INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

INBO Newsletter

From talk to action:

we must act quickly before it is too late!

COP23 - Bonn - November 2017

Water and Climate Summit - Rome - October 2017

World Forum - Daegu - April 2015

World Forum - Marseilles - March 2012

World Forum - Istanbul - March 2009

The findings are alarming: Floods, droughts, cyclones, scarcity, waterborne diseases, pollution, wastage, erosion, destruction of ecosystems: the seriousness of the situation in many countries requires the quick implementation of comprehensive, integrated and consistent water resources management.

Climate change is exacerbating these situations and is affecting more and more the quantity and quality of inland freshwater and aquatic ecosystems.

The regime of all our rivers and the level of our aquifers will be substantially modified!

All this represents a threat to security, economic and social development and the environment, especially in the poorest countries.

Mobilization is essential at all levels to urgently set up programs that are needed to mitigate pressures and prevent and adapt to the effects of global warming.

Quick action would reduce costs and damage, we should worry about the "cost of inaction"!

Freshwater is one of the first victims of climate change: **we must act quickly, before it is too late.**

The experience gained in more than fifty years shows that it is undeniably at the level of the basins of rivers, lakes and aquifers, whether local, national or transboundary, that essential actions, based on real upstream / downstream solidarity, should be carried out or reinforced.

In addition, nothing is possible without the participation, beside political authorities, of representatives of different economic sectors, local authorities and associations, all of whom are working in the field and are the real stakeholders of change.

This is especially the role of "Basin Committees or Councils".

We must not "reinvent the wheel" because many effective actions are already carried out in the field. **It is therefore necessary to identify good practices and disseminate them.**

The problems encountered are not technical, but mainly institutional and financial.

We must get mobilized to win this water battle and prepare the future of next generations.

Everything is still possible. Let's act quickly!

www.inbo-news.org

March 2018 - n° 26

Great international events

International Summit on the Great Rivers of the World: "Taking action for water and climate"

Representatives of the great rivers of the world participated in the Opening Ceremony © INBO – C. Runel

The Italian Ministry for the Environment, Land and Sea organized the International Summit on "Water and Climate; Meeting of the Great Rivers of the World", from 23 to 25 October 2017 in Rome, Italy.

This international summit was organized in partnership with the United Nations Economic Commission for Europe (**UNECE**), the International Network of Basin Organizations (**INBO**), the Global Alliances for Water and Climate (**GAfWC**) and **Aquamadre**.

It gathered more than 350 high-level participants from 56 countries and representatives from, in particular, the European Commission, the major UN agencies, the Union for the Mediterranean, the largest river basins in the world, and his Holiness Pope Francesco.

The President of the Italian Council of Ministers, Mr. Paolo Gentiloni, officially opened the Summit on the morning of 23 October and the closing ceremony on 25 October was celebrated in the presence of the President of the Italian Republic, H.E. Sergio Mattarella.

As has now become clear, climate change is already having a visible impact on freshwater resources, with dramatic consequences (floods, droughts, erosion, ecosystem degradation, etc.).

This Summit has been an important milestone for the preparation of the Bonn COP 23 (6-17 November 2017) and the Brasilia World Water Forum (18-23 March 2018). Its goal was to further integrated freshwater management issues into the top priorities of the international negotiations on climate change and of the Global Climate Action Agenda.

It especially focused on the need for quick action to finance projects, to improve knowledge, governance, public participation and take immediate measures for water adaptation to climate change.

The summit was an outstanding occasion to match project proposals to financing opportunities and to foster experience sharing between great river basin organizations, local, national and regional administrations in charge of climate change adaptation policies and water resources management, bilateral and multilateral donors and other international institutions interested in adaptation to climate change and in basin management.

The work of the Summit was organized around four major topics, which were presented in high-level panels and widely discussed among participants:

- Acquisition and sharing of knowledge on the impact of climate change on water resources;
- Nature-Based Solutions,
- Public participation and involvement of the economic sectors and local authorities;
- Financial mechanisms for adaptation to climate change in the water sector.

At the end of the discussions, the following priority recommendations were formulated for reporting to COP23 in Bonn:

- **Integrated water management,** organized at the level of coastal, national or transboundary rivers, lakes and aquifers basins, is needed all over the planet;
- In particular, **regional and transboundary cooperation** in climate change adaptation is crucial to effectively address this change, when there are surface or groundwater resources shared between several riparian countries;
- **The establishment and development of local, national or transboundary basin organizations** is to be supported as well as the strengthening of institutional and technical cooperation between counterpart basin organizations from the same region and other parts of the world;
- In each country and each basin, the organization and improvement of **the production, gathering, conservation and exchange of data is to be supported within integrated Water Information Systems (WIS),** which are to be sustained in the long term, while taking climate change into account. Flood and drought early warning systems should be strengthened or developed wherever necessary;
- Stronger linking is needed for **scientific knowledge-based** decision making;

Rome - Italy - 23-25 October 2017 – Capitoline Palace

Closing Ceremony in the presence of the President of the Italian Republic, H.E. Sergio Mattarella © INBO – C. Runel

- **The effective participation of the civil society and all stakeholders** in decision-making and management processes is to be fostered. In particular, it is necessary to use dialogue frameworks, such as Basin Committees or Councils, Local Water Commissions or river or aquifer contracts for this purpose;
- It is important to promote exchanges of experience on the most effective mechanisms for dialogue and participation of water stakeholders worldwide and to create links between representatives of local authorities, economic sectors and the civil society involved in these processes. It is advisable that **the members of the Basin Committees and Councils,** that already exist in many countries, organize an enhanced cooperation among themselves, as part of a joint initiative that would fit in with the "Citizens" process of the forthcoming World WaterForum in Brasilia in March 2018;
- **We need to promote Nature Based Solutions (NBS).** The restoration of flood plains is recognized as one of the most important challenges and a key issue for natural flood management, groundwater recharge, biodiversity protection and the security of human communities. The multiple benefits of Nature-Based Solutions contribute to reducing the cost of action.

