ROMANIA
- **19 - 21 November:**
LANBO General Assembly Latin-American Network of Basin Organizations
Rio de Janeiro
BRAZIL

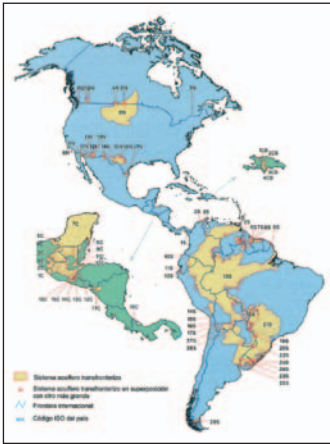
And, of course, from 16 to 22 March 2009: 5th World Water Forum - Istanbul - TURKEY

Please join us:

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Transboundary aquifers in the Americas



The Vth international workshop of the **ISARM Americas** project, jointly coordinated by **UNESCO-IHP** (regional office of Montevideo) and the **Organization of American States (OAS)** was held from 17 to 20 September 2007 in Montreal, Canada. It gathered the national coordinators of about twenty American countries and international experts from UNESCO,

INBO and IGRAC (International Groundwater Resources Assessment Center). The workshop participants also included the Special Rapporteur of the International Law Commission (ILC) of the UN on the topic of shared natural resources.

The project **ISARM Americas** started in 2002 and its objectives are:

- Improve the scientific, environmental, legal and institutional understanding of the transboundary groundwater resources of the hemisphere.
- Produce an Inventory of Transboundary Aquifers of the Americas.
- Identify priority case studies for the implementation of pilot projects.

This cooperation among neighboring countries has allowed the identification of about **69 transboundary aquifers**. The results were published in an atlas, presented in the Montreal workshop, which was also the opportunity to listen to various international presentations, such as that of Mr. Jean-François Donzier, **INBO** Secretary, on **INBO Action Plan** and the European Union Water Framework Directive, and of Ambassador Chusei Yamada on the ILC draft articles on the law of transboundary aquifers.

The project's second phase dealt with the legal and institutional aspects of transboundary aquifers. The analysis of the results will be published in a second volume. An update on the progress of the case studies was also presented and includes aquifers such as:

- The Artibonite and Masacre aquifer systems between Haiti and Dominican Republic, in a mountainous and coastal area;
- The Yrenda-Toba-Tarijeno aquifer system in the Gran Chaco Americano (Argentina, Bolivia and Paraguay), in a semi-arid zone;
- The Bolson del Hueco aquifer (Mexico-USA), in an urban area;
- The Pantanal aquifer (Bolivia-Brazil-Paraguay), in a wetland area.

A field trip on the Chateauguy aquifer system between Quebec, Canada, and the State of New York, USA, was organized.

Ms Raya Marina Stephan

UNESCO

r.stephan@unesco.org

www.oas.org/dsd/isarm/ISARM_index.htm

North America

Management of the St. Lawrence and Great Lakes Basin



Organized by the **CO**mmittee for dialogue and **VA**lorization of the **BA**sin of the **RI**chelieu River (**COVABAR**), an important International Symposium on the Management of the St. Lawrence and Great Lakes Basin was held from 13 to 15 last September in Sorel-Tracy in Quebec.

It gathered about one hundred participants and elected officials who testified to the successful experiments of water management at the level of river basins in the United States, in Europe and Ontario, such as, in particular, Mr. Jean-François Donzier, Technical Secretary of the **Inter-**

national Network of Basin Organizations (INBO), and, for France, Mr. Rémy Filali, Director-General, Interdepartmental Institution for the Development of the Charente River and

Mr. Christian Bernad, President of the Association for the Development of the Lot Valley.

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

The experiments in the basins of Ontario, the United States and France already have proven its effectiveness.

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

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

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

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

Hubert CHAMBERLAND

President of COVABAR

President-founder of the Regrouping of Basin Organizations of Quebec (ROBVQ)

Fax: (450) 464 8854

hubert.chamberland@covabar.qc.ca



www.covabar.qc.ca



North America

USA

TFDD: the Transboundary Freshwater Dispute Database

The Oregon State University's Program on Water Conflict Management and Transformation (PWCMT) aims to fully document and keep current the **Transboundary Freshwater Dispute Database (TFDD)**, to better understand conflict and cooperation over international freshwater resources.

The **TFDD** is a geography/public policy education and research lab developed around a state-of-the-art geographic information system of the world's international river basins.

The database includes five separate components:

- An Atlas of International Freshwater Agreements with thematic maps;
- An International Freshwater Treaties Database with a searchable database of more than 400 international agreements, covering the years 1820 to 2002;
- A Spatial Database with biophysical, socioeconomic, and geopolitical data;
- An International Water Event Database, from 1948 to 1999;
- An International River Basin Register, last updated in August 2002.

The goal of PWCMT is to aid in local, national and international water conflict prevention and resolutions.

Its objective is to continue populating the TFDD and to provide current international water relations information that can be utilized to enhance water relations.

Lynette de Silva

Associate Director
Program in Water Conflict Management and Transformation (PWCMT)
Oregon State University
desilval@geo.oregonstate.edu

www.transboundarywaters.orst.edu

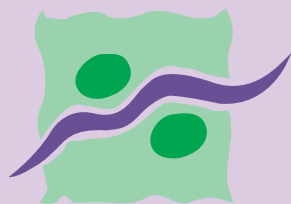


Latin America



LANBO

The next
**General Assembly
of the Latin-American
Network of Basin
Organizations
(LANBO)**
will take place
in Rio de Janeiro
(Brazil)
from 19 to 21 Nov. 2008.



www.ana.gov.br/relob

ECLAC

Basin Organizations: Lessons Learned from the Regions

The Natural Resources and Infrastructure Division of the Economic Commission for Latin America and the Caribbean (ECLAC) carried out several studies, which analyze the experience and creation of Basin Organizations. Its main conclusions are as follows:

- The functions of the Basin Organizations should basically focus on water, and moreover should be precisely defined and well articulated with those of other stakeholders;
- These organizations are not spontaneously generated, but need supervision and significant and permanent support from the government;
- It is necessary to make the representativeness concept compatible, to make sure that all interests are represented, with the need of reaching a minimum consensus in decision-making;
- It is essential to promote and facilitate the participation of the interested parties by giving them access to information, financing and the possibility of giving their opinion and advice;
- The representatives of the sectors without their own resources should benefit from adequate financing;
- Although it is advisable that Basin Organizations finance themselves by users and recipients' contributions, this is seldom possible, at least in an initial stage, this is why a significant and lasting governmental support is necessary during at least a decade.

Andrei Jouravlev

andrei.jouravlev@cepal.org

Miguel Solanes

miguel.solanes@cepal.org

Economic Commission for Latin America and the Caribbean
(ECLAC)

Natural Resources and Infrastructure Division
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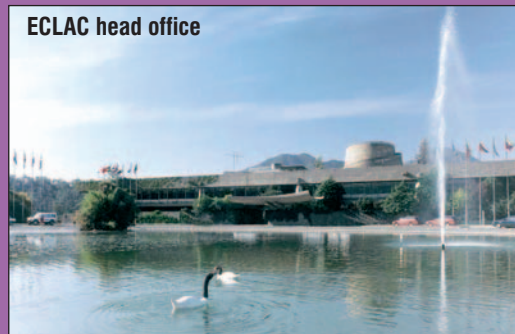
Fax: (56-2) 208-02-52

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Mexico

Lagartero River

**SOCIAL PARTICIPATION
IN INTEGRATED BASIN MANAGEMENT
IN ARRIAGA COUNTY, CHIAPAS**



The Lagartero sub-basin lies in Arriaga County, on the southern slope of the Sierra Madre and in the coastal plain of Chiapas State.

The strategy for social participation in the Integrated Basin Management Program aims at having water users and governmental and non-governmental institutions participate in order to seek alternative solutions to guarantee the basin's natural resources, as an integrating element of prime importance for citizens' activities.

The strategy was formulated through dialogue with local stakeholders, followed by participative community workshops, to identify the problems having a greater impact on the basin's natural resources and which threaten water availability.

To formalize the participation of the society and institutions, the **Lagartero River Basin Committee** was created in 2003 with **CONAGUA** support.

It is an auxiliary body of the Chiapas Coast Basin Council, created by article 13 of the National Water Law.

The process of social participation, directed by the technical team of the Basin Management Department, facilitated the coordination of the activities of projects, programs and actions.

The planning instruments, based on participative analyses, include 9 Master Plans for the Conservation of micro-valleys, a Plan for the Conservation of Sites, an Ecological Plan for Regional Planning and a Management Plan, including a Citizens' Action Plan for Natural Disasters.

Martín Rodríguez Cruz

Operation Department of the Lagartero River Basin Committee, Arriaga County
subcuencaLagartero@yahoo.com.mx



Yucatan Peninsula

INTEGRATED GROUNDWATER RESOURCES MANAGEMENT

The Yucatan Peninsula is constituted by the Campeche, Quintana Roo and Yucatan States.

The main source of water supply is a karstic aquifer having great water availability but vulnerable to pollution.

In accordance with the National Water Law, published in April 2004, the National Water Commission (CONAGUA) is the federal authority in this matter, and is represented in the region by the **Yucatan Peninsula Basin Organization**, which develops the Integrated Water Resources Management process in coordination with the different stakeholders involved, through the Basin Council.

