

INTERNATIONAL NETWORK
OF BASIN ORGANIZATIONS

RESEAU INTERNATIONAL
DES ORGANISMES DE BASSIN

RED INTERNACIONAL
DE ORGANISMOS DE CUENCA

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The network newsletter

IN 2005, INBO IS MOBILIZING TO PREPARE THE MEXICO 4TH WORLD WATER FORUM

The 4th WORLD WATER FORUM will take place in Mexico City FD. - BANAMEX Congress Center (Mexico) - from 16 to 22 March 2006 and will be, as for the previous events of Marrakech (1997), the Hague (2000) or Kyoto (2003), the meeting place for all the stakeholders of the water sector of the whole world.

The International Network of Basin Organizations (INBO), which now gathers **153 permanent members or observers from 52 countries**, as well as the majority of the International Commissions or Transboundary Basin Organizations, will be a dynamic partner in this event and in its preparation phase in 2005.

Of course, it is on the topic of integrated water resource management (IWRM) on the scale of the basins of rivers, lakes and aquifers, that INBO can share the practical experience acquired by its members in the field.

The specificity of the Network is indeed to gather the Governmental and Basin Organizations, which are really in charge of defining and implementing water policy in their respective countries: far from academic speeches, INBO members are directly responsible for water management and have to face the daily realities that it implies and the preparation of the future.

Better than anybody else, they know the stakes and the problems to be solved locally in each basin and commit themselves to carry out the actions they deem necessary, either for applying the regulations, or for mobilizing financial resources and implementing projects or for dialogue and the involvement of users and of all the citizens concerned.

For more than 10 years, they have carried out exchanges between them within INBO to identify and disseminate the most useful and effective approaches, but also to raise the decision-makers' awareness on the encountered difficulties.

Within the Network, the partners have organized themselves at the regional level, either African, American, Asian, European or Mediterranean, in order to strengthen neighborhood relations and to take into account all the diversities of local and regional situations.

In Europe, the Water Framework Directive (WFD) is obviously the big endeavor that mobilizes the INBO partners of the 25 Member States of the European Union and of the Candidates or associated Countries, as it includes the main management principles that have been formalized by our Network for a decade.

INBO proposed to the Mexican Authorities, the World Water Council and GWP to organize, with all interested partners, a session on the participation of the public and water users in basin management, on 18 March 2006 in Mexico City, within the "IWRM" topic of the 4th World Forum.

In order to prepare this session and to mobilize its members, INBO already plans for three large regional preparatory meetings in 2005:

- ① from 23 to 25 May in Marrakech (Morocco) for the Mediterranean basin, with MENBO General Assembly,
- ② from 29 September to 1 October in Namur (Wallonia region - Belgium), with the 3rd Assembly of the Group of European Basin Organizations for the Implementation of the Framework Directive,

- ③ in November in Niamey (Niger) during the 2nd General Assembly of the African Network of Basin Organizations (ANBO).

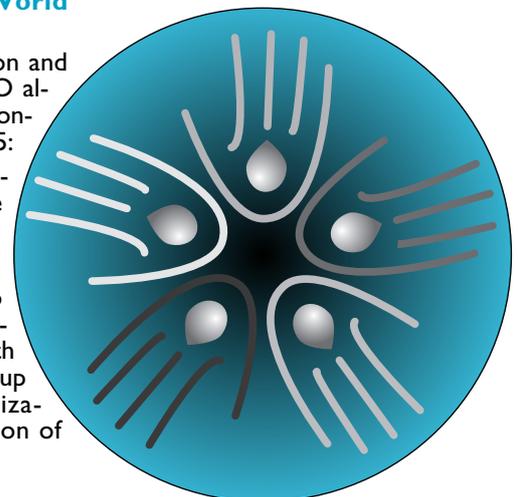
In addition, INBO will participate in the International Conference on Water in Central Asia on 30 and 31 May 2005 in Dushanbe (Tajikistan), and also in the initiative of UNESCO and of the International Water Academy of Norway on the resolution of conflicts on shared waters, at the beginning of November in Stavanger.

Contacts are ongoing with our Japanese colleagues for the consolidation of the Asian Network of Basin Organizations.

In liaison with the Council of Europe, the International Secretariat for Water and Solidarity-Water-Europe, INBO will also be a partner in the week devoted to the citizen's approach to water management, in Strasbourg (France), from 17 to 21 October 2005.

A preparatory meeting might also be organized during this autumn in Central America.

¡Our ideas are progressing, let's get mobilized to make our results known in Mexico City!



"DECLARATION OF TROIS ILETS"



Pierre BARIL, former President, opens the General Assembly, in the presence of Pascal BERTEAUD, French Water Director

Better governance of freshwaters, which are limited and vulnerable, is one of the main keys to sustainable development, as it is essential to sustain life on our planet and ensure the health and socio-economic progress of our societies, while respecting the environment.

From 24 to 28 January 2004, 178 representatives of governmental administrations in charge of water management, of Basin Organizations, already existing or being created, coming from 39 countries, and from interested bi- and multilateral cooperation agencies, met in Trois-Ilets in the Martinique, during the sixth General Assembly of the

International Network of Basin Organizations (INBO), to define, all together, the most suitable actions needed for achieving the objectives of integrated and participatory management of inland surface and ground water resources and of related coastal zones.

The delegates reaffirmed that the problems linked to water governance are challenges that can no longer be tackled on a sectoral or local basis, or indeed separately.

In fact, the search for solutions must pass through an integrated and holistic approach, organized at the relevant level of basins of rivers, lakes and aquifers, either local, national or transboundary.

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.



The new INBO President: Madeleine JOUYE De GRANDMAISON

In order to achieve these objectives, while taking account of all adaptations required by the different field situations, the delegates recommended that the following procedures regarding good governance of inland freshwater resources and coastal zones should be used all over the World:

- 1 This Integrated Water Resource Management at the river basin level should aim at meeting, in a holistic, consistent, sustainable and inter-sectoral manner, all essential and legitimate needs of the citizens, at combating wastage, protecting against risk, preventing pollution, at preserving and rehabilitating ecosystems,
- 2 In each country, a clear legal framework must specify the rights and obligations, the possible levels of decentralization, the institutional responsibilities of the different stakeholders, the processes and means needed for good water governance,
- 3 The representatives of populations, local authorities, water users or of organizations representing collective interest should participate in this management beside administrations, especially in Basin Councils or Committees.

Information, awareness and education of populations or users and of their representatives are required.

- 4 When translating into the national water policy of each Country the principles of integrated management of water resources, and in consistency with their own IWRM national plans, **basin management plans (or master plans) should be prepared, through dialogue and transparency, to set the objectives to be achieved in the medium term,**
- 5 Reliable, representative, harmonized and easily accessible **integrated information and monitoring systems** and specific research should be organized in each basin,
- 6 The establishment of **specific financing systems, based on the users' (consumers and polluters) contribution and common cause,** is required in each basin to ensure the implementation of **successive priority action plans and a balanced management of the resource and improve or maintain its quality, as well as the smooth operation of community utilities.**

These contributions, defined by consensus in Basin Committees, should be managed at the level of the basin, in a decentralized manner, **by a specialized, technical and financial basin Organization.**



178 Delegates from 39 Countries

18 March 2006 - 4th Mexico World Water Forum
 "Participation of the public and water users in basin management"

⑦ **As regards transboundary rivers, lakes or aquifers,** cooperation agreements should be signed by riparian Countries and Management Plans designed at the level of the whole basin, especially in international or transboundary Basin Commissions, Authorities or Organizations.

Water has no national or administrative boundary: jointly managing the resources shared between several neighboring States of the 263 transboundary rivers and lakes and hundreds of transboundary aquifers over the world is strategic and a priority and should take this reality into account.

The islands are systems which offer a wide range of biodiversity, ecosystems and socioeconomic entities, where management of freshwater and coastal areas is a complex issue which requires special attention, a specific legal framework and adapted means. Implementation of the European Water Framework Directive is a major milestone for promoting the principles of good governance advocated by INBO. This topic is a priority for mobilizing its members.

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

The delegates of the General Assembly of the International Network of Basin Organizations requested that Official Development Aid and the programs of International Cooperation Organizations should be re-focused to support projects aiming at implementing real concerted actions which meet the above principles, and experimentations, evaluations and exchanges of know-how in these areas.

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 for Water



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Christiane RUNEL,
 Director of
 "INBO Newsletter"

INBO's next World Session on 18 March 2006 in Mexico!



The TWINBASIN^{xn} project aims at facilitating twinning between Basin Organizations in order to disseminate good practices and strengthen their human resources.

It was officially launched on the occasion of the General Assembly of the International Network of Basin Organizations, in the Martinique in January 2004.

It relies on a **Steering Committee regrouping the 18 founder members:** INBO and its Regional Networks for

Africa (ANBO) and the Mediterranean (MENBO), the Seine-Normandie Water Agency (France), the International Office for Water, (France), the Secretariat for Water Resources (Brazil), the Global Water Partnership (Sweden), Techware (Italy), the University of Pretoria (South Africa), the National Water Authority - OVF (Hungary), the Interstate Coordination Water Commission - ICWC Aral Sea (Uzbekistan), Jara Tirta I Corporation (Indonesia), the Algérois - Hodna - Soumman Basin Agency (Algeria), the Sebou River Basin

Agency (Morocco), the Organization for the Development of the Senegal River (OMVS), the National Water Commission (Mexico) and Apele Romane (Romania).

The main orientations defined by this Steering Committee were:

- the need to prioritize assistance to the existing twinning arrangements;
- the advantage of a "preliminary study" that compiles a summary report and carries out an analysis of the past twinning arrangements: outcome, successes, failures;
- the significance of defining very stringent and demanding criteria for accessing to mobility scholarships;
- the creation of the first three Specific Interest Groups (SIG) on the "twinning", "mobility" and "dissemination" topics. Other

SIGs will be created in the future, in particular for the "transboundary rivers" topic.

The project was selected within the "Global change and ecosystems" priority of the 6th Framework Program for European Research. The European financing of the project will cover the operating expenses of the Network (travels, tool development, scholarships, etc.) for a 48-month period.

A restricted Steering Committee met again in Dakar (Senegal) in November 2004, during the joint Assemblies of the African Network of Basin Organizations and of the Network of International Commissions and Transboundary Basin Organizations. It will hold its next meeting in Marrakech on 23 May 2005.

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LEGAL AND INSTITUTIONAL COOPERATION OVER TRANSBOUNDARY AQUIFERS

The 14th Session of the Inter-governmental Council of the International Hydrological Program, held in June 2000, having recognized that transboundary aquifer systems are important sources of fresh water in some regions of the world, particularly under arid and semi-arid climatic conditions, the Council decided to launch an inter-agency initiative, called the Internationally Shared Aquifer Resources Management program (IS-ARM), dealing with scientific-hydrogeological, socio-economic, environmental and legal and institutional issues.

With the collaboration of regional organizations such as the "Observatoire du Sahara et du Sahel" (OSS), or the Organization of American States

(OAS), the Program was launched in Africa and America, and is being developed in the Balkans or the Middle East, with UN ESCWA. As a first result, about forty transboundary aquifer systems were identified in Africa, compiled in a map and table which will be published soon.

International law applicable to transboundary groundwater is still in its first stage of development. There already exist international rules that apply to transboundary aquifers, but they do not cover all types of aquifers, and do not consider their specific characteristics.

However, in 2002, the International Law Commission of the United Nations (UN ILC) has included the topic of "shared

natural resources" in its work program.

The IHP is committed to provide the Special Rapporteur with scientific, technical and legal support on the issue of transboundary groundwater.

Two reports were already prepared and debated at the UN ILC: the first one (in 2003) addressed the background of the topic and provided a hydrogeological overview of the groundwater resources of the world.

The second report (in 2004) includes several draft articles for a future transboundary groundwater international legal instrument, while the addendum provides case studies and a selected bibliography on the topic.

The third report is to be submitted in 2005.

A regional meeting with experts from the Arab world was held in June 2004 at the UNESCO and a second meeting will take place in March 2005 with groundwater experts from America, with INBO participation.

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APFM: ASSOCIATED PROGRAM ON FLOOD MANAGEMENT

Meeting of the Community Flood Management Committee in Bangladesh



The Associated Program (APFM) is a joint initiative of the World Meteorological Organization (WMO) and Global Water Partnership (GWP) to promote Integrated Flood Management. It is supported by the Governments of Japan and the Netherlands.

Water-related disasters, such as floods and droughts, need to be integrated in water resources management to achieve sustainable development.

The APFM has been working on case studies

on flood management practices from all over the world, the implementation of pilot projects and the compilation of materials on integrated flood management.

A series of documents describes the basic tenets and requirements of this kind of management.

This series is available on the APFM web site in English, French and Spanish. The first paper in this series, written in collaboration with the International Water Law Research Institute (IWLR) at the University of Dundee (Scotland), is on the "Legal Aspects of Integrated Flood Management". This issue touches on many areas of law on various institutional and geographical scales, addressing flood prevention, preparedness and mitigation, and emergency response, recovery and rehabilitation.

A pilot project on Flood Management Strategy for the Lake Victoria Basin in Kenya has been developed to serve as a model for developing the country's national strategy on flood management.

Another pilot project is on "Community Approaches to Flood Management", five Community Flood Management Committees have been established in selected communities in India, in Bangladesh and Nepal, and manuals describing specific activities for community based flood management have been translated into local languages.

APFM Newsletter is available on its website.

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RIVER RESTORATION

3RD ECRR CONFERENCE

The European Center for River Restoration, ECRR, and Croatian Waters have organized in Zagreb, from 16 to 20 May 2004, the



ECRR participants

3rd ECRR Conference on River Restoration in Europe.

INBO Permanent Technical Secretariat delivered a speech, entitled "Together for Integrated Water Resource Management".

The Conference underlined that, in recent years, many European rivers encountered extreme hydrological events, floods and droughts in particular, which created stress on water resources.

River restoration or rehabilitation includes a number of measures with the common goal to restore the natural functions of rivers which were disturbed by human activities.

It has become clear that most European rivers are transboundary and that one country will not be able to solve water quality and quantity problems on its own. Exchanges of experiences and practical approaches within the European countries are needed together with

a greater awareness about the values of intact rivers.

INBO members are themselves directly involved in river restoration projects.

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WATER IN MOUNTAINS

INTEGRATED MANAGEMENT OF UPPER RIVER BASINS

Following the international conference on "Water in mountains and integrated management of upper river basins", which took place in MEGEVE, on 4, 5 and 6 September 2002, the "Megève Group" met on 14 November 2003, in the presence of Mr. Mike BONNEL, in charge of the HELP project of UNESCO, to validate a program to be implemented from 2004 to 2006 and including the following actions:

- Enhancement of the Megève conference proceedings,

- Launching of a website "Water in Mountains - Integrated management of upper river basins",
- Creation of a forum "Water in Mountains" with all the elected officials, scientists, academics, environmental technicians wishing to work on this issue,
- Progressive setting-up of a network of pilot sites to test effective solutions of integrated management.

Original experiments will be undertaken within this program, such as: the use of Geographic Information Systems and water quality indicators, contractualized relations between the agricultural-pastoral, forest and tourist activities and water managers, contracts

between downstream consumption areas and mountainous areas, definition of tools for land organization and the launching of hydrogeological parks.

- Finally, a new conference "MEGEVE 2", to be held in September 2006, will draw up a progress report on the most significant experiments since 2002.

A new pilot site "Savoy County - Mount Blanc - Leman", comprising 5 basins (Upper Arly Valley, Upper Arve Valley, Giffre, Leman/Voirion, the Anney Lake) was validated on 30 June 2004 by the "HELP BASINS" Committee as being "an operational program".



Signing of the Gran Sasso agreement on 22 March 2004

The "Savoy County - Mount Blanc - Leman" area and the Natural Reserve and National Park of Gran Sasso in Italy have already decided to initiate a technical cooperation on the occasion of the World Water Day on 22 March 2004.

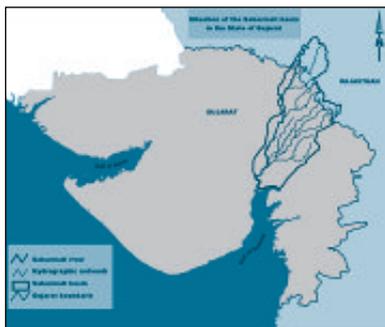
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ASIA INDIA

INTEGRATED PLANNING AND MANAGEMENT OF SABARMATI RIVER BASIN (GUJARAT)



The Sabarmati River is one of the major west-flowing rivers of Gujarat, which originates in Rajasthan and flows out into the Gulf of Cambay.

Following the "Integrated Management of the Sabarmati river basin project", financed by French Cooperation and implemented by IOWater between 1998 and 2001, the project entitled "Integrated River Basin Planning and Management of Sabarmati river basin" is jointly taken up by the

Union Government of India and the State Government of Gujarat under the World Bank assisted "Hydrology" Program. It aims at providing experience to the Government officers in the use of advance modeling tools and of a Decision Support System (DSS) for evaluation and comparison of various developmental and management options.

The System has been developed, using "RIBASIM", a package for simulating the behavior of a river basin under various hydrological conditions, developed by WI | Delft hydraulics of the Netherlands.

The river basin has been analyzed with different scenarios: the planning of needs for year 2025 has been based on current demands for all sectors.

The results revealed that even with different strategies, more water will have to be imported to this water stressed basin by year 2025.

A new project entitled "Sujalam Sufalam" (Good water-Good yield) is being implemented by the Government of Gujarat to combat water stresses in the region.

It is actively considering the setting-up of River Basin Organizations (RBOs) with the Sabarmati basin as a pilot basin and this experience shall be applied to other basins of the State.

The Sabarmati river basin is also being studied by the International Commission on Irrigation & Drainage (ICID).

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TAIWAN TAIWAN WATER 2004

The Taiwan Authorities invited Mr. Jean-François DONZIER, INBO Permanent Technical Secretary, to deliver the introductory Conference of the first International Trade Show "Taiwan Water" which was held in Taipei Exhibition Center from 3 to 6 September 2004. The topic selected was "the new European water policy".

Mr. DONZIER was also invited by the National Taiwan University (NTU) for a one-day course on the institutions and means of water management in Europe, the Water Framework Directive in particular.



GENERAL ASSEMBLIES OF THE AFRICAN NETWORK OF TRANSBOUNDARY BASIN ORGANIZATIONS AND OF THE NETWORK OF TRANSBOUNDARY BASIN ORGANIZATIONS



Official opening ceremony with President WADE

"Water has no boundary"

168 delegates of governmental administrations, responsible for managing water resources, of Basin Organizations and International Organizations coming from 34 countries, met in Dakar (Senegal) from 2 to 6 November 2004, under the auspices of the International Network of Basin Organizations (IN-BO), at the invitation of the Organization for the Development of the Senegal River (OMVS) and with the support of French Cooperation.

The meeting was honored by the effective presence of several Ministers in charge of water in the sub-region, of the President of the Council of Ministers of OMVS, of the Prime Minister of Senegal. His Excellency Adboulaye WADE, President of the Republic of Senegal came to officially open the meeting on November 3 and to support the Network's initiatives.

PREAMBLE

The International Network of Basin Organizations (IN-BO) is especially mobilizing for better management of transboundary rivers, lakes and aquifers.

Indeed, there are 263 transboundary rivers or lakes and hundreds of aquifers over the world, the basins of which are shared by at least two or more (18) riparian countries.

Water has no boundary and appropriate integrated resource management of the basins of rivers, lakes or aquifers, shared by several riparian countries, is now of strategic significance.

Cooperation agreements need to be initiated or signed between the riparian countries for these rivers and aquifers. Such an integrated management obviously requires methods for observation, management, protection and development.

Their specific situation should be better taken into account in the debates and multilateral agreements on a new governance of water resources.

In Evian in 2003, INBO, jointly with several large NGOs concerned, especially drew the attention on these stakes of the G8 Heads of State and Government, who retained this issue among their priorities for future actions in the water sector.

This is the reason why the numerous participants in the IN-BO International Conference, held in Thonon-les-Bains (France) on 25 and 26 November 2002, decided to constitute "an informal Network of International Commissions and Transboundary Basin Organizations", based on a voluntary and free participation of its members and observers.