The Rome Summit thus called for the signing of a declaration to support the integration of the use of such Nature-Based Solutions in the "Marrakech Partnership's Agenda for Global Climate Action", during the official Action Day for Water and Climate at the COP23 on 10 November 2017 in Bonn.

- Governments and the international community must **ensure the mobilization of essential funding** for the implementation of urgent actions to adapt water to climate;
- **Africa,** which is the continent that is the most vulnerable to the effects of climate change, must be able to count on the mobilization and solidarity of all partners through the **"Water for Africa" initiative,** launched at the International Conference on Water and Climate in Rabat in July 2016.
- **Attaining the Sustainable Development Goals by 2030 and implementing the Paris Agreement** require an acceleration of funding, from all sources, of climate action in the water sector;
- **Funding should support** not only infrastructure projects, but also serve to improve knowledge of resources and climate change impacts, capacity building, governance, water culture, the monitoring and evaluation of policies.

  It is advisable that donors recognize and strengthen the essential role of basin organizations in sustainable water resources management, by financially supporting projects related to the commitments and principles set out above to address climate change.

For further information and see the papers and photographs:

www.inbo-news.org

350 high level participants from 56 countries © INBO – C. Runel

International news

Great international events

COP23 – UNFCCC - 17 November 2017 – Bonn - Germany:

Signing of the International Declaration "Nature Based Solutions", during the official "Action Day for Water and Climate" on 10 November 2017 © INBO - C. Runel

Created at the COP22 in Marrakech in 2016, the **"Global Alliances for Water and Climate – GAfWaC",** gather the four "Alliances" of the Basins (Paris Pact), Megacities, Desalination and Business, themselves established at the COP21 in Paris a year earlier. Today, they represent more than 450 organizations around the world, which have committed themselves to mobilize their partners, identify and disseminate good practices and support the development of new projects by field stakeholders involved in adaptation to climate change and in the resilience of the inland freshwater sector.

The Global Alliances for Water and Climate have been designated by the two Moroccan and Fijian "Climate Champions" to prepare and coordinate, with their partners in the sector, the **"Official Action Day for Water and Climate",** which took place on Friday 10 November 2017 as part of the COP23 in Bonn and which followed the International Rome Summit on "Water and Climate" held from 23 to 25 October.

This day was an opportunity to remind decision makers that freshwater is one of the first victims of climate change.

Indeed, freshwater resources are already and will be more and more directly affected by climate change, and this in the coming years.

The consequences, depending on the regions, will be an increase in intensity and frequency of floods and droughts, the strengthening of extreme hydrological and hydrogeological phenomena, a flow deregulation of the rivers originating in the mountains, due to the melting of glaciers and the reduction of snow cover.

It will be also necessary to fight against an increased erosion caused by the modification of plant species and soil cover, and changes or even reduction in agricultural production, a change in flows at the mouth of rivers, as well as salt intrusions on the coasts and in coastal aquifers, due to the rising of sea levels, an increased prevalence of water-borne diseases or the arrival of invasive species in ecosystems, especially caused by the warming of surface water .

The demographic, economic and ecological consequences are likely to be very significant and require global mobilization to quickly prepare the necessary adaptation programs at the level of each basin, taking surface water and groundwater into account.

Areas with big human settlements and economic activities will be seriously threatened, with the risk of large population displacements, especially in rural areas.

These effects are compounded by significant pressures already linked to population growth, urbanization and development. Global warming is a **"multiplier of threats"**, aggravating difficult situations and increasing tensions, even in stable regions!

We must act quickly, before it is too late, and the mobilization of all stakeholders is essential at the global level, in order to urgently develop the programs needed to prevent the effects of global warming and adapt to them.

In 93% of their National Contributions (NDCs), the countries have identified water as a priority for adaptation. As water is essential for human health, food security, energy production, industrial productivity, tourism, navigation, biodiversity, in addition to basic human needs, securing water resources means ensuring security in all these areas of economic, social and environmental development.

Adaptation to climate change is one of the conditions for achieving the Sustainable Development Goals for 2030 in the water sector.

The Action Day for Water and Climate was organized around a review of the actions that have been carried out, especially by the four Global Alliances for Water and Climate, since the COP22 in Marrakech last year **and four thematic sessions** on:

- improving the funding of adaptation projects,
- the knowledge needed in the field of water to respond to climate uncertainty,
- water and urban resilience,
- water, sustainable agriculture and food security.

This Day has shown, with the presentation of many actions already in progress, that "no regrets" solutions exist and can be implemented immediately, but also that difficulties must be overcome.

Among the recommendations made, it can especially be noted that:

1. **Integrated water resources management should be organized at the level of coastal, national or transboundary rivers, lakes and aquifers basins,** because, in particular, regional and transboundary cooperation is crucial and must be increased where there are surface or groundwater resources shared by several riparian countries.

Freshwater victim of climate change: We must act quickly!