A management process was implemented. It includes:

- **A Regional Action Plan**, elaborated with the participation of all the water stakeholders. It establishes common objectives for the aquifer conservation. This plan was approved by the Basin Council in November 2006, and will be supplemented by Yearly Action Plans which will define the projects to be developed, the investments, the specific actions to carry out and the indicators to be followed.
- **The networking of water information systems:** a catalog of clients and suppliers of water information was created as a first strategy to integrate the Regional Water Information System

(SIRA). Forums for the presentation of the studies on the aquifer are organized to integrate knowledge and define complementary studies.

- **The water users' participation:** users' committees by sectors (agricultural, domestic and municipal, trade and industry) were created, whose representatives have a voice in the Basin Council, representing the interests of their sector in decision-making, within the mandates granted by the current law.
- In coordination with the local authorities, **42 spaces of Water Culture have been created** in the same number of municipalities where activities are developed to encourage the society to efficiently use water and to prevent its pollution. Special attention is given to the actions addressing the children to teach them the economic, environmental and social value of water by means of games.

It is expected that the combination of these elements and the revision of the legislative framework, monitoring and sanctions to the offenders to the National Water Law, will contribute, in substantial way, in the sustainable use of the Yucatan Peninsula aquifer.

Sergio Chan Lugo

General Director
Yucatan Peninsula Basin Organization,
National Water Commission
Fax: + 529999450936
sergio.chan@cna.gob.mx



CONAGUA
COMISION NACIONAL
DEL AGUA

www.conagua.gob.mx



Latin America

Brazil

WOP - Water Operators Partnership

LATIN AMERICA AND THE CARIBBEAN CREATED A "PARTNERSHIP" FOR ACHIEVING THE MILLENNIUM GOALS

The Association of the Brazilian State Water and Sanitation Companies (AESBE) is a non-profit-making civil entity, made up since 1985 of 24 State Companies. These companies are in charge of supplying water to 103 million people in 3,919 cities. They also provide sanitation services to 45 million people in 893 cities.

AESBE participated in the second meeting of the Coordination Group for the creation of a cooperation network between Operators of Water and Sanitation Utilities (WOP-Water Operators Partnership) of Latin America and the Caribbean.

This meeting was held at Santa Marta, Colombia, on 10 and 11 September 2007. It was organized by the Inter-American Association of Sanitary and Environmental Engineering (AIDIS), in collaboration with the Colombian Association of Sanitary and Environmental Engineering (ACODAL) and the United Nations Department of Economic and Social Affairs (UN-DESA).

The "Partnership" aims at helping the least developed countries achieve the Millennium Goals in the sanitation sector.

The topics discussed during this meeting included: management and financing of water and sanitation utilities in urban areas; strengthening of institutional governance and responsibilities; development of associations between operators of water utilities.

The regional WOP seeks to integrate the Latin American and Caribbean countries, which will thus be able to interact and join their efforts by establishing a permanent dialogue with other areas and specialists of the various International Development Agencies.

AESBE and its partners strongly supported this UN initiative and actively participated in the setting up of this network in Latin America. The President of the Association, Mr. Paulo Ruy Carnelli, reminded that the association had already acted in this field, through experience sharing between the 24 State Water and Sanitation Companies.

AESBE Press Officer
imprensa@aesbe.org.br

www.aesbe.org.br

Tocantins State

MASTER PLANS FOR THE RIO MANOEL ALVES AND RIO PALMA BASINS

The Government of the Tocantins State is the contracting authority for two studies on the formulation of Master Plans for the Rio Manoel Alves and Rio Palma Basins, financed by the World Bank.

Both rivers are born in the buttresses of the Serra Geral, are fed by the huge Urucuia aquifer and run from East to West to the Rio Tocantins,

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

IOWater, as INBO Secretariat, participates in these studies with the Brazilian consulting firm Gama Engenharia.

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

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

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

At the end of the study, mid-2008, the creation of a Basin Committee is planned, as there are already more

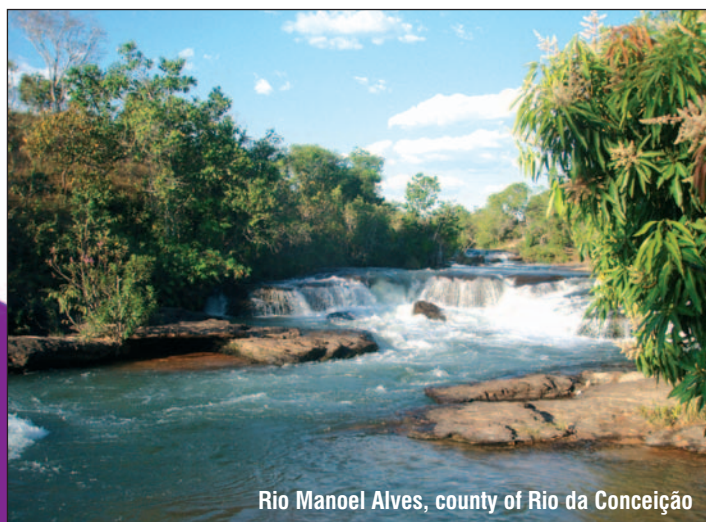
than a hundred in Brazil, to sustain a local management body.

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

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

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

www.recursoshidricos.to.gov.br



Rio Manoel Alves, county of Rio da Conceição



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



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

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

The ambition of this project, of a 5-year duration (2006-2010), is to

set up new research programs, financed by the network members and meeting the national and regional challenges resulting from the evolution of the European context after the adoption of the Water Framework Directive.

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

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

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

- ❖ **assessing the needs for water-related research**, with a short-term prospect, based on a

scientific review and workshops inviting the various stakeholders to express their needs;

- ❖ **facilitating access to the information and analyzing existing programs;**
- ❖ **drafting procedures for financing, launching and following-up the research activities** of the network.

JANUARY 2008: LAUNCHING OF THE FIRST IWRM-NET PROGRAM

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

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

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

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

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

PLEASE JOIN THE IWRM-NET COMMUNITY!

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

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

www.iwrn-net.eu

ENMaR

Handbook: "Water: local planning and management"

The key aim of the handbook "Water: local planning and management", published by **ENMaR (European Network of Municipalities and Rivers)**, is to share good practices concerning water management.

The handbook therefore has two audiences. Firstly, the main target group of the **ENMaR** project includes the municipalities and stakeholders at local level, who can compare their situation with other river basins and can learn from what others are doing. Secondly, the decision-makers group will be able to gain an overall impression of the

current situation concerning water management and its related fields.

A chapter is given to each of the project key themes (spatial planning, tourism, water management, agriculture and forestry) which highlight differences and similarities among the regions. Due to the high importance placed on public participation, a chapter on stakeholder engagement has also been included.

Further on, the Handbook contains 60 case studies, selected from good examples of projects on-the-ground in the **ENMaR** regions. These projects are current or planned, and

operate at a local level in the river basins to contribute to achieving the aims of the WFD. Although there are many good examples relevant to the **ENMaR** themes, only two case studies per theme from each **ENMaR** region have been selected. An overview of each case study is given with signposting to where more detailed information can be found including contact details. The aim is to provide a snapshot of progress in this field and to highlight a range of good examples from across Europe.

The handbook can be downloaded on the website.

Wiebke Abeling
Kommunale Umwelt-Aktio N U.A.N.
Hannover
+49 511 302 85 68
abeling@nsgb.de

www.enmar.org





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

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

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

The Basin Organizations of the Member States of the European Union have made significant progress since 2000 in the implementation of the



The Opening Ceremony

Water Framework Directive (WFD): administrative adaptations, economic analyses, public information and involvement of water stakeholders, characterizations, development of monitoring networks, etc.

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

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

The conference was thus organized around three topics:

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

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

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

PREPARATION AND COST OF PROGRAMS OF MEASURES

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

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

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

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

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

The participants wished sharing experiences, harmonizing methods (environmental cost assessment, rate of cost recovery, cost-effectiveness models for measures, etc.) and developing socioeconomic indicators or reference values, in the International Districts as a priority (disproportionate cost concept, etc.).

Giving explanations to the consumers and decision-makers is necessary to make the stakes understandable and the (often unavoidable) water price increase acceptable.

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

ACCOUNT TAKING OF GLOBAL WARMING

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

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



200 participants coming from 33 countries

THE EUROPEAN BASIN ORGANIZATIONS ARE GETTING MOBILIZED FOR THE FRAMEWORK DIRECTIVE!



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

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

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

PUBLIC CONSULTATION

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

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

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

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

The main meeting of 2008 should not be missed!

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

SITUATION IN THE MEDITERRANEAN BASIN

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

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

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

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

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

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

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

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

Mr. Jacky COTTET, President of the French Rhone-Mediterranean and Corsica Water Agency, was congratulated for the effectiveness with which he held his Presidency in 2006-2007 and **Mr. Roberto GRAPPELLI**, Secretary General of the Tiber Basin Authority (Italy), will take the chair until the next **"EUROPE-INBO"** conference, which will be organized in Sibiu, "European Capital of Culture 2008", in Romania from 2 to 4 October 2008.

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

www.inbo-news.org

INTERNATIONAL CONFERENCE ON RIVER RESTORATION, 16-21 JUNE 2008, VENICE

The 4th International Conference on River Restoration will take place on 16-21 June 2008 in Venice-Italy and it will provide a stimulating forum to join points of view and learn from experiences from Europe and other countries.

The **ECRR** is a non-profit organization and operates as a network of both national centers and individual members and its mission is to promote ecological river restoration and sustainable river management throughout Europe, fostering their integration in national and European policies.

ECRR and **INBO** work together as a partnership to promote and enhance

ecological river restoration as part of sustainable river basin management.

Why this conference?