OBJECTIVES OF THE NETWORK: PRIORITIES FOR ACTION

In addition to the presentation of the strategies of bi and multi-lateral cooperation institutions involved and to the study of several real cases of organization on the scale of transboundary basins, the Dakar Assembly widely dealt, in 4 workshops and 69 papers presented during the meeting, with 4 central topics for the implementation of IWRM and for facilitating the creation and strengthening of basin organizations over the world:

- ① statutes and responsibilities of transboundary Basin Organizations,
- ② preparation of basin management plans and action programs,
- ③ financing Basin Organizations and their programs,
- ④ monitoring and information systems in the management of transboundary basins.

GENERAL RESOLUTIONS

The participants noted with appreciation the advance achieved for a better management of transboundary basins and the significant progress already made in the implementation of policies and real actions at this level.

- The Dakar participants expressed their wish to continue exchanging their experiences through four complementary activities:
 - Organizing regular meetings, either plenary sessions on a yearly basis or topical workshops whenever necessary. Apart from an exchange of experiences, these meetings will result in the identification of the main concerns of Basin Organizations involved in the field.
 - Developing a website based on the methodologies, techniques and contents already elaborated within "AQUADOC-INTER" in Central Europe and "EMWIS" in the Mediterranean region. This common website should include case studies and documents produced by Basin Organizations (abstract in English and French, links with the sites of the Basin Organizations). This site would also include current information, a forum for discussions and frequently asked questions,

links towards new documents and information produced at the international level.

- Promoting training programs for executives and staffs of Basins Organizations.
- Establishing twinning arrangements between Basin Organizations of different countries facing common problems, notably within the "TWIN-BASIN" project or already existing agreements.
- The organizations represented in Dakar expressed their support to Pilot River Basins exercises, such as those developed in the European Union for WFD implementation or within the European Water Initiative for Africa for instance, within that of GEF and in an increasing number of countries. They recommended to propose additional pilot basins for widening the exercise to adapt it to the context of each region of the world.
- The Delegates also wished to enlarge the direct dissemination of Pilot River Basin results to all other Basin Organizations. Generally speaking, in spite of the Web facilities, access to information remains complex.

OF BASIN ORGANIZATIONS (ANBO) ORGANIZATIONS

- As regards **transboundary basins**, it seems necessary to support the creation of International Commissions or similar Organizations and to provide better means to those already existing, and to reinforce cooperation between the neighboring countries of each of these basins.
The case of rivers of large federal countries may, for some aspects, be compared to the one of transboundary basins.
- As regards the specific aspects of the **prevention and control of floods and droughts**, which heavily affect many countries, the Delegates confirmed that there is a need to better exchange information and know-how and that it is essential to harmonize the control plans between the countries of transboundary basins.
In particular, they recommended to build reliable and effective systems for quick warning against floods and droughts and to create mechanisms for prevention and action to face the natural disasters caused by water and to protect human lives and properties.
- **Consistency of the water monitoring and information systems**, harmonization of data and Geographic Information Systems and the use of common models are essential for sharing information and following up actions in transboundary basins.
- A joint thinking on the **methods and means for consulting and mobilizing the populations** is urgent. It would also be very useful to jointly formalize strong and easily appropriate arguments likely to justify a real interest and an effective participation of the populations, whose approval is essential for the successful implementation of the projects related to water policy in the basins that are still expecting tangible results.
- The participants also drew the attention of the proper Authorities on taking adequate measures to prevent the **introduction and the dissemination of invasive aquatic species** which cause considerable ecological and economic damage and of which new specimens are continuously discovered.
- They wished a better participation of the transboundary basins supported by GEF in the Network activities and they asked the INBO Member Organizations to get actively involved in the activities initiated during the operational phase of **"IW-LEARN" Project with GEF support.**

Mr. OULD MERZOUG, OMVS High Commissioner, will chair the Network of International Commissions and Transboundary Basin Organizations up to its next Plenary Assembly.



ANBO Bureau chaired by Mr. Mohammed Bello Tuga, Executive Secretary of NBA

REGARDING THE AFRICAN CONTINENT IN PARTICULAR

- ANBO proposes to all interested organizations of the water sector, of Southern, Central, North, East or West Africa, to governmental Administrations, Basin Organizations, either existing or being created, bi and multilateral cooperation Organizations, to become a member **to jointly develop a true common African expertise on the management of the sixty, or about, transboundary basins of Africa.**
- ANBO proposes to the European Union, to the bilateral and multilateral cooperation Agencies involved and to the countries concerned, to assist in the implementation of its multi-year action plan. It proposes, in particular, to create and facilitate a **"Permanent Technical Committee"** of the **African Basin Organizations**, especially the pilot basins selected for the first phases of the European Water Initiative, in order to allow the managers of these basins to regularly exchange their experience, to evaluate their projects, identify the best practices adapted to the African contexts, to define the encountered problems and to make the syntheses necessary for disseminating the lessons learned on the whole African continent.
- ANBO also proposes to organize **training courses on "the six pillars of IWRM"** open to the African executives and technicians concerned.
- ANBO wishes that a project for an **African Water Information and Documentation System (AWIS)** be very quickly launched to federate the information centers, either existing or to be created in the interested basins or countries, to share their references, useful documents and African studies, to store them and make them easily available to everyone.

The Delegates retained with thanks the proposal from Morocco and the Niger Basin Authority (NBA) to organize in 2005 the next meetings of the Bureau and General Assembly respectively.

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Mrs. JOUYE De GRANDMAISON and Mr. OULD MERZOUG hand INBO medal to President WADE

AFRICA

TRANSBOUNDARY BASIN MANAGEMENT

EUROPEAN WATER INITIATIVE



A working group, led by the French Ministry for Foreign Affairs, was entrusted, according to the Strategy approved by the EU and the African Ministerial Council on Water (AMCOW), with the launching of a program:

- ➔ for transboundary water resource management (TB);
- ➔ for drafting national IWRM plans.

There are over 60 international river basins in Africa, and virtually every African country shares at least one of them. Implementation of basin-level integrated water resources management in Africa therefore requires international cooperation among riparian countries.

Following the Earth Summit on Sustainable Development of Johannesburg, a strategic partnership was established between African countries and the European Union on Integrated Water Resource Management (IWRM) especially at the level of Transboundary Basins to achieve the Millennium Development Goals.

Indeed, in each transboundary basin, each riparian country should have the capacity to manage the resources of its national part of the basin.

AMCOW identified the needs for support in four sub-regions and selected five "pilot" transboundary basins for which support will be requested from the 9th EDF intra-ACP budget:

- **Southern Africa:** Orange-Senqu Commission (ORASECOM);
- **Central Africa:** Lake Chad Basin Commission (LCBC);
- **East Africa:** Lake Victoria basin (Nile Equatorial Lakes Subsidiary Action Program -

NEL-SAP), and Kagera Basin Organization (KBO);

- **West Africa:** Niger Basin Authority (NBA) and Volta river basin.

The International Office for Water was entrusted by the French Ministry for Foreign Affairs with the identification, in relation with the other European Cooperation Agencies involved, of the priority actions that could be financed by the European Union starting from 2005.

A budget of Euro 10 millions has been allocated to this program. The funds should be shared reasonably and equitably between the four sub-regions, following the identified priorities in each of the 5 pilot basins.

Stakeholders' involvement

During the whole process, liaison and consultation were made with both African (AMCOW-TAC, NEPAD, River Basin Authorities, Regional Economic Commissions, National Authorities such as Ministries of Water and Environment or Water Authorities) and European officials (European Delegations in riparian countries, European bilateral Cooperation and Local Technical Assistants).

Preparatory missions also allowed meetings with the local stakeholders of each basin to discuss priority actions.

Methodology

Project analysis is based on six IWRM "pillars" or priority areas of intervention:

- institutional frameworks,
- mobilization of financial resources,
- capacity building,
- assessment and monitoring,
- awareness and confidence building,
- basin management plans and action programs.

Many already available documents were reviewed and numerous meetings and talks with local and regional stakeholders, in each of the five pilot basins, allowed the necessary integration of due information and the identification of priorities.

In order to be supported under the program, priority activities should add value to other activities and help to remove obstacles to improved water management in the basin.

First orientations

"Institutional frameworks strengthening" seems to be a permanent need, in all basins. Indeed, even when financial means appear to be available, it is sometimes difficult to apply them because of weakness of administrative structures.

"Ownership" is clearly an important issue. The River Basin Authorities (main beneficiaries) and Regional Economic Commissions will have to own the program. Ownership will definitely be a key factor for the sustainability of foreseen actions.

Involving Countries and Basin Organizations

Some institutions still have problems to switch from an official stereotyped speech (IWRM, Civil Society involvement with decision-making process, etc.) to its field application.

Many countries still do not have suitable legislative and regulatory frameworks that define statutes, tasks, responsibilities for national institutions and that allow inter-sectoral and inter-administrative coordination between them.

Most countries have no National Water Resources Management Plan.

Real participative processes, which involve water users, local collectivities, NGOs, etc, are rare.

Improving this situation is urgent, so that strategies elaborated at transboundary level can really apply within each national section of the basins.

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A NEW STRATEGIC APPROACH

The Strategic Approach to sustainable, efficient and fair development of water resources is based on the new European cooperation policy, the tool of which includes "Guidelines" for project support.

The European Commission has organized workshops for building awareness to this approach, with the local help of CEFOC (West and Central Africa), NCWSTI (Southern and South Africa), NETWAS (East Africa) and NWRI (Kaduna - Nigeria), HR Wallingford and IOWater.

In total, nine workshops were held in ACP countries, including 7 in Africa: in South Africa (2 workshops), Kenya, Burkina Faso, Djibouti, Chad and Nigeria.

Discussions with the DG External Relations and EU Delegations identified main areas of interest and specific country needs.

Group of trainees in the Ouagadougou workshop - Burkina Faso



EUROPEAN COMMISSION

DRINKING WATER AND SANITATION IN POOR COUNTRIES: EU LAUNCHES € 500 M WATER FACILITY

The European Union (EU) has launched a € 500 million Water Facility for African, Caribbean and Pacific (ACP) countries. The Facility will drive progress towards achievement of the water and sanitation related Millennium Development Goals as well as the targets set at the World Summit for Sustainable Development, held in Johannesburg in 2002.

The Facility marks a change in the EU's development strategy. It will be:

- ❖ **Open** - soliciting proposals from national and local governments, municipalities and civil society organizations;
- ❖ **Demand-driven** - supporting communities in greatest need;
- ❖ **Innovative** - providing grants for blending with loans, public-private partnerships and other sources;

❖ **Long-term** - fostering improved and integrated management of water resources.

At the Johannesburg Summit, the EU launched a Water Initiative (EUWI), which aims at rallying Member States, civil society and financial institutions, as well as water industry. It is based on the principle that our objectives for drinking water and sanitation should be achieved with an integrated approach to river basin management.

The Water Facility will be able to promote new initiatives, provide technical assistance, build research and management capacity in ACP countries and most importantly provide a flexible source of grant-funding.

The Facility is based on the following key principles:

■ **Governance:** to build or strengthen institutional and regulatory frameworks

which are a precondition for recipient countries' ability to attract more funds;

■ **Ownership:** to support and deepen the involvement of actors in ACP States in the design and implementation of water policies;

■ **Flexibility:** by providing the necessary seed capital to launch projects for forging the public/public partnerships needed to increase funding.

Within the framework of the EU Water Initiative, the partners are working together to:

- 1 reinforce the political commitment to improve access to clean water and sanitation in the context of poverty reduction;
- 2 promote public/private partnerships, and strengthen institutional capacity at regional, national and local level;

- 3 improve the coordination of projects;
- 4 encourage regional and sub-regional cooperation;
- 5 generate additional, flexible and innovative funding.

The Commission launched the first Call for Proposals during the autumn of 2004 in ACP States for:

- Improving water management and governance;
- Co-financing water and sanitation infrastructures;
- Co-financing civil society initiatives.

Further information will be available at:

http://europa.eu.int/comm/europeaid/projects/index_en.htm

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NGOs POINT OF VIEW

AN EXPERIENCE TO PROMOTE IN CAMEROON

Cameroon is concerned with the four large basins of Lake Chad, Niger, Atlantic Ocean and Congo, having a great ecological and climatic diversity, starting from the arid Sahel to a dense and humid forest zone passing through a mountainous area.

This climatic and ecological diversity could be an asset, if

we take into consideration the numerous advantages of water management by basin and the creation of a system for the financing and management of water resources.

An approach, with the creation of Management Councils (for local dialogue) and Basin Committees could be a good starting point to speed

up the development of the communities.

An experiment on a small scale (Bamenda Urban Council) carried out by IDF, a local NGO, has established that better education of communities leads to a great improvement in water resource management with the involvement of these communi-

ties in the design and decision-making that concern them. Thanks to this participatory process better urban and agricultural practices have been noticed.

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WATER MANAGEMENT ISSUES IN THE CONGO RIVER BASIN

The Congo River, with a strong and regular average flow (40,000 m³/sec), has become a strategic source of water for nations with water deficits. The Democratic Republic of Congo extends on two thirds of the basin, which is shared by 7 countries. In the DRC, draft laws relative

to the water code were submitted to the Parliament to promote better integrated management from an institutional viewpoint. The joint management of the resources is still assigned with some ambiguity to the Ministries of the Environment and Energy. The National Action Committee

for Water and Sanitation is responsible for formulating rehabilitation and development programs in the drinking water sector and supervising their implementation.

Until these reforms take place, the insufficiency of the national policy and of the institutional framework is a handicap for

decision-making on the use of water resources.

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NIGER RIVER BASIN: FIGHT AGAINST THE WATER HYACINTH

For fifteen years, the Niger River has been attacked in its higher course in Mali by the water hyacinth. It covers all the surface of the river, pumps water, that it evaporates, chokes all the animals, is an obstacle to navigation

and perturbs water abstractions.

The Group of Action for the Safeguard of the Niger River (GASFN) undertook, with the financial support of the Program of Small Subsidies from the Global Environment

Fund of UNDP, to teach the riverside residents (fishermen, paddlers, washerwomen, farmers, etc.) a simple composting technology for producing a biological fertilizer and the conversion of desiccated stems into arti-

facts, such as baskets, basketwork, etc.

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A project in Sub-Saharan Africa, supported by the Challenge Program on Water and Food (www.waterforfood.org), hypothesizes that through an indigenous African approach, starting from local traditions and social arrangements, it will be possible to create more resilient water institutions, while also giving greater voice to the inhabitants in the process.

In particular, the project will be:

- ① networking the researchers and implementers to increase awareness of African indigenous structures and disseminate project results,
- ② creating profiles of governance in two basins, the Volta and Limpopo,
- ③ developing specific recommendations for including in-

igenous principles throughout Sub-Saharan Africa.

The project partner institutions include the International Water Management Institute (IWMI), the International Food Policy Research Institute (IFPRI), the Water Research Institute (Ghana), the "Institut National de l'Environnement et des Recherches Agricoles" (INERA, Burkina Faso), the African Wa-

ter Issues Research Unit (AWIRU, Pretoria), and the Department of Soil, Science and Agricultural Engineering, University of Zimbabwe.

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UN-WATER-AFRICA

A BI-ANNUAL REPORT ON WATER IN AFRICA

The Interagency Water Group, UN-WATER, endorsed the focus on Africa at its 8th session held in Niamey in April 2001, as part of the World Water Assessment Program (WWAP) and decided to develop an Information System (African Water Information Clearing House) to support a report on

water for Africa on a bi-annual basis (AWDR).

The key qualities of the system are an easy access for all member nations, the availability of raw data and analyses, interconnectivity with databases on African Water Resources, the initiating of a systematic collec-

tion of data and help in data exchange between the databases.

Three workshops were held in Accra, on 15-17 June and 15-18 September 2004, and in Mombassa, on 13-15 October 2004. They gathered more than 100 participants from 20 countries.

This series will be continued in the other sub-regions in 2005.

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PARIS CONFERENCE

A COOPERATION FRAMEWORK FOR THE NIGER RIVER BASIN

The "Management and Governance Principles for the Sustainable Development of the Niger River Basin" were adopted in Paris on 26 April 2004 by the Heads of State and Government of the Niger Basin Authority (NBA):

- ① The aim of the partners is, on the one hand, to facili-

tate the implementation of rational management of water resources and ecosystems of the Niger River Basin through enhanced distribution of the water resource and its benefits based on the needs of the various users and, on the other hand, to encourage

further cooperation among the Members States.

- ② They attach specific importance to carrying out impact studies and socio-economic integrating studies, which can better facilitate the assessment of stakes, constraints, impacts and benefits to be shared from the planned investments or management actions.
- ③ The projects which can significantly affect the quality and/or quantity of the water resource will be subject to prior information of all partners by NBA.
- ④ In the absence of such prior information, the projects and works will not be financed by one of the partners.

- ⑤ Each partner is committed to enhance coordination with the others and to develop synergies among ongoing or future projects and programs.

- ⑥ The partners commit themselves to support NBA in its capacity building process, in accordance with the resolutions of the Council of Ministers of 8-9 January 2004, held in Yaoundé.

- ⑦ The NBA Partner Consultation Committee, coordinated by the World Bank, is the implementing structure of these projects.

INBO is one of the signatories of this Cooperation Framework.



PAN-AFRICAN CONFERENCE ON WATER

ADDIS ABABA - DECEMBER 2003

The aim of the Pan-African Conference, that took place in Addis Ababa in December 2003, was to determine how to jointly achieve the Millennium Development Goals regarding water in Africa.

18 African countries participated at ministerial level, and all the donors attended.

At the invitation of the FAO, INBO contributed to the topic "Water for food security".

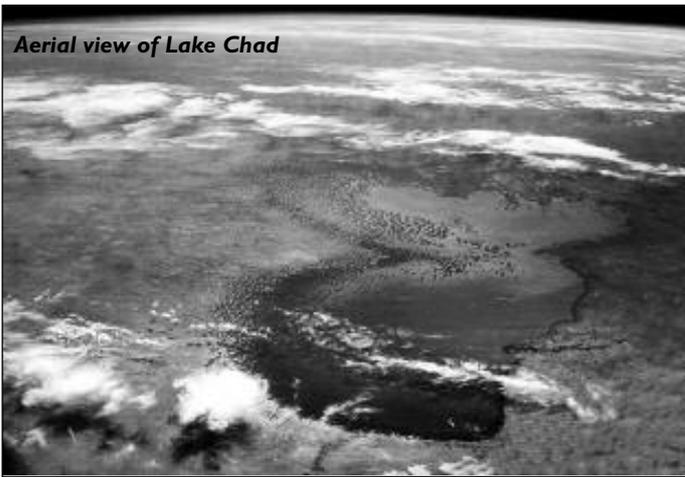
The rapporteurs noted the low efficiency of efforts in favor of food sufficiency, particularly in Africa.

Our representative described the possibilities offered by Integrated Water Resource

Management (IWRM) at the river basin level, as recommended by INBO.

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LAKE CHAD BASIN COMMISSION (LCBC)



Aerial view of Lake Chad

Statutes and assignments

The convention, signed on 22 May 1964 in Fort Lamy, now N'Djamena, by Cameroon, Niger, Nigeria and Chad created the Lake Chad Basin Commission (LCBC). It is a sub-regional and intergovernmental organization which gathers, in addition to the four riparian countries of Lake Chad, the Central African Republic which became member in 1994. The main goal of this organization is to use and bet-

ter manage the natural resources of the basin for the well-being of the populations concerned.

This organization's mandate concerns "the conventional basin" of Lake Chad, which covers a surface area of 984,455 km².

The basic assignments of the Commission are:

- ➔ to share common regulations allowing the full application of the Statutes and Convention,

- ➔ to gather, review and disseminate information on the projects of the Member States and to recommend joint planning,
- ➔ to maintain relations between the Contracting Parties for the most effective use of the basin waters,
- ➔ to follow up the execution of the studies and work in the basin,
- ➔ to prepare common regulations related to navigation,
- ➔ to formulate rules for its staff and to have them applied,
- ➔ to examine complaints and contribute to the solution of disputes.