Plenary session on "Finance" during the official "Action Day for Water and Climate" © INBO - C. Runel

- **In each country and each basin, the organization and improvement of the production, gathering, conservation, exchange and dissemination of data are to be supported within integrated Water Information Systems (WIS), which are to be sustained in the long term,** while taking climate change into account, **because we do not know how to manage what we cannot measure** and the delay in this area is important: Flood and drought early warning systems should be strengthened or developed wherever necessary.
- **Water management needs to be organized in a cross-sectoral way** involving local authorities, including municipalities, economic sectors, especially agriculture and energy, and the civil society as a whole. Effective participation of all relevant stakeholders should be promoted in the decision-making and management processes and in the development of field projects. From this point of view, the Alliances created between basins, cities and businesses allow a better mobilization of these partners, a shared vision of the issues and solutions, the cross-dissemination of good practices and the pooling of support means.
- **Multiple benefits are provided by Nature-Based Solutions,** which have proven effective alongside conventional infrastructure and which contribute to reducing the costs of action: they need to be promoted and skills have to be provided to develop this "green engineering". In this regard, during COP 23, an appeal was launched for the signing of a Declaration to support the use of Nature-Based Solutions into the **"Action Agenda of the Marrakech Partnership for Global Climate Action",** which has already gathered more than 70 signatures from international or national organizations involved.
- **Governments and the international community must ensure the easier mobilization of essential funding for the implementation of urgent actions to adapt water to climate.** The achievement of the 2030 Sustainable Development Goals and the implementation of the Paris Agreement require accelerating funding from all sources for climate action in the water sector.

Financing, whose procedures should be simplified, must not only support infrastructure projects, but also serve to improve knowledge of resources and climate change impacts, capacity building, governance, training, water culture, monitoring and evaluation of policies or the use of Nature-Based Solutions.

Project incubation resources, to facilitate their funding from the various "Climate Funds", appeared very useful in the light of current experiences.

The next World Water Forum, to be held in Brasilia from 19 to 23 March 2018, will be the occasion for a new mobilization around these objectives.

The Global Alliances for Water and Climate (GAfWaC) regroup:

1. **The Alliance of the 360 signatories of the "Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers", in 94 Countries,** facilitated by the International Network of Basin Organizations (INBO) in partnership with UNECE,
2. **The Business Alliance for Water And Climate Change - BAFWAC,** launched by the Carbon Disclosure Project - CDP, the CEO Water Mandate, the World Business Council for Sustainable Development (WBCSD) and SUEZ, which has now 65 member organizations, including 47 leading companies,
3. **The Alliance of Megacities for Water and Climate,** facilitated by UNESCO, ICLEI, SIAAP and Arceau-IDF, gathering 16 Megacities for a total population of more than 300 million inhabitants,
4. **The Global Clean Water Desalination Alliance,** gathering dozens of companies and research centers in this field.

www.-water-climate-alliances.org

International news

Great international events

"ONE PLANET SUMMIT"

100 projects for water and climate in Africa

On the occasion of the "One Planet" Summit in Paris last 12 December, the President of the French Republic, Mr. Emmanuel MACRON, announced an initiative to develop "100 new projects for water and climate in Africa", under the Incubation Platform of the Global Alliances for Water and Climate (GAfWaC-IP).

Africa is indeed the continent most vulnerable to the effects of climate change: Seven of the ten most endangered countries in the world are in Africa. 65% of Africa's inhabitants may be facing water stress by 2025.

Climate change is also an important factor in accelerating migration, especially of rural populations. Thus, Africa should be able to count on the solidarity of all partners, especially through the **"Water for Africa"** initiative, launched at the International Conference on Water and Climate in Rabat in July 2016.

The incubator initiative "100 projects for water and climate change in Africa" aims to mobilize 20 million Euros to support, over the next 5 years, the incubator and the preparation of new projects.

The Declaration of Support to this initiative was signed by France, Italy, Chad, Burkina Faso, UNESCO, UNECE, the African Development Bank, the French Development Agency and the Global Alliances for Water and Climate and its 4 partners (International Network of Basin Organizations, Business Alliance and Megacities Alliance for Water and Climate, Global Clean Water Desalinization Alliance), considering that water is one of the first victims of climate change and that there is an urgent need to step up the pace of adaptation and enhance the number of projects relating to water in Africa.

The difficulty for project-holders to mobilize support in the early stages of project preparation, which hinders their capacity to access public and private financial instruments, was also underlined.

Heads of State and Government at the Paris Summit

www.water-climate-alliances.org

Opening of the website of the "Global Alliances for Water and Climate"

On the occasion of the COP23 in Bonn, **the Global Alliances for Water and Climate – GAfWaC** – opened their website to inform all stakeholders involved to combat the effects of climate change in the water sector.

The "Alliances" website will be a showcase for Water and Climate, including the progresses made with the Flagship Adaptation Projects launched at the COP21, such as the Hydrological Information System of the transboundary Congo River, the integrated management of the Hai River in China, the strengthening of the new Mexico Metropolitan Organization for Urban Stormwater Drainage or the "EcoCuencas" Climate Adapt Cooperation project between European and Andean countries.

The site also presents the projects launched at the COP 22, such as the Sebou River management in Morocco, the creation of the "Hydrus" Water Adapt Training Center in Brasilia, cooperation between the Agglomerations of Paris and Manila, the launching of a Euro-Mediterranean water information platform or the future use of the SWOT satellite for hydrological observations of the earth, among others.

It will report on the activity of the four GAfWaC Constitutive Alliances, international water and climate events and their conclusions, incentive projects for new approaches and interesting publications on the subject matter.

It will also foster the GAfWaC "incubator of new projects", to facilitate their funding from the various "Climate Funds".

It was already enriched by the conclusions of the Rome International Summit and the "Action Day for Water and Climate", as part of the COP23 in Bonn, and by the outcomes of the "One Planet Summit" in Paris.

www.water-climate-alliances.org

Actions for Water and Climate

"GAfWaC-IP":

The Incubation Platform for Projects

Climate change is already seriously affecting the water cycle all over the world.