River Restoration has become an issue at the top of the agenda for water management Authorities in Europe, especially due to the Water Framework Directive, which aims at improving the status of fluvial ecosystems in a broad, integrated, ecological perspective.

It contributes to implement other Directives, such as 91/676/EEC (Nitrates), 92/43/EEC (Habitat), 2006/7/EC (Bathing Water Directive) and the measures related to floods.

Practical approaches!

Ecological River Restoration is a challenging topic and involves a wide range of themes concerning planning strategy, implementation and project appraisal for a number of different types of river systems including upland, lowland and urban rivers. The topics addressed include ecology, hydrology, geomorphology and economics within a holistic framework, which is the only one to guarantee a successful restoration of freshwater ecosystems. Introducing such concepts in policies is not easy and will lead to discussions based on knowledge from applied research.

Cooperation!

The **ECRR** wishes to collaborate with organizations operating in this sector and can profitably share experiences and create synergies, thus increasing the opportunities for River Restoration on a European and global scale.

CIRF (ECRR Secretariat)

Centro Italiano per la Riqualificazione Fluviale

Fax: (+39) 041615410

info@ecrr.org

ecrr@cirf.org

www.ecrr.org



Belgium

APPLICATION OF THE COST RECOVERY PRINCIPLE IN THE WALLOON REGION

Through successive institutional reforms, Belgium transferred some responsibilities to the regional authorities.

Water policy is one of them.

In its article 9, the Water Framework Directive 2000/60/EC requires from the Member States to establish before 2010 a pricing system which applies cost recovery for promoting an effective use of the resources and guaranteeing an appropriate contribution of the various sectors (house-

holds, industries, agriculture) in the financing of water utilities, according to the polluter-pays principle, among others.

Adopting this Directive implied using a new approach to the management of the water cycle in the Walloon Region and its transposition required the establishment of a new legislative framework.

Some new key principles thus had to be integrated into the Walloon Law: establishment of an integrated water

policy, principle of True-Cost of water, public participation, river basin district approach, etc.

Usually, the baseline of all these principles is transparency. But, in addition to the organization of water management, pricing was the subject matter of special reforms for increasing transparency in the whole sector.

Indeed, the Walloon Region has begun a thorough reform of water pricing since 2001.

From now on, the principle used to determine the water price is to integrate all the costs of the anthropogenic water cycle: from protection of water intakes to wastewater treatment. The water price thus does not benefit any more from a subsidizing of investments.

It is called **the True-Price of water**.

Thus, a single pricing structure is applied to all the Walloon users, whether households, farmers, companies or administrations. This standardized structure is based on the concepts of True-Cost of the services: True-Cost of water supply (CVD) and True-Cost of sanitation (CVA).

But the Walloon Region also took the opportunity of this new legislative framework to improve transparency in its institutions, by introducing a citizen regulation of the water price and by standardizing the accountancies of the operators of the water cycle.

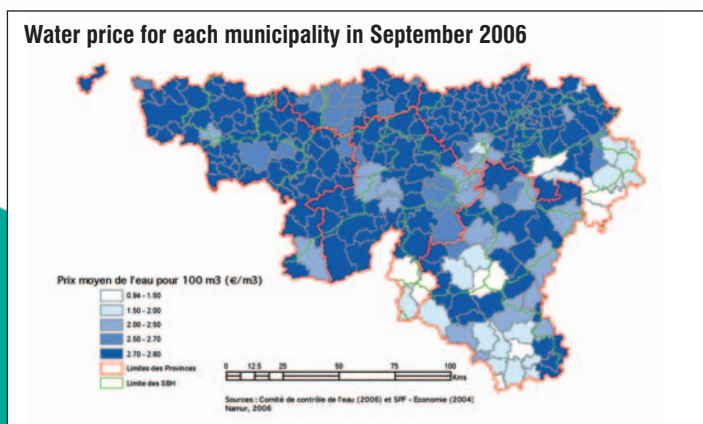
Didier CADELLI

SPGE

Fax: 081 251 959

didier.cadelli@spge.be

www.ulg.ac.be



Spain

Spanish-Hungarian Cooperation



In accordance with the Joint Declaration signed in November 2001 by the Ministries of the Environment of Hungary and Spain that dealt with the main environmental and water protection problems, a first cooperation meeting was held in Debrecen, Hungary, in June 2007, between the National Directorate for Water and the Environment of Hungary and the Spanish General Directorate for Water (DGA) to define future cooperation objectives for Water Framework Directive implementation, transboundary management and prevention of extreme phenomena, such as floods and droughts.

Within this cooperation framework, a first visit of a Hungarian Delegation to the Spanish DGA was organized on 10-12 September 2007.

The Hungarian Delegation was received by the Spanish Water Director, Jaime Palop, who presented the Prevention and Drought Management Plans, Hydrologic Automatic Information Systems, national legislation

and the Water Framework Directive implementation in particular.

The Hungarian Delegation gave information on the multilateral cooperation system between Hungary and the numerous countries sharing the Danube River basins and sub-basins. During the visit of the Atazar dam, different topics were discussed including the emergency and functioning plans for large dams.

The Delegation also met the staff from the Tagus River Basin Authority, in Madrid, where details on the close cooperation between Spain and Portugal in the Albufeira agreement framework were shared. It was also able to directly observe the functioning of the Hydrologic Automatic Information System (SAIH) and its benefits over available water resources control.

Miguel Antolín Martínez
Coordinator of International Affairs,
Directorate General for Water
Fax: +34 91 453 53 06
mantolin@mma.es



Jucar River Basin Authority

EVALUATION OF ENVIRONMENTAL FLOWS

In the Spanish Law of 22 June 2005, the National Hydrological Plan defines ecological flows as those maintaining fish life in the river and vegetation on the river banks. On 6 July 2007, the Hydrological Planning Regulation was approved indicating, in article 18, the following: *"The hydrological plan will determine the ecological flow regime in rivers and transitional waters, including the water needs of lakes and wetlands. This ecological flow regime will be established in a way that will allow to sustainably maintaining the functionality and structure of the aquatic and associated inland ecosystems, contributing to reach the good status or ecological potential in rivers or transition waters. For its establishment, River Basin Organizations will carry out specific studies on each section of the river."*

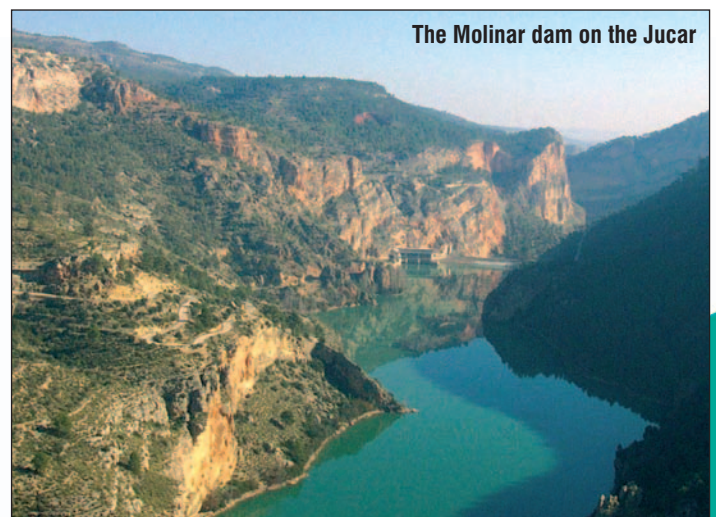
The technical and methodological criteria of these studies are being developed by a Technical Instruction of Hydrological Planning and a Guide. The Jucar River Basin Authority (JRBA) has been working since March 2006 on the Evaluation of the Environmental Flow Regime in Water

Bodies in its area, following a three-phase process:

- ❖ **A first phase** aiming to determine the environmental flows in all Water Bodies. The studies identified and characterized the Water Bodies that are heavily modified or the cause of significant conflicts of use. Moreover, a less demanding minimum flow regime will be applied for all water bodies on the event of long droughts.
- ❖ **The second phase** consists in a process of dialoguing with the involved stakeholders, conditioning water allocations and established water reserves in the Hydrological Plan of the Jucar Basin.
- ❖ **The third phase** consists in incorporating the ecological flow regime and its adaptive follow-up into the Hydrological Plan of the Jucar Basin, which is being written according to the criteria of the Water Framework Directive.

Maria Serneguet Belda
Jucar River Basin Authority
Maria.Serneguet@chj.mma.es

www.mma.es



Public Institution of the Vienne River Basin (EPBV)

CREATION OF A BODY FOR INTEGRATED WATER RESOURCES MANAGEMENT IN THE VIENNE RIVER BASIN



The Public Institution of the Vienne River Basin (EPBV) was created on 10 September 2007. It is a mixed syndicate, involving the Limousin Region, the Poitou-Charentes Region, the Vienne Department, the Charente Department, the Poitiers Community of Agglomerations and Châtelleraudais Community of Agglomerations.

The creation of this body, responsible on the Vienne basin scale, is in line with the continuity of the joint approach that was ini-

tiated by these communities several years ago, and which promotes water management in particular within the Water Development and Management Scheme (SAGE) for the Vienne River Basin, approved in June 2006.

The Public Institution of the Vienne River Basin aims at supporting the implementation of the Water Development and Management Scheme (SAGE), but also at initiating and supporting other joint approaches to integrated water management, currently insufficiently developed in the basin.

For this purpose, it will act as coordinator and facilitator and will provide advice and assistance to the project managers and will develop studies

and, in exceptional circumstances, some work in favor of water and aquatic environments.