This Commission has an Executive Secretariat which was restructured in 1990 and its task was refocused on:

- the inventory of the basin water resources, the collection, analysis and processing of data, the planning and follow-up of development activities,
- the implementation of regional projects and the promotion of national projects.

Among the other achievements of the Commission there are the Diagnostic Analysis of Environmental Degradation in the Basin, the Strategic Action Plan (SAP) and the Vision for 2025 of LCBC. The latter plans that:

- the Lake Chad - common heritage - and other wetlands should be sustainably preserved to ensure the economic security of the freshwater ecosystem resources;
- the national and regional Authorities accept an integrated and sound management of the river basin in order to achieve sustainable development;
- each Member State has equitable access to healthy and sufficient water resources to meet its needs and rights and to preserve its freshwater resources, its ecosystem and biodiversity and to reduce the level of poverty.

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CREATION OF THE VOLTA BASIN TECHNICAL COMMITTEE

We, Experts representing the States sharing the Volta Basin, namely:

- ❖ the Republic of Benin;
- ❖ Burkina Faso;
- ❖ the Republic of Ivory Coast;
- ❖ the Republic of Ghana;
- ❖ the Republic of Mali;
- ❖ the Republic of Togo;

gathered in Ouagadougou on 29 and 30 July 2004,

Aware of:

- the vulnerability and scarcity of freshwater resources;
- the increasing water demands and the vulnerability of our economies facing climatic hazards;
- the demographic, social, economic and environmental pressures on the resources of the Volta Basin, which affect the riparian populations and hinder poverty reduction and sustainable development;

- the lack of a Basin Organization being a handicap, in many ways, to the concerted development of the Volta river and of an international partnership.

Considering:

- the significance of the economic, social, cultural and environmental functions of water resources;
- the will of our States to promote Integrated Water Resource Management in the Volta Basin;
- that the river basin is the relevant planning unit for water resource management;
- the willingness of our States for joint venture and solidarity regarding the development of all the resources of the Volta Basin with a shared vision;
- the recommendation of the meeting, held in Accra from 8 to 11 July 2002, relative to the creation of a Technical Committee for the Volta Basin (CT-BV).

Convinced:

- of the need for strengthening cooperation between the Governments of the States, which share the Volta Basin, for the sustainable management of these resources;
- that the creation of a Basin Organization is essential for the implementation of the IWRM principles and practices on the Basin scale;
- of the need for promoting economic development in our countries with the integrated development of the Volta Basin;
- that the creation of an intergovernmental committee for dialogue is a prerequisite to the process leading to the creation of a Volta Basin Organization.

Adopted the following resolutions:

- ◆ a resolution relative to the constitutive documents of the Volta Basin Technical Committee;
- ◆ a resolution on the European Union Initiative for the improved management of transboundary basins in Africa;
- ◆ a work plan for the August-December 2004 period;
- ◆ a motion of thanks.

In addition, the meeting created a unit for the follow-up of its conclusions.

www.inbo-news.org
 All information on INBO is available



on the WEB
www.inbo-news.org

COOPERATION ON THE NILE

INTERNATIONAL APPROACH



The River

The River Nile is one of the world's great rivers.

It is shared by ten countries: Burundi, Democratic Republic of Congo (DRC), Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda. The river serves as home to world-class environmental assets, such as Lake Victoria (the second largest freshwater body by area in the world) and the vast wetlands of the Sudd. It also serves as home to an estimated 160 million people.

Nile Basin Challenges and Opportunities

Despite its extraordinary natural endowments and rich cultural history, today the Basin is characterized by poverty, instability, rapid population growth, and environmental degradation. Four of the Nile riparian countries are among the world's ten poorest, with per capita incomes in the range of USD 100-200 per year.

But the Nile offers significant opportunities for development that could enhance food production, energy availability, transportation, industrial development and environmental conservation.

Evolution of cooperation in the Basin

Although cooperation started in the form of bilateral agreements a long time ago, the countries of the Nile Basin have been engaged in regional cooperative activities over the past thirty years: Hydromet, which was launched in 1967, with the support of UNDP, was one of the first regional projects. It was followed by the **Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE)** created in 1993.

Also in 1993, "Nile 2002", the first in a series of ten Conferences was organized with the

support of CIDA. In 1998, recognizing the mutual benefits to the region, all riparian countries, except Eritrea, joined in a dialogue to create a regional partnership to facilitate the common pursuit of sustainable development and management of Nile waters. The transitional mechanism of the **Nile Basin Initiative (NBI)** was officially launched in February 1999 in Dar es Salaam, Tanzania, by the Council of Ministers of Water Affairs of the Nile Basin States.

NBI Vision and Actions

"To achieve sustainable socioeconomic development through the equitable utilization of, and benefit from, the common Nile Basin water resources" is the shared vision of the Nile Basin Initiative.

To translate the Shared Vision into action, the riparian countries have developed a Strategic Action Program that focuses on two approaches:

- a basin-wide **Shared Vision Program (SVP)** to create an "enabling environment" for cooperative action through building trust and skill,
- a **Subsidiary Action Programs (SAP)** to plan and implement activities

"on the ground" at the lowest appropriate local level, taking into account the benefits from, and impacts of, these activities in all riparian countries.

Celebrating Cooperation on the Nile (ICCON-I)

The first meeting of the **International Consortium for Cooperation on the Nile (ICCON)**, which took place on June 26-28, 2001, in Geneva, Switzerland, was a major milestone for the Nile Basin Initiative. The meeting, for the first time, brought together Ministers and senior officials from Nile basin countries with representatives of bilateral and multilateral donors, professional organizations, media and NGOs. As a first step, USD 140 Million was raised to support both SVP and SAP programs.

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GUINEA

THE "WATER TOWER" OF WEST AFRICA

The Republic of Guinea is drained by twenty three (23) river basins including fourteen (14) international ones, which gave it the usual name of "water tower" of West Africa. Guinea is member of the Organization for the Development of the Gambia River (OMVG), the Niger Basin Authority (NBA) and of the Union for the Mano river. It develops a cooperation with the Organization for the Development of the Senegal River (OMVS).

The Organization for the Development of the Gambia River (OMVG)

Created on 30 June 1978, it gathers the Republics of Gambia, Guinea, Guinea-Bissau and Senegal.

OMVG assignments are the development and sustainable management of the natural resources and energy of the transboundary river basins of Gambia, Koliba/Corubal and Kayanga/Géba rivers, which are under its jurisdiction.

With such a prospect, it has, thanks to the technical and financial assistance of ADB and IDB, identified and implemented two large projects:

- **The project for the Development and Management of Natural Resources**, with a cost 17.738 billion FCFA, which started on 1st April 2004 for a 6-year duration.
- **The Energy program**, which falls within the framework of a study of the means for energy production and electricity

transmission in the OMVG Member States.

In its first phase, the latter project concerns the feasibility of the Sambagalou Dam on the Gambia river (in Senegalese territory) and of the interconnection of the electric transmission systems of the OMVG Member States.

The study established that this whole arrangement, made up of the Sambagalou dam and the interconnection line, will only be financially viable if the production of the Kaleta hydroelectric development, located on the Konkouré river which is under the sole sovereignty of the Republic of Guinea, is taken into account.

During the 30th Session of OMVG's Council of Ministers held on 21 and 22 October 2003 in Conakry, the Guinean Government agreed, in principle, on the integration of the Kaleta project in the regional system of the Organization's Member States.

Following this agreement, the 29th Session of the Conference of the Heads of States and Governments of the CEDEAO, held on 19 December 2003 in Accra (Ghana), adopted the Sambagalou / Kaleta project and its transmission system within the framework of OMVG.

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KENYA

EWASO NGI'RO SOUTH BASIN DEVELOPMENT AUTHORITY (ENSDA)

The EWASO Ngi'ro south river basin crosses one of the most vital resource belts of Kenya and Tanzania: 70% of Kenya wheat is produced in the basin which supports a huge number of livestock and wildlife. The world famous "Maasai Mara", which is home to diverse wildlife species, falls within the Ewaso Ngi'ro basin. The river originates from Mau Escarpment which is the largest water tower in Kenya. The catchment area has been excised and deforested over the last six years. Today the river and its tributaries are facing severe threats as some of them have started drying up or flows reduced.

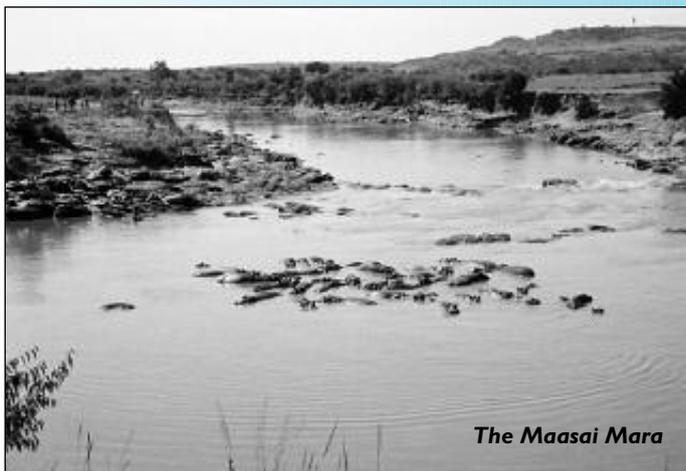
To achieve sustainable resource management in the basin, the Ewaso Ngi'ro South Basin Development Authority (ENSDA) has just concluded the drafting of its 2005-2009 strategic plan.

To carry out this plan, **ENSDA has embarked on establishing basin committees** comprising various stakeholders. The role of the committees is to provide linkages to ensure water quality control and catchment protection, which is a key to sustainable water management. The committees will work closely with water users asso-

ciation, local authorities and organizations representing various interest groups. These forums provide a framework for dialogue and effective water governance.

Over the past few years, there have been problems due to the weakness of information systems on water resources in the basin. The authority has just established a regional resource center with a computerized information system. The center is a documentation center with GIS for hydrology, pollution, abstraction levels, catchment degradation. However this tool is yet to be fully operationalized and strengthened.

The recently introduced integrated water development and management is gaining support from stakeholders. The argument is that water development should address issues of food security, health and sanitation, catchment conservation and information exchange. Development of water schemes should integrate related socioeconomic sectors, the meeting, in a sustainable and inter-sectoral manner, of all essential and legitimate needs, the protection against risks and the preservation and rehabilitation of ecosystems.



The Maasai Mara

ENSDA will soon establish a basin-based participatory planning unit within its five sub-basins that form the EWASO NGI'RO south river basin, to ensure greater cooperation and conflict resolutions on natural resources utilization. To achieve this objective, the authority is building strong partnerships with institutions of higher learning, local authorities, civil societies, private sector and other similar organizations.

For example, close links have been established with Egerton University and Narok county council in the conservation of the Mau catchment area.

Most rivers (Sondeu, Nyando, Mara, Yala and Ewaso Ngi'ro) draining into Lake Victoria originate from Mau. All these rivers are transboundary and face severe threats from human activities. There are ongoing surveying and restoration of forests. ENSDA is developing an information management system to monitor the evolution of flow, water quality and management.

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NIGERIA

TOWARDS REFORMS

Nigeria, with a land area of 923,000 sq. km, is located in the tropics where its climate is semi-arid in the North, gradually becoming humid in the South and is subject to significant temporal and spatial variations.

Need for Reforms

The threats and challenges facing the nation's water resources led the Government to move towards integrated management that underpins the nation's socioeconomic development.

A number of programs and projects were initiated.

Hadejia-Jama'are-Komadugu-Yobe basin Project

The Hadejia-Jama'are-Komadugu-Yobe Basin (HJKYB) is of strategic national and international importance, with a

dense population concentration which is increasingly putting pressure on scarce water resources. These resources are shared by Nigeria on the one hand and Niger, Chad, Cameroon and Central African Republic on the other hand. The Hadejia-Nguru Wetlands (HNWs) have immense local, national and international economic and ecological importance.

The National Council on Water Resources took charge of the program of reforms of the Water Resources Sector in 1998.

The reform program is based on the "Governance cycle" of sector reform, which divides the process into several phases: Review, Policy Development, Reform and Implementation. The review phase was completed in June 2001.

International Agreements and Conventions on Integrated River Basin Management

Nigeria is a member of the Niger Basin Authority (NBA) and Lake Chad Basin Commission (LCBC).

Water Financing: Use of the "User-polluter-pay" Principle

Water Resources Development and Management are basically a function of the Government. This responsibility is shared among the three levels of Government: Federal, State and Local. The Government largely finances the construction of large dams and irrigation projects. International Organizations and NGOs however intervene in the area of feasibility studies, design and capacity building.

The Participation of Water Users - the Basin Committees

In 1973, the Federal Government created the Sokoto Rima, Chad and Hadejia Jama'are Basins. Presently, there are **twelve River Basin Development Authorities (RBDAs)** in the country charged with the responsibilities of full development of irrigation schemes, water supply, flood control, resettlement and food production.

These Authorities are to initiate programs to encourage participation: the Water Users Association was set up to promote Integrated Water Management.

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CENTRAL ASIA

INTERNATIONAL SECRETARIAT FOR WATER ORGANIZATION OF THE CIVIL SOCIETY AND COMMUNITY MANAGEMENT



General assembly meeting of CAAW, Osh, Kyrgyzstan

Since 1998, the International Secretariat for Water (ISW), in collaboration with NOVIB, the Swiss Agency for Development and Cooperation (SDC) and the "Comité Catholique contre la Faim et pour le Développement" (CCFD), has been implementing a community water management project in nine villages in Kyrgyzstan and five villages in Uzbekistan. This project aims to create and strengthen local civil society organizations capable of managing water, hygiene, health and other community development issues. Since its beginning, 53,000 people gained access to

drinking water through 14 village committees which manage the water system of their own village. They collect 80% of the operating costs from the users. In March 2001, ISW, with local Water village Committees, created the Central Asian Alliance for Water (CAAW) to expand and share with other villages its knowledge and skills. The Alliance is a member of Solidarity-Water Europe.

Since January 2004, ISW is working in Andijan and Fergana provinces of Uzbekistan to manage a new phase of the project. This phase aims at de-

centralizing the management of drinking water supply and improving hygiene at the village level. SDC has provided a grant of US 1.7 million over three years (2004-2007).

The main expected results are:

- ❖ Rehabilitation of drinking water supply systems or building of new ones in twenty villages.
- ❖ Understanding of the community ownership concept by the people concerned and local authorities. Village peoples pay monthly water charges to operate and maintain the system.
- ❖ Creation of water management committees, functioning democratically, in all villages concerned, which become self-reliant to operate and maintain the system.
- ❖ Reduction by 10% of children's diarrhea; hand-washing practices by children and households have increased by 30%.
- ❖ Organization of "youth parliaments" in targeted schools, which are able to plan, fund and implement

water, hygiene and environmental activities.

- ❖ Building of a regional network of practitioners who share information and experience to replicate the sustainable community management practices in new sites.

A few figures

The results of the last six years were:

- Water-borne diseases have decreased by 70%;
- Infant mortality has been almost eradicated in all villages;
- 132 ecological sanitation toilets have been constructed;
- Micro-credit programs delivered loans to more than 4,000 women and generated employment to about 8,000 people. The reimbursement percentage is 99% and portfolio risk is 1.5%;
- Women represent about 50% of water committee's members and are presiding over 3 water committees;
- Youth parliaments are active in 15 schools.



Village collective work in Kunelek, kyrgyzstan



Meeting of the management board to discuss the extension of the water system



Loan officer preparing micro-credit for Gulcha women's group

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"RIVERTWIN"

PUBLIC PARTICIPATION AND AWARENESS

The SIC ICWC of Central Asia, together with partners from European countries (Germany, Greece, the Netherlands, and Sweden) and from Benin (Africa), is implementing a specific RIVERTWIN research Project. The project objective is to develop an integrated regional model for the strategic planning of integrated water resources management (IWRM) in twinned river basins.

Three river basins were selected for modeling (the Neckar river, the Queme river, and the Chirchik river in Germany, Benin, and Central Asia, respectively).

SIC ICWC carries out research on the transboundary Chirchik river basin, which is located in three Republics: Kazakhstan, Kyrgyzstan, and Uzbekistan.

One of the components of the project is the Public Participation and Awareness (PPA).

The aims of PPA in the project are to inform all concerned parties about the project objectives, to involve the public in discussions on river basin development scenarios, to develop a system of public support to bodies in charge of selecting the development scenarios

with a strong inter-sectoral coordination and finally to contribute to the involvement of the civil society and ensure transparency in the decision-making process.

Various workshops are planned to gather representatives of the concerned institutions.

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ARAL SEA

INTEGRATED MANAGEMENT OF THE AMU-DARYA AND SYR-DARYA RIVERS



Taking into account the increase in water shortages and ecological aggravation in the Aral Sea Basin, an "Agreement between Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan about cooperation at regional level on the management and conservation of international water resources" was signed, on 18 February 1992. It created the Interstate Commission for Water Coordination (ICWC) of Central Asia, whose main tasks are to formulate common orientations, to determine water consumption limits for each State and the suitable operating mode for reservoirs and international waterways. ICWC meetings are held 3-4 times a year, alternatively in each Central Asian State, under the chairmanship of the receiving country.

The ICWC executive agencies are the "Amu Darya and Syr Darya" River Basin Organizations (BVO).

The regional project "Integrated water management in Fergana Valley" has been imple-

mented for two years under the aegis of ICWC to study mechanisms for sharing water resources between the Central Asian States with the support of the Swiss Agency for Development and Cooperation (SDC).

Based on the Fergana Valley experience, a new regional project is being implemented by the Scientific Information Center of the Interstate Commission for Water Coordination (SIC ICWC) with the assistance of USAID, to enhance cooperation between Central Asian countries in the field of joint use of water resources of the Amu-Darya and Syr-Darya rivers by using four pilot sites in Kazakhstan (Kzyl-Orda province), Turkmenistan (Dashgovuz province), and Uzbekistan (Horezm province and Karakalpakstan).

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"ESCAP"

Within the ESCAP "Capacity Building on Strategic Planning and Management of Natural Resources in Asia and the Pacific" a project was initiated in 2002 in 5 countries of the Central Asian Region: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, with the support of the Swiss Agency SDC and the U.S. State Department.

National Work Teams together with SIC ICWC have developed proposals which were examined at the 40th ICWC meeting held in Cholpon-Ata, Kyrgyzstan on 19 August 2004.

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"CAREWIB"

The aim of the "Central Asian Regional Water Information Base (CAREWIB)" project, which started in January 2004, is to help the public to have access to information and thus improve sustainable development and partnership in the area of rational use of national natural resources.

The Project's priority tasks:

- Opening of a regional Internet portal of information,
- Creation of an interstate information system on the natural resources in the Aral Sea basin to which it is

planned to connect all oblast water authorities of the Aral Sea basin.

- Capacity building.
- Production of publications.

The project is implemented by SIC-ICWC in Tashkent together with UNECE/SPECA and UNEP/GRID-Arendal and financed by the Swiss Agency SDC. It involves 13 oblast water authorities from the five countries in the region.

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THE REGIONAL CENTER ON HYDROLOGY - RCH

A meeting of the Directors of National Hydrometeorological Services (NHMS) of the Aral Sea basin (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) took place on 22-23 February 2004 in Almaty. The chairman of the Executive Committee of the International Fund for Saving the Aral Sea, representatives of Swiss Development Cooperation (SDC), Swiss Mission on Aral Sea Problems and of USAID participated in the meeting.

An agreement regarding the organization of the Regional Center on Hydrology (RCH) under the aegis of EC-IFSAS was signed by the five regional NHMS during the meeting to allow the on-line hydrological information exchange for fore-

casts and for developing and upgrading the hydrological network for forecasting river flows in the Aral Sea Basin.

The RCH assists national institutes in conducting regional hydrological researches.

One of the priorities is the creation of the ARAL-HYCOS system supported by WMO, which will allow not only to upgrade hydrological monitoring, but also to provide maximum efficiency in hydrological information exchanges by means of satellite communication.