The resulting water crisis is a key factor in current and future social, economic, environmental and migration crises, affecting health, food and energy security and economic growth; essential to the sustainable development of many countries.

Donors are mobilized on the issue, but stress their difficulty in finding sound projects to finance. At the same time, project holders regret their lack of capacities to initiate the preparation of new projects and to access funding given the complexity of the procedures.

The Incubation Platform of the Global Alliances for Water and Climate (GAfWaC-IP) was created at COP22 in Marrakech, to fill this gap. It mobilizes the 450 partners involved in the four Global Alliances for Water and Climate gathering Basin Organizations, companies, large cities and desalination specialists.

The GAfWaC Incubation Platform focuses on the priorities of the **"Paris Pact on Water and Adaptation to Climate Change in the Basins of Rivers, Lakes and Aquifers".**

Launched at COP21, particularly for strengthening water governance, protecting better and saving resources, developing hydrometeorological and environmental monitoring networks and Water Information Systems (WIS), or designing and operating sustainable financing mechanisms. It also incorporates priorities shared with other GAfWaC member alliances, such as water resource protection, nature-based solutions, development of sustainable desalination solutions or circular economy in cities and companies.

On an experimental basis, ten projects including three in Africa could be supported by the Platform in 2017, with the help of the French Ministry of Ecology.

These projects could benefit to 33 million people. At the end of the first year of operation, GAfWaC-IP completed the incubation of 10 projects and contacts were established with potential donors.

Funding for several projects has already been secured.

A second phase of the much more ambitious Incubation Platform is being finalized following the presentation of the results at COP23 in Bonn.

The incubated projects in 2017 were:

- Securing populations and ecosystems around the Diama Dam in the Senegal River Delta;
- Resilience to the impacts of climate change: towards better efficiency in industrial wastewater treatment in the city of Fes in Morocco;
- Fight against climate change and restoration of the Zarqa River Basin in Jordan;
- Development of Water Information Systems for adaptation to climate change in the Congo River Basin;
- Adaptation to climate change and flood/drought risk management in the Syr Darya Basin in Kazakhstan;
- Development of a climate change adaptation strategy and a priority action plan for the Sava Basin;
- Launching of the first "Water and Climate" courses at the "HYDRUS" Training Center in Brasilia;
- Support to the operationalization of Burkina Faso's National Water Information System;
- Mediterranean Water Knowledge Platform: Support to the development of National Water Information Systems (NWIS) in 4 pilot Southern Mediterranean countries;
- BAFWAC: Global Platform for Joint Action and Learning for Business.

The Rome International Summit on Water and Climate, 23-25 October 2017, recommended that "Funding should support not only infrastructure projects, but also serve to improve knowledge of resources and climate change impacts, capacity building, governance, the monitoring and evaluation of policies".

The Italian Government allocated 5 million Euros to immediately launch three of these incubated projects.

These very encouraging first results were presented at COP23 in Bonn last November.

President E. Macron at the "One Planet Summit"

Actions for Water and Climate

Training for preparing bankable projects for climate change adaptation in transboundary basins

UNECE

Dakar - Senegal - 21 - 23 June 2017

Workshop on project preparation in Dakar

A training workshop for preparing bankable projects for climate change adaptation was organized by UNECE, from 21 to 23 June 2017 in Dakar, Senegal, in partnership with **INBO**, the African Water Facility, the World Bank, European Investment Bank, Dutch Ministry of Infrastructure and the Environment and the Swiss Development Cooperation Agency.

This workshop was hosted by the Organization for the Development of the Senegal River (OMVS), which is in charge of the Secretariat of the African Network of Basin Organizations (ANBO).

It gathered more than 30 participants, including representatives of the World Bank, African Development Bank, European Investment Bank, French Development Agency and European Water Facility as well as of Transboundary Basin Organizations (TBOs) from Africa, Europe and Asia.

The participants received practical training on how to prepare their request for financing climate change adaptation projects in transboundary basins. They were also trained to make the distinction between adaptation and resilience, as well as between adaptation and development projects.

They were introduced to donors' procedures and project financing cycles and trained on how to develop project proposals for adaptation to climate change, including, in particular, the identification of the impacts of climate change, the vulnerabilities and the needs for adaptation, while fitting their project proposal with the national or transboundary context and climate change adaptation priorities defined in other related sectors.

TBOs should include in their proposals actions that would deliver positive results for both mitigation and adaptation, as such "co-benefits" are highly valued by donors.

Donors informed of the difficulties they encounter to finance TBOs as these often lack of proper financial resources to qualify as direct borrowers. The donors intervene more frequently with the riparian countries rather than with the international structures they created between them. This is why the Ministries of Finances of the riparian countries, which are the contact point of the donors, should be involved in projects from the start.

However, the TBOs provide a consistent framework at the regional level and allow for a real technical and economic integration enabling a sounder use of water resources throughout their basin, where unilateral actions of each riparian State taken separately might not be coordinated with those of other upstream and downstream countries of the basin.

INBO presented the Incubation Platform of the Global Alliances for Water and Climate (GAfWaC-IP) that aims to bridge the gap between donors, looking for quality adaptation projects, and project holders, ignoring how to access climate funds and comply with their procedural requirements.

GAfWaC-IP provides technical assistance to project holders, to help them build their proposals and reach access to funding.

The training made it clear that there is a strong demand for GAfWaC-IP services.

