

7th World Water Forum

Daegu-Gyeongju

13 - 17 April 2015



Kyoto - Japan - March 2003 - WWF 3



Mexico - Mexico City - March 2006 - WWF 4



Istanbul - Turkey - March 2009 - WWF 5



Marseilles - France - March 2012 - WWF 6

www.inbo-news.org

The 7th World Water Forum will take place in Daegu-Gyeongju from 13 to 17 April 2015 at the invitation of the South Korean Government and the World Water Council.

It is a major meeting not to be missed!

The International Network of Basin Organizations - INBO, which already actively participated in the six previous Forums, calls its Members and Observers to get mobilized and go to Daegu to present their solutions, to exchange and discuss in order to develop and improve basin management and transboundary cooperation in the world.

Since the 1990s, water management at the level of basins of rivers, lakes or aquifers has experienced a quick development in many countries, which made it the basis of their national legislation or tested it in pilot river basins.

The European Water Framework Directive of 2000 imposes, for example, good management of the national or international River Basin Districts to the 28 Member States and the candidate Countries of the European Union.

The management of the transboundary basins of the 276 rivers and hundreds of aquifers is taken more and more into account within Commissions, Authorities or International Basin Organizations, which are being created or strengthened on all the continents.

Significant progress has been made: basin management works when there is strong will of all the stakeholders!

The Forum of Daegu will be the opportunity of reporting on these progresses and presenting our solutions to face the difficulties which remain.

INBO jointly with **OECD**, **UNESCO** and **UNECE** will especially get involved, in partnership with all the other interested Organizations, **in the Forum topics addressing adaptation to climate change, cooperation to reduce conflicts and improve transboundary water management and governance, as well as in several regional processes.**

Our ideas are progressing, let's get mobilized to make our solutions known in Daegu in April 2015!

Declaration of Fortaleza



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

It gathered 319 delegates, coming from 49 countries.

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

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



The opening ceremony © IOWater - C.Runel

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

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

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

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

Integrated information systems should allow having knowledge on resources and their uses, on polluting pressures, ecosystems and their functioning, risks and evolution follow-up. Production and availability of reliable information and data are essential to enable **a constructive dialogue between partners**, facilitate decision-

making and evaluate the results of the implemented policies.

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

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

Sustainable financing of water resources management and of the basin organizations, that are in charge of it, must be guaranteed regarding investments and operation, and based on the application of the "polluter pays" and "user pays" principles, ensuring all necessary geographical and cross-sectoral equalizations and true solidarity between all categories of users by combining national or local administrative taxes, the pricing of community services, and taxes specific to objectives selected through dialogue.

At the side of the relevant Governmental Administrations, active participation in decision-making of the local Autho-

rities concerned, including municipalities, representatives of different categories of users and associations for environmental protection or of public interest should be organized.

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

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

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

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

FOR BETTER BASIN MANAGEMENT OVER THE WORLD!

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

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

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

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

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

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

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

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

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

With regard to floods, the "upstream-downstream common cause" should be the basis of consistent and coordinated management on the scale of basins and sub-basins both for prevention and protection.

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



This is especially true in transboundary basins where cooperation between riparian States should be promoted.

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

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

Pressures on water resources require looking for new ways, such as the use of non-conventional water and reuse of treated water. Mobilizing new resources and creating new reserves are needed; this should be done after making sure that water demands are rationalized and that projects are ecologically acceptable and economically reasonable. "No regret" approaches should be sufficiently flexible to adapt to highly fluctuating situations in the future.

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

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

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

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

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

While thinking has started for defining the UN post 2015 Sustainable Development Goals, INBO considers essential to include water resources management in the top priorities, as this more and more scarce resource is essential for economic, social and environmental development.

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

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

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

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

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



International Events

The President's speech

Increasing cooperation in the field of water



© IOWater - C.Runel

We should more than ever build bridges between Basins, Regions, States and Countries worldwide for finding solutions for the recovery and conservation of our water resources.

To cooperate means to join our efforts to follow the same path, integrating and optimizing outcomes for the benefit of all.

By nature water is meant to unite peoples.

There are many places in the world where water resources are degraded, rivers are dead, ecosystems are devastated and groundwater is polluted.

In this context of global change, the participation of the whole society in water resources management is crucial.

Thus, it is only through the exchange of ideas, deepened debates and an ever greater participation of stakeholders, that sufficient quality and quantity of water will be guaranteed in our river basins.

And this is the main objective of the **International Network of Basin Organizations (INBO)** that I have the honor of presiding for three years.

In all the Basin Organizations taken together worldwide, we are tens of thousands of people who, directly and indirectly through Basin Committees, discuss, debate, create, share and decide the future of our river basins, and promote projects and work, plan objectives, enable effective public policies for the conservation of our water resources.

In this sense, access to information is the basis for dialogue between all parties involved and for their mobilization.

The International Network of Basin Organizations is supporting this great surge of daily participation in the field for protecting our rivers, lakes and aquifers.

We will share our ideas, our projects and our solutions.

We will integrate our ideals and our vision into the Sustainable Development Goals, always in the direction of effective cooperation for our water resources.

Lupercio Zirolido Antonio

President of the International Network of Basin Organizations
Governor of the World Water Council



www.inbo-news.org

Report of Activities 2010 - 2013

Worldwide recognition for INBO



INBO General Assembly was an opportunity to assess the activities of the Network in the past 3 years, **under the Presidency of OMVS (Organization for the Development of the Senegal River) since 2010. OMVS High Commissioner is today Mr. Kabiné Komara**, who chaired the statutory sessions in Fortaleza.

The General Assembly welcomed INBO successes, especially obtained under the Multiyear Action Plan.

The Assembly was pleased with the undeniable success of:

- **"INBO Newsletter"**
(27,000 recipients),
- **"The Electronic Newsletter of the Network"**
(28,000 subscribers),
- **INBO website**
www.inbo-news.org,
which had 1,150,000 visitors in the past 12 months.

The Assembly underlined the great interest of the series of **"Handbooks on River Basin Management"**, already translated into many languages.

Two new handbooks are planned in 2014 and 2015, one on adaptation to climate change and the other on the protection and restoration of aquatic ecosystems in basins.

The Assembly reminded the success of the **"World Pact for better River Basin Management"**, presented at the Forum in Marseilles and already signed by 128 concerned organizations around the world.

The Assembly wished, that new initiatives be taken for training executives and technicians of Basin Organizations. For this purpose, the **"INBO Academy"**, launched in 2010 to train executives of Basin Organizations or of their partners, will be strengthened.

The Assembly finally wanted that INBO continue the reflections started since the **World Water Forums in The Hague, Kyoto, Mexico, Istanbul and Marseilles** to propose its "vision" of the evolution of water management in the coming years, and its proposal to move to practical field action in view of the **seventh Forum in Daegu/Gyeongju in South Korea in April 2015.**

www.inbo-news.org



Messrs Kabiné Komara and Lupercio Zirolido Antonio
© IOWater - C.Runel

International Events

OECD



Water Governance Initiative



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

Launched on the occasion of the 6th World Water Forum in Marseilles in March 2012, the **OECD Water Governance Initiative (WGI)** gathers representatives of national Governments, regional, local and basin Authorities, the private sector, NGOs, service providers, regulators, international organizations, donors and independent experts. It is particularly important to involve stakeholders coming from outside the water community: the Initiative associates representatives from the energy and agricultural sectors, Parliamentarians and Elected Officials, media, consumer associations, trade unions, private companies and the civil society.

In total, 25 countries are participating.

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

Working Group 3 on basin governance, in particular, is jointly facilitated by INBO and UNESCO (ISARM). It will have to propose the best institutional practices in the management of national or transboundary basins of rivers, lakes and aquifers and, also, performance indicators to evaluate their practical implementation in the field.

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

Delphine Clavreul

Water Governance Program
Regional Development Policy Division
Delphine.CLAVREUL@oecd.org

www.oecd.org



Water Security for Better Lives



According to OECD, by 2050 the world's population will reach 9 billion people, 40% will live in areas under severe water stress.

Nearly 20 % of this population could be exposed to floods and the economic value of assets at risk from floods is expected to be €35,000 billion. Water supply could encounter more shortages.

In a new publication "**Water Security for Better Lives**", OECD examines the critical issues surrounding water security (water shortage, water excess, poor water quality, and the resilience of

freshwater systems), providing a rationale for a risk-based approach and the management of trade-offs between water and other (sectoral and environmental) policies.

The publication provides policy analysis and guidance on the use of market-based instruments and the complex links between water security and other policy objectives, such as food and energy security, climate mitigation...

This report establishes a three-step process to find, identify and manage the risks associated with water: risk assessment, risk tolerance assessment, risk acceptability and calibration of appropriate responses. It calls for Governments to accelerate their actions to improve the efficiency of water management systems and reduce the impact of the rising global demand, shortages and flooding caused by climate change.

www.oecd.org

3rd Istanbul International Water Forum



The International Water Forum organized in Istanbul from 27 to 29 May 2014, made contributions to the next 7th World Water Forum, to be held in Daegu (Korea) in April 2015.

Water resources management and fair allocation is a more and more crucial issue. International law comes to the rescue to prevent or peacefully resolve water-related conflicts.

However, the general principles for making fair allocations and the criteria used to significantly assess the damage are often vague and need to be clarified.

The topic of this 3rd Istanbul Forum was: "Water Regulation and Safety: Risk Assessment and Challenges, Opportunities to seize".

www.iusf.org.tr



International Events

UNECE



Global workshops on River Basin Commissions



In the framework of the 2013-2015 work program, the Parties to the UN Convention (1992) on the Protection and Use of Transboundary Watercourses and International Lakes have planned to organize two workshops to **promote the exchange of experiences and good practices between joint bodies for transboundary water cooperation of the whole World**, in order to learn lessons from them and have recommendations.

The first of these workshops took place in Geneva on 23-24 September 2013.

It was organized under the leadership of the Governments of Germany and Finland, in partnership with UNECE, INBO, UNESCO, GEF, IW:LEARN, GWP, ICPDR and UNEP.

Over 120 participants discussed good practices in the legal and institutional arrangements and procedures.

The International Commission for the Protection of the Rhine demonstrated the evolution and gradual expansion of cooperation in the basin.

The International Commission for the Congo-Ubangi-Sangha Basin described its path from a navigation-dominated body towards an integrated water resources management commission.

The binational Authority of Lake Titicaca shared its experience of implementing a Master Plan to address the use of resources in the Lake.

The Mekong River Commission presented its experience with organizational reforms.

The International Commission for the Protection of the Danube River shared its rules and practices on the involvement of stakeholders.

Internal rules for effective functioning were described by the International Sava River Basin Commission.

The debate also highlighted recent successes to establish new agreements and joint bodies, for example the conclusion of the Memorandum of Understanding on a Shared Strategic Vision for the Sustainable Management of the Drin River Basin.

The experience of the establishment of Zambezi Watercourse Commission and role of the Revised Protocol on Shared Watercourses in the Southern African Development Community were also presented.

The second workshop which took place on 9 and 10 April 2014 focused on the technical aspects of cooperation in the framework of joint bodies.

Iulia Trombitaia

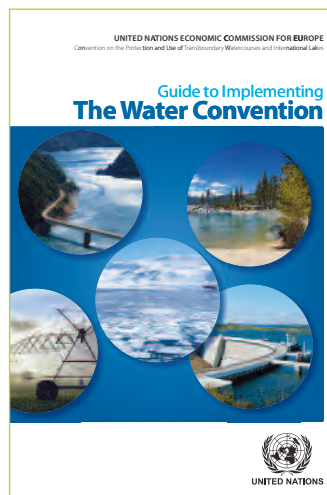
UNECE Secretariat

Iulia.Trombitaia@unece.org

More information on the meeting:

www.unece.org/env/water/workshop_joint_bodies_2013.html

Guide to implementing the UNECE Water Convention



The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) was adopted in 1992 and entered into force in 1996.

It brings together almost all countries sharing transboundary waters in Europe. It was opened for ratification by all United Nations Member-States.

It serves as an instrument to strengthen international cooperation and national measures for the ecologically sound management and protection of transboundary surface water and groundwater.

It provides an intergovernmental platform for monitoring the development and promotion of transboundary cooperation.

This guide to implementing the Convention comments the Convention's provisions and provides explanations of the legal, procedural, administrative, technical and practical aspects of the requirements for its appropriate implementation.

It aims to strengthen the understanding of the Convention among current and future Parties, international partners, non-governmental organizations and academia.

Downloading:

www.unece.org/index.php?id=33657

World population projected to reach 9.6 billion by 2050 and 11 billion by 2100

The United Nations issued new World Population Prospects.

According to this document, the current world population of 7.2 billion is projected to increase by almost one billion people within the next twelve years, reaching 8.1 billion in 2025 and 9.6 billion in 2050.

It could reach 11 billion people by the end of the century.

Developing regions will experience the greatest increase in population from 5.9 billion in 2013 to 8.2 billion in 2050.

During the same period, the population of developed regions will remain largely unchanged at round 1.3 billion people.

According to the report, growth is expected to be most rapid in the 49 least developed countries, whose population is projected to double in size from around 900 million inhabitants in 2013 to 1.8 billion in 2050.

The new projections include some notable findings at the country level. For example, the population of India is expected to surpass that of China around 2028, when both countries will have populations of around 1.45 billion.

More information:

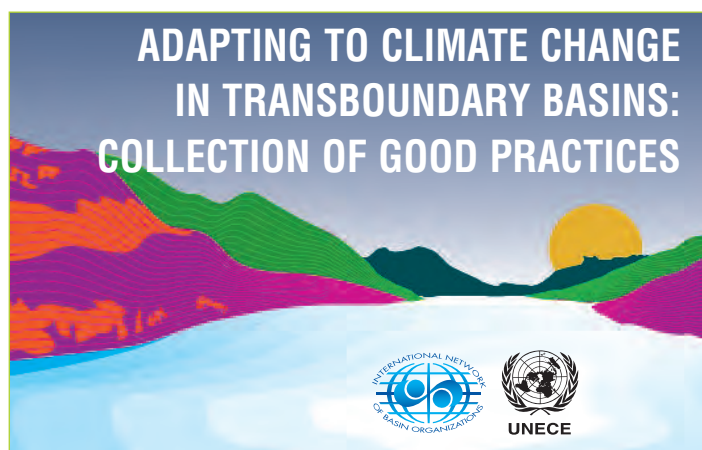
www.unfpa.org

INBO - UNECE



Adapting to climate change in transboundary basins

Collection of good practices and lessons learned



Climate change, whose reality has been confirmed again, if necessary, by the latest IPCC reports, will have significant effects on surface and ground water resources and aquatic environments, and beyond, on a large number of water-related activities, such as agriculture, energy production, navigation, for example.

Adaptation is needed and very directly concerns water resources management in national and transboundary basins.

At the last World Water Forum in Marseilles in 2012, it was proposed to promote the exchange of experiences gained by basin organizations in the development of a strategy for adaptation to climate change and in the preparation of action plans for this purpose.

INBO and UNECE have agreed to join forces and work together on this critical issue.

A platform of the basin organizations involved in climate change adaptation was created in 2013, including eight European pilot basins and a dozen transboundary basins in other regions of the world.

INBO and UNECE are also committed to developing a compendium, illustrated by many case studies, for giving recom-

mendations on the actions needed to adapt basin management to the effects of climate change, based on practical experiences collected in basins.

The aim is to present the compendium, published in English and French, at the next World Water Forum in South Korea in April 2015. A digital version will also be available.

In addition to the basin organizations, many organizations are involved in the production of this book: IUCN, AGWA, GWP, WMO, ...

This publication will complement the two handbooks already published in March 2009 on "Integrated Water Resources Management in the Basins of Rivers, Lakes and Aquifers" and in March 2012 on "Integrated Water Resources Management in Transboundary Basins", and the UNECE publication on "Guidelines on Water and Adaptation to Climate Change".