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THE INFORMATION-CONSULTING CENTER (ICC)

SIC ICWC has created an Information-Consulting Center on the European Commission's "FP6" in Central Asia for developing cooperation between European and Central Asian scientific groups in the field of sustainable development, global change, ecosys-

tems and rational water use, by overcoming the isolation of regional researchers.

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KAZAKHSTAN - RUSSIA

TRANSBOUNDARY MANAGEMENT OF THE IRTYSH BASIN
OMSK CONFERENCE, MAY 2004



The Irtysh in Omsk

As soon as 1998, during a first project for the improvement of water quality in the Irtysh river in Kazakhstan, the idea of implementing basin management for this river, a tributary of the Ob, started to grow.

In 2001, a project started, with financing from the French Fund for Global Environment (FFEM), for a transboundary basin management approach between Russia (Omsk Oblast) and Kazakhstan (Pavlodar and Eastern Kazakhstan Oblasts).

It allowed the development of cooperation between the two countries with the support of French experts concerning 4 main topics:

- **The creation of a common water database between the two countries.**

Using the inventory of data suppliers, the new system concerns the qualitative and quantitative aspects of surface and ground waters, polluters and water users, abstractions, uses and dis-

charges. It could be extended to other parameters in the future. It is managed by a computer network, and this allows each country to integrate its data and, as a counterpart, to benefit from the information coming from everyone. **This network, called IRBIS (Irtysh Basin Information System)** is now operational; a Web site (<http://www.irmic.org>) makes available to the public any information requested by the new International Irtysh Commission.

- **The harmonization of procedures and standards and the collection of qualitative and quantitative data**, that could be integrated in the data files of the IRBIS base. For this purpose, an important work of data synthesis and conversion was needed, with the help of the International Office for Water.

- **A need-resource model was built and developed.**

It covers an area of about 1,000 km along the Irtysh between the Chinese-Kazakh border in Bouran and the Krasnoyarska station downstream of Omsk in Russia and takes into account the main tributaries and groundwater, mainly in the downstream area, together with the important diversions made (Irtysh Karaganda canal and the future diversions in China).

This model, developed by SAFEGE, was exploited locally by engineers of Omsk Agrarian University and then made available to the Russian Water Department and to the BVU in Kazakhstan.

- Finally, the creation of the **International Irtysh Commission** with the Authorities of the two countries and with a possibility of its opening to China.

Within this project, the Omsk Oblast in Russia organized an International Conference on 20 and 21 May 2004, which gathered 250 persons around the topic of the protection of Irtysh waters and their transboundary management.

French support (IOWater, SAFEGE, ANTEA) was requested to the FFEM for the three coming years, starting in 2005, in order to better reinforce the International Commission and to continue the development of the hydrological model.

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UZBEKISTAN

BASIN MANAGEMENT OF IRRIGATION SYSTEMS

Following the Presidential Decree on "Urgent directives for reform extension to agriculture", a Government resolution on the transition to basin management of irrigation systems was issued in 2003. The Basin Management Organizations (BMO) are responsible for:

- increasing the effectiveness of water resources use by applying market mechanisms;
- applying a common policy on water saving;
- ensuring reliability of irrigation systems and hydraulic infrastructures;

- managing rational and efficient use of river basin water resources;
- providing reliable mechanisms for water resource control.

The Central Asian Research Institute for Irrigation (SANIIRI) is developing a mathematical model, computer programs and software for improving the management of runoff problems and water regulating works in the main irrigation systems.

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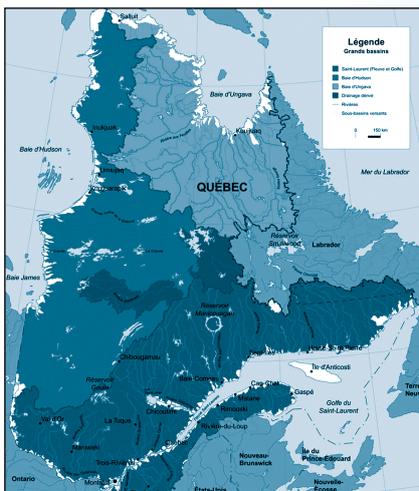
Omsk Vice-Governor and the project team

NORTH AMERICA

DRAFT AGREEMENT ON THE SUSTAINABLE WATER RESOURCES OF THE GREAT LAKES - ST. LAWRENCE BASIN

Protecting the waters of the Great Lakes and the St. Lawrence River, as well as the water-dependent natural resources, is the issue that has given rise to a consultation. After three years of negotiations, the Premiers of Quebec and Ontario, and the Governors of the eight American States bordering the Great Lakes (Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, Wisconsin), are consulting their populations on the draft agreement entitled: "Great Lakes Basin Sustainable Water Resources Agreement" (see Network Newsletter N°11).

This Basin covers an area encompassing the five Great Lakes watersheds (Ontario, Erie, Huron, Michigan and Superior) as well as the St. Lawrence River Basin as far as the City of Trois-Rivières in Quebec (the tidal limit). It represents 18% of world freshwater reserves, but remains fragile and sensitive to climate variations and human actions; a mere 1% of the volume of the Great Lakes is replenished each year by precipitation and runoff.



At the heart of the draft agreement is a common standard for the management of new water withdrawals carried out in the Basin. The common management standard applies to all types of withdrawal (diversions of water out of the basin, projects of water consumption in the basin, projects intended to increase the existing withdrawals), all uses (agricultural, urban, industrial, etc.) and all waters of the basin (surface of the Great Lakes, tributaries, groundwater).

The standard specifies the elements that need to be implemented for the review of withdrawal projects, such as the absence of significant negative impact on the quantity and quality of the waters of the basin, the implementation of water saving measures, the return of withdrawn water to the basin of origin, and improvement of the waters and water-dependent natural resources.

Under the umbrella of the Council of Great Lakes Governors, an extensive public consultation took place from 19 July to 18 October 2004. Each State and Province also held their own public meetings where the population was invited to express their opinions on the draft agreement. The recommendations resulting from this consultation will be taken into consideration in order to draw up the final version of the agreement, planned for 2005. The Governors and Premiers are

relying on this consultation in order to make the agreement an initiative that will contribute to preserving the integrity of the water resources of the Great Lakes - St. Lawrence River Basin for future generations.

It is a first event regarding international water management of the shared basin.

This initiative is likely to interest many INBO members.

All the texts and documentation are available on the following websites:

For Quebec:

<http://www.menv.gouv.qc.ca>

For the Council of Great Lakes Governors:

<http://www.cglg.org>

For Ontario:

<http://www.mnr.gov.on.ca>

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QUEBEC - CANADA

QUEBEC MUNICIPALITIES AND WATERSHED MANAGEMENT

In 1996, the Quebec Government joined the International Network of Basin Organizations (INBO), thus formalizing Quebec's commitment to implementing the provisions of integrated watershed management.

The Quebec Government agreed, in 1998, that a public consultation was needed to let the public voice their views on this important issue. The consultation, whose conclusions were tabled in May 2000, found a broad consensus from an overwhelming majority of participants.

In 2002, the new water policy was adopted, thus establishing River Basin Agencies in 33 watersheds deemed high priority (see Network Newsletter, n°12). Through this joint initiative, representative local and regional stakeholders are brought together to develop a Water Master Plan.

The "Fédération Québécoise des Municipalités" (FQM) represents 900 local municipalities and 85 regional county municipalities (RCMs) throughout the length and breadth of Quebec. These municipalities are Quebec's leading water managers. They manage and pay for drinking water supplies and water purification, maintain local and regional watercourses, manage development of the recreation/tourism potential of water bodies, and determine allowable uses on their territories while taking ecosystem integrity into account. The FQM has been touting the virtues of integrated watershed management in Quebec for many years now. As early as 1992, the FQM was a partner in a pilot project to create Quebec's first watershed committee.

The entire FQM membership feels action is imperative at all levels. The resource must be protected through planning schemes that will guide local regulations from a standpoint of sustainable development.

In coming years, the challenge for all Quebec municipalities will be to achieve water-protection and water-management over their territories, while respecting points on which community partners have reached consensus during development of water master plans.

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"CANWELL 2004"

With the support of the French Consulate-General in Vancouver, Mr. Jean-François DONZIER, Permanent Technical Secretary, was invited to deliver an inaugural speech on European water policy during "CanWell 2004".

This great event, which was held this year in Kelowna



(British Columbia), gathered North-American professionals on groundwater, wells and boreholes.

TEXAS

"GLOBAL FORUM ON WATER" HELLO HOUSTON, WE HAVE A PROBLEM...

Water scarcity is not restricted to the countries of the South. Some of the richest regions of the Western countries are also encountering an accelerated depletion of the resource, likely to hinder their development in the medium and short term.

It is the case of Texas, which is hosting the biggest international oil companies and is a concentrate of the pioneers' spirit for whom each acre of conquered land constitutes a pri-

vate property. The use of water and other natural resources is considered there to be completely free for the landowner. He may thus withdraw the quantities he wants and use them as he wishes, without asking anything to anybody or paying any water tax.

Obviously, this approach finally raises problems!

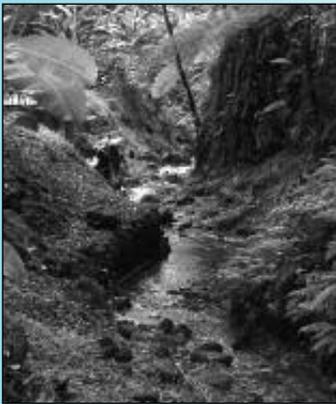
A "Global Forum on Water" was held in Houston from 2 to 4 April 2004, to address this topic. Organized with the assis-

tance of the well-known "Rice University", it aimed at analyzing the situation and finding possible ways of improving water resources in Texas.

INBO TPS, supported by the French Consulate in Houston, highlighted the European Community approach, formalized in the Water Framework Directive, and more particularly the use of economic instruments to control uses and orientate water management policies.

This topic aroused some interest in a country where water price is very low, where infrastructures are degrading and where any action of the public administration is considered with mistrust: would the "principle of cost recovery" have many beautiful days ahead on the other side of the Atlantic?

THE CARIBBEAN WATER RESOURCE MANAGEMENT FOR A JOINT AND LASTING APPROACH



A Caribbean network for islanders

Within the global vision, close to specificities of the land, **Regional Networks** are organized, especially inside INBO. There is indeed a need for neighborhood cooperation based on common cultures.

In this context, the Caribbean Basin, a Regional Sea, as defined by the United Nations, will require more and more joint management.

Land-Sea: A system

Managing the natural resources of islands means managing Land-Sea systems. The functioning of terrestrial environments cannot be dissociated from that of marine environments and reciprocally: the vulnerability and fragility of such systems are the issue with, in addition, a specificity for each island.

But we cannot reinvent everything alone on our own:

- to preserve water,
- to mitigate its uneven distribution in space and time for each island,

- to face crises,
- to manage waste and pollution of any kind to preserve water and public health.

Here is a first possible field of cooperation.

Water, a component of cultural life

One should not forget the social field: a major concern shall be the education of the children, the information of the young adults, multidisciplinary education.

The first enemy of water in closed spaces such as ours is waste. Our societies do not escape from the consumption fever; the treatment and elimination of wastes are a major challenge for the islands.

The removal of wastes may create many activities and jobs in our geographical sphere.

Professional training, a need

The management of natural resources and wastes requires professional training for which there is matter to cooperate. By sharing our resources, we will be able to act in synergy and not in opposition. The economies and activities of our islands condemn us to be complementary.

Risks to be managed

We share a climate which regularly exposes us, and each one in its turn, to angers of nature.

Here too, the experience of some could be made profitable by others in terms of crisis forecast and management.

We can also share our observations in a regional network such as a Caribbean-HYCOS.

Lands to preserve

The need for yield in agriculture and excessive flexibility with respect to regulations are going to endanger our assets: **Land - Sea - Water.**

Finally a large part of our economic expectations lies with tourism and, more than for others, on natural resources. Our environment constitutes "our business" and at this level the management of the Caribbean Sea falls with us all, the first vigilance dealing with control of telluric pollution.

An inter-island cooperation network

At the last General Assembly of the International Network of Basin Organizations (INBO), held in January 2004 in the Martinique, we especially underlined water management in islands.

With the support of the Caribbean Insular Community, an Associated Program must be launched for the management of natural resources, as recommended by the Regional Meetings on Sustainable Development which took place in 1996 in the Martinique. We will have to seek together to remove the political barriers that isolate us more than the sea does.

The Regional Meetings recommended an inter-island body for permanent dialogue on Sustainable Development: perhaps we have to create it?

A regional network inside INBO could be the first step.

May this partnership become real, be consolidated for the Sustainable Development of our islands.



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All information
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is available



on the WEB
www.inbo-news.org

LATIN AMERICA

FAO

PAYING ENVIRONMENTAL SERVICES IN RIVER BASINS



In Latin America the concept of Paying Environmental Services (PES) was given much attention in the last few years. As compared to other regions over the world, there are many PES in Latin America. The PESs were applied in river basins on very different scales and with various objectives, from the micro-river basin - with a very effective service -

usually managed by a NGO, to a national program supervised by the State: some countries of the region, such as Costa Rica, have formulated a policy to stimulate reforestation and the management of existing forests for instance.

The primary idea of the PES is to create a market for an environmental service that usually has no price.

The Agriculture and Food Organization of the United Nations (FAO) formulated some recommendations for a successful application of PESs in river basins.

Among the main conclusions, the following can be underlined:

- ❖ The PES can be, in the long term, a sustainable mechanism if generated by local resources.
- ❖ It is essential that the relations between land use and the service are clearly identified.
- ❖ It is necessary to carry out studies on the demand and offer of environmental services.
- ❖ The PES does not necessarily involve cash payments, but can be fiscal incentives, a credit or another type of fee, which can be individual or collective.
- ❖ The silvicultural, silvipastoral, agri-silvicultural systems are favored, as well as conservation agriculture.
- ❖ The mechanism for PES management could be a multi-stakeholder organiza-

tion, with representatives of the government, private companies and NGOs.

- ❖ The most outstanding environmental impacts of the PESs have been the reduction of illegal wood cuttings and deforestation for agriculture and animal husbandry, the conservation and reforestation of the forest cover and the decrease in forest fires.
- ❖ In addition, they generate a high sensitivity towards the environment among the populations involved.
- ❖ A specific legal framework is not usually required for implementing a PES at local level.

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ECLAC

A REPORT ON THE MUNICIPALITIES AND WATER RESOURCE MANAGEMENT



In the countries of the region, the last decades were marked by strong and conflicting processes for the decentralization of various activities and responsibilities to the municipal level.

These reforms have resulted in the consolidation of the traditional participation of municipalities in the providing of public water services.

In addition, the municipalities have a strong impact on basins' water resources, on the one hand, and on their uses and users, on the other.

This raised questions about appropriate arrangements for integrating municipalities in

the water management system.

The aim of the ECLAC report (November 2003, Series Natural Resources and Infrastructure no. 66) is to contribute to the discussions carried out on these matters.

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CENTRAL AMERICA

REGIONAL INTEGRATION AND MANAGEMENT OF SHARED RIVERS

The search for regional integration for better water management is a priority for all the local stakeholders and cooperation Organizations in Central America.

In fact, the rationalization of water resource management in Central America requires better management of transboundary rivers in this region, where 57% of the water resources is shared.

The European experience is an example regarding the level of regional integration and the methodological inputs of the new Water Framework Directive.

Several projects are under way in the region (Rio Lempa, Rio

San Juan, Rio Coco, Rio Paz, etc.).

Experiments deal with:

- ◆ the sharing of information and data;
- ◆ the organization of bi or tri-national cooperation: creation of Commissions, mandates, statutes, etc.;
- ◆ methodologies and the definition of common objectives;
- ◆ the financial means used to implement the decisions made.

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"CARU"

BIODIVERSITY PROTECTION IN THE URUGUAY RIVER

The Uruguay river is an international waterway. Its spring is in Brazil and it constitutes the frontier between Argentina and Brazil and later between Argentina and Uruguay. The latter countries, in a spirit of integration and in pursuit of their national interests, decided to seek a rational and shared use and exploitation of their common stretch of the River Uruguay, by creating the "Comisión Administradora del Río Uruguay" (CARU).

The general objective for the activities of the Commission is the protection of the Uruguay River as a whole, with special attention to the preservation of fish species and aquatic biota.

Since 1987, "CARU" has been executing the Water Quality and Contamination Control Program (PROCON), which consists in regular samplings of water and sediments in four annual campaigns in the main



channel and both shores of the river, over 500 km.

Up-to-date, results have evidenced that standards are met in the river's main channel.

The average annual input of chlorinated pesticides is

40 times lower than the reported discharge to La Plata River through the Parana River and the levels of chlorinated pesticides and PCBs found in fish from the river are not significant and make fish edible.

Since 1983, "CARU", together with the fisheries Institutes from both countries has been executing a broad research program on the fish fauna in the shared reaches of the Uruguay River. Activities were centered on the main fishing grounds, south to Gualeguaychú river mouth, and in Salto Grande Lake.

The main breeding areas and nursery grounds of the populations of sábalo (*Prochilodus lineatus*), boga (*Leporinus obtusidens*) and other migratory species are located at the lower and middle reaches of the Paraná river, but there are also local populations in the Uruguay river that should be protected.

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BRAZIL

PIRACICABA-CAPIVARI-JUNDIAÍ CONSORTIUM 15 YEARS MANAGING WATER RESOURCES



The Intermunicipal Consortium of the Piracicaba, Capivari and Jundiá River Basins is completing its 15th year of activity, directly related to the integrated management of water resources in Brazil.

The Consortium was founded on 13 October 1989, as an autonomous non-governmental and non-profit association. The PCJ Consortium, whose members include municipalities and companies, is an association of private and public end users of water, with a high

level capacity of mobilizing these sectors.

The organization's goals are planning, promoting and developing actions in the areas of environment, sanitation and water resources, with the purpose of recovering, protecting, preserving and conserving the environment and implementing sustainable development.

The organization has taken an active part, in the State of São Paulo, in the discussions on the State Policies for Water

Resources (Law n° 7,663, 30 December 1991), and also in the elaboration and establishment of the National Policy for Water Resources (Federal Law n° 9,663, 8 January 1997), besides participating in the National Water Resources Council (CNRH), as a leader of the group of river basin organizations.

In the region, the PCJ Consortium participated in the creation of the Committee of the Piracicaba, Capivari and Jundiá River Basins (CBH-PCJ).

To celebrate these 15 years of advances and successes in integrated water resource management, the PCJ Consortium will hold a special ceremony to honor the main people and companies who have contributed to the recovery and preservation of water sources during this period.

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MEXICO

CREATION OF THE NATIONAL AND REGIONAL WATER INFORMATION SYSTEMS



In order to comply with the Mexican Water Law of 29 April 2004, the main part of the work carried out hitherto within the framework of the "CICA" projects (Centros de Información y Consulta sobre el Agua) is going to be included in the setting up of the National and Regional Water Information Systems (SINA and SIRA).

Brief reminder of the context

At the end of the 1990s, the "Basin Councils", created in Mexico according to a logic of decentralization of water resource management, very quickly felt the need to access the information allowing them to make suitable decisions.

In order to meet this expectation, the "CNA" (National Water Commission) then planned the creation of information centers called "CICAs" (Centros

de Información y Consulta sobre el Agua).

The "CNA" wished to benefit from the French experience in the field of management of water-related data and information and IOWater and the French Water Agencies provided an organizational and technical assistance, financed by the French Ministry for Foreign Affairs since 2001.

Since 2003, the various recommendations have started to be approved and take effect:

- ◆ Coordination between "CNA" and "INEGI" (Institute of Statistics and Cartography), "SEMARNAT" (Secretariat in charge of the Environment) and "IMTA" (Mexican Institute of Technologies on Water), for the preparation of cooperation protocols for the exchange of information at the national level;

- ◆ Unanimous adoption by the Basin Committee of the Yucatan Peninsula and by the Basin Committee of Mexico Valley (basin including Mexico City), of the technical and financial projects proposed for the launching of the first two pilot "CICAs", and this with a strong support from the States concerned;

- ◆ Participation of representatives from "CNA", "INEGI", "SEMARNAT", "IMTA" and the Government of Quintana-Roo, in a study tour in France for an analysis of the methods adopted for the management of data and obtained results.