The workshop was highly interactive, with the presentation of projects for the Basins of the Lake Victoria and Niger River, of OSS (Sahara and Sahel Observatory) accreditation to the Adaptation Fund, of the European Investment Bank procedures.

Exercises with individual or group work on drafting a project proposal to donors were much appreciated by the participants, who wished the continuation of this first training event.

INBO and ANBO presented the AfriAlliance project for innovation in the water and climate sector, aiming at boosting research for the preparedness of Africa to climate change.

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UNECE

For successful cooperation in transboundary basins

Workshop on Basin Management in Geneva

Growing water scarcity, climate variability and increasing water needs for economic development have led to a rising interest in water allocation practices.

Especially where rivers, lakes and groundwater bodies cross national borders, the competing demands of countries and sectors for water resources pose a threat of conflict.

Equitable and effective water allocation is thus an important basis for peaceful and sustainable development, as well as one of the biggest challenges in water management and protection.

What different forms of water allocation arrangements are currently in use and what are the benefits of including them in transboundary agreements?

A workshop was held on 16 and 17 October 2017 under the auspices of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), which is serviced by UNECE.

It gathered more than 100 participants coming from over 48 countries in Europe, Africa, Asia and the Americas, to share their experiences.

It was emphasized that pollution prevention and ensuring minimum environmental flows play an important role in basins faced with water allocation difficulties. Discussions also touched upon how joint infrastructure investments and climate change adaptation can be driving forces for agreeing on water allocation.

The participants acknowledged that water allocation is not a concern for all basins globally, but a growing concern in basins faced with temporary or constant water scarcity, which, due to climate change impacts, is affecting more and more countries in the world.

They also proposed to include activities to promote sustainable, equitable and resilient water allocation in the future work program of the Water Convention, especially capacity-building and awareness-raising activities as well as the development of a guidance document on existing good practices.

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UNECE

Stockholm World Water Week

27 August - 1st September 2017

This year, the main topic of the Stockholm World Water Week was "Water and Waste: Reduce and Reuse".

The Secretariat of **INBO** and **Global Alliances for Water and Climate (GAfWaC),** intervened in many "climate" events and working meetings organized with its partners to present the results and prospects of the Alliances and their Incubation Platform and to prepare the program for the official Action Day on Water and Climate of the COP23 on 10 November 2017 in Bonn.

A side event on **the PIANO (Europe-China Innovation Partnership) project** promoted the French-Chinese cooperation project for the Hai River Basin Integrated Management, which is a model in identifying innovation needs and technical exchanges on very specific issues (pollution modeling, predictive modeling of cyanobacterial proliferation).

Working meetings were held with the main partners to advance many issues such as the implementation of the **"AfriAlliance"** project (network of European and African organizations involved in the search for innovative solutions for climate change adaptation in Africa), or the next World Water Forums in Brasilia, from 18 to 23 March 2018 and Dakar, March / April 2021.

www.worldwaterweek.org

Opening ceremony

International news

The Global High-Level Panel on Water and Peace

The Global High-Level Panel on Water and Peace was launched in November 2015 in Geneva by 15 co-convening countries (Cambodia, Colombia, Costa Rica, Estonia, France, Ghana, Hungary, Jordan, Kazakhstan, Morocco, Oman, Senegal, Slovenia, Spain and Switzerland) with the mandate to develop recommendations aimed at preventing and resolving water-related conflicts and at making water an instrument of peace.

"A Matter of Survival", the final report of the panel was launched in Geneva and in New York in September 2017.

It concludes, among others, that the global water challenge needs to be addressed urgently in an integrated and comprehensive way at all levels, ranging from the United Nations Security Council and other multilateral organizations to grass-root level institutions.

The "Geneva Water Hub" is in charge of disseminating the report and supporting the implementation of its recommendations. It is managing the Secretariat of the Panel.

Mr. Jean-François Donzier, Secretary General of the International Network of Basin Organizations participated in the Panel meetings in Dakar on 5 April 2016 and in Geneva on 27 February 2017.

Panel Meeting in Dakar on 5 April 2016

He presented the progress made in the integrated management of transboundary rivers, lakes and aquifers and showed how much the signing and implementation of a cooperation agreement between riparian countries was a factor of peace and social, economic and ecological progress, based on the exchange of data and information and the sharing of the benefits of a shared vision of these basins' future.

www.genevawaterhub.org/panel-water-peace

OECD: Water Governance Initiative


Initiative meeting in Rabat in January 2017

The Water Governance Initiative was launched by OECD at the 6th World Water Forum in Marseilles in 2012.

This work gave a first result in the publication by OECD in 2015 of the 12 principles of water governance that are a real world reference framework.

The various partners in OECD Initiative then worked on indicators of good governance practices.

INBO is been actively involved in this initiative, especially in research and definition of governance indicators applicable on different scales: country, region, basin and city.

In 2018, this work will result in a summary document on water governance and a set of indicators to measure the status of this water governance in countries, basins and cities.

The latest version of the proposed indicators was subjected to a feasibility test in the first half of 2017 with 12 volunteer pilot institutions.

The 9th workshop of the Water Governance Initiative, held in Paris on 3 and 4 July 2017, allowed a dialogue on the problems encountered when using these indicators. This led to adjusting a new version that was full-scale tested with these volunteer pilot institutions in autumn 2017.

At the 10th meeting of the members of the Water Governance Initiative, on 20 and 21 November 2017, in Vienna, Austria, the test feedback-based results were discussed and the requirements to ensure the full success of the use of this set of indicators were defined.

At the same time, the 60 or so "Water Governance stories" collected in 2016 and 2017 were analyzed in order to extract the main lessons learned.