Daniel Valensuela

International Network of Basin Organizations (INBO)

d.valensuela@oieau.fr

Sonja Koepfel

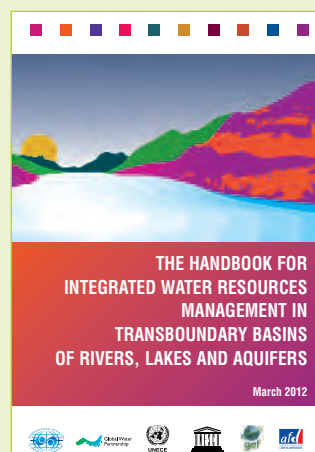
UNECE

Sonja.koepfel@unece.org

www.inbo-news.org

Handbook on Integrated Management of Transboundary Basins

The Handbook is now available in several languages



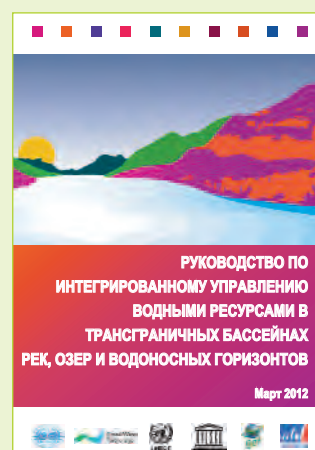
This Handbook was published during the World Water Forum in Marseilles in March 2012 by the International Network of Basin Organizations (INBO) and its partners.

It addresses representatives of the Governments of riparian countries of transboundary basins and managers who must make decisions related to the resource sharing and management, and more generally to all water users in the particular context of transboundary waters.

Originally published in French and English, this Handbook has been translated into several languages since its release: Spanish, Russian, Chinese and Arabic, thus contributing to disseminate good practices over the world.

The different versions can be downloaded from INBO website:

www.inbo-news.org



International Events

French-Speaking World



Facilitation of the "Water portal" of "Médiaterre"



During summer 2011, a Memorandum of Understanding was signed by the **Sustainable Development Institute of the French-speaking World (IFDD)**, a subsidiary branch of the International Organization for the French Speaking World (OIF), and the International Office for Water, INBO Secretariat, to collaborate to the facilitation of the "Water" portal of "Médiaterre".

These activities will take a new dimension.

This memorandum was renewed in January 2013 and extended to the drafting of more technical articles.

A new step will now be reached that will make the "Water portal" evolve towards a real educational platform.

The Limousin Region (France) is supporting this project for the 2013-2015 period, via its mechanism for supporting shared projects (DISMUT).

www.mediatorre.org/eau



"EUROPE-INBO 2014"

For the implementation of the European Water Framework Directive



**Bucharest - Romania
12 - 15 November 2014**

To participate, please register:

www.inbo-news.org

Water Summit



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



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

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

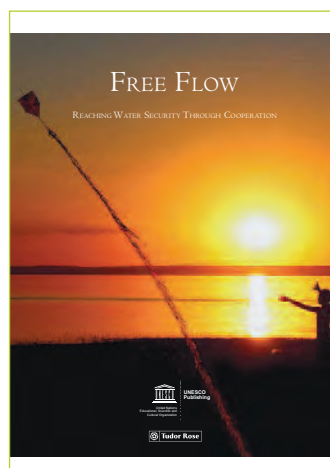
Mr. Jean-François Donzier, INBO Permanent Technical Secretary, was invited to lead the session on **Water Governance in the Civil Society Forum** organized during this Summit, in which he presented an introductory framework paper on the principles now widely recognized that govern modern basin management.

www.budapestwatersummit.hu

Free Flow



Reaching water security through cooperation



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

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

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

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

www.un.org/fr/events/worldwateryear

African Network of Basin Organizations (ANBO)



Strengthening the Institutions for Transboundary Water resources management in Africa Project (SITWA)



SITWA Steering Committee meeting
October 4th 2013 - Addis Ababa - Ethiopia

The "Strengthening the Institutions for Transboundary Water resources management in Africa" Project (SITWA) started in October 2012.

Its specific objectives are to have the **African Network of Basin Organizations (ANBO)** transformed into a sustainable and influential organization as a pillar under the African Ministers Council on Water (AMCOW) and have a technical assistance program provided

through the Regional Economic Commissions (RECs).

The Project is funded by the European Union for a one-year Inception Phase and a two-year Implementation Phase. It is co-managed by the Global Water Partnership Office (GWPO) and the Organization for the Development of the Senegal River (OMVS), taking care of ANBO Secretariat and host of the Project Management Team in Dakar.

During the first phase, the project focused on:

- **ANBO's** legal and institutional arrangements as a pillar under AMCOW;
- Legal frameworks of the African Basin Organizations;
- Capacity building needs of these organizations;
- Information and knowledge management needs; and
- Resource mobilization mechanisms of the African Transboundary Basin Organizations and of **ANBO**.

In December 2012, the Project Steering Committee met in Dakar to approve the work plan and the budget for the first one-year phase.

On 13-14 and 17-18 June 2013 about eighty (80) participants from Western, Northern, Eastern and Southern Africa attended interregional consultations and provided inputs to the five thematic study areas covered in the inception phase.

On 4 October 2013, the Inception Phase Report was validated and approved by the Project Steering Committee (PSC) meeting in Addis Ababa, Ethiopia.

The Action Plan will be implemented during Phase II of the project (2014-2015).

Innocent Kabenga

African Network of Basin Organizations (ANBO)
Project Manager GWPO/ANBO-SITWA-EU Project
innocent.kabenga@gmail.com

www.anbo-raob.org

Good practices in Basin Management

Assessment of the experiences of five African organizations

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

The African partner institutions are the basin organizations of the Senegal (OMVS), Niger (NBA), Congo (CICOS) and Volta Rivers (VBA) and the Water

Resources Coordination Center (WRCC) of the Economic Community of West African States (ECOWAS).

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

- Governance;
- Search for autonomous and sustainable financing;
- Strategic planning and implementation actions;
- Optimization of monitoring.

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

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

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

Finally, many documents relating to the four topics will be available soon on the **African Water Information System (AWIS) website**, managed by ANBO.

Frédéric Maurel

Water - Sanitation Project Manager
French Development Agency
maurelf@afd.fr

www.afd.fr



Workshop in Ouagadougou - Burkina Faso - November 2013



Conservation and development of Lake Chad



The LCBC workshop in Niamey in March 2013



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

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

LCBC, established in 1964, initiated an institutional reform in 2008.

In this context, the Conference of Heads of State and Government adopted on 30 April 2012 **the Water Charter of Lake Chad Basin.**

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

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

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

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

Component 3 should allow:

- The implementation of the Water Charter through its ratification by all the Member States and preparation of appendices;

- The signing of the United Nations Convention of 21 May 1997 on the Law on the use of international watercourses for purposes other than navigation;
- The exchange of experience with basin organizations of West and Central Africa.

Four workshops for disseminating the Charter, which gathered parliamentarians, decision-makers, practitioners and water users, took place in Ndjamena (January 2013), Niamey (March 2013), Abuja (May 2013) and Yaoundé (December 2013).

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

Dr. Moustapha Ngaïdo

Environmental lawyer
ngaïdo@gmail.com

www.cbilt.org

The Nakanbé and Mouhoun Water Agencies

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

The Decree of June 2003, determining the areas of responsibility of the structures in charge of water resources

management, has divided the country into five areas: Cascades, Gourma, Lip-tako, Mouhoun and Nakanbé.

In October 2010, the French Loire-Brittany Water Agency and Nakanbé Water Agency signed a Memorandum of Understanding for

cooperation in the development of joint actions in the field of Integrated Water Resources Management.

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

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

In addition to direct collaboration between agencies, these institutional cooperation projects strengthen the policy framework and facilitate the implementation of common cause projects in connection with the Water Development and Management Plans of the concerned river basins.

Dibi Millogo

Nakanbé Water Agency
fredmilfr@yahoo.fr

<http://eau-nakanbe.org>



The Nakanbé River



LES AGENCES DE L'EAU
ÉTABLISSEMENTS PUBLICS DU MINISTÈRE EN CHARGE DU DÉVELOPPEMENT DURABLE

Volta Basin Authority (VBA)



Implementation of priority actions of the 2010-2014 Strategic Plan

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

Since 2012, the International Network of Basin Organizations (INBO) has been implementing the project, which aims to build the capacity of:

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

In January-February 2013, Members of the Experts' Committee and Executive Directorate made a visit to France in the Seine-Normandie and Adour-Garonne Water Agencies and met in Toulouse members of the Planning Commission, DREAL (Regional Directorate for the Environment, Development and Housing) and of the Coteaux de Gascogne Development Company (CAGC).

The project also allowed the participation of the VBA Executive Director in INBO World General Assembly, held in Fortaleza, Brazil, from 12 to 16 August 2013. He was able to participate in the topical round-table "Institutional frameworks for action of Basin Organizations, of local



authorities, water users and the public, role of Basin Committees" and exchange with his counterparts in charge of Transboundary Basin Authorities.

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

It allowed strengthening the relations between the various stakeholders of the six VBA Member States. At the same time, an expert from the Adour-Garonne Water Agency presented the dialogue process in the river basin and made recommendations for the functioning of the Stakeholders' Forum.

A session was organized on the preparation of the Master Plan for Water Development and Management.

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

Charles A. Biney

Executive Director
Volta Basin Authority
Fax: + 226 50376486
cbiney@gmail.com

www.abv-volta.org



Guinea - Upper Tinkisso Basin



Payment for environmental services

The Tinkisso is a tributary on the left bank of the Niger River in Guinea.

The issue to deal with was to implement a mechanism of payment for environmental services to ensure sustainable development in the river basin.

On a proactive basis, the selected principle was as follows:

- People who provide environmental services should be paid for doing it,
- People who benefit from environmental services should pay for them.

The prices of goods and services should ideally reflect all social costs, including environmental degradation costs associated with pollution and resource exploitation.

In the example of the Tinkisso Basin, we tested the combined approach of ecosystem restoration and payment for generated environmental services to explore the feasibility of integrated and

sustainable management essential for poverty alleviation and adaptation to climate change.

The participatory and pedagogical approach used promoted local communities' awareness to the adverse effects of the degradation of resources on which they depend for their survival.

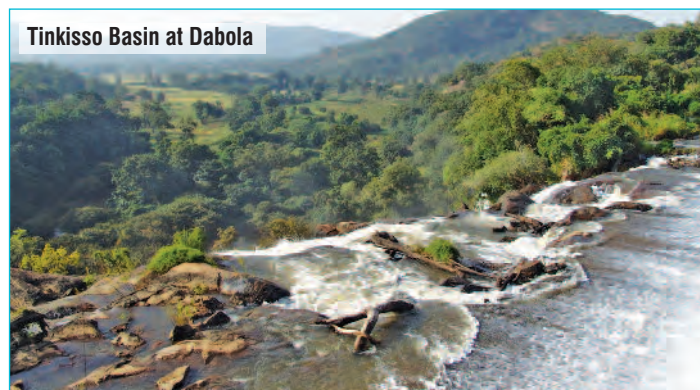
A new collaboration dynamics has developed between the technical services in charge of conservation, the water sector, agriculture, animal husbandry, and the users and other stake-

holders in the implementation of **REPASE project (Restoration of Ecosystems and Payment for Environmental Services)**.

It is a program designed to build the capacity of demonstrating the economic contribution of activities based on water resources and associated ecosystems to poverty reduction and economic growth.

Abdoulaye Camara

Deputy Coordinator of REPASE
Tel.: 664 24 17 23 / 628 09 91 66
asquihydro@yahoo.fr / ablalayerapase@gmail.com



Tinkisso Basin at Dabola

Gabon



"World Rivers Day"

The "World Rivers Day" 2013 was celebrated in Cape Estérias on 28 September 2013, at the initiative of the General Directorate of Water Ecosystems of the Ministry of Water and Forestry, which organized:

- An awareness of the local population on the significance of rivers and waterborne diseases;
- A discussion panel on water quality and the threats to rivers in Gabon;
- An operation for cleaning the Gabaga River.

Jean Gabriel Goussilou

General Directorate of Water Ecosystems
Ministry of Water and Forestry
jg.goussilou@yahoo.fr



Towards the "SDAGE"

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

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

- **Good "SDAGE" ownership**, ensuring the participation of the basin's stakeholders and water users;
- **The creation of a hydrological modeling** to better understand the functioning of the river basin and its possible resource allocations.

Two projects are going to help this initiative:

- **Project for support to water resources management in the Congo River Basin, financed by the European Union** and managed by IOWater, INBO Secretariat. This project includes a training cycle on operational hydrology for the National Hydrological Services (NHS) and CICOS, and support to the implementation of the participatory component of the "SDAGE";
- **Project for monitoring water resources and prospects for the Congo Basin, funded by the French Global Environment Facility** and managed by CICOS, with a technical assistance from the French Development Agency.

A component corresponds to the development of a resources allocation model on the basin scale.

These bases being completed by early 2015, the "SDAGE" then will be initiated with the objective of giving people what they really need.

Institutional audit

In 2013, the **International Commission of the Congo-Ubangi-Sangha Basin (CICOS)** carried out an audit of its activities in Integrated Water Resources Management (IWRM) and of its shipping activities. The main conclusions are as follows:

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

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

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

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

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

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

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

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

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

Launching of Congo-HYCOS program

Facing difficulties in the knowledge and control of water resources in the Congo River Basin, **CICOS** and its Member States committed themselves to implement the **Congo-HYCOS** program,

which is a component of WHYCOS (World Hydrological Cycle Observing System) program of the World Meteorological Organization (WMO).



Gauging of the Congo River

This commitment resulted from alarming findings regarding an almost total lack of equipment for hydrometric measurements in the entire basin. Indeed, **the river basin has today only about twenty gauging stations.**

The **Congo-HYCOS** program has started, thanks to funding provided by the European Union and the French Global Environment Facility.

The training cycle of the European project is coming to an end with a very positive outcome that allowed the National Hydrological Services of CICOS Member States to reclaim hydrological issues and be aware of the magnitude of the work ahead.

The challenges facing the States, CICOS and the recently recruited program coordinator are numerous: to finalize a project document specifying the stations to be established as well as the organization of the monitoring and maintenance thereof, set out the roles of each and the data exchange processes, find financial partners for starting the operational phase of the project and identify a sustainable financing mechanism for the maintenance of the network at the end of the externally financed phases.

Damien Brunel

CICOS Adviser

dbrunel.atcicos@yahoo.fr

www.cicos.info

Niger Basin Authority (NBA)



The Water Charter and users' participation in concerted and sustainable water resources management in the Niger River Basin

The Niger Basin Authority (NBA) has had a **Water Charter**, adopted by the Member States, since 2010.

This agreement provided for, in Articles 25 and 26, effective involvement of users of the Niger Basin natural resources in decision-making regarding the management of the river.

"States Parties shall guarantee to all users the right to be informed about the status of water resources and to participate in the elaboration and implementation of decisions relating to the basin development."

For this purpose, information about the status of transboundary waters, the allocation of water to different sectors and the measures taken or planned to prevent, control and reduce transboundary impact must be available to the public".

The users' information is guaranteed by their participation, through Local Coordinations, the National Coordinations of Users (NCU) and the Regional Coordination of Users (RCU), in the statutory meetings of the Niger Basin Authority (Technical Committee of Experts, Council of Ministers, Summit of Heads of State and Government).

The National Coordination of Users gathers all the representatives of the stakeholders exploiting the natural resources of the Niger Basin.

The involvement of the civil society in the development of the Niger Basin began in 2005 when the NBA invited representatives of the civil society to participate in the regional workshop to validate the regional synthesis of multi-sectoral studies.

The role of the Coordinations of Users is to mobilize them around basin development issues through information and awareness campaigns, on the one hand, and to build their capacity in

organization, participation, representation, negotiation and advocacy, on the other.

To facilitate their effective participation in the decision-making process, **the Water Charter set out the following rules for participation:**

- Information must be given effectively at the beginning of the decision-making process;
- Reasonable time must be provided for the different stages of public participation;
- Participation should begin early in the process;
- The public must be informed promptly of new projects;
- The public must have the opportunity to submit in writing any comments, information, suggestions, proposals, alternative proposals, analyses or opinions that it considers relevant;
- States Parties and the Authority must ensure that, at the time of decision making, the results of public participation are duly taken into account;
- Once the decision is made, the public is promptly informed.

Stakeholders' capacity building and the involvement of the civil society are the third priority issue, entrusted by the Member States to the Executive Secretariat under the Shared Vision.

Abdoulaye Kaya
Niger Basin Authority (NBA)
abdoulayekaya@yahoo.fr

www.abn.ne



The Niger River



A river model shown in 2006 at the first Niger Basin Users' Forum

Free speech

Hydropolitics of the Senegal River

In West Africa, a water crisis is already a reality.