Changes in the context and new orientations...

The Mexican water law of April 2004, appreciably modifies the organization of water management at basin level and provides for:

- ◆ the creation of autonomous **Basin Organizations**, which will be in charge of, among other things:
 - formulating and proposing Hydrological Plans for their basins;
 - operating the basin financial system;
 - allocating concessions for the exploitation of facilities and water resources;

- pre-serving water quality and promoting the effective and sustainable use of water resources in coordination with the States and the Basin Councils;

- ◆ A redefinition of the role of the "**Basin Council**", which has, from now on, the function of a consultative body of the Basin Organization.

With regard to the information systems, the law:

- Reminds the general principles of free access to water-related information;
- Entrusts the "CNA" and the Basin Organizations with the task of disseminating this information;
- Plans that "the national planning and programming of water resources will be carried out on the basis of a National System and Regional Information Systems, which will be supported by the Commission and the Basin Organizations".

The implementation decree should be promulgated in April 2005.

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18 March 2006 - 4th Mexico World Water Forum
INBO: "Participation of the public and water users in basin management"
www.inbo-news.org

VENEZUELA

TOWARDS THE INSTITUTIONALIZATION OF RIVER BASIN MANAGEMENT

The Republic of Venezuela through the Ministry of the Environment and Natural Resources, specifically the Directorate General of River basins, undertook actions for the institutionalization of integrated water resource management.

For this purpose, a Draft Law is being debated at the National Assembly.

It establishes the following: "**Water is a good of the Nation's public domain which is vital for life and development. The law will set out the provisions necessary for guaranteeing its protection, development and rehabilitation, while respecting the steps of the hydrological**

cycle and the criteria of land use planning".

The Draft Law states that integrated water management is an element necessary for the sustainable development of the country to everyone's benefit, allowing the interested stakeholders of the different sectors to act. It divides the country into Hydrographic Regions, identifies the river basins which belong to each region and establishes management principles and the institutional organization, which includes Water Authorities: the National Water Authority, under the supervision of the Ministry of the Environment and Natural Resources, the National Water

Council, the Councils of Hydrographic Regions and the River Basin Councils.

The Hydrographic Region Council of the Central Plains is now being created in accordance with the new legal framework. It corresponds to the Guárico River Basin.

As part of the training of the staff working in the MARN's Directorate General of River Basins, a course on "Integrated Water Resource Management at the level of

River Basins" was given by Professor Axel Dourojeanni in October 2004.

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INTERNATIONAL MEETING ON THE IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE KRAKOW (POLAND), 27 - 29 SEPTEMBER 2004



The Polish Minister for the Environment opened the "EURO-INBO" Group meeting

FINAL RESOLUTIONS

126 representatives of the governmental administrations responsible for managing water resources and of the Basin Organizations or Water Authorities **coming from 32 countries**, Belgium, Belarus, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Italy, Japan, Latvia, Lithuania, Luxembourg, Macedonia, Morocco, Moldavia, Norway, Poland, Portugal, Romania, Russia, Senegal, Serbia and Montenegro, Slovakia, Spain, Sweden, Tunisia, Ukraine and International Commissions (Moselle-Saar, Scheldt, Helsingki, Oder), GWP CEE and the European Commission, **met in Krakow, on 27 and 28 September 2004**, under the auspices of the International Network of Basin Organizations (INBO), of the Mediterranean Network of Basin Organizations (MENBO) and of the Central and Eastern European Network of Basin Organizations (CEENBO), at the invitation of the Polish Ministry of the Environment and Polish RZGWs.

PREAMBLE

In the member or candidate countries of the European Union, the implementation of the Water Framework Directive has entered, since 2002, in an active and operational phase, which directly involves the existing Basin Organizations or the "District Authorities" being created, that are facing many practical and effective problems in its field implementation.

Numerous and interesting studies and works were also developed in many districts and in "Pilot Basins", and it is useful for them to exchange the difficulties encountered, obtained results or very operational and concrete experiences accumulated in the field.

During the INBO meeting in Valencia, Spain, on 11 and 12 November 2003, it appeared that there was a need for informal exchanges of practical experiences between the volunteer Basin Organizations, in addition to the official European platform, organized in working groups led by the European Water Directors and the European Commission.

That is the reason why, it was decided to organize, within INBO, an open Group of European Basin Organizations, called "EURO-INBO", for the implementation of the WFD.

INBO activities must indeed be complementary to ongoing efforts and must avoid setting up parallel or competing structures.

The "EURO-INBO" working group aims at enriching the common strategy for the implementation of the Water Framework Directive (WFD) without duplicating work already done, by presenting different approaches and mentioning the very pragmatic questions, which arise in the European Districts.

The objective is to facilitate process in the field by direct contacts between the public bodies in charge, which would be or are yet interested in our

group, created on a voluntary basis and free involvement.

49 papers were presented during the Krakow meeting.

GENERAL ISSUES

Five topics were dealt with in this 1st meeting of "EURO-INBO" Group of European Basin Organizations in Krakow:

1 Status of the districts initial characterization:

It should be stressed that a common conclusion of all countries in their initial characterization work is that agriculture will, in many cases, be the limiting factor to achieving the environmental objectives.

2 Economic component of the WFD;

3 Environmental objectives and the "good ecological status" in particular;

4 The transboundary basins;

5 Flood prevention and control.

CONCLUSIONS

Generally speaking, the participants considered very favorably the progress made allowing a better understanding of the WFD and of its instruments on the one hand, and on the other the significant progress already made in the first stages of its implementation.

➤ The Organizations participating in the "EURO-INBO" group expressed their wish to **continue exchanging their experiences** through four complementary activities:

- **Organizing regular meetings**, either yearly plenary sessions or thematic workshops whenever necessary. Apart from an exchange of experiences, these meetings will result in the identification of the main concerns of Basin Organizations involved in the practical implementation of the WFD,
- **Developing the "EURO-INBO" website**, based on the methodologies, techniques and contents already elaborated within AQUADOC INTER in the Czech Republic, Hungary, Poland and Romania and EMWIS in the Mediterranean region. This common website could include case studies and documents produced by Basin Organizations such as the "initial characterizations" for the end of 2004 (abstract in English, links with the sites of the Basin Organizations). This site would also include current information, a forum for discussions and frequently asked questions, links towards new documents and information sources produced at the European level,
- Promoting **training programs** for executives and staffs of Basins Organizations,
- Establishing **twinning arrangements between Basin Organizations of different countries** facing common problems, especially within the **"TWIN-BASIN"** project or existing agreements.

49 papers were presented



ON OF THE WATER FRAMEWORK DIRECTIVE

- ▶ **The Organizations represented in Krakow expressed their full support to the Pilot River Basins exercise developed under CIS during the first phase ending in 2004.** The "EURO-INBO" group recommended proposing additional Pilot Basins for testing in the second phase of CIS starting in 2005. The Delegates also recommended enlarging the direct dissemination of PRB (Pilot River Basin) results to all other Basin Organizations. Generally speaking, in spite of the Web facilities, access to information remains complex.
- ▶ **As regards transboundary basins, it seems necessary to support the creation of International Commissions and provide better means to those already existing,** and to reinforce cooperation with countries bordering EU (Candidate countries, NIS countries and Balkans), through projects supported by the European Commission,
- ▶ As regards the specific aspects of the **prevention and control of floods,** which heavily affect many European countries, the delegates confirmed that there is a need for better exchanging information and know-how and that it is essential to harmonize the control plans between the countries of transboundary basins. They support the proposal to initiate exchanges between operational Centers for flood control and prevention. In this field, the recent paper of the European Commission should be considered as the basis for future initiatives. Compatibility between the WFD and flood control in heavily affected areas should especially be looked for.
- ▶ **Consistency of water monitoring and information systems,** harmonization of data and Geographic Information Systems and the use of common models are essential for sharing information and following up actions, in transboundary basins as a priority.
- ▶ **A joint thinking on the methods and means for consultation of the general public and for the processing of the received opinions is urgent.** It would also be very useful to jointly formalize strong and easily appropriable arguments likely to justify a real interest and an effective participation of the general public, whose approval is essential for the consultations on the actions and projects related to water policy in the basins.
- ▶ At this stage of their first exchanges, the delegates already stressed several other main concerns of interest for future exchanges of experiences:
 - **Specific implementation of the WFD in islands,**
 - **Water management in areas with current or past mining activities,**
 - **Treatment of historic and future pollution and its impact on the resources and environments** (polluted sites and soils, mines subsidence, sediments, phytosanitary residues, invading species, etc.),
 - **Design of an iterative and dynamic approach for formulating programs of measures,** taking into account the existing and future situations without delaying the actions to be implemented in the short term,
 - Link between the WFD implementation and the reform of the Common Agricultural Policy: **Improvement of consistency between different official aid for agriculture and the environment,**

- **Institutional organization of the District Authorities** according to their specific constraints, for supporting a better convergence for the effective implementation of the WFD,
- **Need for regular information** of the District Authorities on the progress made in European work **on the definition of "good ecological status",**
- **Effects of the classification of Water Bodies and designation of protected areas on future regional planning and development,**
- **Economic aspects:** consolidation of the information already collected, creation of databases and exchanges at the level of the international districts, tools for public consultation, training of specialists,
- **Improving knowledge of hydrobiology and hydro-morphology.**

The participants thanked the representative of the European Commission for inviting the "EURO-INBO" group to present the conclusions of the Krakow meeting to the Committee of the European Water Directors.

It will be a great honor for the group of European Basin Organizations, which confirms its willingness to be fully associated to the CIS process as the other partners already involved.

The "EURO-INBO" Group reminds that the European Commission is permanently invited to its meetings and works, as well as the Water Directors of all interested countries.

The delegates thanked the Polish Ministry of the Environment and RZGWs for having initiated this first meeting and for their perfect organization of the meeting and their warm welcome in Krakow.

Mr. Mieczyslaw OSTOJSKI, Polish Water Director, will chair the "EURO-INBO" Group up to its next Plenary Assembly.

The delegates retained the proposal from the Walloon Region and Basins Organizations of the Maas international district to organize the next plenary meeting of "EURO-INBO" in Namur, Belgium, from 29 September to 1st October 2005.

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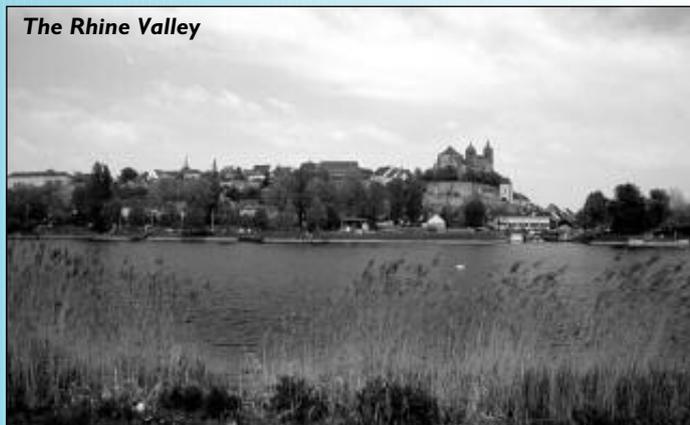


126 representatives coming from 32 countries participated in the "EURO-INBO" Group meeting

EUROPE

"RHINE-NET"

TO DEVELOP PUBLIC PARTICIPATION



The Rhine Valley

The Rhine Network or "Rhine-Net", created with the help of the INTERREG program, aims at identifying and enhancing good practices in public involvement over a 5-year period up to the end of 2006.

These good local practices are especially significant for implementing the European Water Framework Directive that promotes a new public involvement in water management

with a true citizens' participation.

The aim of the "Rhine Network" is thus to identify and develop local practices of participatory management of water resources, to strengthen European cooperation on the scale of the river basin and to disseminate the acquired local knowledge.

Project activities

The activities carried out in this project include 6 real case studies:

- revitalization of the upper Rhine,
- development of the Dreisam in Feiburg,
- protection of springs in Luxemburg,
- classification of the delta wetlands,
- renaturalization of banks in Karlsruhe,
- flood prevention in the Moselle / Saar basin.

In addition to these case studies, public information and awareness activities will be organized on the basin scale:

- local information workshops on the active participation of the Civil Society;
- a poetry contest "Rivers of pictures, rivers of words" in schools;

- a "Bathing Day" in the Rhine;

- the "Neckar festival".

Knowledge gained about the participation practices will then be discussed in 2005 to prepare an **"operational guide for participation"** addressing stakeholders in water management.

The results will be widely disseminated on the Internet, in particular.

The project, which involves 13 partners, is led by "Naturlandstiftung Saar" and coordinated by "Solidarité Eau Europe".

The INBO PTS will evaluate the participatory management practices and will draft the operational guide, which will enable the capitalization of the best practices.

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IWRM.NET

A EUROPEAN NETWORK OF PUBLIC AND REGIONAL RESEARCH PROGRAMS ON INTEGRATED WATER RESOURCES MANAGEMENT

IWRM.Net was born in Stockholm in August 2004 and gathers 35 water research program managers from 20 countries of the European Union and neighboring countries.

Based on an inventory of research and of its organization in the Integrated Water Resource Management (IWRM) field, carried out in 2003-2004 in 13 European countries, it

appears that real synergies are possible between each ongoing research program on water to succeed, in the next 5 years, in:

- **Systematizing exchanges of experiences and good practices,**
- **Defining common strategies,** such as for example the assessment of the needs for research, in relation with the Framework Directive,
- **Developing joint activities by favoring crossed participations** between programs or the planning of real transnational research programs.

It clearly appears that the Water Framework Directive (WFD) strongly renews a demand for research and will result in changes in the methods of thinking, acting, planning in the water field.

The Stockholm Conference clearly shows that research results deserve to be better enhanced and are not sufficiently visible to the community of water managers.

If our proposal is accepted by the European Commission, within the framework of ERA-Net (European Research Area Networking), the effective launching of the work of the IWRM Network is scheduled for the summer of 2005.

INBO has developed this network, by initiating a European cartography of research programs on water in 13 pilot countries.

<http://www.oieau.org/eranet>

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"WFD-COMMUNITY"

IN INBO, WE ARE A COMMUNITY!

In order to facilitate the implementation of the Water Framework Directive, the "WFD-Community" project consists in testing a new method for training young professionals from Basin Organizations, based on a virtual community of professionals.

It deals with:

- the creation of a place on the Internet for training and tutorship between junior and senior professionals,
- remote exchanges of knowledge on the Web,

- opportunities of virtual meetings in addition to the events organized by INBO,
- a teaching scenario based on exchanges between working colleagues.

The computerized infrastructure was installed and the experiment started in the first quarter of 2005, thanks to volunteers.

If you wish to participate in the project, contact us:

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Namur (Walloon Region - Belgium)
29 September - 1st October 2005
3rd Assembly of the Group of European Basin Organizations for the Implementation of the Framework Directive - EURO-INBO

MEIF - WATER

METHODS FOR EVALUATING THE INVESTMENTS AND MODES OF FINANCING

Pricewaterhouse Coopers (PWC), BIPE and IOWater presented the results of the European MEIF project (Methods for Evaluating the Investments and modes of Financing), on 10 and 11 June 2004 at La Défense-Paris.

The objectives of this project, financed by the DG Research within the 5th Framework Program, were to draw up a report on the **practices and the procedures used in 10 European countries to evaluate the cost of the infrastructures and investments needed in the coming years**, to outline the financing strategies and identify the effects of tariffs on water price.

The field investigations, the syntheses carried out using the literature collected in each of the 10 countries (France, Germany, Italy, Spain, United Kingdom, on the one hand, and Bulgaria, the Czech Republic, Hungary, Poland and Romania, on the other), finally the lessons learned by experts of each country show that:

- **Significant efforts remain to be made** for each country to obtain sound approaches and procedures for estimating investments.
- **The possible sources of financing vary from one country to another** and yet the strategies used are very limited and often insufficient to meet total recovery of investment costs.
- **The price is not a variable for adjusting a good balance between investments/financings/tariffs of services.** In several situations encountered, the water price is subjected to such an adjustment constraint that the investment programs are often deferred or largely truncated (Central European countries in particular).

<http://www.meif.org>

THE SCHELDT

INTERNATIONAL MANAGEMENT

On 21 December 2004, the Scheldt's riparian Countries and Regions (France, the Netherlands, Federal Belgium, Flanders, Walloon and Brussels-Capital Regions), approved the "Scaldit" report, which is the first transnational analysis of the International River Basin District of the Scheldt.

An international river of 430 km, the Scheldt runs from Cambrai to Antwerp. Its catchment area covers 21,800 km². It drains a population of more than 10 million inhabitants, which makes it one of the most densely populated zones of the European Union with 500 inhabitants per km².

The "Scaldit" report shows the general characteristics of the entire Scheldt International River Basin District. It deals with various topics such as economy, hydrology, biology or past and current pollution.

Through the "Scaldit" INTER-REG project, supported by Europe, the Scheldt's riparian countries and regions have initiated an international cooperation within the International Commission of the Scheldt, which is used as a training and

experience sharing process for defining the stakes of an International River Basin District.

When approving the "Scaldit" report, the contracting parties insisted on the need for continuing their cooperation. Year 2005 will thus be remembered by the preparation of a single management plan for the whole Scheldt District, thus meeting the requirements of the Water Framework Directive.

The International Commission of the Scheldt formulated an action plan and set up a measurement network to evaluate the field results of this cooperation on the Scheldt. Operational since 1998, the quality monitoring network of the Scheldt is directed by the Artois-Picardy Water Agency. This network meets the requirements of the Water Framework Directive, which requires international coordination of measurements and plans planned for each International District.

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ETC WTR

A EUROPEAN BASE ON EMISSIONS INTO WATER

First tests

In 2003, a new tool was developed for the storage of data on emissions into water, according to the concepts used for the management of all the water data of the European Topic Center on Water (ETC) gathered in the European "Waterbase".

This tool has been made available on the Internet under protected access, restricted, for the time being, to the ETC members. This site uses the most modern cartography techniques to enable anyone to create his/her own map and have access to the data.

In 2004, the European Topic Center on Water of the European Environment Agency (EEA) continued the collection of data on emissions from voluntary Basins and Member States.

At the same time, the need for being able to estimate the emissions of the not indexed sources and more widely of all

the sources with few data, led to develop a table of emission factors associated with their characteristic sizes and the corresponding bibliography.

Lastly, a **prospective study of the changes in sanitation in Europe before 2020 was carried out.**

Reporting

The EEA's "Reporting Obligations Database - ROD base" gathers all European and international reporting obligations deriving from the commitments of its Member States.

The elements are available in the form of summary sheets giving access, in particular, to the texts of the Directives, to the guidelines and formats for collection, to the deadlines and other useful information. This tool is also used by EEA to alert the people in charge of reporting when a deadline is near.

For more information:

<http://rod.eionet.eu.int>

THE INTERNATIONAL COMMISSION OF THE MAAS

The Member States and Regions represented in the International Commission of the Maas (Germany, Belgium, France, Luxembourg, the Netherlands, and the Brussels-Capital, Flanders and Walloon Regions) agreed to develop, in complement to the national report drawn up in accordance with article 5 of the WFD, a **joint report on the characterization of the international river basin district of the Maas.**

EURO-GROUP provided support to the Secretariat to coordinate the work and follow-up the working groups on the various aspects of the inventory. IOWater participated in the methodological analysis for consolidating the assessments coming from the various countries concerning the risk of non achievement of the environmental objectives and of the economic analyses.

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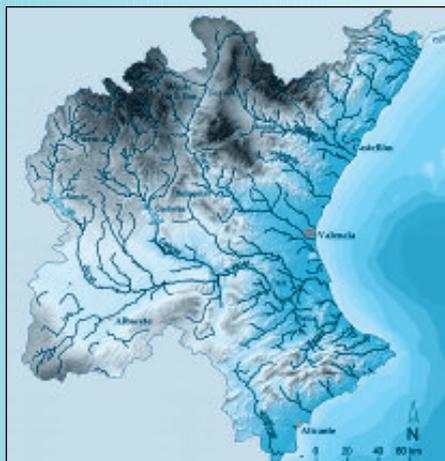


The Maas River

SPAIN

JUCAR PILOT RIVER BASIN

ADVANCES IN THE WFD, REPORT ON ARTICLE 5



The Jucar River Basin was selected in 2002 as the Spanish Pilot Basin to implement the European Water Framework Directive (WFD). The Jucar River Basin Authority (CHJ) has assumed the highest level of commitment by accepting the implementation of all Guide Documents of the WFD. It presented a report early in 2004, which included the works developed up to now.