At the Initiative meeting in Rabat in January 2017, Mr. Jean-François Donzier, Secretary General of **INBO** and the Global Alliances for Water and Climate (GAfWaC), presented the conclusions of the official Action Day for Water and Climate of COP 22 in Marrakech.


Initiative meeting in Vienna in November 2017

A delegation from the Brazilian Intermunicipal Consortium and PCJ Water Agency was invited to present the very positive results of the **"EcoCuencas"** cooperation project, which aimed at testing in Brazil, Colombia, Ecuador and Peru new economic tools to adapt to the effects of climate change in the selected pilot basins.

www.oecd.org

World Water Data Initiative

WMO - Geneva - 4 - 5 September -2017


The Geneva workshop

On 4 and 5 September 2017, **the International Network of Basin Organizations (INBO) was invited to participate in a work meeting of the World Water Data Initiative.**

This workshop was held on the premises of the World Meteorological Organization (WMO) in the presence of some thirty experts representing the World Bank, the Australian Government, various UN agencies and several NGOs.

This initiative was launched in 2016 by **the High-Level Panel on Water (HLPW)** set up by the UN Secretary General and the President of the World Bank Group. It aims to promote the implementation of the Sustainable Development Goal related to Water (SDG6), which identified access to water data as an essential condition for the implementation of its Action Plan, published in September 2016.

The World Water Data Initiative, managed by the Australian Government until 2018, aims to improve access to water data for stakeholders by providing advice on the right parameters to use by stimulating new technologies and harmonizing common standards.

During this meeting, **INBO** underlined its willingness to actively collaborate in this important strategic initiative, given the significance of data access to achieve effective integrated water resources management in basins and at the national level.

INBO fosters links with local stakeholders in order to better organize access to data (which are often dispersed in multiple national and local organizations) and supports the development of Integrated Water Information Systems.

INBO's forthcoming publication of a handbook on Water Information Systems is scheduled for the Brasilia World Water Forum in March 2018.

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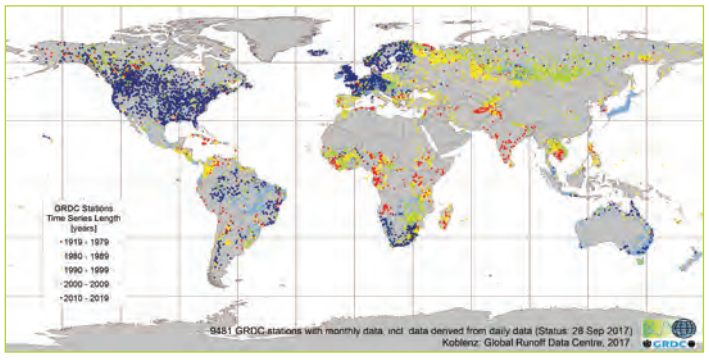
The Global Runoff Data Center (GRDC)

Facilitator between data providers and data users



The Global Runoff Data Center (GRDC) was established in 1988 at the German Federal Institute for Hydrology (BfG) under the auspices of the World Meteorological Organization (WMO).

The GRDC global database is a collection of river discharge data collected at daily or monthly intervals from more than 9,400 stations in 160 countries. This adds up to more than 410,000 station-years with an average record length of 43 years.

The GRDC archives international data of up to 200 years old, and fosters long-term hydrological studies.

The aim is to help earth scientists analyze global climate trends and assess environmental impacts and risks and assist with transboundary water resources assessment.

The GRDC maintains a number of specialized databases such as those of the WMO Commission for Hydrology or the Global Terrestrial Network for River Discharge to support the Global Climate Observing System (GCOS) in assessing total freshwater flows to the oceans.

In addition, the GRDC supplies GIS maps on the Major River Basins and their boundaries for more than 7,000 stations.

The GRDC completely relies on the voluntary contribution from National Hydrological Services to expand and update its river discharge database.

National Hydrological Services and River Basin Authorities are encouraged to supply their information so that the GRDC can provide on request the available discharge data and non-commercial applications to science and research.

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International news

International Water Association (IWA)

A Basin Action Agenda:

The "Principles for Water-Wise Cities" Framework

This Agenda aims to activate the public utilities of cities to work with basin organizations, as well as with the other water management stakeholders (e.g. agriculture, industries and mining).

Why should urban stakeholders invest and take action in their river basin?

Urban stakeholders have a critical role to play in preserving the freshwater resources on which they depend: a disruption in supply of freshwater to cities would have significant economic, environmental and health consequences.

Global projections show that urban populations will continue to grow.

Thus improving freshwater security and protecting water resources, which cities rely on, is a priority.

The Basin Action Agenda builds upon the Principles for Water-Wise Cities, which aim to integrate water in planning across scales, and help city managers ensure access to safe water and sanitation.

This Agenda provides guidance pathways for securing water resources, protecting water quality and preparing for extreme events.

How can urban stakeholders become agents of change?

The Agenda provides a framework for showcasing best practices to inspire urban end-users to be aware of what is happening in their river basin and respond to these events.

The feedback collected from a workshop series, a webinar and basin stories will be reflected in the launch of the **Basin Action Agenda** at the 2018 IWA World Water Congress in Tokyo.