Finally, this body is responsible for ensuring consistency between the activities carried out on its territory. Also, morphological degradation, pollution by nitrates and pesticides or quantitative management of the resource will be priority fields for action.

Stéphane LORIOU

SHAPE Vienne River Basin SAGE

Fax: +33 5 55 45 17 34

s-loriot@cr-limousin.fr

www.cr-limousin.fr

Transboundary Integrated Water Resources Management

A NEW STRATEGY FOR FRANCE'S OFFICIAL DEVELOPMENT ASSISTANCE

As part of the implementation of the Millennium Development Goals, France has adopted a strategy to guide its Official Development Assistance in the water sector, defining Transboundary Water Resources Management (TWRM) as one of its priorities.

With more than forty years of experience in integrated basin management, France has developed a proactive, diversified development cooperation policy in the field of transboundary river basin management to promote the implementation of Transboundary IWRM. It has in particular developed its action in four priority basins: **the Senegal, Niger, Nile and Mekong Rivers.**

To specify this policy in greater detail, all the French stakeholders involved in this field met to define a **Strategic Orientation Document (SOD) on Transboundary IWRM.**

The French Government, French Development Agency, French Global Environment Facility (FFEM), French Water Agencies, the International Office for Water, research bodies, water sector companies, consulting firms and non-governmental organizations are undertaking projects that combine to form a major French dynamics in international cooperation.

Within this strategic framework, France will not only consolidate its action in the four priority transboundary river basins, but also strengthen its involvement in current progress in **the Volta, Congo and Orange/Senqu River Basins.** Other basins will be able to benefit from French support according to the stakes involved, such as transboundary groundwater.

France's official development assistance will be directed towards

three complementary, essential measures:

- ❖ **Supporting the establishment of water governance from local to a transboundary basin scale**, facilitated by international agreements, active participation by, and capacity-building for all users, and the establishment of dedicated investment funds;
- ❖ **Financing structural investments**, that mobilize, develop and/or protect the water resource and ecosystems;
- ❖ **Encouraging dialogue** between participatory management institutions and donors, and between the donors themselves.

For the French development cooperation system, the end goal is to participate in creating the condi-

tions for improved cooperation among the various involved parties, including the users, in order to enable the economic, social and environmental development of the regions concerned, for the benefit of local citizens. France is already providing considerable support to Basin Organizations, especially for those of the Senegal (Euro 8.2 million), the Niger (Euro 10.4 million), the Nile (Euro 4.8 million) and the Mekong (Euro 4 million).

Jean Luc François

Ministry for Foreign Affairs

Subdirector for Sectoral Policies

and Millennium Development Goals

Fax: +33 1 53 69 33 19

www.diplomatie.gouv.fr



Rhone-Mediterranean & Corsica

THE WATER AGENCY RECEIVED THE BULGARIAN BLACK SEA BASIN AGENCY



From 24 to 28 September, a Bulgarian delegation, made up of the Director of the Black Sea Basin Agency in Varna, Mr. Ventsislav NIKOLOV, of two of his collaborators and a representative of the Water Directorate of the Bulgarian

Ministry of the Environment and Water, stayed in Lyons, Marseilles and Toulon at the invitation of the Rhone-Mediterranean and Corsica Water Agency, within the European **TWIN-BASIN^{AN}** arrangements.

After 2 days spent in Lyons to exchange on water taxes – what taxpayers and how they are identified, which type of taxes and how pollutant emissions are measured, the measurement networks and public consultation planned for by the WFD – the delegation went to Marseilles, for a presentation of the Agency's littoral policy, of the 9th Action Program and the Master Plan for Water Development and Management. The Bulgarian delegation could attend a meeting of the Basin Committee's Geographical Commission on Littoral in Aix-en-Provence.

On the last day, our Bulgarian colleagues met the IFREMER staff in Toulon who presented their activity

related to the measurement of marine environmental quality, especially the Nautila, a pocket submarine for great depths, and then they visited the waste management unit of the harbor.

Jean FAURE-BRAC

In charge of External and International Relations
Rhone-Mediterranean and Corsica Water Agency
Fax: +33 4 72 71 26 06
Jean.FAUREBRAC@eauarmc.fr



www.eaurmc.fr

The French Water Information System (WIS)



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

It gathers partners, signatories of the WIS Agreement, under the authority of the Water Directorate of the

Ministry of Ecology and Sustainable Development (MESD).

According to the new Law on Water and Aquatic Environments (LEMA), **the WIS organization is now under the responsibility of the National Office for Water and Aquatic Environments (ONEMA)**.

WIS relies on common reference frames, databases and websites.

The National Data Reference Center for Water (SANDRE) is developed by **IOWater**, **INBO** Secretariat, within the WIS Agreement.

SANDRE establishes the common language for water data which contributes to the Water Information System (WIS). It also draws up the specifications of the WIS architecture, allowing technical interoperability, and manages the WIS reference frames.

Year 2007 was marked by various improvements aiming at providing more services to its users, especially the publication of a **catalogue of cartographic water data**, which enables to look for data, to access

their description (source, creation date and contacts, summary), to download the geographical layers and to visualize them on a dynamic map.

In 2007, **SANDRE** also wrote technical specifications, allowing, on the one hand, the exchange of data on water analyses between the Departments of the French Ministry for Health and Water Suppliers, and, on the other, the laboratories to collect data on field water analyses with a Personal Digital Assistant (PDA).

www.sandre.eaufrance.fr

www.eaufrance.fr



Central and Eastern Europe

Russia-Estonia

Groundwater resources management in the Peipsi / Narva River Basin

Transboundary water resources management has become one of the major stakes of the 21st century. Abundantly provided with resources, thanks to generous rainfall, the Northern European countries are facing a problem of water quality rather than quantity. The European Water Framework Directive imposes to the Member States of the European Union to manage their transboundary basins in a concerted way with the neighboring countries.

Thanks to a joint financing from the French Global Environment Facility (FFEM) and the European LIFE Pro-

gram, BRGM has participated since 2002 with Estonian, Russian and Finnish partners in the establishment of joint water resources management between Estonia and Russia in Lake Peipsi and Narva River Basin.

The shared groundwater bodies form a complex system of several aquifers, the exploitation of which is conditioned by multiple anthropogenic parameters on both sides of the border. More particularly, groundwater supply comes from four large aquifers made up of superimposed layers of soils from the Paleozoic era sinking up towards the South.

Part of these aquifers is used for drinking water supply, on both sides of the border, and it becomes absolutely essential that concerted management of the pumped volumes be established in the future.

However, the outstanding feature of this area is the existence of significant resources of bituminous shale whose exploitation goes back to the 1930s.

This natural wealth was exploited until 2000, before experiencing an almost total stop of activity on the Russian side. The current rise in oil price causes a renewed interest in this resource because it is the only energy resource of Estonia, which uses it for its main thermal power plant.

The impact of the exploitation of these shales is not only socio-economic but also environmental. The open-pit and underground mines are accompanied by the pumping of the aquifers, which are found at higher levels in the exploitation area.

The processing of materials extracted for energy or industrial use (separation of ores, cracking) leaves many secondary products, either solid (coal heaps) or liquid, and causes polluting air emissions.

The direct or potential impacts of these changes on drinking water supply and on the protection of existing ecosystems are multiple. In the short or long term, the problem of continuing or stopping groundwater pumping in the area will arise with foreseeable consequences.

In such a case, the consequences of mine sinking and its environmental impact are still insufficiently estimated.

The project objectives developed according to several lines:

- Building the capacities of the regional stakeholders to assess water resources and environmental aspects;
- Proposing, through the development of scenarios, measures for improving water resources management by taking into account the socioeconomic aspects;
- Leading the Estonian and Russian partners to perennialize transboundary cooperation with common decision-making supporting tools provided by the project.

One of the main keys of this joint management is the lasting use of the geological and hydro-geological model, which was developed.

At project completion, an international conference took place on 20 and 21 December in Helsinki. It allowed:

- presenting the project results,
- offering the Russian and Estonian experts the opportunity of discussing about the future stakes of their common resource,
- broadening the debate by inviting experts of other countries, who presented similar examples of transboundary management.

Stéphan Urban
Water Department
BRGM - Orléans
Tél.: 02 38 64 - 3310
S.Urban@brgm.fr

www.brgm.fr



Discharge of phenols into surface water

CEENBO

During its 3rd General Assembly, held in the Czech Republic, the **Central and Eastern European Network of Basin Organizations (CEENBO)** nominated Mr. Petr KUBALA, Director of the Povodi Vltavy Agency, as President for 2007-2008.

The Romanian APELE ROMANE Authority is in charge of the Network secretariat. Daniela RADULESCU facilitates the activities dealing with the exchange of experience for **the Water Framework Directive implementation** in the countries of the region, the support to the organization of twinning agreements within the **Twinbasin** project of the European Commission, the development of a website, the prospects for actions for the implementation of **the Directive on floods**, etc.

The work program was adopted during the Bureau meeting organized in Debrecen in June 2007; any information is available on the website:

www.ceenbo.org

Central and Eastern Europe

Hungary

The 7th INBO General Assembly with Hungarian eyes

"DEBRECEN WAS THE WATER CAPITAL OF THE WORLD FOR ONE WEEK"

For a long time, Hungary had been interested in hosting the World Assembly of the International Network of Basin Organizations.

During the 6th General Assembly - which was held in the Martinique in 2004 - Hungary was unequivocally chosen for organizing the next Assembly in 2007.

It was a great privilege for the Hungarian Basin Organizations to receive their partners from all over the world. The final site for the Assembly was chosen to be Debrecen, which is

rapidly developing with a new conference center and with better price conditions for accommodation.