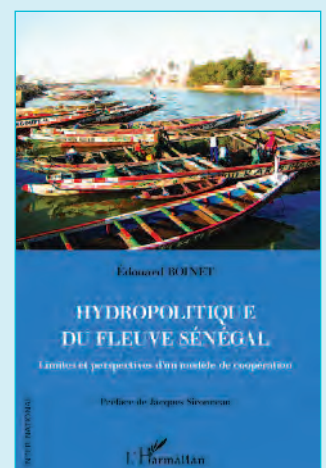
This book, published by L'Harmattan, clearly analyzes the ambitious response given by the riparian States of the Senegal River: the establishment of **the Organization for the Development of the Senegal River (OMVS)**, an institutional and legal framework among the most advanced in water management worldwide.

The author, Edouard Boinet, is project manager at **INBO Secretariat**, currently working in China with the mission of coordinating the French-Chinese cooperation project focusing on the experimentation of some water management methods and techniques in the Chinese Hai River Basin.

L'Harmattan Publishing

Tel.: +33 1 40 46 79 20 - Fax: +33 1 43 25 82 03
contact@harmattan.fr

www.editions-harmattan.fr



North America

North-American Network of Basin Organizations (NANBO)



Second Water Forum in Quebec

Four great challenges

From 27 to 29 May 2013, the second Water Forum was held in Lake Beauport, in the region of Quebec, at the initiative of the **North American Network of Basin Organizations (NANBO)** and the **Regrouping of the River Basin Organizations of Quebec (ROBVQ)**, with Ducks Unlimited Canada, the First Nations of Quebec and Labrador's Sustainable Development Institute, the Association of the Regional Land Use Planners of Quebec and the Laval University Research Chair on Drinking Water.

This meeting gathered more than 170 participants from Quebec and North America.

Four big themes were selected.

- **Conservation and enhancement of wetlands:** different models prevail in the United States, Quebec and the Atlantic Canadian Provinces.

- **Participation of First Nations in integrated water management:** better understanding of the social and cultural challenges facing watershed organizations to ensure an active participation of these communities in water governance.
- **Land use planning and security:** floods are more and more frequent in Quebec like in many other countries in North America.
- **Protection of fresh water sources.**

More than 30 speakers attended this event, coming from the United States, France, Quebec, Manitoba, Prince Edward Island and Ontario.

Everyone agreed to underline the relevance of such an event.

In fact, the sharing of experiences and knowledge is fundamental, at regional, national and international level, to progress toward better integrated water management.



gress toward better integrated water management.

It seems even more evident that good water governance goes first through an increasing collaboration between all different stakeholders concerned.

Marie-Eve Buist
Projects Manager
NANBO

info@monroban.org

www.monroban.org

www.robvq.qc.ca/services/formations/rdveau2



Third International Forum on Integrated Water Management

The third International Forum on Integrated Water Management took place at the University Laval (Quebec City, Canada) on May 7-9, 2014.

The event addressed the issues of transboundary water management in a context of climate change.

The event was organized by the North American Network of Basin Organizations (NANBO), the Regrouping of the River Basin Organizations of Quebec (ROBVQ) and the St-François River Basin Organization (COGESAF); in collaboration with the Quebec Metropolitan Community, the University Laval

Environment, Development and Society Institute and the research consortium on climatology and adaptation to climate change OURANOS.

The 500 participants addressed the following themes:

- Governance and Strengthening of Institutional Capacities;
- Water Resources and its uses management;
- Risks Management and Adaptation to Climate Change:

Three case-studies, including the Great Lakes / St-Lawrence and the Rio Grande systems and the Rhine Basin, were presented.

Two roundtables answered the following questions:

- In a context of climate change how can we promote transboundary water management on the watershed scale and for what benefits?
- What integrated water management for the Great Lakes and St-Lawrence System?

Jérôme Spaggiari
Coordinator
International Forum on Integrated Water Management
jspaggiari@rv-eau.ca

www.rv-eau.ca



North America

Canada - Quebec



France-Quebec twinning arrangements for integrated water management

The Regrouping of the River Basin Organizations of Quebec (ROBVQ) and the Association of French Public Local Basin Authorities (AFEPTB) launched their first twinning program in 2013.

The Committee for Dialogue and Development of the Richelieu River (COVABAR) and Charente EPTB consolidated their existing twinning arrangement.

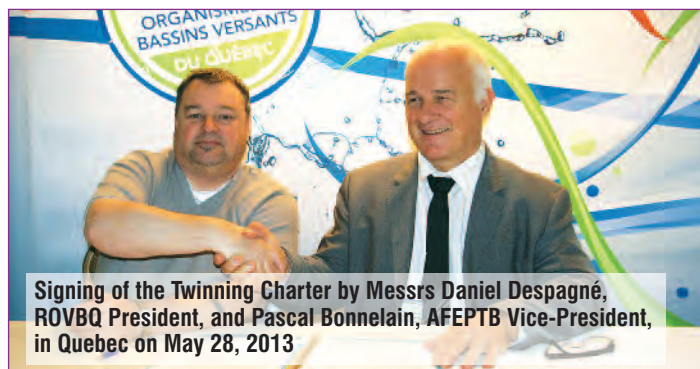
Assistance will be given to three new twinning arrangements: the first between the Basin Agency of the seven rivers and Seine Great Lakes EPTB, the second between the Organization for Dialogue in the Nicolet River Basin (COPERNIC) and the SDAGE of Garçons and the third between the Saguenay RBO and Vidourle EPTB.

In France as in Quebec, integrated water management in river basins is now recognized as the best solution for planning and sustainable use of water resources.

However, due to the quick deterioration of this resource, River Basin Organizations (RBO) in Quebec and Public Local Basin Authorities (EPTB) in France, need to be innovative and creative, including by enabling exchanges and information.

The twinning of basin organizations is a practical tool that allows them gaining knowledge based on feedbacks, information exchanges, expertise and know-how, as well as developing networks of contacts for quickly mobilizing knowledge best suited to the new challenges of integrated water management.

ROBVQ and AFEPTB ratified a partnership charter that was signed in France, in Vogüé, at the annual congress of Public Local Basin Authorities and in Quebec, at Lake Beauport, during the second Water Forum.



About ten basin organizations in Quebec have shown interest in undertaking a twinning arrangement with a French EPTB.

This program was made possible through the support from the North American Network of Basin Organizations (NANBO) and the financial contribution of the Permanent France-Quebec Cooperation Commission.

Antoine Verville

Deputy Director General - ROVBQ
Tel.: (418) 800-1144 #6
caroline@robvq.qc.ca

www.robvq.qc.ca



5th Champlain Meetings 2013

Integrated river basin management in an urban environment in Quebec



The Committee for Dialogue and Development of the Richelieu River Basin (COVABAR) organized the 5th annual meeting on integrated water management, the Champlain Meetings, in Longueuil from 12 to 14 September 2013.

The topic was: Green and blue urban infrastructure and promotion of integrated water resources management in the

updating of the Metropolitan Development Plan (PMAD).

The Champlain Meetings were created in 2009, following a twinning arrangement between the Local Public Basin Authority for the Charente River, in France, and COVABAR, in Quebec, this under the **TwinBasin program of INBO**.

About twenty speakers and over 120 participants discussed various issues.

Two major issues were identified:

- Passing from sustainable development to sustainable lifestyle;
- Involvement and mobilization of elected representatives.

The means that were specifically mentioned for doing so were, on the one hand, increased citizens' participation, and, on the other, the commitment of elected officials to put more pressure on Governments to ensure that laws governing water are more stringent and not only integrated into the development plans of all the Regional County Municipalities (RCM) and other municipalities, but also fully complied with.

Then we can hopefully establish in the short, medium and long term, a true water culture in Quebec.

Hubert Chamberland

Architect and Urban Planner
Co-president of the Charente/Richelieu twinning
President of COVABAR and NANBO
hubert.chamberland@covabar.qc.ca

www.covabar.qc.ca



obv: RICHELIEU / SAINT-LAURENT

COVABAR



Latin America and the Caribbean

Martinique



Fort-de-France Bay Contract



The largest bay in the Martinique: the Fort-de-France Bay includes 16 municipalities and 290,000 inhabitants representing 75% of the population of the island.

An application for a Fort-de-France Bay Contract was submitted to the Martinique Basin Committee in May 2006.

The Prefect's Decree of 2 November 2006 relating to the establishment of the Bay Committee, authorizes CACEM (Urban Community of the Center of Martinique) to take care of its technical secretariat.

The final document and its action plan were approved on 19 June 2009. The latter was signed on 7 May 2010 for five years in which seven topics were documented:

- Treatment of domestic wastewater,
- Treatment of urban stormwater
- Handicraft, industrial and port pollution control,
- Phytosanitary pollution control,
- Erosion control and development of rural areas,
- Conservation of aquatic environments,
- Control and monitoring of the program.

Monitoring and assessment of the program implementation

With scientific and methodological support (IRSTEA and IFREMER), a study carried out in 2011-2012 helped appraise the institutional and organizational aspects of the process, including for assessing and characterizing the relevance of the monitoring tools.

Coordination between sectors of activities was considered as well achieved though perfectible.

It appeared that the participatory aspect was a challenge due to the importance of the area and its stakes.

Long-term management requires "adaptive governance".

An observation system for monitoring the Contract's environmental effects

An analysis of the existing measurement systems was made in 2010.

Proposals for further implementation have been adopted by the Bay Committee to improve the set of information and data to be gathered.

Since 2011, the implementation of the monitoring system has been completed for rivers and the marine environment.

This system aims to improve knowledge of the levels of contamination throughout the five-year program and assess the status of Water Bodies in terms of efforts made.

The results to be obtained will help in the short and long term to characterize and identify the source of pressures, define alarming factors, follow up the relevant indicators and encourage changes.

At program mid-term...

About 360 different parameters were analyzed for the marine environment previously poorly documented.

Today, it is admitted that the Fort-de-France Bay Contract has led to improved account taking of the river basin and its significant challenges.

It appears that the facilitation quality is the essential component. CACEM, as support structure, ensures making procedures more flexible and responsive while capitalizing on the consensus already established between the members of the Bay Committee to achieve the objective of Good Ecological Status of Water Bodies, required by the European Water Framework Directive.

Stéphane Jérémie

Urban Community of the Center of Martinique
CACEM

stephane.jeremie@cacem-mq.com

www.cacem.org

Public Consultation by the Basin Committee

In accordance with the European Water Framework Directive (WFD), the French Basin Committees launched a public consultation to update the Management Plans (SDAGE) and Programs of Measures in 2015.

The Directorate of the Environment, Development and Housing and the Water Board of the Martinique organized this new public consultation planned by the Directive.

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

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

The Basin Committee of the Martinique, anxious to seek the opinion of the population, developed an **innovative consulting strategy** by mixing traditional tools, such as a website and consultation questionnaire, with specific tools:

- 20 "blue ambassadors" toured the island to inform and gather opinions,
- five public meetings and a seminar for water stakeholders were organized.

2,000 people responded to the consultation.

The "blue ambassadors" played a key role in the consultation.

Nearly half of the questionnaires were completed through them.

The results show that, for the future, the Martinique people want more transparency on the water price and water quality.

They would also wish financial aid to reduce pollution (including to fund on-site sanitation), to develop a water saving policy (including stormwater management for individuals), and to improve practices, by developing integrated agriculture in particular.

These concerns will be taken into account in the next Martinique SDAGE and Program of Measures for the 2016-2021 period.

www.eaumartinique.eu

www.martinique.developpement-durable.gouv.fr



Latin America

ECLAC

Chile: Towards the establishment of River Basin Councils?



The Natural Resources and Infrastructure Division of the Economic Commission for Latin America and the Caribbean (ECLAC) and the Institute of Engineers (IING) of Chile organized a Seminar on "Water Policy and Integrated Water Resources Management" in Santiago on 9 November 2012.

The aim of the event was to analyze the proposal of IING to create **River Basin Councils**.

Several situations were analysed: they clearly show how the problems arising in water resources management in the country hamper sustainable development and that the existing institutional structures do not currently offer a suitable solution.

What these problems have in common is that they are caused by actions taken independently by different actors, disregarding the interactions that occur between them.

They are therefore caused by a lack of coordination between the many agents involved at the river basin level.

On the basis of this observation, there is a clear need to promote a form of water resources management that takes a broad view of the relationship between water and the many processes that affect its availability.

This implies the coordinated action of stakeholders and the adoption of a medium and long-term systemic perspective, which would not necessarily require a change in the current legal and economic framework.

The IING proposal postulates that the first step is to encourage **the creation of a new entity, a River Basin Council**, to perform a coordinating role, involving the participation of the citizenry and the private and public sectors. This proposal is the natural continuation of several initiatives which have been trying for years to generate greater coordination in the activities of the agents at the river basin level.

Andrei S. Jouravlev

Economic Affairs Officer

Natural Resources and Infrastructure Division
Economic Commission for Latin America
and the Caribbean (ECLAC)

Andrei.JOURAVLEV@cepal.org

www.cepal.org



Chile



WORLD BANK



The market of water rights and Integrated Water Resources Management

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

It thus requested assistance from the **World Bank** to assess the situation and formulate a national strategy for improving the institutional framework, with a particular focus on the necessary reforms.

The Chilean model is unique as all surface water resources are distributed among the holders of water rights. The type of use is not specified and a market for water rights, without State regulation,

allows the resale of these rights between private operators and users.

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

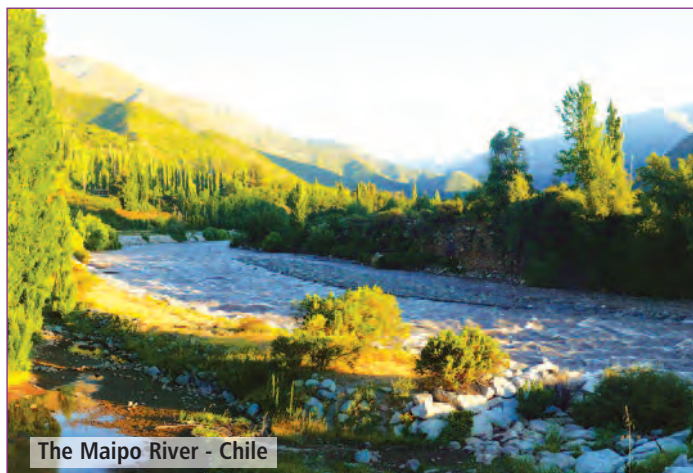
www.inbo-news.org

All information
is available
on the Web



www.inbo-news.org

1.3 Million visitors in 2013



The Maipo River - Chile

www.mop.cl



Latin America

Colombia



National Environmental System

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

Since 2012, a cooperation project has been undertaken by the French Adour-Garonne Water Agency and the Colombian Ministry of the Environment and Sustainable Development.

This institutional support focuses on three main issues:

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

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

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

The missions organized in November 2012 and March 2013, allowed presenting the French experience in water data management in terms of establishing common languages and reference frames and enhancing interoperability between existing information systems in conformity with the "SAN-DRE" standards (see page 43).

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



Meeting of the Expert Group
October 2013

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

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

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

The technical discussions focused on:

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

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

Mauricio Bayona

Colombian Ministry of the Environment and Sustainable Development
maubayona@yahoo.com

www.minambiente.gov.co

The Magdalena River



Junction of Rio Bogota
with Rio Magdalena

Brazil



PCJ Consortium and the French Loire-Brittany Water Agency:

Cooperation with the "Gaúcho" Forum of Basin Committees



Meeting of the "Gaúcho" Forum of Basin Committees
Porto Alegre - 2013

In 2005, the Intermunicipal Consortium of the Piracicaba, Capivari and Jundiá River Basins (PCJ) and the French Loire Brittany Water Agency (AELB) participated in INBO-facilitated TwinBasin project.

In 2006, the PCJ Consortium and AELB signed a multi-year cooperation agreement.

It has resulted in constant and fruitful exchanges between both partners and allowed disseminating the experiences of the PCJ Consortium and the Agency to other basin institutions in Brazil.

The PCJ Consortium is a successful management system model implemented in the PCJ Basins and it can contribute to develop similar approaches in Brazil.

A new step forward in the cooperation between France and Brazil was taken in May 2013, by **organizing a seminar and a technical visit in the Rio Grande do Sul (RGS).**

RGS is the southernmost Brazilian State and encounters a paradoxical situation: since 1988, it has been housing the oldest Basin Committee in Brazil, which meets every month as the 25 other committees created since, but there is not yet a Basin Agency, while

the Law for its establishment was passed in 1994.