The report has followed the specifications set out in Annexes II and III of the WFD. It describes the coordination of administrative arrangements within the Jucar River Basin District.

The first part of this report includes a detailed description of the Pilot Basin, which describes its administrative framework, the physical, climatic and biological conditions, the existing resources, and the biological and physical/chemical quality control networks.

The section on characterization of the Pilot Basin describes different activities: the definition of surface water and groundwater bodies using a national GIS model, the classification of the existing ecotypes, the selection of reference con-

ditions according to these ecotypes, and the use of the concept of hydrogeological unit for the characterization of groundwater bodies.

The third chapter of the report covers the register of protected areas, which includes the identification of areas designated for the abstraction of water intended for human consumption, areas for the protection of significant aquatic species, water bodies designated for recreational use, nutrient-sensitive areas, areas designated for the protection of habitats or species.

The report continues with an analysis of anthropogenic pressures, such as point or non-point sources of pollution, in order to assess the risk of failing the environmental quality objectives established by the WFD for each water body. This identification has been developed by following the Manual of pressures and impacts of the General Directorate of

Water of the Spanish Ministry of the Environment.

At last, the report includes an economic analysis of the use of water, based on a specific hydraulic system and its associated users, which is a system considered very representative of the Jucar basin. It includes a description of the existing Spanish economic regime for surface waters, such as recovery of the costs of water services, estimates of the costs associated to the use of groundwater and the economic characterization of water use.

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THE NETHERLANDS

THE "WIN" WATER INFORMATION NETWORK

To strengthen the implementation of IWRM in the Dutch water sector, the Netherlands Water Partnership (NWP) has developed the Internet based Water Information Network (WIN).

Set up jointly by the government, the private sector and the civil society to be a national information and coordination center, the Netherlands Water Partnership is binding together governmental and

non-governmental organizations, research and training institutions and private companies in order to ensure an effective contribution between them into finding lasting solutions to the water problems.

WIN, a gateway to Dutch knowledge and expertise, optimally streamlines the information, which is circulating both inside the Netherlands, and between the Netherlands and other interested countries.

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www.inbo-news.org
All information
on INBO
is available



on the WEB
www.inbo-news.org

FRANCE - SPAIN

THE GARONNE WITHOUT BORDER

In 1995, exchanges took place between the Generalitat of Catalonia, the General Council of the Aran Valley and the French Mixed Syndicate for Studies and Development of the Garonne and led to the signing of an agreement protocol in June 2000. In 2001, the first "French-Spanish General Convention on the Garonne, a European river" was held in Toulouse.

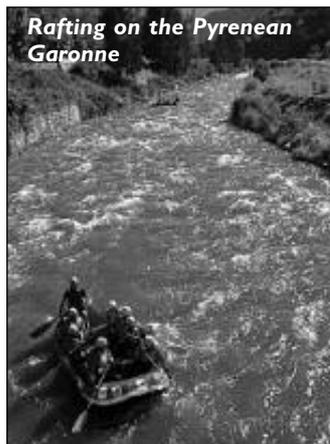
A 3-year project, with a budget of two million euros, was proposed to the European Union under its program: INTERREG III A.

This joint project focuses on four main orientations:

- ◆ The setting-up of a "Transboundary Information System on the Garonne";
- ◆ A study program for better knowledge of the Garonne, its functioning and uses, including the building of a transboundary hydrometric network;
- ◆ An action plan for the protection of the river ecosystems, including a Master Plan for the joint maintenance of bed and banks, a coordinated management of floating wastes and of the French and Spanish Natura sites 2000;
- ◆ The citizens' information and awareness.

At last, the building of an access road is planned to the Tower of the Plan d'Arrem (between the Bridge of Roy and Fos), and a walking space in Vielha.

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FRANCE

RHONE-MEDITERRANEAN & CORSICA

THE AGENCY IS WORKING OUTSIDE ITS BASIN'S AREA



Hitherto, the Rhone-Mediterranean and Corsica Water Agency has worked outside its area of responsibility to a limited extent:

- ❖ Receiving visitors from abroad or taking part in conferences to present the role of an agency in water management in France. The Agency has received trainees for longer periods;
- ❖ Cooperating with bordering countries on rivers crossing the border; this is the case with the International Commission for the Protection of Lake Lemán (CIPEL);
- ❖ Active participation in the International Network of Basin Organizations, since the Water Agency hosted its Constitutive meeting in Aix-les-Bains and Cham-

bery in 1994 as well as the meeting of the Network of Transboundary Basin Organizations in Thonon.

A partnership is being established with the Water Office of the Reunion Island.

However, our environment is changing: the European Water Framework Directive is reforming water policy in France, which must be brought in line with other countries of the European Union; in addition, new French legislation has just confirmed the task of the Agencies to operate outside their basin. The Board of Directors of the Rhone-Mediterranean and Corsica Water Agency decided on its international relations strategy based on this new context and in a

voluntary manner, yet targeted in accordance with the following principles:

- ❖ Work using the expertise of Agency employees to broaden and share our skills;
- ❖ Some work limited to Overseas Departments, and Mediterranean or European Union countries, in order to capitalize on experience in similar environments from a geographical or legal point of view;
- ❖ Work in partnership with contracting authorities in the basin, regional and industrial communities, agricultural organizations, research departments and educational establishments.

Because of the dramatic tsunami that occurred in South East Asia, the intervention of the Agency has been widened to financial aid to countries in emergency situations, within a decentralized cooperation with its basin partners and on a limited number of operations.

This would rest on all the experts of the Agency and this requires internal coordination for which I am responsible. Work to date will be intensified; in particular, INBO will continue to play its invaluable role in fostering relations, observing changes and cooperating with foreign basin organizations.

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RHINE-MEUSE

A TOOL FOR KNOWLEDGE WHICH IS COMPREHENSIVE ... AND FREE

www.eau2015-rhin-meuse.fr



Since summer of 2004, the site "water 2015", devoted to the Water Framework Directive in the Rhine-Meuse basin, presents to the public the entire "inventory of the districts" carried out by the State departments and the Water Agency. This document is complemented by a module, which introduces all the watercourses

and groundwater tables of the basin and their characteristics. To allow its availability to the largest audience, the Rhine-Meuse Basin Committee has chosen to put online an electronic version of about 2,000 pages in Web format. In parallel, all the stakeholders concerned by the consultation, as specified in the Water Framework Directive, which started in autumn 2004, received a CD-Rom presenting this inventory, with a summary document, "the water stakes in the French Rhine and Meuse dis-

tricts", with the register of protected areas and wetlands, the progress made in the Master Plan for Water Development and Management (SDAGE).

The site offers a search engine to allow easy navigation. For each "water body", it presents all the identified watercourses and groundwater tables and all the related data.

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SEINE-NORMANDY

REVIEW OF THE 8TH ACTION PROGRAM

THE AGENCY CLASSIFIES ITS PRIORITIES



Noting the extent of the work necessary for achieving the WFD objectives of good water quality in 2015 and the big increase in investment costs, the Board of Directors of the Seine-Normandy Water Agency made new decisions, after advice from the Basin Committee, on the financial balance of its 8th Action Program.

Without inconsiderately increasing the total amount of taxes and charges and without reducing granted aid, these decisions will enable the Agency to support an annual work program higher than 1,100 Million Euros in 2005 and 2006.

In reply to the strong demand of the contracting authorities, the Board of Directors asked

the Agency to classify the 8th program's actions and priorities regarding the projects having a direct impact on the resource and the environments (coastal areas included), developing preventive solutions, allowing territorial consistency, enabling to meet the requirements of the UWW Directive and "PMPOA2", already included in multiyear

contracts, anticipating the objectives of the Water Framework Directive, and implementing the methods used for assisting industrial activities, accepted by the European Commission.

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FRANCE

THE CHINESE YEAR IN FRANCE ON THE "WATER CLASSES" TOPIC

The calendar had been carefully studied. It is indeed on 22 March 2004, World Water Day, that began the one-week visit of 5 Chinese specialists on the topic of "water classe".

Awareness of children to water management was in fact chosen by the French Ministry of Ecology and Sustainable Development as a priority for French-Chinese cultural and educational exchanges, based on the following activities:

- ❖ **Introducing the concept of "water classes"** by the Seine-Normandy Water Agency, that launched this tool about 17 years ago and that celebrated its 1,000th "water class";

- ❖ **Presentation of the educational tools used and**

of the program of visits when accompanying the "water classes" in the field;

- ❖ **Visit of institutions in charge of water management in France;**

- ❖ **Examination of requirements for a transfer of know-how** (method, documents) and for the establishment of a French-Chinese partnership to adapt and disseminate this concept in China.

The visitors were positively impressed by the methods used to raise the awareness of the youngest to the issues of water management.

Better knowledge of the Chinese educational system is needed to facilitate this transfer of the "water classes" concept.



The Chinese delegation received at INBO Secretariat in Paris

It is especially the objective of the next mission to China of French experts, planned for 22 March 2005.

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THE REUNION ISLAND

SOMETHING NEW IN WATER MANAGEMENT OVERSEAS

Since the orientation law of 2000, the French Overseas Departments have gradually created Local Water Offices (LWOs), local adaptation of the metropolitan Water Agencies.

The responsibilities of the new Offices deal with the study and follow-up of the environments and the resource, technical advice and assistance to the contracting authorities, training and information of the stakeholders and the financing of water policy.

Although the LWOs' use of water charges had indeed been planned for in the law of 2000, the methods for its implementation were not precisely defined, leaving this decision-making power to the Basin Committee.

The Overseas Program Law defines the "abstraction" charges:

- **specific rates are set for each use;**
- **a highest and lowest rate** is defined for each category of water charges.

The simplicity of this arrangement, either regarding the tax basis or the rate of charges, supports its legibility and thus its acceptance by users.

However, it is necessary to determine the level of charges applicable to each user, to establish records of tax payers, to define the procedure for setting up the arrangement, to identify priorities for action to allocate the funds thus collected, etc.

Thus, the LWO of the Reunion, formally created in 2003, launched a study, entrusted to the DE Consulting firm, in partnership with IOWater, for the definition of water charges to orientate the local stakeholders in their decisions.

The study was completed in October 2004 and provided the Basin Committee with the elements necessary for establishing charges in 2005.

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Inauguration of the LWO of the Reunion Island

THE WORLD BANK

FRENCH CASE STUDY

The World Bank wished to gather some cases studies on the **application in some countries of the integrated management principles** developed during the Dublin International Conference in 1992.

It requested France to provide a document, which includes block tables that gather and summarize:

- the institutions and structures,
- the laws and regulations,
- the economic and financial incentive arrangements,
- the accompanying aspects, such as public awareness, training and data collection.

This diversified information concerns the national, basin and local levels.

These tables are accompanied by a text describing the use of these principles in the Rhone-Mediterranean-Corsica Basin during the last ten years and especially the Master Plan for Water Development and Management and its supervision by the Basin Committee.

This French experience, more than thirty years old, the im-

plementation of the Framework Directive and its transcription into French law may be, for the World Bank, an experience applicable to other countries.

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WIS:

THE FRENCH WATER INFORMATION SYSTEM CENTERED ON THE FRAMEWORK DIRECTIVE

The **Water Information System (WIS)** aims at organizing the production, the management and the dissemination of water data in France.

According to an overall agreement, it gathers the main French data producers and managers under the impulse of the Ministry of Ecology.

It is firstly involved in the WFD implementation for producing data on the knowledge of the status of water bodies

and pressures as well as the data required for economic analyses and making them available to the public.

Water Data Master Plans, undertaken in all the basins, must make sure that the necessary data will be produced before the WFD deadlines, and plan the actions to be carried out.

At the same time, a new public portal for accessing data, "**Eaufrance**", is being set up.

The **SANDRE, the National Data Reference Center for Water** organized by IOWater, ensures, within a partnership, the coherence and the sharing of the produced data and plays a key role to guarantee interoperability between the various WIS databases and portals.

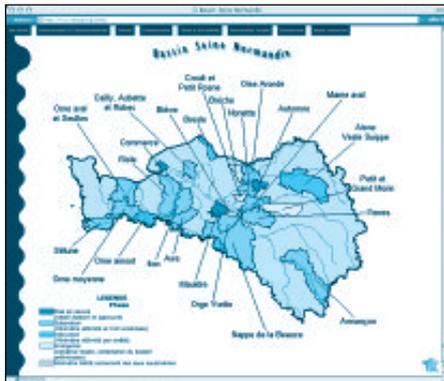
The site, providing access to the SANDRE standards, also includes all the frames of reference shared by all the users:

especially the geographical frame of reference on water-courses and groundwater, on all the measurement stations, regulatory zonings and works.

www.sandre.eaufrance.fr

IN EACH BASIN:

WATER DEVELOPMENT AND MANAGEMENT SCHEMES



Since the Law of 1992, complementing the Water Law of 1964, **Water Development and Management Schemes (SAGEs)**, formulated by **Local Water Commissions (LWCs)**, have specified the provisions of the **Basin Master Plans at the level of tributaries**

and aquifers to suit local field conditions.

The website www.sitesage.org provides easy access to rich information issued from regulatory texts, current events, experience of various French SAGEs, guidance documents. It has now included new sections such as **training**, with the list of the main organizations, **the Network of SAGE facilitators**, with access to the pro-

ceedings of the meetings of basin networks, a French **summary table** of the advancement dates of various SAGEs and a synthesis of the relevant answers for each broad topic dealt with in the "forum", especially concerning the **work undertaken in rivers**.

www.sitesage.org

A MANAGEMENT TOOL FOR AUNIS AQUIFER

The "Marais Poitevin" (Poitevin Marsh) is the second largest wetland of France.

The **Water Development and Management Scheme (SAGE) of "Sèvre Niortaise - Marais Poitevin"** is the planning and management tool which applies to it. It sets the general objectives for use, development and quantitative

and qualitative protection of water resources and aquatic ecosystems.

On the southern catchment area of the Marsh, the perimeter of the intensely exploited groundwater (NIE) of Aunis, shows a chronic imbalance between water resources and needs.

Better knowledge for better management

The hydrogeological study carried out on Aunis NIE by the Interdepartmental Institution of the Sèvre Niortaise Basin (IIBSN), with the support of the Loire-Brittany Water Agency and of the Departments of Charente-Maritime, Deux-Sèvres and Vendée, must allow for better understanding of groundwater resources. It means developing a mathematical model for an aquifer which implies that much information is available. The reliability of the model depends on data quality.

In order to obtain essential information, it was necessary to implement:

- ◆ **Monitoring networks:**
 - the piezometric network on 30 sites,
 - the water-level network on 22 sites,
 - the hydrometric network to follow up river flows and drained volumes at the outlet of the four sub-basins;

◆ Data bases:

- effective precipitations,
- abstracted volumes;

◆ Hydrogeological campaigns:

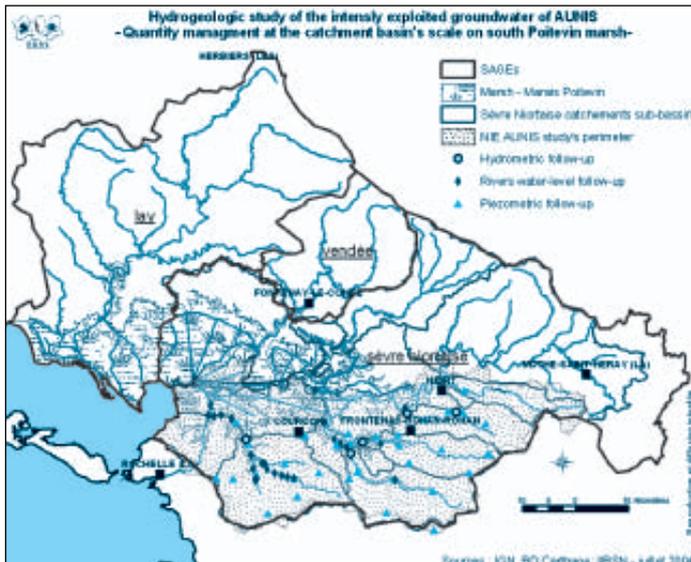
- pumping tests carried out on 19 sites.

The relations between the Malm Groundwater and the Marsh are also investigated with the University of Poitiers.

Once the model is completed at the end of 2005, it will be possible to simulate various situations, to observe the consequences, and draw conclusions in terms of management or development.

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2ND GENERAL ASSEMBLY OF THE CENTRAL AND EASTERN EUROPEAN NETWORK OF BASIN ORGANIZATIONS KRAKOW, POLAND, 26 SEPTEMBER 2004



The delegates of CEENBO General Assembly

The 2nd General Assembly of the Central and Eastern European Network of Basin Organizations took place in Krakow, Poland, on 26 September 2004, and was chaired by Mr. Ovidiu GABOR. The event was organized by the Polish Authorities, the International Office for Water and the Secretariat of CEENBO.

The President of INBO (International Network of Basin Organizations) - Mrs. Madeleine de Grandmaison, INBO Secretary, Mr. Jean-Francois Donzier and Mr. Pierre Roussel, President of the French Rhone-Mediterranean and Corsica Water Agency participated in the Assembly.

The Assembly welcomed delegates representing Member Organizations or observers from Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Serbia & Montenegro and Slovakia. Belarus attended and showed interest in participating in CEENBO work. GWP was represented by Mr. L. N. Popescu (GWP CEE Romania).

The Assembly thanked Mr. M. Ostojski, Polish Water Director, for his warm welcome and the perfect organization of the Assembly, as well as the Romanian and French Authorities

for their financial support to the Secretariat since the last General Assembly in Sinaia, Romania.

The General Assembly was pleased with the progress report, presented by CEENBO Secretary - Mrs. Daniela Radulescu, and they approved the budget. The delegates congratulated the Apele Romane National Administration's leading staff for their support to CEENBO and INBO activities.

The new Romanian National Training Center for Water Management was inaugurated on 30 May 2004, by Mr. F. Stadiu, State Secretary in charge of Water, on the occasion of the Liaison Bureau of the Network of International Commissions and Transboundary Basin Organizations (Voina / Romania, 27 - 29 May 2004).

This Center will also be available to CEENBO members.

The Assembly unanimously nominated Mr. Mieczyslaw S. Ostojski, as the new CEENBO President from 1st January 2005, thus succeeding to Mr. Ovidiu Gabor (Romania).

It also nominated the following members of the Liaison Bureau: Mr. M.S. Ostojski - President, Poland; Mr. Ovidiu Gabor - Vice-President, Romania; Mrs. Galina Balusheva - Bulga-

ria; Mr. Petr Kubala - Czech Republic; Mr. Petru Serban - Romania; Mrs. Natasa Smolar-Zvanut - Slovenia. Serbia & Montenegro will send its nomination.

CEENBO is taking the legal form of an association under Romanian legislation and its secretariat will be handled by the National Administration APELE ROMANE. According to the provisions of Clause 4 of CEENBO Statutes, the National Administration "Apele Romane" - Romania - will continue to be the host of the Association's Head Office.

Based upon the proposal of the Bureau, the General Assembly designated Mrs. Daniela Radulescu as the Head of CEENBO Secretariat. Poland will nominate a Deputy Secretary.

On this occasion, specialists were nominated to take part in INBO Experts' Council.

NEXT MEETINGS

The implementation of the European Framework Directive will remain a CEENBO priority topic in 2005 for mobilizing the Network members involved, either in the enlarged European Union or in any other interested Country of Central Europe and the Balkans.

The next meetings of the Liaison Bureau will be coordinated with the main events organized by INBO or its Regional Networks: EURO-INBO Group meetings in Poland and Walloon region in particular, HELCOM - St. Petersburg, etc.