The Assembly took place on 6-9 June 2007.

From more than 400 applications, we could receive 250 guests (registered participants and accompanying persons) coming from more than 40 countries.

The opening plenary session was greeted by Mr. László Kóthay, Director of the Trans-Tisza Region's Environmental and Water Directorate and Mr. Gyula Györi, Mayor of Debrecen City. Then, Dr. Miklós Varga, State Secretary for Water, opened the General Assembly on behalf of Dr. Gábor Fodor, Minister for the Environment and Water.

It is an INBO custom to introduce the water management and Water Organizations

of the host country: Mr. Sándor Tóth, Chief Councilor, talked about the situation of flood protection in Hungary, Mr. László Kóthay gave a lecture about the challenges of water management in the 21st Century.

Mrs. Madeleine Jouye de Grandmaison officially gave INBO Presidency to Mr. László Kóthay. The new Hungarian President emphasized the importance of cooperation with the Liaison Bureau and INBO Regional Networks and recommended the enlargement of the Network.

The General Assembly was closed at the Aquaticum Hotel with a real tropical Martinique night offered by the Regional Tourist Committee of the Martinique, presided by our former INBO President, Mrs. Madeleine de Grandmaison.

On 9 June, there was a cultural visit of the Hortobágy National Reserve Park, classified UNESCO World Heritage.

Most of the guests visited the Hungarian Pusztá for the first time, and it was a particular experience for them to see the fauna and flora of this region. After having lunch accompanied by gipsy music, the participants visited the flood protection dyke enhancement works in Tiszadob.

We were very glad of having the opportunity to show Debrecen and its countryside to our guests. We hope so that they will return to us again.

Organizing the General Assembly in our country in Debrecen raised the prestige of the Hungarian Water Organizations with the election among them of INBO President for the next three years.

The Hungarian Organizing Committee uses this opportunity to express gratitude to all of you who helped strengthen cooperation in the INBO family!

Kalman Papp

OVF

papp.kalman@ovf.hu

Hungarian evening



The Seine-Upper Tisza twinning

Twinning with the Hungarian Upper Tisza Basin Directorate, the Seine-Normandy Water Agency (France) took the opportunity of INBO General Assembly in Debrecen in June 2007 to make a visit to its counterpart.

The Seine-Normandy Water Agency (AESN) has been linked by a cooperation agreement with the Hungarian Water Authorities since 1994. The agreement was renewed in 1997, then in 2005 at Mount St Michel. Regular exchanges are fed by current topics.

Contacts have multiplied since 2000 and common understanding of the obligations of the European Framework Directive is achieved through

experience sharing between the 2 basins: communication, stakeholders' mobilization, flood control and management or definition of sensitive areas, etc.

The taking place of INBO General Assembly in Debrecen was the occasion for AESN to return a visit to its twin basin. The visit, organized by Kalman PAPP from the Central Office for Water and the Environment, enabled the French delegation to meet Gaspar BODNAR, Director of the Upper Tisza Basin and his team. The latter had organized field visits in the Nyiregyaza area: pumping station, Tur weir, Tivadar dike, flood protection center of Vasarosnameny, etc.

The discussions mainly focused on the development of flood protection on the Tisza (too frequent floods), forecasting and warning systems, the building of dikes and devices for anticipating floods. Water quality and public consultation were also included in the discussions.

The coming to France of a Hungarian delegation is planned for April 2008 and topics such as quality recovery in the Seine, pollution caused by the Champagne wine indus-

try, public consultation and wetland protection should be discussed.

CALLE Myriam

Seine-Normandy Water Agency

Fax: +33 01 41 20 16 00

calle.myriam@aesn.fr

www.eau-seine-normandie.fr

Tur weir



Central and Eastern Europe

Hungary-Romania

The Water Framework Directive implementation in the Körös/Crisuri Transboundary Basin

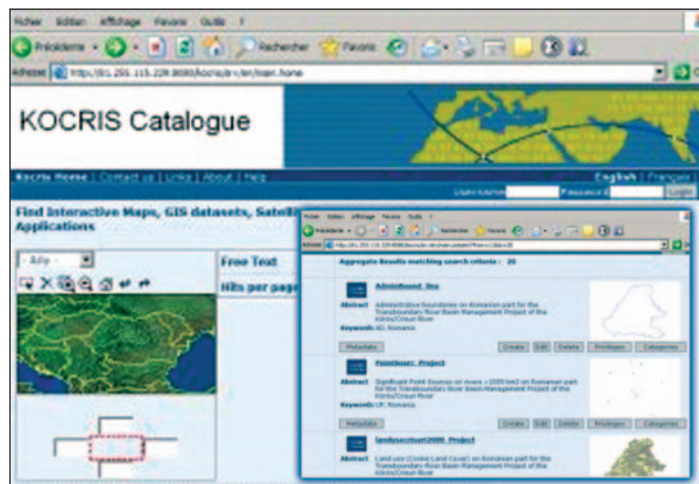
The project for the Körös / Crisuri, tributary of the Tisza in the great Danube Basin, which started in 2005, is now ending: the two concerned countries, Hungary and Romania, are now members of the European Union and apply, in a convergent way, the same community legislation.

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

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

The methodological and practical contribution of the French experts of Water Agencies was useful to develop the new practices necessary for the Water Framework Directive implementation.

Carried out by **IOWater**, **INBO** Secretariat, under the aegis of the **International Commission for the Protection of the Danube River (ICPDR)**, this project allowed true



Web application for sharing metadata between the various institutions

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

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

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

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

- Development of a **catalogue of shared metadata**;
- Creation of a website, hosted by **ICPDR (www.icpdr.org)** entirely devoted to the project, with the various experts' reports;
- **Checking that the Objectives of Good water Status would be achieved in 2015**, according to the implementation of the Program of Measures proposed through modeling;

- Implementation of joint work aiming at **harmonizing the methods for sampling fish and invertebrates** for the realization of a Biological Quality Index;
- **Training on quality management** in the laboratories analyzing the basin water and implementation of a blank quality audit;
- **Testing a public consultation on significant basin issues in the two countries** for preparing the national phase;
- **Drafting of a detailed economic analysis** of the measures planned for the project;
- **Drafting of a guidance document** on the implementation of the various stages of the planning process necessary for the development of the Management Plan;
- **Presentation of the project results during various international meetings** and design of a brochure for disseminating the obtained results.

At the end of this particularly profitable project, we deplore the death in May 2007 of one of its craftsmen, **Mr. Petru Serban**, Romanian Water Director in Apele Romane, initiator of CEENBO, who led his country on the way to Integrated Water Resources Management and widely contributed to the success of the project by his direct personal involvement in the activities and his active participation in the Steering Committee.

www.icpdr.org



Electrical fishing for harmonizing the measurement methods

icpdr iksd
International Commission
for the Protection
of the Danube River
Internationale
Kommission
zum Schutz
der Donau

"Apele Romane" participates in international twinning agreements

TWINNING WITH UZBEKISTAN

The twinning agreement between the National Administration "Apele Romane" and the Scientific Information Center of the Interstate Water Coordination Commission of Central Asia (SIC-ICWC), developed within CEENBO, is in line with the European Twinbasin project.

This twinning project allowed exchanges to take place between May and September 2007, dealing with common topics:

- Monitoring of resources;
- Assessment of water quality;
- Informational networks;
- Financing approach.

The Twinning Project consisted in two missions: the first one began with the visit of four Romanian specialists in Uzbekistan, in May 2007. It included visits to the South Fergana Canal (SFC), to the Water Users Associa-

tions, to a private farm "Turdiali" (Kuva district) and to Chirchik Hydraulics. The mission ended with an official meeting in Tashkent with BWOs Syrdarya and SIC-ICWC.

The Romanian specialists learned about IWRM practices in Uzbekistan, focusing on joint management at transboundary level, irrigation management practices, automatic regulation of canals and information collection.

The second mission of 3 Uzbek specialists in Romania started in August 2007. "Apele Romane" presented its activities and organized visits at four Water Directorates (Jiu, Arges-Vedea, Buzau-Ialomita and Dobrogea-Litoral) and two Water Management Units (Mehedinti and Tulcea).

Serban Iliescu

National Administration "Apele Romane"
Fax: +40 (2) 13 155535
serban.iliescu@rowater.ro

TWINNING COOPERATION WITH SOUTH AFRICA AND SWAZILAND

In 2007, Romania, Swaziland and South Africa started a close collaboration based on the cooperation agreement between the Komati Basin Water Authority (KOBWA) and the National Administration "Apele Romane" - Olt River Basin.

This "Olt-Komati" twinning agreement was developed within the Twinbasin project.

The first mission of the project took place in Swaziland between March and April 2007 and included practical information exchanges through meetings at the KOWBA departments and technical field visits.

The project focuses on several specific areas of interest:

► Administrative and legal framework:

❖ **At regional level:** the Southern African Development Community (SADC) and the European Community (EU).

❖ **At national level:** the River Basin Organizations such as Olt in Romania, the Komati River Basin Authority in Swaziland and the Catchments Management Agencies (CMA) in South Africa.

❖ **At transboundary level:** the Danube River Commission in Europe and the Komati Joint Water Commission between South Africa and Swaziland.

► **Dam operation, monitoring and maintenance:** SANCOLD in South Africa and CONSIB in Romania play a similar role. Both Romania and South Africa have specific legislations governing dam safety. Swaziland currently has no dam safety legislation and uses the South African legislation on the Maguga Dam.

► **Improvement of monitoring networks** for water quantity and quality (biological and physical-chemical parameters).