Representatives of the PCJ Consortium, AELB and **"Gaúcho" Forum of Basin Committees** met on May 23rd and 24th, in Porto Alegre (RGS), to discuss the establishment of a tripartite cooperation.

The Loire Brittany Agency's Manager, Michel Stein, remarked that the "PCJ Consortium is a successful example in Brazil, and experiences should be reproduced in other national realities".

"The PCJ Basins took the French management system as reference, which was important for the consolidation of our management system. I believe that with our partners from Loire Brittany, we could contribute to improve water resource management in Rio Grande do Sul" recalled the PCJ Technical Manager, Alexandre Vilella.

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

The following actions are planned:

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

Murilo F. de Sant'Anna

PCJ Consortium

Tél. / Fax: +55 19 3475 94088

murilofs@agua.org.br

www.agua.org.br



Seminar in May 2013 in Porto Alegre



The Piracicaba River





New water policy in Mexico

"Suspension of free extraction of groundwater"



Mr. Enrique Peña Nieto

Mexico is facing today a complex water situation that requires measures to guarantee water supply for current and future generations.

Given this situation, the Mexican Government decided to implement a series of reforms for securing sustainable and accountable resource management.

The National Water Act (LAN), applying Article 27 of the Constitution on the ownership and management of national waters, aims to regulate water extraction, use, development, distribution,

control and preservation for integrated and sustainable development.

Its provisions are applicable to all national waters, whether surface or ground waters.

Regarding groundwater, Article 18 of the LAN stipulates that extraction is free except when Restricted, Prohibited or Reserved Areas (RPRAs) are established for reasons of public interest or public utility, or if free extraction is temporarily suspended or restricted by a General Agreement.

At the initiative of the National Water Commission (CONAGUA), the Government plans to establish such Restricted, Prohibited or Reserved Areas, where overexploitation of aquifers and specific hydrogeological units has been observed.

Under the World Water Day 2013 and the International Year of Water Cooperation, the President of the United States of Mexico, Mr. Enrique Peña Nieto, and the Director General of the National Water Commission (CONAGUA), Dr. David Korenfeld Federman, signed **the General Agreement to also temporarily suspend free extraction in areas outside RPRAs.**

This allows temporarily prohibiting boreholes in various regions of the country without authorization from CONAGUA, which is a structural change of great importance for controlling groundwater extraction and improving its use.

3rd National Congress on River Basin Management

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

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

Conferences, round tables, technical sessions allowed researchers, repre-

sentatives of governmental institutions, non-governmental organizations and user communities to address important issues such as climate change, participatory management, the need for an interdisciplinary approach and knowledge sharing.

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

Mr. Jean-François Donzier, Technical Secretary of the International Network of Basin Organizations (INBO) presented a keynote speech on best practices implemented by basin organizations in different parts of the world.

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

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

Claudia Coria

International Cooperation Manager

Mónica Gpe. Camarena García

International Cooperation Directorate

Planning Department

National Water Commission (CONAGUA)

monica.camarena@conagua.gob.mx

www.conagua.gob.mx



Third National Meeting of the Operational Directorates of Basin Councils

INBO

"GA 2016"

Mexico will host the next INBO General Assembly

Brazil organized the **9th World General Assembly of the International Network of Basin Organizations (INBO)** from 12 to 16 August 2013 in Fortaleza, Ceará.

It gathered 285 delegates, representatives of member organizations, water administrations and observers from 49 countries and representatives of bilateral and multilateral organizations and international Commissions and Authorities of Transboundary Basins.

Mexico is one of the Founder Members of INBO and the country is one of the main promoters of water management in river basins in Latin America.

The delegation of the National Water Commission (CONAGUA) was led by Mr. Abel Alcazar Jimenez, Director of Basin Councils, who presented the Mexican experience in water governance and management in river basins in the round tables "Institutional frameworks for action of Basin Organizations", "the participation of local authorities, water users and the public" and "the role of Basin Committees".

Fortaleza General Assembly unanimously accepted the Mexican proposal to host INBO General Assembly in 2016.

CONAGUA is Member of INBO Management Bureau and will take the World Presidency of the organization for a 3-year period from the closing of the Assembly in Mexico until the next Assembly in 2019.

International Year of Water Cooperation

In February 2011, the UN General Assembly declared **2013 as "International Year of Water Cooperation"**, in order to establish and foster initiatives in the field of water for maintaining peace and security.

Mexico is committed to water resources conservation and sustainable use.

The President Enrique Peña Nieto stated that "Mexico has a Global Responsibility".

The National Water Commission (CONAGUA) agreed with UNESCO to establish the conditions needed for the implementation of joint activities under this International Year of Water Cooperation.

A Technical Cooperation Agreement was signed by the Minister of the Environment and Natural Resources, through the National Water Commission, and UNESCO.

The document was signed by Dr. Blanca Jiménez-Cisneros, Director of UNESCO's Division of Water Sciences and by the Director General of CONAGUA, Dr. David Korenfeld.

Among the activities carried out, **the closing ceremony in Mexico in December 2013 of the International Year of Water Cooperation** had an impact on the entire Latin American and Caribbean region.

A report was published to summarize and assess the main activities organized during the year and the commitments made by countries related to the management and conservation of this vital liquid: **water**.



UNESCO - CONAGUA



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

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

During the first day devoted to lessons learned from the International Year, a high-level plenary session

addressed "Cooperation, a key to peaceful water sharing": **Mr. Jean-François Donzier, Secretary of the International Network of Basin Organizations, made an introductory speech on the best Basin Management practices used over the World.**

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

CONAGUA and INBO are strengthening their cooperation

Messrs. David Korenfeld, Director-General of the National Water Commission of Mexico (CONAGUA), and Jean-François Donzier, Permanent Technical Secretary of the International Network of Basin Organizations (INBO), agreed to strengthen their cooperation, started a long time ago by the two institutions, in order to exchange knowledge, experiences and technology developed by more than 80 INBO Member Countries and achieve better management of water resources in River Basins.

During a meeting in Mexico late August 2013, **Mr. David Korenfeld affirmed that "cooperation between Mexico and INBO is benefitting both parties and allows responding to the Mexican priorities"**.

Especially, he proposed to promote projects for the technical training of operating personnel and decision-makers, in order to improve water management and services in Mexico.

Mr. Jean-François Donzier confirmed that INBO is ready to strengthen its relationship with Mexico to develop innovative models for integrated water resources management in river basins. He offered INBO support for developing exchanges of experiences and knowledge of the principles and means of water management at basin level in the cooperation programs, facilitating the implementation of water resources management tools, and in information and training programs for the people involved in the management of Mexican Basin Organizations.

David Korenfeld reiterated CONAGUA's commitment to actively participate in INBO, in order to collect the best international experiences and enrich the Mexican national water policy.

Mexico has been Founder Member of INBO since 1994.

Claudia Coria

International Cooperation Manager

Mónica Gpe. Camarena García

International Cooperation Directorate

Planning Department

National Water Commission (CONAGUA)

monica.camarena@conagua.gob.mx

www.conagua.gob.mx



Latin America

Peru



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



Conference on Water Policy
ANA - Lima - March 2013

Peru has started a major reform of its water policy.

In 2012, a new law reformed the calculation of economic "retributions" (fees) for water use and wastewater discharge.

Under a project funded by the **World Bank**, the International Office for Water, INBO Secretariat, brought its expertise for the definition of a methodology, which is ambitious, pragmatic, socially and economically acceptable.

Today, these "retributions" are effectively collected.

Twinning between Quilca Chili and Artois-Picardy Basins



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

Under the agreement, French specialists went to Arequipa, to share experiences with stakeholders of the Quilca-Chili Basin.

In addition to meetings with members of the **Basin's Water Resources Council**, the French experts made several field visits, especially at the

water intake for the supply of Arequipa (Tomilla I station) and at the Charcani I hydropower plant.

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

Giuliana Retamozo Romero

SDGCC Expert

Administrative Water Authority I Caplina Ocoña

gretamozo@ana.gob.pe

www.ana.gob.pe



Presentation of the French and European water policy



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

Effects of climate change on temperature and rainfall parameters in Puno

A study was carried out between December 2011 and January 2012 in the city of Puno, in order to assess the evolution of temperature and rainfall parameters as compared to series of historical episodes with extreme temperatures (maximum, minimum) and storm rainfall between 1972 and 2011. 87,600 data were compiled according to these three variables, with 29,200 data regrouped in four decades for each variable.

Then these data were homogenized to determine averages per decade, and finally an analysis of the relationships and associations was performed using parametric statistical tests.



The results show that climate change affects the temperature and rainfall parameters in the city of Puno.

It was observed that the association between extreme maximum and minimum temperatures and storm rainfalls is reversed, i.e. when the extreme temperatures increase, storm rainfalls decrease, although in some months, when the extreme minimum temperatures rise, storm rainfalls also increase, mainly during the low water months.

The parameters of maximum and minimum temperatures recorded more significant changes in their trends over the 1972-2011 period.

To conclude, the temperature-rainfall parameters of historical episodes of extreme temperatures (maximum and minimum) show increases of 2.1 °C and 0.9 °C and storm rainfalls show a decrease of 15.80 mm/year from 1972 to 2011.

Tapia Aguilar, Bernardino

Expert in Hydrometeorology

National Service of Meteorology and Hydrology of Peru (SENAMHI)

dinotap@hotmail.com

New Caledonia



Voh-Koné-Pouembout Water Management Committee (VKP WMC)



The North nickel factory in the VKP area

In an exceptional situation, an unprecedented response for the territory

Engaged in the process of North/South territorial rebalancing in New-Caledonia, the Northern Province supports the implementation of the North nickel factory in the VKP area.

The unprecedented demographic and economic development due to this international scale project is putting significant pressure on the already fragile water resources.

The dispersion of responsibilities in water management, poor sharing of knowledge and deficiencies in this area, have led the Northern Province to gather all stakeholders around a unique and innovative solution of local consultation.

The Voh-Koné-Pouembout Water Management Committee (VKP WMC) was thus created in June 2010 to respond efficiently to the urgency of the situation, taking into consideration each partner's responsibilities.

Ambitious objectives, detailed action plan

Within the VKP WMC, the water stakeholders have defined the first 3 year concerted action plan.

The main objective: to define the level of adequacy between needs and resources with different perspectives and to increase the development of the area.

The European Commission and the South Pacific Commission have financially supported this program.

Significant progress and answers for the future

At the end of this first three-year program, the VKP WMC has completed more than a hundred actions and has reliable data.

The Committee is now considered as a major decision-making support tool.

The ongoing 2013-2016 action plan is based on the expertise gained since 2010.

A new method for water governance in New-Caledonia?

The VKP WMC organized in May 2013, a seminar gathering experts from South Pacific countries, France and Quebec, who shared their experience and gave suggestions.

The French and Anglo-Saxon models have inspired the VKP WMC to implement innovative solutions adapted to its context.

Marion Bois

VKP Water Management Committee
Northern Province
Fax: 00687 47 71 91
m.bois@province-nord.nc

www.gouv.nc

Cambodia

LES
AGENCES
DE L'EAU



Pilot Project for the Stung Sen River Basin



The Stung Sen River

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

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

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

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

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

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

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

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

Puy Lim

Tonle Sap Authority
Ministry of Water Resources and Meteorology
Puy.Lim@ensat.fr

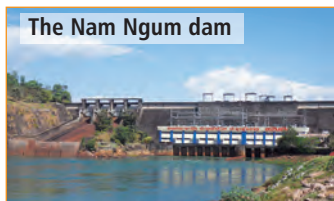
www.tonlesap.gov.kh



Meeting with local elected officials on 20 May in Kampong Thom



Integrated Management of the Nam Ngum River Basin



The Nam Ngum dam

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

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

study of potential sources of funding for these measures.

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

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

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

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



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

This second phase has come at a key time for the Nam Ngum River Basin Committee (NNRBC), which was formally established by Decision of the Laotian Prime Minister on 29 January 2013.

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

Chanthanet Boualapha

Ministry of Natural Resources and Environment
chanthanet@gmail.com

www.monre.gov.la



Vietnam



Second phase of the Dong Nai Basin pilot project

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

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

funded by the French Loire-Brittany Water Agency.

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

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



The Dong Nai River



Kick-off seminar of October 2013

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

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

M. Le Huu Thuan

Deputy Director General
Department of Water Resources Management
Ministry of Natural Resources and Environment
lhthuan57@yahoo.com.vn

www.monre.gov.vn



Vietnam



Free speech

Financial status of Water Resources Management in the Cau River Basin



The Cau River

In 2001, while implementing the 1998 Law on Water Resources, the Ministry of Agriculture and Rural Development (MARD), then taking care of Water Resources Management, established the River Basin Organization of the Hong-Thai Binh River system.

The Cau River Basin Organization was established in 2006 with the following tasks:

- Planning in the River Basin;
- Coordination with concerned agencies of ministries, departments and localities for water resources management in the River Basin.
- Settlement of disputes over water resources in the basin.

The Cau Basin Organization consists of two levels:

- ❖ **At policy level:** a Management Board is composed of members representing provincial governments and related executive agencies with a chairmanship rotating among them.
- ❖ **At operational level,** a Management Office is hosted by the Department of Agriculture and Rural Development (DARD) of the Thai Nguyen province. The Cau Basin Organization also gets support from the Basin Organization of the Hong-Thai Binh River system.

In the Cau River Basin the important issues for water management are flood and drought management as well as water quality management.

The demand for funding water management in the basin is huge.

The "users and polluters pay" principles have been applied in financing water management in the basin, through water resource taxes and fees, licensing fees and environmental fees for wastewater;

As "water is social and economic goods" an exemption policy is applied for the poorest population. A flood prevention fund was established.

The revenues collected for water management cannot however cover all the expenses which still have to rely on State budget funding.

In the future, it is necessary to specify the total expenditures for water management, to clearly define the financial resources needed to determine the level of taxes and fees.

Water management should be closely coordinated between the involved governmental agencies.

To more effectively use the funds for water management, the mandate and funding of the Cau River Basin Management Committee must be strengthened. The Committee should be able to propose a financial policy, which is consistent with the principles of integrated water resources management and in accordance with the specific economic and social conditions of the river basin.

To Trung Nghia

Ph.D. for Water resource Planning
nghiatotrung@gmail.com



The "Blue Passport" for basins' citizens

The "Blue Passport" is a joint initiative of the International Secretariat for Water (ISW) and the International Network of Basin Organizations (INBO).

The "Blue Passport" aims to give recognition to the citizen involvement in water protection, use, conservation and management. It allows interested basin organizations, which would wish so, to enhance local, individual

and/or collective civic action, for the preservation of water resources in their river basin.

It aims to increase the sense of belonging to the community of people of a basin, by recalling that their identity is not just that of their country of origin but also that of the local river basin where they live.

It helps give recognition of their action to those who are involved in their river basin bodies.

**Application form
for a "Blue Passport"
and information:**

www.sie-isw.org/fr/passeport





A pilot project for the Hai River Basin and Zhou sub-basin

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

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

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



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

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

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

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

Three technical assignments were carried out in the Zhou River Basin (December 2012, May and September 2013), mobilizing French scientific experts from the PIREN-Seine research group on the modeling of pollutants, from INRA and the Water-Environment Laboratory of the Public Works School ParisTech on the identification and monitoring of cyanobacteria.

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

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

It attended a meeting of the Seine-Normandie Basin Committee.

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

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

Ms. Kang Jie

Water Resources Conservancy Commission of the Hai River
kangjie@hwcc.gov.cn

www.hwcc.gov.cn



Plants proliferation in the Yuqiao reservoir

China



South-North Water Diversion

In China, two-thirds of arable lands and more than 40% of the population are concentrated in the North, which has only 14% of the water resources of the country.

In 2002, the Government launched a major South-North Inter-basin Water Diversion Project to fill the gap between needs and resources.

This project embodies the vision formulated by Mao Zedong in 1952: "The North needs water while the South has plenty. If possible, the North could borrow water from the South".

The project is estimated at €44.9 billion (more than three times the cost of the Three Gorges Dam). It aims to divert, through an extensive network of canals, part of the Yangtze waters (44.8 billion cubic meters/year) to the arid lands of the Yellow and Hai River Basins.

This should help alleviate the water shortage that the big northern cities suffer from.

Beijing and Tianjin encounter water stress situations comparable to those of Jordan or Palestine with only 150 m³/year/capita.

Both cities will benefit from the project with additional 1.24 billion m³ and 1.02 billion m³ per year respectively.