There were some proposals for future CEENBO workshops in 2005 and 2006, in the Czech Republic (Topic: Monitoring), in Poland (Wroclaw) on floods, and in Bulgaria (under discussion).

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WATER FRAMEWORK DIRECTIVE (WFD)

Since 2002, the WFD has been the main work topic of the Regional Central European Network of Basin Organizations (CEENBO), whose Secretariat is ensured by Apele Romane in Romania.

IOWater and French experts from Water Agencies and Walloon experts from Liege University provided support to the organization of several

regional workshops addressing the representatives of Basin Organizations and the national executives in charge of implementing the WFD in the Central European countries. The workshops dealt with specific aspects, such as the delimitation of water bodies, the analysis of pressures and impacts, the economic analysis, "the inventory", etc.



CEENBO workshop in Tulcea

Namur (Walloon Region - Belgium)
29 September - 1st October 2004
3rd Assembly of the Group of European Basin Organizations for the Implementation of the Framework Directive - EURO-INBO

CENTRAL AND EASTERN EUROPE

ROMANIA

IMPLEMENTATION OF THE FRAMEWORK DIRECTIVE IN PILOT BASINS

During the steps taken by Romania for its accession to the European Union, all Community Directives on water were transcribed into Romanian national law.

Romania is a Member of the International Commission for the Protection of the Danube River (ICPDR), which has formulated a program for the implementation of the Framework Directive in all the Danubian countries.

In May 2004, the Ministry of the Environment and Water Management, through the National Administration "Romanian Waters", received from the PHARE program a support for the implementation of the Framework Directive in two pilot basins: Somes-Tisza and Arges-Vedea.

This project includes, on the one hand, the providing of analysis equipment to the laboratories of the Basin Authorities, especially for the biologi-

cal and bacteriological analyses of waters, and technical assistance on the other hand.

The contract was allocated to a Consortium, made up of Arcadis Euroconsult B.V., Mott MacDonald, the International Office for Water and Ecoterra, in order to undertake technical assistance, training programs, the supply of software and the dissemination of results. The guidelines and methodologies prepared by the project could then be applied in other Romanian river basins.

They are based on the Common Strategy formulated by the European Commission and the European Water Directors for the development of Integrated Water Management Plans in the river basins and for an economic analysis.

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NEW WATER LAW IN ROMANIA: FIRST LIGHT

In 110 articles, the Water Law 310/2004 amended, on last 28 June, the initial Water Law of 1996 for introducing the Framework Directive in Romania.

New:

- ◆ The National Administration of Romanian Waters (NAAR) and its 11 Basin Organizations become "public institutions of national interest with legal entity".
- ◆ Flood-prone areas are established in which any new construction is prohibited, while the existing buildings will have to be destroyed, except for owners willing to assume personally the risks.
- ◆ The economic value of water is clearly affirmed and justifies that conservation, reuse and saving measures are financially encouraged. Bonuses and penalties are established with such a purpose in mind. The total recovery of environmental costs is to be achieved in 2010,

by way of a "contribution" applied to all the industrial, agricultural and domestic users.

- ◆ The door is opened to an adjustment of this "contribution" according to "environmental, economic, social, geographic and climatic" considerations.
- ◆ The financing of investments will be ensured by the State budgets and local authorities. To this are added the loans and obligations guaranteed by the State.
- ◆ The operating expenses of the Water Administration and of the Framework Directive implementation will be ensured, on a case by case basis, by the State budgets and those of local authorities.

The "Water Fund" is suppressed.

FRENCH-ROMANIAN BILATERAL COOPERATION

The Romanian Ministry of the Environment and the French Ministries of Ecology and Sustainable Development and for Foreign Affairs increased their cooperation for the implementation of the European Framework Directive in Romania.

The first workshop, held in May 2004, allowed exchanges of experience on the implementation of the inventory in Districts in Romania and in France and on the use of models and tools for assessing water quality for characterization of the Districts.

ROMANIAN DUTCH BILATERAL COOPERATION

From the Romanian side, the Mures pilot project was implemented, between January 2002 and December 2003, by the Mures River Directorate, the Ministry of Environment and Water Management, and the National Administration "Apele Romane/Romanian Waters", and from the Dutch side by Arcadis.

It dealt with the River Basin Management Plan, institutional structure adaptation, the monitoring and assessment strategy, and training and public awareness.

A second workshop, dealing with the economic component of the Framework Directive, took place in July 2004. It presented cost recovery, the formulation of evolution scenarios or the calculation of taxes and water charges.

These workshops gathered participants from the National Administration Apele Romane (NAAR), from the eleven Delegated Water Directorates in charge of implementing the WFD, and French (Water Agencies) and Belgian (Liege University) experts.

Significant work was undertaken on the latter with the publishing of the "Directiva Apei" newspaper, the preparation of posters and a leaflet on the Mures River Directorate, the development of a CD on the pilot project, the creation of a website and the organization of workshops with the River Basin Committee members.

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"RNIDA": THE ROMANIAN NATIONAL WATER INFORMATION NETWORK

The setting-up of the National Water Information Network is continuing.

An inter-ministry meeting allowed the drafting of an agreement protocol on the method for operating the Network. The participants came from the National Institute of Hydrology and Water Management, the National Institute of Statistics, the National Office of Land Registry, Geodesy and

Cartography, the Ministry of Transport, the National Company for Land Reclamation, the National Authority for the Regulation of Public Services, the Ministry of Economy and Trade, the National Institute of Meteorology, the Ministry of the Environment and the "National Administration of Romanian Waters".

www.rowater.ro

POLAND

WFD IMPLEMENTATION

Within the PHARE programs and the implementation of the European Water Framework Directive (WFD), a twinning between Poland and France started in the fourth quarter of 2004 for a 2-year duration.

The International Office for Water intervenes as operator of the French Ministry of Ecology and Sustainable Development.

In Poland, the Ministry of the Environment (Department of Water Resources) is the project recipient. It is mobilizing many Polish stakeholders in water management, especially the Water Agencies (RZGWs).

This twinning resumes the principles used in the previous arrangements (called "pre-accession"), with, in particular, the appointment of a French Resident Adviser, who will work at the Polish Ministry of the Environment during 24 months. This twinning also implies the participation of many French experts coming from institutions involved in the

WFD implementation in France: Ministry of Ecology and Sustainable Development, Water Agencies (Rhine-Meuse, Artois-Picardy, Seine-Normandy, Adour-Garonne and Loire-Brittany), Regional Directorates of the Environment (DIRENs), the Office of Geological and Mining Research (BRGM), IOWater, etc.

The main objective of this twinning is to assist with the implementation of the economic tools of the European Framework Directive.

The activities will aim at formulating management plans for the river basin districts and programs of measures, at recovering costs and developing water pricing policies, at public participation in the preparation of management plans, and at strengthening transboundary Cooperation in international districts with neighboring Countries such as Russia, Belarus or the Ukraine.

"OSIRIS": FLOOD WARNING

In the dramatic circumstances of the past catastrophic floods, which occurred in Europe, **OSIRIS (Operational Solutions for the management of Inundation Risks in the Information Society)**, funded by the European Commission, is a project, which allowed testing how new information and communication technologies can be an incentive to proactive behavior in terms of reducing vulnerability to flood risk. It consisted in assessing different targeted group end-user requirements, specifications and in developing five prototyped applications in Frankfurt/Oder (Germany), Klodzko (Poland) and in the Middle Loire basin (France).

OSIRIS demonstrates that the new information technologies can be used to improve the dissemination and reception of flood warnings. OSIRIS was devoted to properly understand the socio-political and cultural contexts of both risk communicators and their audience.

The strong determination of the French (ÉPloire) and Polish (District of Klodzko, IMGW) partners allowed the exploitation of the OSIRIS results in the form of industrialized tools, with a deployment to other basins.

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In May 2005, the Gdansk Water Foundation will celebrate its 10th anniversary!

This Foundation under Polish law was created in May 1995, within the framework of a cooperation project led by IOWater and gathering Polish and French national and regional Authorities as well as Danish Cooperation, with a complementary financing from the European Commission within the Life Baltic program.

With a team of 7 people, managed by Zbigniew Sobocinski, the Foundation carried out in 2004 more than 60 seminars and training courses for a public of about 1,500 professionals of the water sector coming from the entire territory of Poland.

POZNAN RZGW IMPLEMENTATION OF THE NITRATES DIRECTIVE

When the new Water Act came into force on 1st January 2002, the heads of the seven regional water management boards were entrusted with new duties connected in great part to the Nitrates Directive 91/676/EEC.

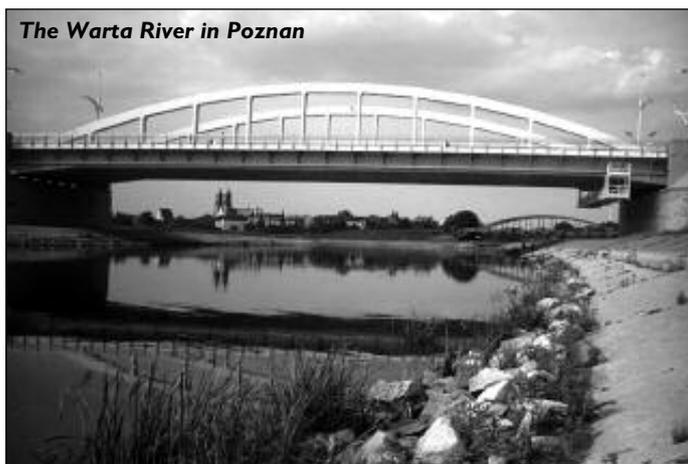
They have to identify sensitive surface and ground waters and zones vulnerable to nitrates and establish action programs to reduce water pollution.

The Regional Water Management Board (RZGW) in Poznan carried out a complete analysis of water pollution by nitrates, which is not a serious problem.

As a consequence of this identification of sensitive waters, 7 nitrate-vulnerable zones were found in the Warta river basin. The decrees concerning vulnerable zones came into force in December 2003. The delimitation of vulnerable zones will be reviewed every 4 years.

In a second stage, the RZGW formulated action programs to reduce water pollution in vulnerable zones. In the Warta river basin, seven action programs concerning 19 municipalities were thus established. They include a range of actions necessary for improving environmental quality: the improvement of agricultural practices, the farmers' awareness to existing environmental quality problems and their education on good agricultural practices, a permanent diagnosis of environmental hazards, the monitoring of the effectiveness of the action program (monitoring of agriculture, biotopes and surface water quality in sensitive areas) and the implementation of supporting actions.

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The Warta River in Poznan

TRANSBOUNDARY WATER MANAGEMENT

The Polish accession to the European Union has opened new financial resources (Tacis, DANCEE, Fifth FPRD) and launched again the Polish-Russian cooperation on the integrated management of Vistula Lagoon basin, initiated in 1964, between the Polish north-eastern voivodeships (provinces) and the Kaliningrad Oblast. Indeed the Russian Central Government has thus treated the Kaliningrad Oblast as a pilot project for developing cooperation with the European Union.

It is foreseen that, in the near future, an agreement will be signed on the harmonization of transboundary monitoring and free data exchange. The first official discussions took place in September 2004 in Moscow. This will have a great influence on the development of management plans for international basin districts, including the Vistula, as required by the Framework Directive.

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HUNGARY

INTERNATIONAL POST-GRADUATE COURSE ON HYDROLOGY



Technical visit of a group of young experts

When UNESCO launched its International Decade (IHD) in 1965, Hungary was among the first countries to promote hydrological training on an international scale.

Since then, the Water Resources Research Center (VITUKI) has regularly organized Post-Graduate Training Courses, primarily intended to developing nations. Their objective was to acquaint the participants with advanced theoretical and practical methods used in hydrology and related disciplines. Until today more than 80 countries have sent young professionals to these courses.

In 2004 the 500th participant was received.

VITUKI's international course has recently greatly developed in the Central and Eastern European region.

The next course will be organized from 1 April to 31 July 2005 in the spirit of the upcoming UN Decade of Education for Sustainable Development.

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VITUKI

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HUNGARY / FRANCE TWINNING

The signing of an agreement was concluded between the National Directorate for Environment, Nature and Water Protection (Hungary) and the Loire-Brittany Water Agency (France) in the Festetics Castle on the bank of Lake Balaton.

It concerns the implementation of the EU Water Framework Directive in two river basin directorates out of the 12 Hungarian Environmental and Water Protection Directorates: the West-Trans-Danubian and Trans-Tisza Directorates.

The partners exchange their experience on the topics of natural resources protection, institutional issues (consultations and dialogue with the users and operation of the River Basin Council), economic issues, protection against floods and non-point pollution.

The presentation of the river basin management plan of the Loire-Brittany river basin, and the examination of its possible application in Hungary are also planned.

The Parties carry out joint research and exchange results, organize seminars, study-tours and practical training for their employees and executives, as well as exchanges of short-term experts and between their documentation centers.

The twinning agreement is valid for three years.

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THE KÖRÖS/CRISURI TRANSBOUNDARY BASIN

On 23 November 2004, the representatives of the French, Hungarian and Romanian Ministries of the Environment, of the International Commission for the Protection of the Danube River (ICPDR), of the FFEM and IOWater met in Paris to launch the cooperation project for the management of the transboundary Körös / Crisuri Basin, tributary of the Tisza, on the left bank of the Danube.

The meeting enabled to detail the draft action plan of the project for 2005 and 2006. The main objective is the preparation of a harmonized management plan on the two sides of the border and testing the development of programs of measures, by integrating data organization, quality monitoring, economic analysis, public participation in decision-making and the prevention and control of accidental pollution.

ESTONIA

"WATER" DIRECTIVES

A one-year twinning arrangement between Estonia and France, dealing with the implementation of the Directives on "Drinking Water", "Urban Waste Water", "Dangerous Substances discharged into aquatic environments" and their Daughter Directives started in May 2004.

The twinning is led, on the Estonian side by the Ministry of the Environment, on the French side by the Ministry of Ecology and Sustainable Development, with the International Office for Water as mandated operator.

The objective is a real work jointly carried out by the administrations of the two countries so that the new Member State complies with the European

Union's requirements. The role of the two (Estonian and French) Project Managers and of the Resident Technical Adviser (seconded by the Seine-Normandy Water Agency) is essential to take into account the context in which the local departments, in charge of implementing the Directives, carry out their activities.

Since the launching of this twinning, French experts from the Ministries of Ecology and Health, the General Council of the Maritime Alps, the Loire-Brittany and Seine-Normandy Water Agencies, INERIS (National Institute for Industrial Environment and Risks), BRGM (Office of Geological and Mining Research) and IOWater have intervened.

The twinning must provide support to the formulation of investment plans for drinking water supply and sanitation and to take measures for eliminating or reducing dangerous substances.

Three exchange and training seminars already took place:

- ◆ In Parnu, on the implementation of the Waste Water Directive especially focusing on sludge removal.
- ◆ In Tallinn, on technologies adapted to wastewater treatment plants.
- ◆ In Kurtana, on the implementation of the Drinking Water Directive.

Others are planned to deal with economic aspects, plan-

ning, drinking water and dangerous substances.

The twinning included three study tours of Estonian executives in France: the first, in the Maritime Alps, dealt with the organization of local authorities, the role of municipal utilities and private operators, the second took place in Paris and Champagne regions and dealt with economic aspects, and the third took place in Paris and the Yvelines in departments of the Ministry of Health and in organizations involved with the Drinking Water Directive.

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BALKANS

BALWOIS: WATER OBSERVATION AND INFORMATION SYSTEM

Its shared rivers, lakes and groundwater tables make the Balkan Peninsula an earth of challenges to apply the concept of Integrated Water Resources Management.

The transboundary waters represent more than 95 % of the available resources of the area. They are shared between Albania, Bulgaria, Bosnia & Herzegovina, Croatia, Greece, Republic of Macedonia, Romania, Serbia & Montenegro, Slovenia and Turkey. This concerns the river basins of the Drava, Sava, Morava, Drim / Drini, Vardar, Struma, Mesta/Nestos, Maritsa/Evros and the lakes Shkodar, Dojran, Ohrid and Prespa.

The main concern of the BALWOIS Project is to create in the Balkans a community of the main water stakeholders for:

- the implementation of a Water Observation and Information System,
- the organization of conferences, workshops, scientific visits and training courses,
- the dissemination of suitable, reliable and comprehensive knowledge to end-users.

The Water Observation and Information System in free access on Internet is based on a very efficient Web Map interface to access and display hydrometeorological data classified by country, basin, river or station.

The fruitful scientific BALWOIS 2004 international conference which was organized in Ohrid, Republic of Macedonia, 25 - 29 May 2004, brought together more than 300 participants.

The BALWOIS Project is mainly funded by the European Commission.

The "Institut de Recherche pour le Développement" (France), the National Meteorological and Hydrological Institutes and many scientific research organizations and universities of all Balkan countries take part in this project.

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TRANSBOUNDARY COOPERATION BETWEEN SERBIA & MONTENEGRO AND NEIGHBORING COUNTRIES

Now neighboring Slovenia, Croatia, Bosnia & Herzegovina, Macedonia, Hungary, Romania, Bulgaria and Albania, Serbia and Montenegro has a very important location for the sustainable management of water resources in the Balkans. It belongs to the Danube river basin and, with a smaller territory, to the Adriatic river basin.

Bilateral cooperation

Cooperation agreements were signed with Hungary and Romania in 1955, with Bulgaria and Albania in 1956, but cooperation was discontinued in 1986.

However, the present situation is untenable as a result of the new geopolitical environment resulting from the breakup of the former Federal Republic of Yugoslavia.

The Ministry of Agriculture and Water Management of Serbia has initiated the preparation of agreements and a negotiation process with Croatia, Bosnia & Herzegovina, and Macedonia on the sustainable management of transboundary water resources.

Multilateral cooperation

For Serbia and Montenegro, it is of the highest importance to establish a new framework for multilateral cooperation, which

would be closely linked to the implementation of the European Water Framework Directive (WFD).

Serbia and Montenegro became a full member of the ICPDR (Danube River Protection Convention) in August of 2003.

Budapest Declaration

Following the disastrous floods that occurred between 1989 and 2001, the Ministries responsible for flood control in the concerned countries approved the Budapest Declaration on 25 May 2001. This document establishes an international cooperation with regard to flood control in the Tisza river basin and addresses environmental issues.

The Sava River Basin

Serbia and Montenegro, Croatia, Bosnia & Herzegovina, and Slovenia approved on 3 December 2002 in Kranjska Gora the Framework Agreement on the Sava River Basin, which sets out the principles of multilateral cooperation for achieving sustainable water management in one of the largest sub-basins of the Danube and creating the International Commission for the Sava river basin.

It is also necessary to establish better coordination between ICPDR and the Danube Commission, created by the Convention Regarding the Regime of Navigation on the Danube approved on 18 August 1948 in Belgrade.

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Ohrid Lake between Macedonia and Albania

BULGARIA

THE BLACK SEA BASIN DIRECTORATE

The Black Sea Basin Directorate (BSBD) is a State institution for administrating and protecting local surface waters and sea from pollution in Eastern Bulgaria, including the administrative regions of Varna, Dobrich, Bourgas, Shoumen and Targovishte.

Based in Varna, it is a regional subdivision of the Ministry of Environment and Waters. It was created in December

2002 in conformity with the requirements of the Water Framework Directive and the national legislation.

It includes several departments:

- ❖ Administrative and Economic Department: assisting the activities of the Basin Council;
- ❖ Planning and Basin Management Department:

caring about equipment which is exclusive State property;

- ❖ Monitoring, Analysis and Informational Support Department;
- ❖ Licenses and Permits Department: for water use and/or use of water springs;
- ❖ Water and Cadastre Department;

- ❖ Control Department: controlling the river beds capacity, water intake equipment, sanitation wastewater treatment plants;
- ❖ Relations with other Institutions and PR Department.

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RUSSIAN FEDERATION

TRANSBOUNDARY COOPERATION WITH NEIGHBORING COUNTRIES

The Ministry of Natural Resources (MNR) of the Russian Federation actively participated in the preparation of multi-lateral documents to define the main principles of the use and protection of water resources and the main rules governing the relations between neighboring States for the joint use of transboundary waters.