A final meeting took place in Mbabane between both Basin Authorities and Swaziland Authorities involved in water management. It set a stage for further collaboration on drought and flood mitigation strategies.

The mission of a Swaziland delegation in Romania took place in August 2007 and included a meeting at the Head Office of Olt Water Directorate, in Ramnicu Valcea, where presentations and discussions were held with senior Romanian officials of the Olt River Basin.

Maria Manolescu / Chris Kevvy

Fax : + 40 (2) 13 155535
maria.manolescu@rowater.ro
chriskobwa@mweb.co.za

www.rowater.ro

Danube River wins the Thies Riverprize

The project of the Danube River, Europe's second longest river, initiated by the **International Commission for the Protection of the Danube River (ICPDR)**, was awarded this Australian-based prize for its collaborative approach to improve water quality.

The **ICPDR** project with its headquarters in Vienna, Austria, has shown excellence in water management through a network of water monitoring and sampling stations, research ships and a transboundary warning system for accidents. It aimed to combat



the environmental problems in the Danube River including toxic waste pollution and farming practices.

The Thies Riverprize is an internationally recognized award for achievements in river management. It provides an incentive to repair rivers damages and restore their health.

It celebrates best governance practice.

Silvia Scheibenbogen

International Riverfoundation
Fax: +61 7 3221 1727
silvia@riverfoundation.org.au

www.riverfoundation.org.au



The Olt River

Central and Eastern Europe

INWEB

Partnerships between universities and NGOs in the Balkans



The Network INWEB (International Network of Water-Environment Centres in the Balkans) on "sustainable water management and conflict resolution" was established in July 2003 at the Aristotle University of Thessalonica.

The Network is composed of representatives from the Balkan countries

(Albania, Bosnia & Herzegovina, Bulgaria, Croatia, FYR of Macedonia, Greece, Serbia, Montenegro, Romania, Slovenia and Turkey) coordinated by Prof. Jacques Ganoulis.

INWEB focuses on problems related to shared surface and groundwater resources in South-East Europe, using a multi-disciplinary approach.

INWEB drew up an inventory of transboundary surface and ground waters in the Balkans, presented in its water database on the Internet.

INWEB's major achievements have been the adaptation of UNESCO's "Potential Conflict to Cooperation Potential (PCCP)" program to the Balkans and the development of Higher Education for Sustainable Development (HESD) from a regional perspective.

This requires inter- and trans-disciplinary teaching and research methods, the use of new Information and Communication Technologies (ICTs) alongside a search for new strategies and alliances between academic and non-academic cooperation partners.

A pilot course on Cooperation and Prevention of Conflicts in the Management of Transboundary Waters in South-East Europe was held in Thessalonica in October 2006.

INWEB is currently extending this pilot course to a MSc which will be implemented by the **Balkans University Network (BUN)**, established in 2006 by 11 universities of the region.

BUN aims to facilitate cross-border academic and scientific cooperation by:

- ◆ creating a fund to support research projects;
- ◆ establishing a regional information network;
- ◆ introducing long-distance learning;
- ◆ establishing joint postgraduate programs.

J. Ganoulis

International Network of Water-Environment Centers in the Balkans (INWEB)
Aristotle University of Thessalonica
iganouli@civil.auth.gr

www.inweb.gr

IUCN

Protection of Biodiversity of the Sava River Basin Floodplains

The Sava River, the second largest tributary to the Danube River, is of biological significance because of its outstanding biological and landscape diversity. The Sava is a unique example of a river where the floodplains are still intact, supporting floods alle-

vation and hosting the largest lowland forests of the Danube Basin.

The World Conservation Union (IUCN), Wageningen International (WI), with technical support from Orbicon (DK), have jointly initiated the Protection of Biodiversity of the

Sava River Basin Floodplains project, supported by the LIFE-Third Countries Program and the Swiss Agency for Development and Cooperation.

The Center for Ecology and Natural Resources of the Faculty of Science in Sarajevo, the Agricultural Institute of Srpska, the State Institute for Nature Protection of Croatia, the Institute of the Republic of Slovenia for Nature Conservation and the Institute for Nature Conservation of Serbia will provide the required expert input to the project implementation.

The overall objective of the project is to support Bosnia & Herzegovina, Croatia, Serbia and Slovenia to identify, protect and manage floodplain

areas of importance for the landscape and biodiversity applying the criteria of the EU Birds and Habitats Directives, and to design a coherent transboundary ecological network.

It aims to achieve public and political awareness on the role the Sava natural areas play in the protection of biodiversity and on the role the floodplains play in flood alleviation.

Joerg Lohmann

Project Director
joerg.lohmann@iucn.org

Boris Erg

Project Manager
"boris.erg@iucn.org
IUCN

www.iucneurope.org



Implementation of the European Water Framework Directive

IN A MEDITERRANEAN ISLAND, A PROGRAM OF MEASURES FOR MALTESE GROUNDWATER

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

STRONG STAKES FOR GROUNDWATER MANAGEMENT

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

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

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

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

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

assessment carried out in 2005 and in identifying the great challenges of water management.

On this basis, an identification of all the possible measures to be taken was carried out and technical and economic information on their

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

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

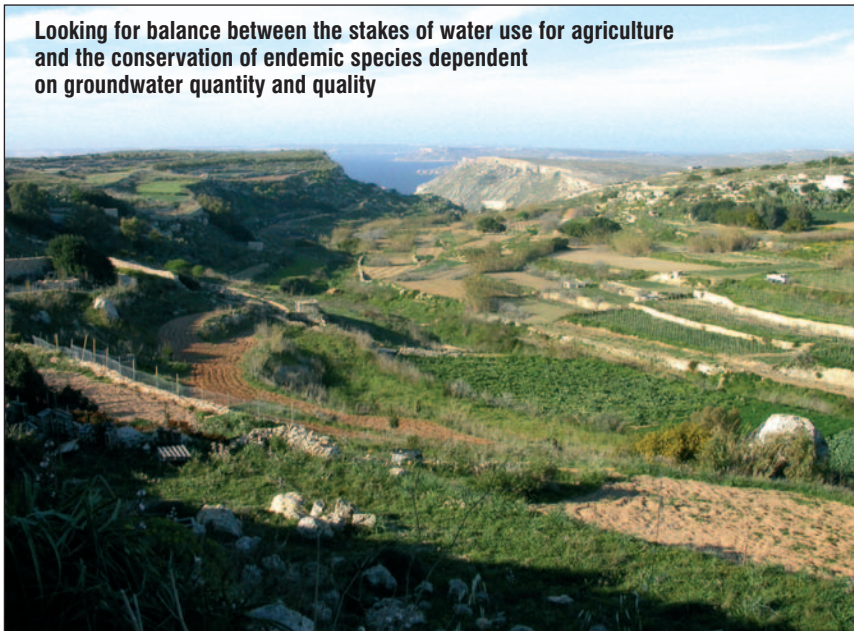
In addition, regular sectoral meetings gathered the French and Maltese experts in order to propose relevant measures suited to Maltese realities.

To supplement the assignments in Malta, **3 study tours in France** enabled the Maltese people in charge to exchange, with their French and European counterparts, their experience in WFD implementation but also to discover precise examples of groundwater management bodies (Syndicates for Alsace, Roussillon and Astien aquifers).

John Mangion
Water Director
Malta Resources Authority
John.mangion@mra.org.mt

www.mra.org.mt

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



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

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

description and their implementation was gathered in **a catalogue of measures**.

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

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



The Mediterranean

Mediterranean Network of Basin Organizations - MENBO

"Preventing drought and water scarcity"

General Assembly - Rome - 8-10 November 2007



The **MENBO** General Assembly examined the Network advances and activities covered since the meeting of Marrakech in 2005. The structure and functioning of the Network were presented to the participants as well as the decisions of **MENBO** Bureaus and General Assemblies, the approval of candidates and new members, participation in international events, activities developed within projects on integrated water resources management, proposals for the development of future projects.

The General Assembly highlighted the strong and continuous implication of the Network in projects such as **TWINBASIN[™]**, **MELIA** or **SPI-Water**, in liaison with Organizations that share objectives and projects in the region, such as **GWP-Med** and **EMWIS**.

MENBO annual general accounts for 2005 and 2006 were approved and the provisional budget for 2007 was presented. The increase in annual budgets shows a greater support from the Spanish Government and collaborating organizations, and a greater participation in projects for exchanges of experiences between countries of the region.

The Assembly approved the proposal of two new Members: the General Directorate of State Hydraulic Works (DSI) of Turkey and the Water and Irrigation Ministry of Jordan.



Mr. BENBIBA (Morocco) and Mr. MAZZITTI (Italy)

It is necessary to underline the quick development of MENBO: the participants were invited to promote participation of their countries in the Network, reminding that the registration to MENBO is free as the primary objective is to obtain an active participation of all the Mediterranean Basin Organizations and Administrations in charge of water management with the joint objective of achieving mechanisms for integrated management at the level of River Basins.

In accordance with **MENBO** statutes, **Mr. Walter MAZZITTI (Italy)**, President of the "European Task Force on Water of the Middle East Peace Process" will take the Presidency of the Regional Network up to its next General Assembly in 2009.

It will be from now on Italy to head **MENBO**, taking over this responsibility from Morocco and previously Spain which allowed the initial and successful launching of the Network.

Mr. Alfonso Pecoraro SCANIO, Italian Minister for the Environment, announced his will to develop actions for collaboration and cooperation between the Mediterranean countries

as a continuation of the Spanish and Moroccan Presidencies.