The diversion takes three "routes":

- **The Eastern route** (1,467 km), completed in late 2013, diverts part of the waters of the lower Yangtze to the North, using existing facilities, especially the Grand Imperial Canal, a 2,500 year old monument connecting Hangzhou to Beijing. The digging of a tunnel and the construction of 23 pumping stations were required to cross the Yellow River.
- **The Central route** (1,432 km) diverts some water from the Han River, via the Danjiangkou Reservoir dam, whose height was raised by 14m on this occasion. Two tunnels will convey underground the diverted water 40 m below the Yellow River. Beijing and Tianjin will draw their additional resources from this route which should be operational by the end of 2014.

Elements of the pumping terminal to Beijing



- **The Western route** is still at the feasibility study stage and should not be brought into service before 2030 because of its technical complexity: it will divert water from the Yangtze River near its headwaters on the Tibetan plateau to the Yellow River through a network of tunnels and dams in the mountains.

In October 2013, several sites on the eastern route were presented to the French high-level delegation participating in the Steering Committee of the

Chinese-French cooperation project on Integrated Water Resources Management (IWRM) in the Hai River Basin, and led by Ms. Michelle Rousseau, Director General of the Seine-Normandie Water Agency, and Mr. Christian Lecussan, Vice-Chairman of the Seine Basin Committee.

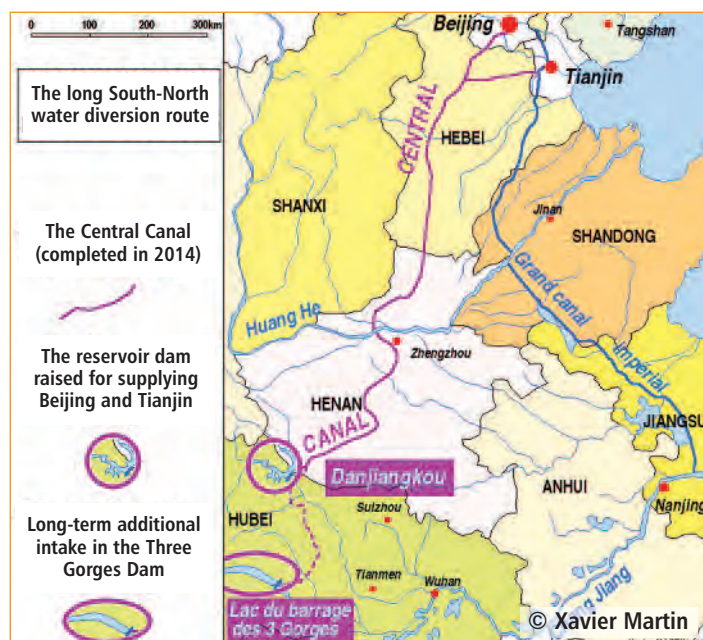
Edouard Boinet

In charge of water resources management cooperation

French Embassy in China

e.boinet@oieau.fr

www.nsb.gov.cn/xx/english



Preparation of the 7th World Water Forum - Daegu 2015

Kick-off meeting

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

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

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

The International Network of Basin Organizations (INBO) was officially invited to this kick-off meeting, especially to the roundtable on water governance and transboundary basin management.

2nd Stakeholders Meeting

The 2nd Stakeholders Meeting of the next World Water Forum took place in Gyeongju (South Korea) on 27 and 28 February 2014.

The participants recalled their wish that the next Forum leads to operational pro-



posals based on a precise assessment of the implementation of commitments made at the Forum in Marseilles, in particular.

The International Network of Basin Organizations will very actively participate in various Forum Processes.

The Forum Thematic Process Commission has indeed selected **INBO** to participate in the preparation of topic 4.3 on Transboundary Cooperation and, also, with OECD and UNESCO, of topic 4.2 on Water Governance.

INBO will also be involved through its Regional Networks in the Forum's Regional Process.

The European Regional Process in particular was launched on 19 May 2014 in Brussels and the issues in which the EUROPE-INBO Group, CEENBO and MENBO will get involved are:

- The European Directives and the "Blueprint";
- The management of European transboundary rivers;
- European tools for adaptation to climate change.

<http://worldwaterforum7.org>



Asia-Europe Meeting

ASEM is working on the conservation of water resources

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

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



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

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

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

Mr. Jean-François Donzier, INBO Technical Secretary, made a speech on the European water management policies, and presented the cooperation actions carried out on this topic in Asia, particularly in China and in the Mekong River Basin, under twinning arrangements with French Water Agencies.

www.aseminfoboard.org



Asia-Europe Meeting

Eastern Europe - Caucasus - Central Asia

Administration of transboundary water data

Presentation to the Dniestr Basin Committee
Ukraine - September 2013



The implementation of effective policies for integrated water management requires having a comprehensive assessment of resources and uses, based on homogeneous and consistent information.

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

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

With the support of SHMI (Slovak Hydro-Meteorological Institute), this project, coordinated by the International Office for Water, INBO Secretariat,

has achieved its objectives both at the regional level and in the two pilot basins:

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

In 2011, after a step for preparing the tools (Web portal, multilingual catalogue) and presenting the project, an assessment was carried out in six of the concerned countries, including:

- A legislative and institutional analysis (database of the stakeholders);
- Organization of national workshops gathering the key stakeholders involved in data production and management;

- Support to the presentation of data sources by the producers (meta-data catalogue);
- Elaboration of data flow charts (who exchanges what with whom?);
- An initial needs analysis.

Since early 2012, the project has entered a phase for supporting the development of pilot actions proposed by the Steering Committee, including:

In the Dniester River Basin

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

The Dniester River



In the Aral Sea Basin

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

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

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

Nicholas Bonvoisin

UNECE

Nicholas.Bonvoisin@unece.org

www.aquacoope.org/ffem-eecca



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



The Aral Sea



Eastern Europe - Caucasus - Central Asia

EECCA NBO



Сеть водохозяйственных организаций стран
Восточной Европы, Кавказа и Центральной Азии

Network of River Basin Organizations of Eastern Europe, Caucasus and Central Asia:

"Challenges and Progress in Water Management and Land Reclamation in EECCA Countries"



The International Water Forum "Aqua-Ukraine 2012" was organized in Kiev on 6-9 November 2012 through joint efforts of the Ukrainian State Water Resources Agency, Ministry of Regional Development, Construction, Housing and Utilities, Ministry of Environment and Natural Resources, and a number of other national and international institutions.

During this "Aqua Ukraine 2012" Forum, the Conference of the Network of Basin Organizations of Eastern Europe, Caucasus and Central Asia was held at the "Bortnitchi" museum.

About 100 people from Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Uzbekistan, and Ukraine attended the Conference.

The participants were welcomed by V.A. Stashuk, Chairman of the State Water Resources Agency of Ukraine and P.A. Polad-Zade, President of the EECCA NBO Network.

Prof. V. Dukhovny in his report gave lines of further development of the Network.

Dr. V. Sokolov, regional coordinator of GWP for Caucasus and Central Asia, presented joint actions for strengthening the exchange of information and dissemination of best practices, especially on IWRM.

Representatives of the Network Members underlined positive changes in the development of the national water sectors in Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Russia, and Uzbekistan.

At the same time, a number of problems related to insufficient financing of the water sector were identified. Serious concerns regarding the situation in the water sector in Russia were expressed by the Head of the Union of Water and Land Reclamation Professionals, Mr. N. Sukhoy.

Mr. B. Libert, UNECE Regional Adviser for the Environment, Mr. D. Valensuela, Deputy Permanent Technical Secretary

of the International Network of Basin Organizations, and Ms. J. Sehring, Consultant from GIZ also participated in the Conference.

The Conference participants noted that presentations of the measures undertaken in the countries of the region allowed improving their water resources management system, implementing the integrated water resources management principles and new technological solutions.

In addition, the provision of information about new publications, software programs, training materials and handbooks allows water specialists to continuously broaden their outlook and thus facilitates progress in the water industry in CIS countries.

Prof. Victor Dukhovny

Executive Secretary EECCA NBO
dukh@icwc-aral.uz

www.eecca-water.net

Central Asia

The Swiss Cooperation Agency is supporting water management in Central Asia

Switzerland is committed in a new program (2014-2020) for regional water resources management in Central Asia.

This new program includes:

- The strengthening of Integrated Water Resource Management (IWRM);
- The development of a Water Information System (WIS);

- The improvement of water management for irrigation (PPI);
- The training and capacity building of partners.

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

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

water data between riparian countries. This frame of references can later be extended to the regional level.

www.aquacoope.org/sdc-ca



Experts' assignment in Kirghizstan

Eastern Europe - Caucasus - Central Asia

Eighth International Conference on "Rivers of Siberia and Far East"

The Conference timed on the World Nature Conservation Day was held in Irkutsk City on 6-8 June 2013.

The Conference was attended by 100 representatives of organizations from 16 regions of Russia, as well as of international nature conservation organizations from China, Mongolia, USA, Australia, Central and South-East Asian countries, and by the Head of the Environmental Department of the United Nations Economic Commission for Europe.

The Executive Secretary of the Network of River Basin Organizations of Eastern Europe, Caucasus and Central Asia (EECCA-NBO), Prof. V. Dukhovny, participated in the Conference.

The key topics of the Conference were as follows:

- Biodiversity of rivers and lakes: assessment and conservation.

- Environmental monitoring of water bodies.
- Impact of hydraulic facilities and use of underground resources on water ecosystems.
- Experiences in basin management in various parts of the world (Aral Sea Basin in Central Asia, Mekong River Basin in South-East Asia, Great Lakes and St. Lawrence River in North America).
- Ecological assessment and international dialogue on water use in the Baikal-Angara-Yenisei Basin, Amur and Ob River Basins, and Volga River Basin.
- Initiatives of local communities, municipal authorities and non-governmental organizations for the conservation of rivers, lakes, development of ecotourism, ecological education and public awareness.



Four roundtables were organized on the following issues:

- 1 Definition of ecological indicators for hydropower plant construction projects in the Amur River Basin.
- 2 Opportunities for the development of ecotourism.

- 3 Ecological assessment of river basin development plans and programs.

- 4 Joint actions towards the conservation of the Selengi-Baikal, Angara and Yenisey Basins.

Prof. Victor Dukhovny

Executive Secretary EECCA NBO

dukh@icwc-aral.uz

www.eecca-water.net

Kyrgyzstan



Drip irrigation efficiency

The principle of drip irrigation is to supply the required amount of water directly to plants by means of small diameter pipelines that are laid on the soil surface or underground and equipped with a special culvert (drip).

The drip irrigation principle is also used on sloping lands.

With slopes up to 40% in Tajikistan, drip irrigation allows harvesting grape up to 220 kg/ha, compared to furrow irrigation, water consumption decreased 2.5 times.

Uzbek researchers found that water saving with drip irrigation used in the vineyard, as compared to furrow irrigation, was 60% (1,500 m³ / ha).

In 1995 and 1999, studies were conducted to determine the drip irrigation equipment and technology used for the apple trees on sandy soils in the Issyk-Kul region. Drip irrigation had a positive effect on the irrigation method and crop yields.

The volume required for optimum moisture in sandy soils of the apple trees in this region has been experimentally established with statistical data processing.

Drip irrigation not only saves water and increases yield, but retains environmental security in the region.

To solve the problems of the Aral Sea, Kazakh scientists proposed to reduce water consumption for irrigation in Turkmenistan, Uzbekistan and Kazakhstan, which take 90% of the river flowing

through these countries, by using ecological farming systems, such as drip irrigation.

Dr Joshov Paiazidin

Kyrgyz Research Institute of Irrigation

payaz@rambler.ru



Eastern Europe - Caucasus - Central Asia

Russian Federation



XII International Symposium and exhibition "Pure Water of Russia 2013"

Yekaterinburg City



On May 14-16, 2013, the XII International Symposium and Exhibition "Pure Water of Russia 2013" was held in Yekaterinburg at the invitation of the Federal Agency of Water Resources, the Government of Sverdlovsk Province, the Administration of Yekaterin-

burg City, the "Russian Research Institute of Integrated Water Resources Use and Protection" (FGUE RosNIIVH), the OJSC "Vodokanal of Sverdlovsk Province", the Ural State Economic University (UrSEU), and "Mebur" LLC.

The theme of the Symposium 2013 was the implementation of regional water programs under the **Federal Target Program (FTP) "Development of the Water Sector of the Russian Federation in 2012-2020"**.

Prof. Victor Dukhovny

Executive Secretary EECCA NBO

dukh@icwc-aral.uz

www.eecca-water.net

Сеть водохозяйственных организаций стран
Восточной Европы, Кавказа и Центральной Азии

Georgia



Water resources in Georgia

With 26,000 rivers, 856 lakes, 786 glaciers, 87 large wetlands and 44 water reservoirs, Georgia has considerable fresh water resources and this offers possibilities for stable water supply to the population and economy and for high quality water export.

Ts. Z. Basilashvili

Institute of Hydrometeorology of Georgia

jarjino@mail.ru



Hydrology of Georgia

International Secretariat for Water (ISW)



A 15-year commitment in Central Asia

The International Secretariat for Water (ISW) and its partners have been working in this area, with the Swiss cooperation agency, which is very active there.

The intervention area is located in the heart of the Ferghana Valley, which receives sparse rainfall.

Focusing on getting the public and local actors involved and on achieving tangible results, the action strategy in the region is based on the following elements:

Ecosystem Sustainability

The sustainability of the projects takes into account the traditional and cultural context of the rural areas and small urban centers.

Partnerships

The projects are monitored by users associations formed by village communities.

Forty users associations have been formed.

Government services offer technical support, especially for public health campaigns.

The presence of national bodies promotes the integration of what has been learned into the new reforms.

User participation

Good governance promotes user participation, through a pricing policy that takes into account all the costs (including amortization) and respects the population's purchasing power and ability to pay.

Awareness raising and education

Educating the populations and raising their awareness is primordial. PHAST (Participatory Hygiene and Sanitation Transformation) method handbooks were written.

Teams of trainers learned about good hygiene practices, and will, in return, train teachers and health workers in the villages of the area.

Specific water supply projects were developed.

42 water supply systems for villages were built, which supply water to 154,000 people in a range of 200 meters.

Time is an essential factor: Not forcing issues, nor making any impositions, while providing the necessary skill-sets, will ensure success.

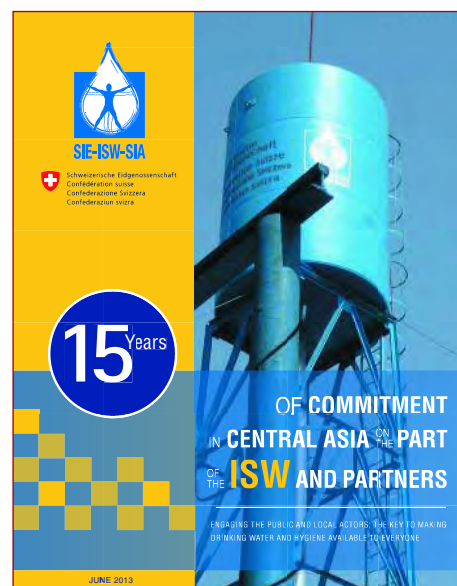
Raymond Jost

Vladimir Arana

International Secretariat for Water

varana@sie-isw.org

www.sie-isw.org



Water Research to Market



From Research to Market...



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

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

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

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

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

It describes:

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

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

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

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

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

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

Water RtoM
contact@waterrtom.eu

www.waterrtom.eu

WaterPiPP

Facilitating innovation transfer in the water sector

The **IWRM-Net** Project had allowed funding 11 research projects for a total budget of €8 million; the latest projects are being completed and an event, organized during the first quarter of 2014, allowed an evaluation to be done.

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

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

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

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

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

Natacha Amorsi
 International Office for Water
n.amorsi@oieau.fr

www.iwrm-net.eu



11th European Conference "EUROPE-INBO 2013" on the

13 - 16 November 2013 - Plovdiv - Bulgaria



The opening ceremony © IOWater - C. Runel

The 11th conference of the "EUROPE-INBO" group was held in Plovdiv, Bulgaria, from 13 to 16 November 2013, at the invitation of the East Aegean Basin Directorate of the Bulgarian Ministry of the Environment and Water.

It gathered 183 participants, representatives of national administrations and basin organizations as well as NGOs, companies and international and regional organizations from 21 Countries.