These obligations concern not only the internal water policy but also the development of international cooperation.

The Russian MNR collaborates with neighboring States and

UN ECE countries on problems of integrated water use. This cooperation mainly aims at:

- ▶ attracting international expertise for solving problems;
- ▶ interacting with neighboring States in the sphere of rational use and protection of transboundary water;
- ▶ attracting investments for the development of the Russian water sector;
- ▶ preventing crisis.



THE "GREAT RIVERS" SIXTH INTERNATIONAL FORUM

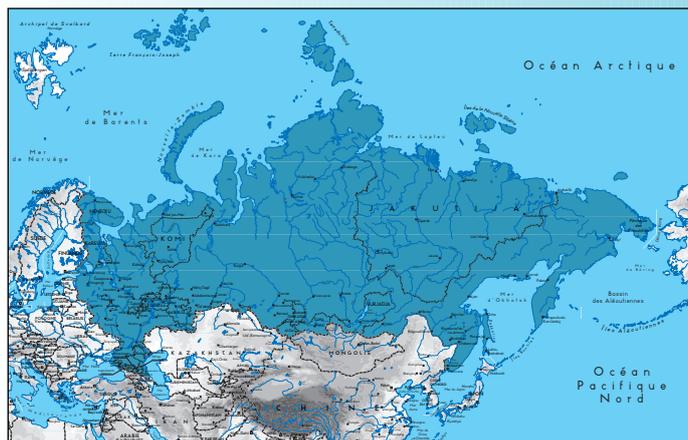
The "Great Rivers - 2004" Forum, which was devoted to the sustainable socioeconomic development in great river basins, hosted 45 constituent members of the Russian Federation, 425 organizations from 15 countries and 230 enterprises and institutions.

The Russian Architecture / Construction Forum was held at the same time, also on the same theme.

The joint exposition of the MNR included enterprises and institutions supervised by the Ministry.

The Forum included 12 sections and seven "roundtables".

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UKRAINE

PILOT PROJECT FOR WATER PROTECTION IN DNEPROPETOVSK

A seminar was held in Dnepropetrovsk on 10 and 11 June 2004, with the aim of presenting the project: "Technology transfer on the protection of surface water in Romania, Moldavia, and the Ukraine".

The seminar was attended by representatives of the concerned Ministries of the

Ukraine, Germany, Moldavia, Romania, and of the Dnepropetrovsk State and "Ekomet" Association.

The main stages of the project carried out in the Dnepropetrovsk region include:

- The selection of three companies for the application of the control method.

- The use of checklists, which are at present being reviewed and translated into Russian.

- The preparation of a decree for the protection of ground and surface water against dangerous substances.

- The development of a safety report model with operational alarm and hazard avoidance plan, as specified by the Seveso II Directive.

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PROPOSAL FOR A NEW WATER CODE

The Ukrainian Scientific Research Institute for Ecological Problems has developed proposals for amendments to the Water Code of the Ukraine (WCU) of 1995, with three purposes:

- ◆ to improve the legal wording of articles;

- ◆ to introduce new national norms,
- ◆ to reconcile the contents with the European Union's water legislation.

The most important proposal is the creation of eight Governmental departments for

river basins (GDWMBR), for the collection of taxes for special water uses and the use of these gathered resources for stimulating the enterprises to undertake water-protection activities.

This initiative follows the experimental creation in 1999, financed by the TACIS program of the European Commission, of the South Bug Basin Commission to coordinate and plan actions of common interest in the basin.

The results obtained in the Bug Basin were sufficiently promising to extend the experimentation stage to national reforms.

The Committee for Environmental Policy at the Parliament (Verkhovna Rada) requested financial assistance to the

French Ministries for Foreign Affairs and of Ecology and Sustainable Development, in order to have access to the materials necessary for drafting a water law, based on river basin management.

The French experts thus helped their Ukrainian counterparts to amend the Water Code and various implementation texts.

A new project on the Western Bug, with European financing, should enable to confirm the orientations already defined.

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The Bug River

MEDITERRANEAN NETWORK OF BASIN ORGANIZATIONS EVENTS AND ACTIVITIES 2003-2004

CREATION OF THE NETWORK

Since it was constituted in November 2002, the Mediterranean Network of Basin Organizations has developed its first activities and participated in various international workshops and conferences within INBO. With its new President Juan J. Moragues Terrades, the main objective of the Network is to achieve closer cooperation among the different basin organizations and entities in charge of water management in the Mediterranean region.

MENBO adapted its final statutes during its 1st General Assembly that was held in November 2003 in Valencia (Spain) within the framework of the International Seminar "Water Days".

EURO-INBO

The Group of European Basin Organizations for the implementation of the Water Framework Directive (WFD) was created during this seminar. The Jucar Basin Authority (CHJ) has chaired the Euro-INBO Liaison Bureau until the Group meeting held in Krakow, Poland, on 25-30 September 2004. The Jucar river basin is the Spanish pilot river basin in which is tested the implementation of all Guidance Documents of the WFD.

TWINBASIN

During the World General Assembly of INBO, held in the Martinique in January 2004, a twinning agreement was signed between the Jucar Basin Confederation (CHJ) and the Buzau-Ialomita basin (Apele Romane) in Romania.

2ND GENERAL ASSEMBLY

The 2nd Liaison Bureau meeting and the 2nd General Assembly of MENBO took place on 11-13 October 2004 in Istanbul.

COLLABORATION WITH EMWIS

Throughout 2004, MENBO started to collaborate with EMWIS (Euro-Mediterranean Information System on Know-How in the Water Sector) to exchange information on water management in Mediterranean countries.

6TH FPRD

MENBO actively participates in different projects within the 6th Framework Program on Research and Development of the EC: MELIA, SISMICA, TWINBASIN and IWRM.Net.

CAPACITY BUILDING SYMPOSIUM ON INTEGRATED WATER MANAGEMENT AND IRRIGATION ISTANBUL, 11-13 OCTOBER 2004



MENBO and the Euro-Mediterranean Irrigators Community (EIC) organized an International Technical Symposium within the Strategy Plan of the Global Water Partnership-Mediterranean (GWP-Med) and within the Mediterranean Component of the EU Water Initiative (EUWI). This event was held at the Kadir Has University of Istanbul.

There were 50 participants representing basin organizations, administrations in charge of water management and irrigators associations coming from: Algeria, Egypt, France, Greece, Morocco, Portugal, Spain and Turkey.

The participants made interesting presentations within four working sessions:

- IWRM evolution in Mediterranean countries at the River Basin level.
- Water Users Associations and Basin Organizations in the Mediterranean: Role in Water Management.
- Adjustment of irrigation in Mediterranean countries towards a sustainable agricultural model.

- Establishment, functioning and modernization of water management institutions in the Mediterranean Region.

After this Symposium, the participants took part in the Mediterranean Dialogue on the advances achieved regarding the Mediterranean Strategy on Sustainable Development. During this Dialogue, MENBO and EIC had the opportunity to present the Symposium results to the NGOs and other Mediterranean stakeholders who participated in the 3rd Meeting of the Circle of Mediterranean Parliamentarians for Sustainable Development (COMPSUD).

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Marrakech (Morocco)

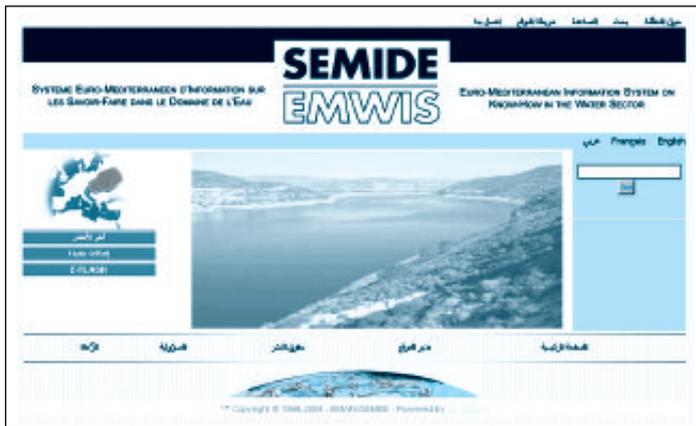
23 - 25 May 2005

**General Assembly of the Mediterranean
Network of Basin Organizations**



THE MEDITERRANEAN

EMWIS : PHASE II - 2003 / 2006



The Euro-Mediterranean Information System on know-how in the water sector - EMWIS - already proposes direct access to the information managed by 14 countries of the Mediterranean region (Algeria, Cyprus, France, Greece, Israel, Italy, Jordan, Lebanon, Malta, Morocco, Palestine, Portugal, Spain and Turkey).

The contract for financing phase 2 of EMWIS was signed on 1st December 2003 by the European Commission, France, Italy and Spain for a 3-year period.

While maintaining the overall objective of strengthening regional cooperation in the water sector, the approach consists in developing **EMWIS as an integrated network of National Water Information Systems.**

Thus, each Mediterranean Partner Country benefits from a specific support to prepare the development of its own national integrated system.

During the meeting, held in Malta on 5 May 2004, EMWIS Steering Committee defined the rules for allowing all the Mediterranean Third Countries (MTC) to take part and

decided to hold a meeting of the General Directors of the **35 countries of the enlarged Euro-Mediterranean Partnership** in 2005 to inform the 10 new members of the European Union and to present a progress report.

Four priority topics were also defined for carrying out experience summaries: ① use of non-conventional water resources, ② the European Water Framework Directive, ③ management of irrigation water, ④ integrated management of drinking water supply, sanitation and wastewater.

Electronic flash in the Arabic language

In addition to its bilingual information services (French-English), such as the multilingual topical directory (that inventories more than 2,500 organizations), to the electronic forums or even the national and international legislations on water, **EMWIS now publishes its monthly electronic flash in three languages: Arabic, English and French (close to 6,000 recipients).** Other services will be very quickly available in Arabic.

Euro-Mediterranean cooperation

The European Commission decided to disseminate through EMWIS any information on all the projects relative to the water sector and co-financed in the Mediterranean region, whatever the program (Development Aid, Environment, Research and Development, etc.): any information on the Regional Euro-Mediterranean Program on local water management (MEDA-water) and on the Mediterranean Component of the European Union Water Initiative (EUWI) is now available on-line on EMWIS website.

Cooperation with INBO

The cooperation with INBO, initiated in 2002, is continuing. Thus, during the INBO General Assembly of 2004, a reflection was launched on the development of a Worldwide Water Information System, based on EMWIS approach in the Mediterranean region and on similar systems in other regions of the world (for example AQUADOC in Central Europe).

For more information:
<http://www.emwis.org>

MOROCCO

PROGRESS ACHIEVED BY A DECADE OF REFORMS

Ten years will have passed since the promulgation of the Moroccan law of 1995, which reorganized the water sector.

In addition to a significant regulatory work needed to draft the implementation decrees, significant reforms gradually took place during this decade, the creation of the River Basin Agencies in particular. It is true that Morocco has reached an exceptional control of its abundant water resources for more than half a century.

The World Bank, with the French Development Agency (AFD), assessed the situation, the successes and difficulties which still remain, in a sectoral analysis, whose findings were already discussed by working groups mobilizing all the Moroccan public stakeholders of the water sector.

On the joint initiative of the World Bank and AFD, a synthesis seminar on the thinking caused by this sectoral analysis took place in Rabat in ONEP training center on last 8 and 9 December.

Work began on 8 December with two workshops mobilizing the representatives of all the Ministries and Public Establishments concerned, one devoted to drinking water supply and sanitation utilities, the other to water resource management and, in particular, to the creation of River Basin Agencies.

This last workshop was led by Mr. R. BALAFREEJ, Adviser to the Moroccan Minister for the Environment, and introduced by Mr. J.C. PIRES of the AFD.

Mr. A. ZIYAD of the MATEE presented the situation of the Moroccan River Basin Agencies and Mr. J.F. DONZIER, INBO Permanent Technical Secretary,

presented the organization and the functioning of Basin Organizations in Brazil, Spain and Mexico, as well as the building process of the French Water Agencies, from 1964 to 1974, and a typology of the basin institutions over the world.

A lively and constructive debate followed with, in particular, interventions from all the Directors of the new Moroccan Basin Agencies.

A synthesis of the workshops was presented on the following day to the Authorities concerned and will be used as a basis for useful recommendations to continue the significant reform effort already made.

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ALGERIA

ABH ALGÉROIS-HODNA-SOUMMAM FOR THE GENERAL PUBLIC



This program widens its audience each year.

During the World Water Day on 22 March 2004, the children, winners of the drawing contest, received their prizes from the Minister for Water Resources.

For three years, the water classes have been a success which is still continuing. Indeed, the Agency offers, in the field of children education, to the pupils of some schools of the capital and to their teachers an educational facilitation regarding the water cycle and the quantitative and qualitative uses of water resources.

In its exhibition stand at the "University-Company Forum" and during the 1st Trade Show on the Environment, which took place in June 2004 in Blida, the Agency displayed the policy for integrated water resource management in Algeria.

"TWINBASIN"

On the occasion of the Algerian Year in France, during the Polutec Exhibition in Paris, the Algérois-Hodna-Soummam Basin Agency signed a twinning agreement with the Seine-Normandy Water Agency on 4 December 2003. This agreement deals with a scientific and technical co-

operation on water management at the level of river basins.

This agreement is signed for a renewable three-year period, within the "TwinBasin" program of the International Network of Basin Organizations.

RAMSAR CONVENTION

Concerned by the significance and impact of overexploitation and by the carelessness of various users, either farmers, industrialists or local communities, the Agency decided to inform them and raise their

awareness on the need to preserve the wetlands classified by the Ramsar Convention, as they have a vital role in the natural development of the hydrological process.

SOON

❖ Educational tools, intended for the general public and children, will be created "to preserve water with simple acts".

❖ The Agency also plans to develop communication means (intranet and Internet).

WATER INFORMATION SYSTEMS

The 2004 Algerian-French cooperation program in the water sector, for a "Support to the River Basin Agencies (ABH)", includes a component on the organization of "Basin Information Systems".

In accordance with the ABHs' wishes, the following assignments were carried out:

- A synthetic analysis of the water information systems existing in Algeria;
- An assessment of the ABHs' needs for informa-

tion including the water cadastre;

- A presentation of the French experience in "water" data management;
- A detailed analysis of the various information systems of the National Water Resources Agency (ANRH), main producer of water-related data in Algeria;
- The production of a first standard entity-relation model planned for the water cadastre;

- An initiation of the ABHs' staff to the GIS functionalities;
- A review of the coding used for water resources in France and Europe;
- The organization of a 'think tank' on the possibilities for coding surface waters (Wadis, lakes, etc.) in Algeria.

These assignments took place in the form of working and training workshops, gathering the ABHs, ANRH, INCT (Na-

tional Institute of Cartography and Remote Sensing), ANAT (National Agency for Regional Planning), and their French counterparts.

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TURKEY

IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE

Following the pilot project on integrated water resource management, carried out from

1997 to 1999 in the Aegean river basins and Izmir Bay, with the support of French Coope-

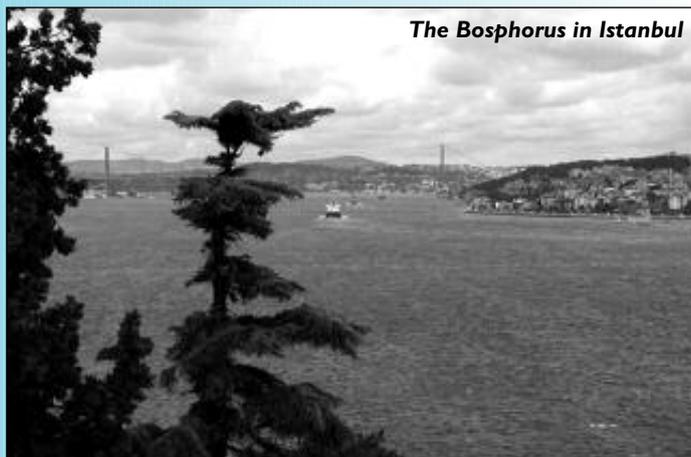
ration, the objective of the MATRA program, funded by the Dutch Government, is to assist Turkey with the implementation of the Water Framework Directive (WFD) at the national and regional level. It is designed to improve collaboration and coordination between the different institutions responsible for water management and to aim for a participatory and integrated approach in water management planning in Turkey.

The expected results are as follows:

- ❖ Definition of River Basin Districts according to the requirements of the Water

Framework Directive (Article 3);

- ❖ Improvement of knowledge of EU legislation;
- ❖ Definition of methods for the characterization of river basins, of environmental objectives, pressures and impacts, economic analyses of water uses and preparation of river basin management plans;
- ❖ Preparation of a River Basin Management Plan for the Uluabat pilot basin;
- ❖ Information of the public and policy makers.



The Bosphorus in Istanbul

MEDITERRANEAN BASIN "SMART"

The SMART project for "Sustainable management of water resources in coastal zones", co-financed by the European Commission in the framework of the INCO-MED A3 program was launched in 2002 for a period of three years.

SMART is based on a multidisciplinary approach including

scientific, socioeconomic and political components. It is being implemented in close collaboration with managers and decision-makers on five pilot sites: the Bay of Abu Ali in Lebanon, the Bay of Izmir in Turkey, the Gulf of Aqaba in Jordan, Hammamet in Tunisia and the Bay of Abu Kir in Egypt.

It is working on innovative methodologies and equipping the Mediterranean Basin research teams with high-performance numerical tools for modeling water quality in coastal zones.

The Project partners are ESS (Austria), SOGREAH (France), FEEM (Italy), EIA (Portugal),

SUMER (Turkey), NCRS (Lebanon), University of Jordan (Jordan), CEDARE and the University of Alexandria (Egypt), CNT (Tunisia).

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CYPRUS

IMPLEMENTATION OF THE WATER FRAMEWORK DIRECTIVE



Cyprus is the third largest island in the Mediterranean after Sicily and Sardinia.

Most of the rivers have their springs in the Troodos Mountains, but have no perennial flow.

It is essential to provide sufficient, safe, clean, healthy and reliable water for domestic and irrigation needs and for the environment.

Cyprus has fully transposed the WFD into national legislation through the "Water Protection and Management Law",

with effect from 22 December 2004.

The Island of Cyprus is subdivided into 9 hydrological regions made up of 70 watersheds. As there are no rivers with perennial flow, the whole island is considered as a single River Basin District.

The competent authority for the application of the Directive is the Ministry of Agriculture, Natural Resources and Environment. The two main "agencies" of the Ministry responsible for implementing the provisions

of the WFD are the Water Development Department and the Environment Service.

The implementation problems are:

- Lack of quantitative and qualitative data and of a national database system.
- Insufficient coordination among responsible authorities and stakeholders.
- Lack of expertise and relevant human resources.
- The mentality of certain water users, who consider water as their own property.
- The high implementation cost.
- The extremely tight and demanding timetable.
- The fragmentation of the water legislation and powers.

Most of these problems will be rectified through the new Law, currently being redrafted at the Law Office of the Republic.

At the same time Cyprus is also facing specific challenges related to regional and/or local situations and conditions such as:

- ❖ Frequent extended droughts.
- ❖ Coastal waters sometimes affected by nutrients from activities.
- ❖ Aquifer exhaustion and salinization in the coastal areas.
- ❖ Increased irrigation tends to aggravate problems.
- ❖ The construction of a large number of dams reduces groundwater recharge and increases saline intrusion.

The implementation of the WFD is quite timely as the water resources of Cyprus are facing increasing pressures. There is no time like the present to tackle the challenges for current and future generations.

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NEXT INBO MEETINGS

**Marrakech
(Morocco)**
23-25 May 2005
General Assembly
of the Mediterranean
Network of Basin
Organizations
MENBO



**Namur
(Walloon Region - Belgium)**
29 Sept. - 1st Oct. 2005
3rd Assembly of the Group
of European Basin
Organizations
for the Implementation
of the Framework Directive
EURO-INBO



**Mexico
(Mexico)**
18 March 2006
4th World Water Forum
"Participation of the public
and water users in basin
management"





Privileged Links

GWP

EMWIS

AQUADOC-INTER

UNESCO

WWC



The network newsletter

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