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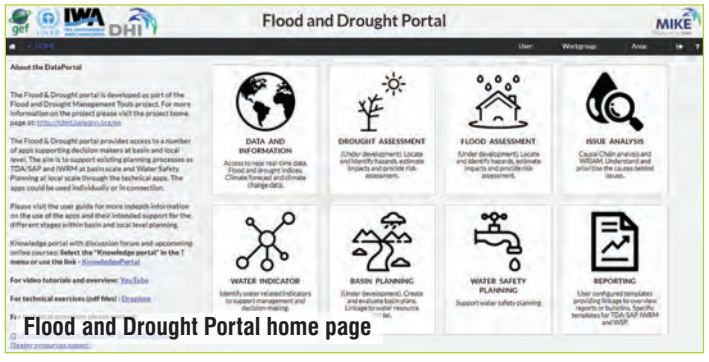
www.iwa-network.org

www.iwa-network.org/projects/water-wise-cities

Flood and Drought Management Tools



Flood and Drought Portal home page

Climate change is increasing the occurrence of severe and unpredictable flood and drought events, which together with fast growing populations, urbanization and economic development are increasing the pressure on water resources.

In transboundary basins, these risks are larger because of multiple countries competing for the same water resource.

To reduce water related risks, land, water and urban managers need to improve their ability to address flood and droughts risks and increase resilience.

Cooperation across borders and scales is fundamental, as is the integration of information on flooding and drought in planning processes, such as Transboundary Diagnosis Analysis/Strategic Action Programs (TDA/SAP) and Integrated Water Resources Management (IWRM) at basin level and Water Safety Plans (WSP) at local (water utility) level.

The Flood and Drought Management Tools (FDMT) project was funded in 2014 by the Global Environment Facility (GEF), International Waters (IW) and implemented by the United Nations Environment Program (UNEP) with DHI and the International Water Association (IWA) as executing agencies. This project is developing a package of web-based technical applications (tools), accessible through the Flood and Drought Portal.

These applications can be used individually or together to include information about floods, droughts and future scenarios into planning, improving the capacity of stakeholders operating in river basins to recognize these risks and to address the implications of a changing reality.

From 2014 to 2018, three pilot basins (Chao Phraya, Lake Victoria and Volta) were chosen for the development and testing of the methodology and technical applications.

These tools enable stakeholders to compile information from models, indicators and existing planning approaches to develop future planning scenarios that are reliable, resilient and effective.

www.flooddroughtmonitor.com

www.iwa-network.org

http://fdmt.iwlearn.org/

UNESCO – International Hydrological Program

United Nations Educational, Scientific and Cultural Organization

Open data at the service of water

IHP-WINS network over the world

The Water Information Network System (IHP-WINS), launched in January 2017, is an online platform for open access to water data.

A tool made freely available to Member States, the scientific community, decision-makers and the general public, **IHP-WINS** aims to be a real support for knowledge sharing and decision-making.

The objective is to democratize access to data and increase the dissemination of local and regional knowledge in the field of water.

Facilitate knowledge sharing

IHP-WINS first offers a georeferenced open access data sharing space on water resources at global, regional, national and local levels.

Through the use of a Geographic Information System (GIS), the information is visualized in the form of overlapping layers, allowing users to create customized maps and updating is facilitated to allow the provision of downloadable documents in various formats (such as reports, videos, photographs, statistics and webinars).

The platform also allows its contributors to share their own data.

Thus, through this pooling of knowledge, **IHP-WINS** contributes to the monitoring of the Sustainable Development Goal (SDG6) on water and sanitation.

The case of transboundary aquifers

IHP-WINS hosts, among other things, data on transboundary aquifers.

By combining these different layers of information using GIS, the maps thus obtained highlight, for example, the level of water stress to which these aquifers are exposed.

At present, the largest communities by their number of inhabitants are the most advanced in open data because they have the financial and human resources necessary to conduct ambitious policies about the uses of digital means and to establish structured data management services.

But, for the most modest communities, it is still not a priority. This issue is a far cry from the concerns of local decision-makers.

Thus, the purposes of open data require pedagogy and very careful accompaniment.

www.unesco.org/phi-wins

Establishment of a Multi-Country Cooperation Mechanism (MCCM)

The Governance of Groundwater Resources in Transboundary Aquifers (GGRETA) project is funded by Swiss Cooperation (SDC).

UNESCO-IHP has facilitated a Multi-Country Cooperation Mechanism (MCCM) for the governance and management of the Stampriet Transboundary Aquifer System (STAS) - shared by Botswana, Namibia and South Africa.

The implementation of the STAS MCCM falls under **ORASECOM's** mandate.

The establishment of the STAS MCCM is a breakthrough in many aspects:

1. **Firstly,** it is the first agreement on transboundary aquifers since 2015.
2. **Secondly,** it is the first operational governance mechanism to be nested in a river basin organization and directly contributing to the implementation of SDG Target 6.5.
3. **Thirdly,** the mechanism will enable sustainable actions on the ground, as part of **ORASECOM's 10-year Plan (2015–2024).**

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THE FRENCH SPEAKING WORLD

The "Water" Portal of Médiaterre

médiaterre
L'information mondiale pour le développement durable

In 2011, a memorandum of understanding was signed between the French-Speaking Institute for Sustainable Development (Institut de la Francophonie pour le Développement Durable - IFDD), subsidiary body of the International Organization of the French Speaking World (OIF), and **IOWater**, **INBO** Secretariat, to collaborate in the facilitation of the "Water" Portal of Médiaterre.

A new step has been taken **to create an educational platform for e-learning.**

Several training modules on water and sanitation have been drafted for the French-Speaking World. They were designed with "4 hands", i.e. in close collaboration with the Regional Office for West Africa of the International Organization of the French Speaking World (OIF).

The written documents have the merit of showing the practices of the South French-speaking countries in the water and sanitation sector.

They will be gradually put online on:

www.mediaterre.org/eau

International Events

8th World Water Forum

Sessions on Basin Management and Climate Adaptation Issues

The 8th World Water Forum will take place from 18 to 23 March 2018 in Brasilia, Brazil.