The conference work was organized around five major issues:

- ① **Feedback from the first River Basin Management Plans and the preparation of the Second Plans (2016-2021)**, with focus on better coherence between the level of pressures and the Programs of Measures; integration of water quantity issues (resource allocation, drought and flood management); adaptation to climate change, better coordination between the EU Directives (Flood and Marine strategy, Habitats, fauna and flora, renewable energy) and the link with other sectoral policies (agriculture, energy, hydropower, navigation...) and better involvement of stakeholders.
- ② **Funding of Programs of Measures**, access to funds and particularly to EU Structural Funds; economic analyses for determining the most cost effective combination of measures; value of ecological services and application of cost recovery.
- ③ **New approaches to river and aquifer restoration**: natural water retention measures, ecological flow, ecological focus areas, reduction of agricultural impacts on water (buffer strips, changes in agricultural practices, etc.).
- ④ **Water governance in trans-boundary basins**: WFD international districts, role and means of International Commissions, Bi and Multilateral agreements and UN Conventions;
- ⑤ **Implementation of WFD principles in EU neighboring countries**, experiences of EECCA and Mediterranean Partner countries.

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

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

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

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



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



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

implementation of the Water Framework Directive

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

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

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

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

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

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

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

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

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

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

We should recommend the use of "green infrastructure".

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

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

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

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

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

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

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

Mr. Nikola KARNOLSKY, Director of the Bulgarian East Aegean Basin, was elected new President of EUROPE-INBO Group until the next Assembly to be held in Bucharest, Romania, from 12 to 15 November 2014.

Very attentive participants © IOWater - C. Runel



11th European Conference "EUROPE-INBO 2013"



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



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

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

This workshop gathered participants with various backgrounds, policy-makers, scientists, water managers and representatives of the private sector

and has been an opportunity for sharing field experiences and good practices in monitoring, in view of preparing the second cycle of WFD implementation.

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

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

Then, during the second part of the workshop, the audience was divided into working groups which successively addressed three main pre-identified issues.

Each issue was introduced by a presentation on the practical experiences of a Member State:

- **Theme 1 - Purpose of monitoring programs:** "Vision of The Netherlands; Rijkswaterstaat experiences";
- **Theme 2 - Stakeholders' organization and role:** "Monitoring in compliance with the Water Framework Directive in Austria; experiences and outlook";
- **Theme 3 - Monitoring strategies:** "Evolution of monitoring networks in Wallonia since 1975 according to various European Directives".

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

These fruitful exchanges helped to identify and highlight issues and experiences of field practitioners.

They also led to draw conclusions and recommendations shared by all the participants of the workshop on the implementation and follow-up of the new Programs of Measures.

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

www.inbo-news.org

European Center for River Restoration



5th European River Restoration Conference 11-13 September 2013 - Vienna - Austria

The EU Life project **RESTORE** together with the European Center for River Restoration (ECRR), organized the **5th European River Restoration Conference** held in Vienna, Austria.

Mr. Janez Potocnik, EU Commissioner for the Environment, was the conference Keynote Speaker. The Conference brought together around 320 river basin managers, policy makers, practitioners and academics from

around Europe and showcased inspiring examples of river restoration. Our initial conference findings are showing the priorities for practitioners and how they want to lead the way in restoring the balance between our lifestyles and the needs of the environment.

The most frequent concern of the audience is to work with communities and many felt there are gaps in this area.

There was also plenty of discussion about current scientific knowledge, and the more technical sessions brought up many gaps in relation to monitoring and evaluation in particular.

More generally, practitioners felt the need to maintain and extend existing initiatives to share best practice. **The organizational capacity to support river restoration is essential.** We discussed using tools such as the RiverWiki and 'how to use pages' on the RESTORE website, as well as the case study guide; Rivers by Design.

The conference also featured the **first "European Riverprize"** awarded by the International River Foundation, which was won by the International Commission for the Protection of the Rhine.

Mr. Jean-François Donzier's speech
© IOWater - C. Runel



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

Susan Sheahan
RESTORE communications advisor
Environment Agency, UK
susan.sheahan@environment-agency.gov.uk

www.restoreivers.eu



Mr. Janez Potocnik, European Commissioner

European Commission



Floods in Europe: raising awareness and monitoring

Last June, the Central European countries faced severe flooding of the Elbe and Danube and their tributaries, which

caused extensive damage, estimated by experts at €11 billion.



JRC (Joint Research Centre of the European Union) coordinates the operational activities of the Emergency Management Service (EMS).

This service provides all people involved in disaster and emergency management with updated geo-spatial information coming from satellite remote sensing.

The European Flood Awareness System (EFAS) received scientific information several days in advance, which helped to inform the competent national authorities and **the Emergency Response Centre (ERC)** of the European Commission to coordinate the actions of the authorities responsible for emergency preparedness.

ec.europa.eu/dgs/jrc

The Foreign Ministers of the European Union agree to "Water Diplomacy"

The contribution of water to security and peace was in the agenda of the EU Foreign Affairs Council held in Brussels on 22 July 2013.

The Ministers recognized that water conflicts could undermine stability in many regions of the world, with a risk of aggravation, in a context of climate and demographic changes.

They emphasized that water and sanitation should be taken into account in the definition of the post 2015 Sustainable Development Goals.

They also called for a greater involvement of women, civil society and local communities, which should have a greater say in water diplomacy.

The Ministers wished for greater international cooperation for the development of exchanges of know-how, and reiterated **the importance of cooperation, especially in transboundary basins.**

They welcomed the outcome of **the Water Security Mapping Initiative**, which outlines the commitment of the Member States in transboundary basins.

<http://water.europa.eu>

European Parliament



7th Environment Action Program: the road to green growth

EU overall environmental policy will be organized by the Seventh Action Program which will apply until 2020. Proposed in November 2012, this program identifies nine priority objectives, including environmental protection and increase in ecological resilience, support to sustainable and efficient growth, and protection against environmental threats to health.

By adopting on 24 October 2013 the agreement negotiated with the Council of Ministers, the European Parliament wants a firmer application of EU environmental law by the Member-States.



It proposes a secure investment in support of environmental policy and adaptation to climate change, and better consideration of environmental issues in other policies. The new Environment Action Program was published in the Official Journal of the European Union.

www.europarl.europa.eu

"EUROPE-INBO 2014"

For the implementation of the European Water Framework Directive



**Bucharest - Romania
12 - 15 November 2014**

To participate, please register:

www.inbo-news.org



Risk-Informed Management of European River Basins

The growing impacts of economic activities and climate change on the conditions of rivers throughout the world, require a new, integrated approach towards river basin management, an approach that can also cope with an uncertain future.

This new risk informed management approach was developed under the European Commission funded project **RISKBASE**.

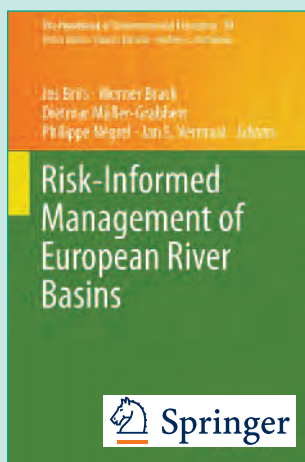
It aims to improve the ecological quality of river basins and thus to protect goods and services. Risk-informed management involves the integrated application of three key-principles:

- Being well informed;
- Managing adaptively;
- Pursuing a participatory approach.

The conclusions are presented in a book which explains these principles in detail, offer examples from practice and connect them to the implementation of the European Water Framework Directive (WFD).

Jos Brils
jos.brils@deltares.nl

www.springer.com



EEA

European Environment Agency



A new Topic Center on Water for 5 years

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

It is based in Copenhagen.

It relies on a network of 350 organizations all over Europe, **EIONET**, to collect environmental data.

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

A consortium of 18 partners led by the German Helmholtz Center for Environmental Research (UFZ), in which IOWater, INBO Secretariat, participates, is in charge of **ETC on inland, coastal and marine waters**.

European Environment Agency

www.eea.europa.eu

www.eionet.europa.eu

WatERP

An innovative tool for optimizing water resources management

The project, called **WatERP (Water Enhance Resource Planning)**, is financed by the European Union and carried out by a 9-partner consortium from different countries.

With an ever growing water demand reaching ecological and economic limits, the need for innovative water management is acute. There is a need for enhanced coordination and cooperation between all implied stakeholders, both private and public, at the local and regional level, to optimize management.

It also needs a higher social commitment and awareness in order to reduce water consumption and to preserve its quantity and quality.

WatERP consists of an Open Management Platform (OMP) that integrates real-time knowledge of available water supplies and demand, on all geographic and organizational scales, so that the entire water supply chain can be improved in an integrated and collaborative manner by the stakeholders and users involved.

This platform is composed by a **Decision Support Tool** to provide recommendations to the water managers, based on inferred knowledge, helping to better match water supply and demand and a **Demand Management Tool**, supporting demands forecasting on different spatial scales, using economic tools for water saving and raising awareness on improved efficiency in water use.

It also provides a website for end-users, so they can view their consumption encouraging them to save water.

It permits the interoperability with other platforms and the integration with commercial software.

The novelty of WatERP is that it improves coordination among stakeholders and fosters users' behavioral change.

The project outcomes are being validated in 2 pilot areas: the Ter-Llobregat Basin (ES), representing a water-stressed region, and Karlsruhe City Area (DE) depicting a water-richer region.

Jorge Helmbrecht
 INCLAM Group, SA
jh@wateridea.eu

www.waterp-fp7.eu



www.inbo-news.org

**All information
 is available
 on the Web**



www.inbo-news.org

1.3 Million visitors in 2013

WaterDiss



Better strategies to transfer research results in Europe



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

In the water sector, sharing research results between researchers and users is a slow and incomplete process: the estimated time for transferring research before integration into public policy, production of new products or services, is often more than 10 years.

During the past three years, the **WaterDiss2.0** project partners worked with a large number of beneficiaries of EU funding. **They defined and tested new strategies to transfer water research to end users.**

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

The conference addressed the following main questions:

- Why the transfer time of water research is currently more than 10 years?

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

"WaterDiss"

g.nion@oieau.fr

www.waterdiss.eu

Natural Water Retention Measures



Towards an integrated information system in 2014

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

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

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

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

- Support the working group of the CIS (Common Implementation Strategy) on the Programs of Measures,

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

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

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

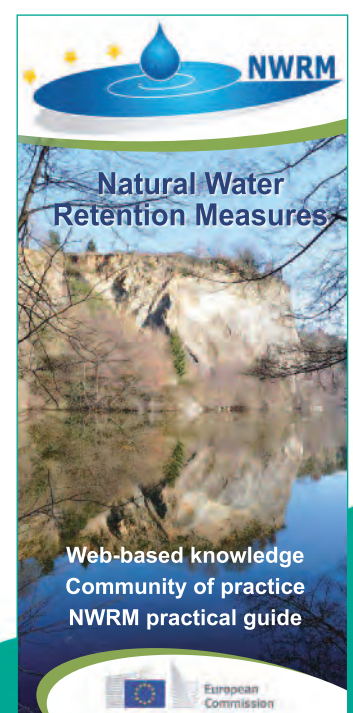
The project was presented in the fall of 2013 to the various CIS groups as well as to the EUROPE-INBO 2013 Conference in Plovdiv, Bulgaria.

Natacha Amorsi & Benoît Fribourg-Blanc

International Office for Water

contact@nwrn.eu

<http://nwrn.eu>





Jucar River Basin Authority

Progress in the drought indicators system

The Jucar River Basin Authority (JRBA) with a total surface of about 42,000 km² comprises the territory of nine river sub-basins that flow into the Mediterranean Sea.

Its major rivers from North to South are: Genia, Mijares, Palencia, Turia, Jucar, Serpis, and Vinalopo. The Jucar River gave its name to the River Basin District.

Serious drought events occurred in the last decades and have complicated water management particularly in the years 1994/95 and 2004/05.

The Jucar River Basin Authority (JRBA) is responsible for supplying towns with large populations such as the city of Valencia - with the third largest popula-

tion in Spain - and the irrigation systems of an area of approximately 370,000 hectares, and for meeting environmental requirements since the entry into force of Directive 2000/60/EC.

This tight utilization of water resources in the district justifies anticipating the implementation of drought mitigation measures as an essential tool for reducing its socioeconomic and environmental impacts.

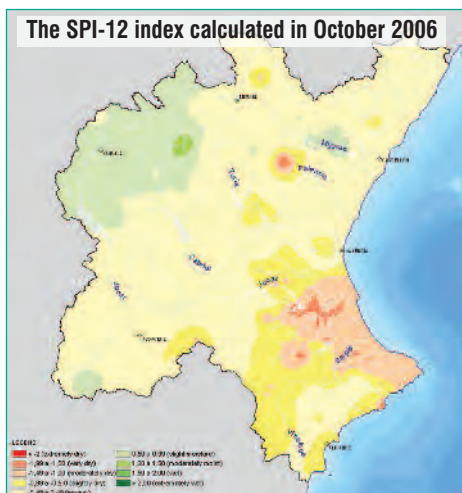
A large number of different indexes have been developed worldwide.

The JRBA uses the State Index (IE) as a drought index. This operational drought index may be completed by others on which work is currently being developed by JRBA: for meteorological

droughts, the Standard Precipitation Index (SPI), for soil droughts, the Palmer Drought Severity Index (PDSI) and the Normalized Difference Vegetation Index (NDVI).

The average monthly data for rainfall and temperature were regionalized by applying the distribution model for the hydrological cycle, PATRICAL.

The JRBA has planned to use such indexes in its drought indicators system, monthly published in its website.



Tatiana Ortega

Jucar River Basin Authority

tortega@chj.es

www.chj.es

Segura River Basin Authority

Wastewater treatment and reuse

A more comprehensive treatment of urban wastewater and its reuse increased water availability for irrigation and rehabilitated the Segura River from an environmental point of view.

The Region of Murcia, which occupies most of the Segura Basin, has established a **General System for the Regeneration and Reuse of Urban Wastewater**, following a hydrological planning process and its 10-year implementation, between 2001 and 2010.

With a total investment of 645 million Euros and with a volume of 100 cubic hectometers of unconventional resources, this project is one of the most relevant worldwide for integrated water management in times of scarcity.

It is a successful example by its ability to support a sustainable economy.

The Segura River Basin, with 365 mm of rainfall per year, has the lowest rainfall in the European Union.

With a natural availability of 400 cubic meters per capita per year, the water environment has historically suffered from a great pressure, which led to a water deficit and extreme environmental conditions, to which were added in the 90s significant polluting discharges of urban wastewater.

Paradoxically, the Segura Basin has suitable natural climatic conditions for irrigated agriculture.

It is a major first-rate exporter, especially to the EU market, with annual revenues of some 3,000 million Euros. In this context, **water is a very valuable item.**

This integrated management project includes not only civil and environmental engineering, but also a series of legal, economic and fiscal measures.

It received an economic assistance from EU Regional Funds for its implementation.

The obtained results allowed incorporating 99% of the urban population and achieving an overall yield of 98% in the treatment of urban wastewater. The new resource thus produced is reused, with all guarantees, either directly in irrigated areas or indirectly after its discharge into the river.

Through this project, the Segura currently has guaranteed minimum flows and organic pollution is imperceptible on its entire length.

The river has recovered its fauna and flora and fishing enthusiasts are already part of the landscape in the city of Murcia.

Miguel Ángel Ródenas

Segura River Basin Authority

presidencia@chsegura.es

www.chsegura.es



The Segura River in Murcia

Spain



Ebro River Basin Authority

The "Ebro Delta" will have a new environmental flow



The Ebro Delta is a most unique area. It was transformed completely in mid-nineteenth century when rice cultivation was introduced, creating, since then, a special environment where human and natural factors intermingle.

Approximately 75% of the surface of the Delta corresponds to farmland or urban areas.

However, it is also a wetland that hosts extraordinary biodiversity.

Given this special character, the 1998 Ebro River Basin Hydrological Plan set out a constant minimum environmental flow of 100 m³/s, which is proportionally higher than the other rivers in the basin.

Since then, the flow in the Ebro Delta has not dropped below 100 m³/s thanks to the management made.

The new River Basin Hydrological Plan (2013) has improved this situation, establishing not only a constant flow, but **a monthly environmental flow** based on the natural hydrological regime of the river, and also a controlled high-water flow.

To define this new environmental flow regime, extensive studies combining hydrological and habitat methods have been carried out, and more than 100 scientific papers and studies on the Delta have been analyzed, along with the various proposals of environmental flows made previously.

All in all, the new Plan sets **an ecological flow in the Delta over 20% of the average annual natural input**, to be guaranteed in all cases, even in drought periods, which represents a tremendous achievement for a basin with semiarid characteristics and high variability like the Ebro.