The Assembly especially thanked **Mr. Mohamed ELYAZGHI**, State Minister of Morocco, for the excellent Presidency he has carried out and the new Moroccan Minister for Energy, Water and the Environment and the State Secretary in charge of water for their reaffirmed support to **MENBO** and **INBO**.

Mrs. BENBIBA (Morocco) and **MO-RAGUES (Spain)** were elected **MENBO** Vice-Presidents.

MENBO Permanent Technical Secretariat remains hosted by the **Jucar River Basin Authority in Valencia, Spain**, which was thanked for the efficiency of the work carried out.

Some proposals were given for the organization of the next General Assembly and Liaison Bureaus in 2008: the present countries were invited to participate in the **International Saragossa Exhibition 2008**.

The participants underlined the prime importance for the Mediterranean Region of **the effect of cli-**

mate change on water scarcity and drought: it was reminded that climate change will have significant effects on water availability and will aggravate extreme phenomena, affecting the Mediterranean areas that are already vulnerable and count on limited water resources. It is anticipated that these effects will have environmental and socioeconomic impacts that will have to be quickly dealt with strategic and

preventive measures. In such a context, the compatibility of water uses with environmental protection will have to be taken care of.

Water scarcity and drought affect a great number of Mediterranean countries. **MENBO** participates in projects on the evaluation and application of joint solutions. **MENBO** was appointed as observer in the Strategic Coordination Group (SCG) of the Common Implantation Strategy (CIS) of the European Water Framework Directive and participates in the **Euro-Mediterranean working group on water scarcity and drought**.

The participants applauded the paper of the European Commission "**Facing the challenge of water scarcity and drought in the European Union**", published in July 2007, as well as the proposal to develop a community strategy that deals with this problem.

MENBO intends to play an important role in the exchange of experiences between the Members States of the European Union and Mediterranean countries facing the same problems.

www.remoc.org

The Mediterranean

"Mediterranean dialogue for Integrated water management" - "MELIA"

Strengthening Euro-Mediterranean dialogue for improving water management

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

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

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



Its objectives are to:

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

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

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

The **MELIA** Project has a website at the address:

www.meliaproject.eu

"INECO"

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

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

INECO gathers 14 institutions from 10 Mediterranean countries (Greece, France, Italy, Cyprus, Tunisia, Egypt, Lebanon, Syria, Algeria and Morocco), including public, private and international organizations. The project, which extends over 3 years, began on 1st July 2006 and will be completed in June 2009.

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

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

INECO deals with the various problems encountered in the decision-making process and with the deficiencies of the current governance structures in the Mediterranean Basin. Research focuses on the alternative institutional and economic instruments which allow promoting equity, economic effectiveness and environmental sustainability in water resources management. The main goal of **INECO** is to develop the stakeholders' skills and constructive commitments in water resources planning, by meeting three challenges:

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

IOWater and **INBO** more particularly deal with:

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

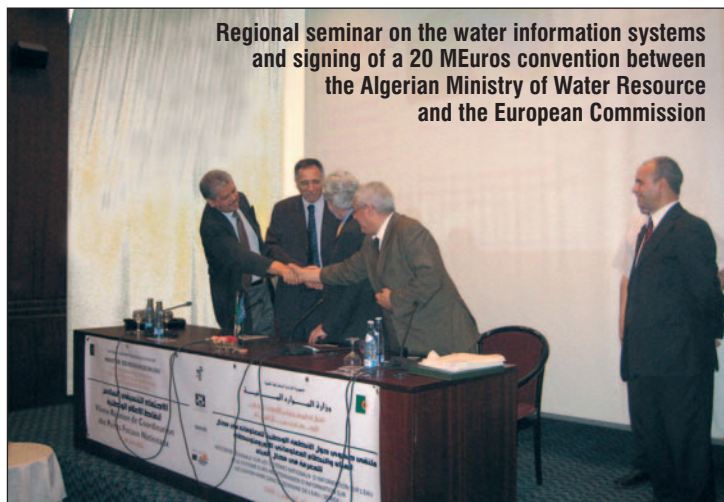
INECO is a "social experiment" for developing skills and political structures. **INECO** aims at providing experience and enabling local societies to change their perceptions and, consequently, their water management practices and at providing complete and adaptable recommendations.

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



The Mediterranean

EMWIS: 20 National Focal Points exch



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

Operational since the end of 1999, the Euro-Mediterranean Water Information System - EMWIS - is an essential tool for dialogue and institutional exchange between the concerned Countries of the Euro-Mediterranean Partnership. It fits in with the decisions made by the Ministers at the Conferences of Marseilles (1996)

and Turin (1999) on local water management.

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

PREPARATION OF THE EURO-MEDITERRANEAN MINISTERIAL CONFERENCE ON WATER IN 2008

The Partner Countries and the European Commission agreed that convening a Ministerial Conference during the European Union French Presidency, in October 2008 in Amman, Jordan, was necessary to start again regional cooperation in the water sector.

EMWIS is preparing a contribution to this conference in the form of an assessment of and prospects for cooperation in the Mediterranean water sector for better coordinating all the initiatives for real effectiveness.

SYNTHESIS AND TRANSFER OF KNOWLEDGE

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

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

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

A WEB PORTAL IN FULL EXPANSION

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

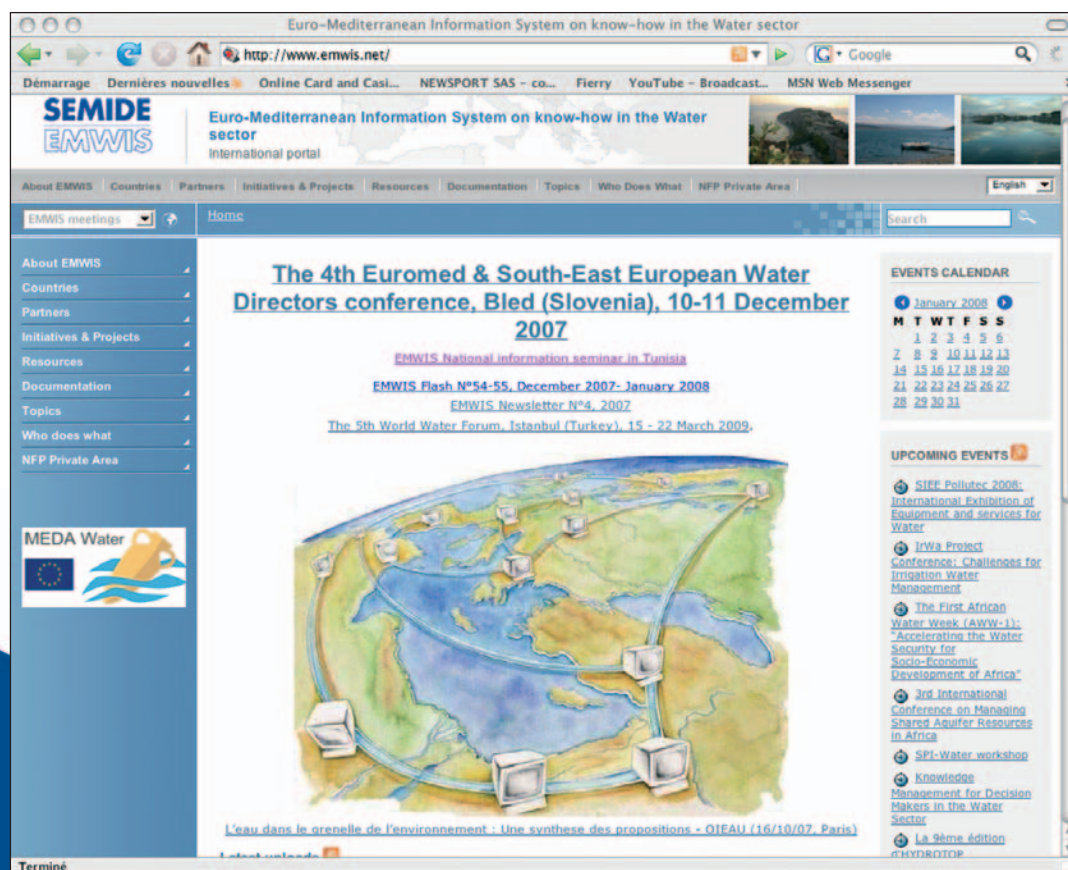
Its thesaurus on water is now available in **5 languages** (Arabic, English, Spanish, French and Italian).

The **electronic flash** (e-Flash) is sent every month to more than 14,000 readers in Arabic, English and French. It not only allows incorporating the information provided by the NFPs and various topical websites, but also providing flows of information in real time for other websites (e.g. Alliance for water monitoring, INBO, etc.).

It is a reference media for water information in the Euro-Mediterranean area and a collaborative working tool for the working groups of the WFD/Med-EUWI Joint Process.

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

SEMIDE EMWIS



The Mediterranean change their information on water

NATIONAL WATER INFORMATION SYSTEMS

At the end of 2007, **EMWIS** had **16 national websites** with the launching of the Egyptian website.

The National Focal Points (NFPs) do not spare their efforts to revise their site and produce contents useful for the national stakeholders of the water sector. The know-how acquired by Algeria, Spain and France in the technical and organizational implementation of their **National Water Information Systems** enables to facilitate the actions of the other countries.