Its implementation was feasible thanks to the solidarity of the whole Ebro Basin, to the availability of a large regulation reservoir in the lower stretch of the Ebro (Mequinenza), and the optimal management that the River Basin Organization performed, having the power to make decisions from headwaters to the mouth.

Manuel Omedas Margeli

Ebro River Basin Authority

momedas@chebro.es

www.chebro.es

Guadalquivir River Basin

Automatic Hydrological Information System (AHIS)

The latest floods that occurred in Spain from December 2009 to March 2010, showed the importance of hydrological monitoring systems in anticipating and managing crises thanks to decision-making support tools.

In this context, **the control center of the Guadalquivir River Basin was renovated and an Automatic Hydrological Information System (AHIS) established.**

It is a centralized decision-making support system based on a set of applications (SCADA Supervision system, telemetry, GIS), mathematical modeling (hydraulic and hydrological model) and weather forecast to help the executives of the operating center

to anticipate and reduce the impact of weather events on the management of the resource.

Between 21 and 24 December 2009, the continuous rainfall during 89 hours was combined with 97 mm exceeding the warning level of 90 m³/h, 10 times the normal level for this time of year.

The AHIS of the Guadalquivir River Basin allowed anticipating floods and alerting the populations concerned.

The measurements were also used to check the quality of the forecast with an error of less than 0.13% of the peak.

The system is used to model 215 high-risk areas and 95 different flooding scenarios to foresee associated crisis management actions.

Fabrice Renault

Schneider Electric

fabrice.renault@schneider-electric.com

www.schneider-electric.com



Franco-Swiss Agreement on the Allaine River Basin

A positive assessment at midterm!

International willingness to act to face a degraded watercourse

The Transboundary Allaine River Contract was initiated thanks to a strong political will to jointly restore the quality of water and aquatic environments in the Franco-Swiss Allaine River Basin.

This 5-year contract (2010-2015) is supported by the Republic and Jura Canton in Switzerland and the Commu-

nity of Municipalities of the Southern Territories (CCST) on the French side.

This program is budgeted at 33 million Euros for a total of 90 identified activities.

Actions are partly subsidized by Swiss cantonal and federal funds, the Rhone-Mediterranean Corsica Water Agency and the Regional Council of Franche-Comté in France.

Successful example of Franco-Swiss coordination

Arriving at mid-term late 2012, the action plan was evaluated with an encouraging progress report, with a commitment rate of the action plan up to 64% and a completion rate estimated at 47% of the budget.

These significant results show the need and successful example of Franco-Swiss coordination to achieve integrated and modern water management.

Many achievements in the field of water and aquatic environments

Various achievements addressed many areas related to surface water and groundwater, such as morphological restoration of rivers and maintenance of river banks, flood hazards, wastewater treatment, control of pollution coming from industry and individual houses or drinking water resources.

A component devoted to awareness, and the monitoring of hydro-biological water quality were established to assess and ensure the sustainability of actions.

The Community of Municipalities of the Southern Territories and the Republic and Jura Canton are pleased to have established an exemplary collaboration that allows the significant results of the mid-term report to be in line with the UN International Year for Water Cooperation in 2013.

Laurence Le Roy

Transboundary Allaine River Contract
Community of Municipalities of the Southern Territories

laurence.eroy@cc-sud-territoire.fr

www.allaine.info



General Meetings on Water in Mountains

"New water governance in the mountains is needed to cope with climate change!"

After three meetings in 2002, 2006 and 2010, Megeve will host again a General Meeting on Water in Mountains, on 8, 9 and 10 October 2014.

This meeting aims to gather all the stakeholders in water management, elected representatives, managers and scientists, at local, national and international level, in Lake Lemman Basin, to:

- Share knowledge, discuss, debate and promote practical solutions to water management in mountains, the laboratory for adaptation to global change;
- Generate ideas and debates on key governance issues related to water;
- Propose a permanent coordination network for "water in mountains";
- Hear what the mountain men have to say, and consolidate "water-solidarity" between mountain people and large plain and foothill populations.

l'Observatoire de l'eau en montagne

The 4th International Meeting of Upper River Basins aims to highlight virtuous practices that put water at the center of regional projects.

The call for papers is open:

www.egem2014.org

Aude Soureilat

Asters, facilitator in the Observation System
aude.soureilat@asters-asso.fr

Pierre Lachenal

Secretary General of the "Living Mountain" Endowment Fund
pierre.lachenal@orange.fr

www.observatoire-eau-montagne.org



France



"SANDRE" is 20 years old!

National Service for Water Data and Common Reference Frames Management

Establishing a common language on water

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

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

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

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

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

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

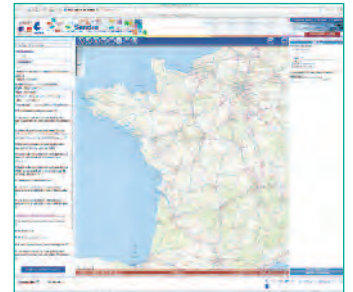
Adapting to the stakeholders' needs

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

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

The order of 29 November 2006, dealing with the methods for approving laboratories carrying out analyses in the field of water and aquatic environments stipulates in its Article 3 that any laboratory must, from now on, be able to receive a request for analyses and to provide results in the "EDILABO" format.

For implementing data exchange, the stakeholders must change their information systems by developing an exchange interface in conformity with the "EDILABO" standard. For this purpose, they can have certified software.



The "SANDRE" is proposing more than 10,000 pages of data dictionaries and exchange scenarios.

It also displays more than 13,000 files which obtained a compliance label and more than 45,000 codified elements (taxons, substances, etc.).

Dimitri Meunier

International Office for Water - SANDRE

d.meunier@oieau.fr

www.sandre.eaufrance.fr



"GEST'EAU"

The website of the SAGES and Environmental Contracts

"Gest'eau", the national website dedicated to Water Development and Management Plans (SAGES) and Environmental Contracts has offered the testimonies of stakeholders involved in these management tools since the beginning of 2013.

A constantly changing participatory tool

Since its inception in 2002, "Gest'eau" has been coordinated by the Ministry of Sustainable Development (MEDDE) and the National Agency for Water and Aquatic Environments (ONEMA).

Since its launching, the website has been collaborative by providing a forum, feedbacks, and allowing web users to work on the contents.

Since the beginning of 2013, interviews have been made to promote the participation of the stakeholders involved in SAGES and Environmental Contracts (facilitators, officers in

charge, members of Local Water Commissions, members of Syndicates, Local Public Basin Authorities, etc.).

Testimonies on local actions

The stakeholders, who speak, provide concrete evidence on actions carried out in their basins with these tools and describe practical measures to be taken.

Thus, 12 testimonies were published in 2013.

www.gesteau.eaufrance.fr



Joint Commission for the Development of the Arve

The Joint Commission for the Development of the Arve and its surroundings (SM3A) recently drafted a Flood Prevention Action Plan.

The plan will last 6 years.

The total amount of the 57 planned actions is €27.4 million, taxes not included

The area chosen for the development of **the Action Plan for protection against flooding (PAPI)** is the same as that of the **Water Management and Development Plan (SAGE)**.

This ensures taking account, in a consistent and overall way and under structured governance, of flood risk in the Arve River Basin, extended to the Geneva's area tributaries.

This area includes 1,400 km of permanent streams and 352 torrents and rivers with various torrential regimes (ice, snow, rain-snow and rain-fed). It covers 2,164 km², i.e. half of the department of Upper-Savoy, and has 106 communities, 320,000 permanent residents and as many tourist accommodations.

Nine contracting authorities will intervene to achieve the action plan: the State, the SM3A, the towns of Chamonix, Les Houches, Les Contamines-Montjoie, and Passy, the Community of Municipalities of the four rivers (CC4R) and Geneva's area (GCC) and the Union of Foron (SIFOR). The SM3A will manage this program and coordinate the different interested parties.

This program is an important effort to prepare the area to better cope with floods and should eventually reduce its vulnerability and improve its resilience.

The seven issues selected in the program are:

- Improved knowledge and awareness to risk;
- Monitoring and foreseeing high waters and floods;
- Alert and crisis management;
- Account taking of flood risk in urban planning;
- Measures to reduce the vulnerability of people and property;
- Slower flows;
- Management of hydraulic protection works.



The Arve River

Tanya Naville

SAGE Arve - SM3A

Fax: 04.50.25.67.30

tnaville@sm3a.com

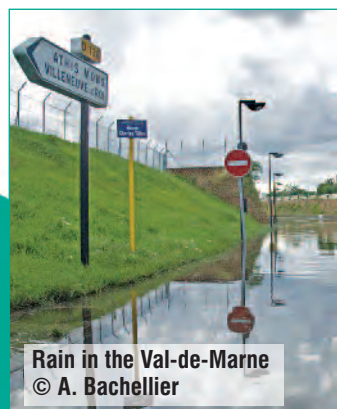
www.riviere-arve.org

Val-de-Marne

The challenge of integrated rainwater management

Since 2006, the Department of Val-de-Marne has been leading a sustainable development initiative, called "Blue Plan/Plan Bleu", whose goal is to associate all partners to integrated and sustainable water management.

For rainwater management, since the 19th Century, drainage to sewers has been the rule. It has led to the building of a sewage system collecting rainwater, managed at municipality, group of municipalities, departmental and inter-departmental levels.



Rain in the Val-de-Marne
© A. Bachellier

However, **growing urbanization increases impervious surfaces.**

These changes will have two major consequences.

- **On the one hand**, the rainwater run-off from buildings and roads brings numerous sources of pollution (garbage, hydrocarbons, etc.) to rivers. But Val-de-Marne's rivers shelter a biodiversity to preserve and to promote, but are also a source of drinking water for half of Paris agglomeration.
- **On the other**, soil sealing increases water volumes collected in the sewer system that may result in its under sizing, leading to an increased risk of flooding domestic users' and public roads. This risk would potentially be increased by the effects of climate change.

Preparing the future is the challenge that all water stakeholders have to meet, by establishing a rainwater management closer to the natural water cycle. In accordance with national and European regulation, it means retaining rainwater where it falls, instead of sending it to the sewer, either by infiltration into the ground or by storage and reuse.

This objective comes up against several pitfalls: the misreading, first, of what is at stake by the city and urban planners who should integrate it when designing projects.

A rainwater management strategy has to be conceived at the catchment area level and defined according to its geological specificities. Finally, the last pitfall is the one of human and financial resources.

Through the "Plan Bleu", the Department carries out a review with its partners in order to pool information, practices and tools.

The development of regional rainwater zoning, accompanied by recommendations, technical guides and awareness brochures, will allow the towns, at the beginning of 2014, to visualize, on their territory, the impact of rainwater run-off, the sewage system capacity, and the possibilities for infiltration depending on soil and subsoil characteristics.

They will have all the cards in hand to offer recommendations in city-planning documents, that are coherent and logical at the catchment area level, and to explain to the residents on what basis these have been defined.

Adèle Colvez

In charge of Plan bleu

Conseil Général du Val-de-Marne

adele.colvez@cg94.fr

www.cg94.fr/plan-bleu

**l'eau
notre bien
commun**

PLAN BLEU
VAL-DE-MARNE

France



A "SAGE" for the Siagne River

A small river basin having everything of a big one

The Siagne is a permanent coastal river born in the hills above Cannes that flows into the Mediterranean Sea.

Its catchment area covers only about 520 km² and about thirty municipalities. Situated halfway between the Var and Alpes-Maritimes Departments, it shows strong upstream/downstream disparities: the natural and preserved upstream area includes Natura 2000 sites, while the downstream area, highly urbanized and having high tourist attendance, is subject to recurring floods.

The Siagne also supplies 7 golf courses and a small dam-reservoir for drinking water supply purpose and used for hydropower production.

Launching of the assessment

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

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

The Interdepartmental and Inter-municipal single-purposed Syndicate of the Upper Siagne was designated to be responsible for the "SAGE".

This assessment began in spring 2013 and will run for two years.

Ambitious objectives:

- Achieving a mobilization of all basin stakeholders to ensure their effective participation;
- Collecting and completing the relevant data on selected issues;

- Ensuring the right level of detail and quantification of analyses;
- Building contrasting and operational scenarios by using participatory methods;
- Contributing to strong governance.

Additional experts' appraisals are needed for supporting these processes: practice in participatory methods, knowledge of institutional and regulatory contexts and skills in Integrated Water Resources Management.



Developing participatory dimension for IWRM

Experiment in regional nature reserves in the South-East of France

For most French Regional Nature Reserves (PNR), water management is becoming a major challenge highlighted in their development charter.

The "Group of Friends of South-East PNRs" launched in 2008 a program called "water between memory and future" in order to experiment innovative actions for participatory water resource management.

The Chartreuse PNR and SIAGA, which manages the Guiers Basin Contract, experimented several innovative actions adapted to the hydrological specificities (karstic aquifers) in order to introduce a participatory approach to water resource management:

- **"Bistr'Eau"** ("water-bar"): sharing and collecting vernacular knowledge about water memory and culture.

- **"Retours aux Sources"** ("Back to water springs") and "participatory dye-tracing": outdoor activities along water systems while meeting stakeholder's views.
- **Inventory of the water heritage:** participation of people wishing to get involved in valuing the water heritage.

These actions help to build a participatory Water Observation System.

Appropriated by each Regional Nature Reserve in the South-East of France, these actions created a hybrid network between local stakeholders and local users. They interact with each other and build together an integrated water resource management in these protected areas.

Mélanie Ferraton

Group of Friends of South-East PNRs

melanie.ferraton@gmail.com

<http://eau.amidesparcs.fr>



Training reference frames on "water samples"

Training course for better controlling sampling

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

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

They deal with sampling of water and phytoplankton in rivers and lakes under the monitoring program for Water Bodies in France (WFD) and with sampling of wastewater to search for priority and emerging micro-pollutants.

A first training session, based on these reference frames, was organized in November 2012, upon request of the Adour-Garonne Water Agency, and will be followed by four other sessions in 2013.

A reference frame for a training module on "groundwater sampling under the monitoring programs for Water Bodies in France" was also established.

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



Trainees making samples





"Observation system of Business Energies"

Water and energy: urgency to face the major global and climate changes

Is easy water over?

The sharp increase in anthropogenic pressures on water resources and aquatic ecosystems, compounded by the effects of climate change, will have heavy social, economic and environmental consequences on all human activities by 2050-2070.

These are as many implications that are echoing the also raised concerns regarding energy.

Sounding the alarm, the workshop, organized on 21 November 2013 at INBO home office under the **"Observation system of Business Energies"** gave the floor to thirteen French experts, but also to OECD and UNESCO, and contributed to a greater awareness of the major water and energy challenges of the coming decades.



© IOWater - C. Runel

Alarming findings

Experts unanimously agree: rivers, lakes, aquifers, wetlands, snow and ice reserves, etc, the whole water system is affected by current changes. Deficits could worsen because the global water demand will still increase by 50% by 2050: between energy storage, cooling of thermal power plants, irrigation,

industry needs, waterways navigation and cities, and low water replenishment, there is an exacerbation of the water demand.

Increased competition between water-consuming activities requires arbitration from the decision makers.

Less consumption and better management: the same imperative for water and energy

One possible answer could be summarized as a twofold imperative: less consumption and better management limiting environmental impacts. An imperative that echoes those weighing today on energy: **water is essential for energy production and energy necessary for treatment, sanitation and water conveyance.**

Rethinking uses

Mr. Jean-François Donzier, INBO Secretary, concluded that organizing better water governance will make it possible to share resources and reconcile uses.

www.observatoire-energies-entreprises.fr



Panorama of Research & Development work

A panorama of stakeholders in Research & Development working in the field of water and aquatic environments (number of R & D jobs, number of research units, etc.) was implemented in 12 EU countries.

More information:

<http://carteau.onema.fr>

"Thermie-Hydrobiology" research program



A restitution day was held on 19 December for the "Thermie-Hydrobiology" Research Program that has been developed since 2008 by EDF Research and Development, IRSTEA and several other scientific partners.

Organized on the EDF R&D Clamart site, this day allowed for better understanding of the role of temperature in the functioning of aquatic ecosystems.