TOWARDS THE CREATION OF A MEDITERRANEAN WATER INFORMATION MECHANISM

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

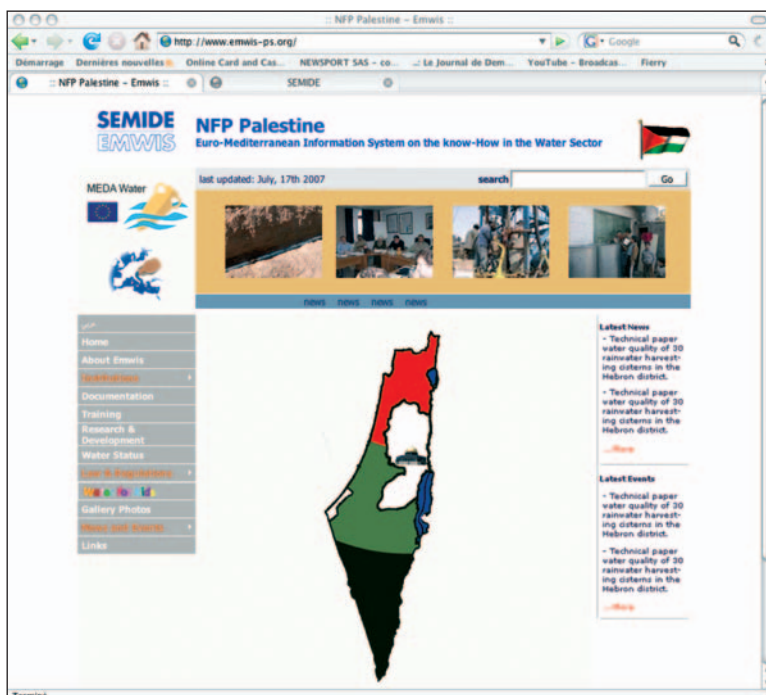
This study is coordinated by **EMWIS** Technical Unit and the Water Directorate of the French Ministry of Ecology and Sustainable Development, and carried out with the technical support of **IOWater**, owing to its expertise in the field of shared water information systems.

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

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

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

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



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

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

FOR HARMONIZING WISE AND EMWIS

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

SEMIDE EMWIS

www.emwis.net



The Mediterranean

Turkey

Capacity building in the water sector



With the prospect of Turkey's possible accession to the European Union, a twinning agreement, called "Capacity Building Support to Turkey for the Water Sector" started in October 2007.

The Netherlands, the United Kingdom and Slovakia will assist Turkey in water management in line with the EU water legislation, the Water Framework Directive (WFD) 2000/60/EC of 23 October 2000 in particular, the Urban Wastewater Treatment Directive 91/271/EEC of

21 May 1991 and the Dangerous Substances Directive 76/464/EEC of 4 May 1976 and daughter directives in order to enable the implementation of the EU community water "acquis" before Turkey's accession.

The project will last 27 months and has four components: a legal and institutional gap analysis, implementation plans, a pilot project in a Turkish river basin and a communication plan.

Henk Sterk

Resident Twinning Advisor
Ministry of Agriculture, Nature and Food Quality
h.j.sterk@minlnv.nl

Uluabat Lake conservation

Uluabat Lake



In Turkey, one of the RAMSAR areas is Uluabat Lake that is near the Bursa Province at the southeast of the Marmara region. The first Management Plan was prepared between 1998 and 2002 by the Turkish Ministry of the Environment and Forestry with the participation of all groups concerned with this issue.

Uluabat Lake is jointly monitored by these institutions to control pollution and illegal water use for agriculture.

Fishing standards, riverside development, industrial discharges are other key issues for the conservation of Uluabat Lake.

Dr. Derya Altunbas

Dr. Pedro Fernandez

Canakkale Onsekiz Mart University
Fax: 90 286 3358738
daltunbas@comu.edu.tr
pfernandez@caminos.upm.es

www.comu.edu.tr

International Congress On "River Basin Management" Antalya – 22 – 24 March 2007

Antalya International Congress



A Kick-Off Meeting took place in Istanbul on 19 and 20 March 2007 for preparing the 5th World Water Forum, planned from 15 to 22 March 2009.

It concerned the definition of priority topics and the study of the various processes which can lead to the practical use of the suggested ideas. Regional round tables were also organized.

Following this kick-off meeting and as a first contribution to the 5th World Forum, the **General Directorate of State Hydraulic Works (DSI)** organized an **International Congress on River**

Basin Management in Antalya from 22 to 24 March 2007.

This Congress was opened by the Turkish Prime Minister, Mr. Erdogan.

700 participants from 60 countries participated.

During plenary sessions, Jean-François Donzier, **INBO** Permanent Technical Secretary, made speeches on Integrated River Basin Management and on the implementation of the European Water Framework Directive.

Professor Oktay Tabasaran was appointed **Secretary General** of the 5th World Water Forum.

WWF Turkey is one of the partners of the action plan. The waters of the Susurluk River Basin flow into Uluabat Lake. The water users and administrations, as well as Non-Governmental Organizations of the area, joined their efforts for integrated basin management. They include the Governorate of Bursa Province, the Environment and Forestry Directorate, the Status of Women Department, the Directorate of Culture and Tourism, the Directorate of Agricultural Issues, the Directorate of Village Services, the Municipalities of Nilufer, Golyazi and Mustafakemalpaşa, the Village of Eskikaraagac, Uludag University, Nilufer Local Agenda 21, the Union of Tourism Travel Agencies (TURSAB), etc.

www.inbo-news.org

**All information
is available
on the Web**



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The Mediterranean

Morocco



Sebou - Seine-Normandy, a most active twinning!



The contacts established since 2003 between the Basins of Sebou in Morocco and Seine-Normandy in France have led to the signing of a twinning agreement in 2005.

Exchanges increased and the European Union chose Sebou as a "pilot basin" to test an adaptation of the principles of the Water Framework Directive.

The first exchanges between the Sebou River Basin Agency and the Seine-Normandy Water Agency

(AESN) started in 2003: a mission allowed identifying some major topics for cooperation.

In 2005, a cooperation agreement was signed and dealt with the stakes of the Sebou River Basin: establishment of water taxes, communication tools, aquifer contracts, management of water abstraction for agriculture and agricultural pollution.

In 2006, an engineer of Sebou ABH stayed one week at the AESN to work on water quality and an AESN engineer participated in the Sebou water

users' awareness on the management of aquifers and agricultural pollution. He testified on the occasion of the Moroccan national debate on the establishment of aquifer contracts.

In March 2007, a Moroccan delegation came to Paris to visit the International Agribusiness Show (SIMA), and met the Minister for Ecology and Sustainable Development as well as farmers and irrigators of the Seine-Normandy Basin. In April, a new mission took place in Fez and Meknès, where the National School of Agriculture organized discussions. Dialogue with farmers is continuing!

Sanitation is not forgotten. Fez is building a wastewater treatment plant with European financial support. On a smaller scale and in rural areas, the Sebou ABH requested AESN to finance the installation of a viable and effective system for wastewater treatment in a human settlement of Sefrou Province.

This project fits in the solidarity program of the French Water Agencies (Oudin-Santini Law of February 2005).

THE SEBOU, A WFD "PILOT BASIN"...

In coordination with the Moroccan WWF, the Sebou ABH requested Seine-Normandy to receive three engineers for one week at the end of June 2007 in Paris. Their stay, focusing on the WFD economic analysis, was the occasion of many meetings and visits, and is likely to be followed by other actions...

CALLE Myriam

Seine-Normandy Water Agency (AESN)

Fax: -33 01 41 20 16 00

calle.myriam@aesn.fr

www.eau-seine-normandie.fr

www.abhsebou.ma



Next INBO Meetings



In 2008, INBO is organizer or partner in the following main events:

- **20 - 22 February:**
NARBO General Assembly
Solo - Surakarta
INDONESIA
- **26 - 28 March:**
1st African Water Week
AfDB - Tunis
TUNISIA
- **12 - 13 May:**
Commission on Sustainable Development
EU Session on the financing of IWRM at basin level
United Nations - New-York
USA
- **4 - 6 June:**
International Symposium "Management of water-related extreme phenomena"
EUROPE-INBO session: "First lessons learned from the implementation of the European Water Framework Directive"
ECWATECH - Moscow
RUSSIA
- **16 - 21 June:**
4th International Conference on River Restoration
ECRR - Venice
ITALY
- **7 - 10 July:**
International Water Exhibition Water "Tribune"
Saragossa
SPAIN
- **1st - 3 September:**
IWRA General Assembly Session: management of transboundary waters
Montpellier
FRANCE
- **4 - 5 September:**
IWA Symposium on River Basins
Budapest
HUNGARY
- **2 - 4 October:**
"EUROPE-INBO 2008"
"The European Basin Organizations are getting mobilized to implement the Water Framework Directive"
Sibiu
ROMANIA
- **19 - 21 November:**
LANBO General Assembly Latin-American Network of Basin Organizations
Rio de Janeiro
BRAZIL

And, of course, from 16 to 22 March 2009: 5th World Water Forum - Istanbul - TURKEY

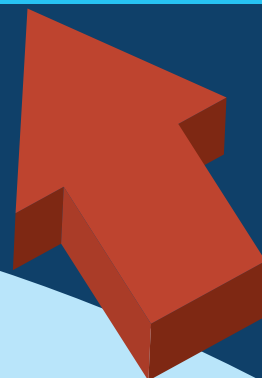
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The website of river basin management over the world

- **The International Network of Basin Organizations**
- **The General Assembly in Debrecen - 7 - 9 June 2007**
- **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
unesco.org / eau-international-france.fr



Secretariat: International Office for Water
21, rue de Madrid - 75008 PARIS - FRANCE
Tel.: +33 1 44 90 88 60 - Fax: +33 1 40 08 01 45
Mail: inbo@wanadoo.fr
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