This program focused on developing new scientific knowledge, **assessing the actual tolerances of water systems under extreme temperature and the impact of thermal discharges on the achievement of the good biological status goals of the Water Framework Directive.**

www.recherche-thermie-hydrobio.oieau.fr

www.inbo-news.org

All information is available on the Web



www.inbo-news.org

1.3 Million visitors in 2013

Croatia



Kosovo



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

Flood Directive:

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

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

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

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

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

A training program supports the preparation of **the Flood Risk Management Plan (FRMP)** with its Program of Measures and associated economic analysis.



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

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

The European Directive on hazardous substances requires that those are:

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

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

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

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

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

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

The Croatian institutions, beneficiaries of this project, were mainly **the Ministry of Agriculture and the Croatian Water Company**.

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

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

Dunja Barišić

WFD twinning

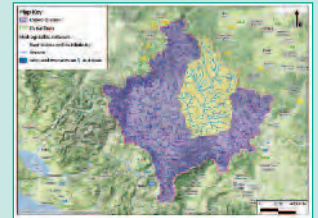
Dunja.Baristic@voda.hr

Alan Cibilic

Flood twinning

Alan.Cibilic@voda.hr

Twinning arrangement on Environment and Spatial Planning



In December 2011, a **2-year European twinning project was launched in order to build the capacity of the Ministry of Environment and Spatial Planning (MESP) and of stakeholders**.

It mainly deals with legislation on water, the management of river basins, of water infrastructure, including dams and waste, urban development, protection of nature and biodiversity.

Italy and France are implementing this twinning project.

The water component allows exchanging on experiences, drafting recommendations for the implementation of the Water Framework Directive and developing River Basin Management Plans, pollution control, and strengthening the Water Information System in Kosovo.

Naser Bajraktari

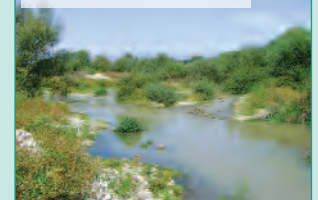
Head of the Water Department

Ministry of Environment

and Spatial Planning

Naser.Bajraktari@ks-gov.net

The Drini i bardh River





Twinning arrangement with the French Water Agencies



The delegation on the site for rehabilitation of the Ondaine river

After the Val de Loire, Normandy and Brittany in recent years, a study tour was organized in late September with our French Partners of the Loire-Brittany Water Agency in the Upper River

Basins of the Loire and Allier. Our Hungarian delegation was led by Peter Kovacs, State Secretary for Water, Ministry of Rural Development.

Various visits on the topic of river development and protection against floods embellished this working week and exchanges.

Meetings with technicians and elected officials were thus planned in different flood control installations, where the flood warning system was presented.

After a visit to the trout farm of Chan-teuges, the Hungarian delegation members were able to familiarize themselves with the restoration of the natural environment of the Ondaine River and with the control of invasive plants.

As part of our French-Hungarian partnership, thinking is underway to expand our cooperation to a third country, the Ukraine or Romania, for example, which share the Tisza River Basin with Hungary.

Peter Kovacs

State Secretary for Water
Ministry of Rural Development
peter.kovacs@vm.gov.hu

www.kvvm.hu



Romania



Water Framework Directive and Hydro-morphology

Challenges and implications

Implementation of the Water Framework Directive and achieving its objective of good ecological status for all water bodies depend on the identification, assessment and control of all anthropogenic pressures on these bodies, including pressures on the physical structure of rivers.

Thus, developing a set of hydro-morphological indicators powerful enough to capture the change in the ecological status of water bodies (rivers) and to

assist decision makers in identifying priority actions, at different spatial and temporal scales, are of significant concern across Europe.

According to the **Romanian National River Basin Management Plan (2009)**, out of a total of 3,399 water bodies, 1,241 water bodies (representing 36.5% of all water bodies) are at risk of failing to achieve environmental objectives, by 2015. Almost half of these water bodies at risk show signifi-

cant hydro-morphological alterations (15% of all identified water bodies are Heavily Modified Water Bodies).

Considering the hydro-morphological alterations identified in Romanian rivers, it is crucial for the implementation of the Water Framework Directive, to develop a set of hydro-morphological indicators.

In this context, the National Institute of Hydrology and Water Management has undertaken a study to develop a methodology for the elaboration of hydro-morphological indicators for Romanian rivers.

Taking into account the strengths, limitations and gaps of the existing European and non-European methods, this methodology is an innovative approach.

It integrates all the hydro-morphological elements required by the WFD, for the ecological status assessment.

The method uses a scoring system and 5 classes to characterize the river hydro-morphology.

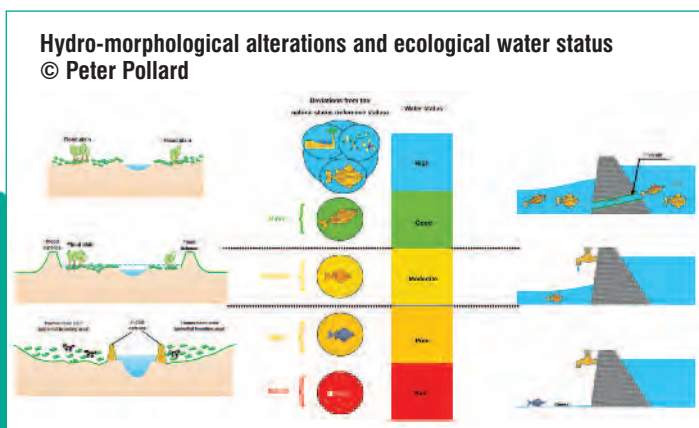
The methodology is intended to represent a scientific basis for the National Water Monitoring System and for water status assessment.

In addition, the methodology should be a decision-making support tool in order to improve water quality in Romania.

Daniela Radulescu

Director of the National Institute of Hydrology and Water Management
CEENBO Permanent Secretary
daniela.radulescu@hidro.ro

<http://inhgacercetare.ro>



Europe - The Mediterranean

EMWIS

SEMIDE EMWIS

Better management of knowledge on water in the Mediterranean area



"Hub" Meeting – Barcelona – March 2014

Establishment of Shared Water Information Systems in the Mediterranean

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

Through dialogue with the Secretariat of the Union for the Mediterranean (UfM), the Mediterranean Action Plan, the European Environment Agency and the Arab League, the project has just been approved by the 43 UfM member countries.

This project includes:

- **A regional component**, to provide guides, tools, capacity building, exchange of experiences and demonstration of data flows for

international reporting activities, including the Strategy for Sustainable Development in the Mediterranean, control of pollution in the Mediterranean (Medpol), and the Water Strategy of Arab Countries. This component is open to all countries of the Union for the Mediterranean. It is based on European standards (SEIS, WISE, INSPIRE) and UN standards (environmental and economic accounting of water).

- **A national component**, which represents nearly 85 % of the budget for building National Water Information Systems (NWIS) in the first four pilot countries (Morocco, Tunisia, Jordan and Lebanon).

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

At the regional level, an analysis of the indicators needed for integrated water resources management was carried out in partnership with the Blue Plan and with support from "ONEMA".

The knowledge generated by this project allows many applications to be considered.

One of them is **preparing a White Paper on Water in the Mediterranean, initiated by the Mediterranean Water Institute** and jointly presented to UfM for labeling, as part of the process of establishing a Mediterranean Knowledge Hub on Water.

In order to respond to the vital challenges facing the Mediterranean region, **this "Mediterranean water knowledge hub"** is an essential prerequisite to the development of sustainable policies for integrated water resources management and adaptation to climate change.

The first implementation stage will cover six Pilot Countries (Jordan, Lebanon, Monaco, Morocco, Spain and Tunisia), while remaining open to the involvement of other countries.

A Network to improve water resources management

In order to better share experiences in Integrated Water Resources Management in the Southern Mediterranean countries and support local stakeholders in its implementation, **the International Union for Conservation of Nature (IUCN), associated with EMWIS, CEDARE and national NGOs in Morocco, Egypt, Jordan and Palestine, launched the "Regional Knowledge Network on Water" (RKNOW) project with funding from the European Commission under the EU Neighborhood Policy.** Four themes have been selected for structuring work in thematic sub-networks for the 3 years of the project: governance, energy-food-water nexus, sustainable technologies, water and climate change.

Eric Mino
EMWIS Technical Unit
e.mino@semide.org

www.semide.net



Union pour la Méditerranée
Union for the Mediterranean

Tunisia

REACH-CLP:

European twinning agreement on the management and control of chemicals

The International Office for Water, the Austrian Environment Agency, "INERIS" and the Swedish Chemicals Agency participate in the European twinning agreement **"Institutional Support to the management and control of chemicals in Tunisia"** to implement the European REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and CLP

regulations (Classification, Labeling and Packaging of dangerous chemicals).

This project aims to promote in Tunisia an industry more respectful of health and the environment while increasing its competitiveness and preparing the Tunisian industrial sector to managerial, organizational and technological changes.

The project includes actions for strengthening the legal basis, establishing an institutional organization and for the capacity building of the Tunisian Technical Chemical Center.

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

Ms. Khaoula Cherif
RTA counterpart
kcherif.dfi.ctc@planet.tn



Europe - The Mediterranean

"CLIMB"



Climate change impacts on water use rivalries in the Mediterranean Region

The CLIMB project (CLimate Induced changes on the hydrology of Mediterranean Basins) – a current international and multidisciplinary research funded by the 7th Framework Program of the European Commission – aims to assess the climate change impacts on Mediterranean water systems and, by using a combination of remote sensing techniques, integrated hydrologic modeling and socioeconomic factors analyses, to reduce uncertainties on impact assessments.

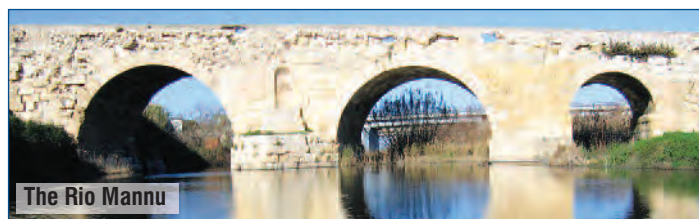
The 7 river basins studied (in Italy, France, Turkey, Palestinian Territories, Egypt and Tunisia) are all affected by vulnerabilities to climate change: the Rio Noce basin located in the north-east Dolomites of Italy; the Thau coastal lagoon in France; the catchment of the Rio Mannu located in the south of

the Sardinia Island; the Izmit Bay in Turkey; the Chiba Catchment in Cap Bon, Tunisia; the north Nile delta in Egypt and the coastal aquifer in Gaza Strip.

One component of the project is to study current water uses rivalries and their evolution according to scenarios of climate change impacts on the hydrology of river basins modeled in the projects.

The catchment is proposed as the pertinent geographical scale to manage the water resource.

However, the actions to face new pressures on demand also require different spatial scale, for possible inter-basin water diversion in particular.



The first results of the research in 4 of the 7 case studies suggest that water scarcity increases at the same time as the aridity of the Region.

Measures of water saving seem only to support the development of new activities or intensification of existing ones. Then, water scarcity is solved by looking for other resources. Solutions to water scarcity seem to rely on technology, including the capacity of funding big hydraulic structures, including large systems of water diversion from other basins.

Thus, the study area of water rivalries in each basin – a priori coherent with the hydrological limits of water uses – needs to be reconsidered by also including the neighboring basins, which could be concerned with water diversions towards their water-deficit neighbors, which will do nothing but create other conflicts of use on a broader scale.

Claudia Cirelli

UMR CNRS Citeres, University of Tours

Fax: +33 (0)2.47.36.15.32

claudia.cirelli@univ-tours.fr

www.climb-fp7.eu

Turkey



WORLD BANK



Presentation of water allocation systems

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

The main organizations concerned in the South of France are: Adour-Garonne Water Agency, Canal de Provence Company, the Authorized Users' Unions Associations (ASA) of the Gap and Ventavon canals in particular, who testified of their experience of managers in situation of water scarcity:

- **at the basin level**, on the definition of allocations priority between uses and their operational implementation by **the Basin Water Agency and the Regional Development Company in charge of infrastructure**.
- **at the local level**, **Authorized Users' Unions Associations (ASA)** were reinforced by the 2004 modernization Act, and keep on playing a significant role in the transmission of their water management experience and know-how in scarcity situation.

The 40 pages English paper is exploring:

- **The legal and policy frameworks for French water management**, including the system of permits for water abstractions, the water law enforcement activities and the latest developments in WFD implementation;
- **The mechanisms for planning and allocating water at basin level** according to the Adour-Garonne Water Agency experience;
- **The Durance-Verdon water system for multi-purpose water infrastructure management**: historical analysis, sectoral policies coordination and governance issues;

- **The legal and operational conditions for water scarcity management by Users' Associations**: characteristics of the Authorized Users' Unions Associations (ASA) of the Lower and Middle Durance, the "water rights" challenges and the specific case of restrictions organized on the Gap Canal.

The identified case studies were presented in Ankara on 30 and 31 October 2013 at the international seminar jointly organized by the World Bank and the Turkish Ministry of Water and Forestry.

Guy Alaerts

Project Manager – The World Bank

Galaerts@worldbank.org

www.banquemondiale.org



Serre-Ponçon Lake in the Alpes-de-Haute-Provence

Europe - The Mediterranean

Turkey



Three European institutional twinning projects

Flood Directive Twinning Project:

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

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

The project objectives are in particular:

- **Transposition of the Flood Directive into the Turkish legislation** and adaptation of the institutional organization;
- Practical implementation of the three steps of preparing a **Flood Risk Management Plan** in the "Bati Karadeniz" pilot River Basin, flowing out into the Black Sea;



Kick-off meeting of the "Bathing Waters" twinning project

- **Organization of a consultation of users** within a Basin Committee;
- **Drafting of a methodological guide and carrying out training courses** to disseminate the lessons learned in the pilot basin to three other basins under the twinning agreement and later to the other Turkish river basins;
- **Preparation of the National Plan for the implementation of the Flood Directive.**

Twinning project on the Bathing Water Directive:

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

The Bathing Water Directive introduces a global strategy based on:

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

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

www.aquacoope.org/turkeybw

Water Framework Directive, Twinning Project on Monitoring:

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

Several field visits allowed illustrating concretely the explanations on the roles of each institution or on the methods used in the three Member Countries of the European Union.

For example, after several training courses in Turkey, a study tour in France, from 6 to 12 October 2013, allowed a delegation of 22 Turkish officials to better understand the institutional organization and practical aspects of monitoring plans.

Huseyin Akbas

Ministry of Forestry and Water Affairs
Flood twinning project
huseyinakbas@ormansu.gov.tr

Nermin Cicek

WFD twinning project
ncicek@ormansu.gov.tr

Jordan



"This is water", Conference on Water and Agriculture

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

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

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

and representatives of the "Highland Water Forum", was particularly fruitful.

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

www.rss.jo



الجمعية العلمية الملكية
Royal Scientific Society

Exchange between the Ministry and farmers' representatives



12th International Conference "Europe-INBO 2014"
Bucharest - Romania - 12 - 15 November 2014
Online registration on: www.inbo-news.org/europe-inbo-2014

www.inbo-news.org



The website of basin management over the world

- **The International Network of Basin Organizations**
- **The Regional Networks of Basin Organizations:**
 - **Africa - ANBO**
 - **Latin America - LANBO**
 - **North America - NANBO**
 - **Asia - NARBO**
 - **Brazil - REBOB**
 - **Central Europe - CEENBO**
 - **Eastern Europe, Caucasus, Central Asia - EECCA-NBO**
 - **The Mediterranean - MENBO**
- **"EUROPE-INBO" :**
European Water Framework Directive implementation
- **Handbooks for Integrated Basin Management**
- **The 7th World Water Forum of Daegu-Gyeongju 2015**
- **"The World Pact for better River Basin Management"**



Secretariat: International Office for Water
21, rue de Madrid - 75008 PARIS - FRANCE
Tel.: +33 1 44 90 88 60 - Fax: +33 1 40 08 01 45
Mail: secretariat@inbo-news.org
N° ISSN : 1265-4027 - Online: ISSN 2310-5852

Privileged links with websites:
worldwaterforum7.org / worldwatercouncil.org
gwp.org / iowater.org / emwis.net
unesco.org / water.europa.eu
european-region-wwf2012.eu
unece.org/env/water
oecd.org



Flashcode

"INBO Newsletter" is published with the support of the French Water Agencies,
the National Agency for Water and Aquatic Environments
and the French Ministry of Ecology, Sustainable Development and Energy

Publishing Director: Christiane RUNEL
Editing - Translation: Gisèle SINE
Production: Frédéric RANSONNETTE
Printing: GDS Imprimeurs - Limoges