As Champion of the Daegu-Gyeongbuk Implementation Commitment (DGIC) for the Theme 4.3 "Cooperation for Reducing Conflict and Improving Transboundary Water Management", INBO is preparing with its partners many sessions related to basin governance, transboundary cooperation, adaptation to climate change and citizen participation.

- **THEME 1 CLIMATE:**

Session 1.b.1: How climate change affects water users: the need for cross-sectoral approaches, Tuesday 20th March, 14:30-16:00, Room ST8

Session 1.b.2: Innovative financial mechanisms for adaptation to climate change, Tuesday 20th March, 16:30-18:00, Room ST8

Session 1.b.3: Do not reinvent the wheel: Many non-regret adaptation measures are already available, Wednesday 21st March, 9:00-10:30, Room ST8

- **THEME 5 ECOSYSTEMS:**

Session 5.a.1: Balancing water needs for human beings and nature, Monday 19th March, 16:30-18:00, Room ST9

Session 5.a.2: River basin revitalization for supporting water quantity and quality and human well-being, Tuesday 20th March, 9:00-10:30, Room ST9

- **THEME 6 FINANCE:**

Session 6.b.3: Exploring synergies between water-related SDGs and the UNFCCC Adaptation Agenda, Wednesday 21st March, 11:00-12:30, Room ST4

- **THEME 8 CAPACITY:**

Session 8.a.1: Information and training for decision makers, Monday 19th March, 16:30-18:00, Room ST3

- **THEME 9 GOVERNANCE:**

Session 9.b.1: For efficient transboundary basin organizations, Tuesday 20th March, 14:30-16:00, Room ST7

Session 9.b.2: Monitoring, assessment, data and knowledge sharing in transboundary basins, Tuesday 20th March, 16:30-18:00, Room ST7

Session 9.b.3: Successful negotiation and implementation of transboundary cooperation agreements, Wednesday 21st March, 9:00-10:30, Room ST7

- **SPECIAL SESSIONS:**

Strengthening citizen participation in basin management: policy, representativeness and challenges, Wednesday 21st February, 9:00-12:30 Room SC1

Data and tools for water management and decision-making, Wednesday 21st February, 14:30-16:30, Auditório Águas Claras 254

Contact : www.inbo-news.org

http://www.worldwaterforum8.org/en/program-0

Please come and participate!

AfriAlliance

Innovative solutions for water and climate in Africa

Workshop, Great Lakes Conference, Entebbe, May 2017

Funded by the European Union's Research and Innovation Program (H2020), the AfriAlliance project aims to build Africa's capacity to respond to climate change challenges by developing joint work and sharing innovative solutions between existing networks in Africa and Europe.

Meeting with field stakeholders, thinking about emerging themes such as social innovation, establishment of a database to collect research and innovation needs related to the challenges of water management and climate change, proactive communication, **these are some of the major issues that IOWater and INBO have dealt with in the AfriAlliance project (2016-2021).**

During the first 18 months, 4 workshops, organized and facilitated in Botswana, Morocco, Uganda and Ghana, as well as a series of interviews, allowed identifying a first list of research and innovation needs.

A phase of identifying solutions has started in order to make available, **in the first quarter of 2018, a summary presenting the existing solutions to the identified needs.**

The collected information will also be used to draft the AfriAlliance's research and innovation agenda when no solution is identified or when a development is required.

In terms of communication, the first series of thematic fact sheets on social innovation is now available on the project website. The purpose of these fact sheets is to highlight the specific conditions for innovation in the water sector. They are aimed at potential solution providers, resource managers and local communities and stakeholders such as NGOs.

The main theme of this first series deals with monitoring.

Five sub-topics were developed to detail the specific challenges of monitoring related to water and climate change in Africa:

- Monitoring of drinking water quality for improving health;
- Monitoring of water availability in quality and quantity sufficient for food security;
- Climate monitoring for early warning systems to prepare for extreme weather events;
- Monitoring of groundwater quantity to ensure its sustainable use and avoid water conflicts;
- Monitoring of water pollution for industries and urban areas to protect human health and ecosystems.

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afrialliance
Africa-EU Innovation Alliance for Water and Climate

www.afrialliance.org

Africa

Niger Basin Authority (NBA)

A dialogue framework to the benefit of the populations of the Niger Basin

Ms. Toupta Boguena, Executive Secretary, NBA

The meeting with the NBA Technical and Financial Partners took place in Niamey on 5 and 6 October 2017.

It was attended by the World Bank, the leading technical and financial partner, the European Union, German, French and Dutch Cooperation and the NBA Executive Secretariat.

This meeting allowed reviewing the comments of the Partners and those of the Executive Secretariat in order to enrich the results of the NBA institutional and organizational audit adopted at the extraordinary session of the Council of Ministers of May 2016.

This exchange has enabled giving the NBA new directions for the implementation of its activities in order to better respond to the various demands of the populations.

The outcomes of the institutional and organizational audit are of great significance with regard to all the strategic documents that have been adopted by the various NBA statutory bodies since 2010: we can mention the 2013-2024 Strategic Plan with its Operational Plan (OP), the Climate Investment Plan (CIP) and the Integrated Program for Development and Adaptation to Climate Change (PIDACC).

In her introductory speech, the Executive Secretary, Dr Toupta BOGUENA, appealed to the partners to provide her institution with the human and material resources necessary for the effective implementation of these programs with a view to strengthening cooperation between the Member States and, above all, improving the living conditions of the Basin populations estimated at more than 130 Million inhabitants.


Participants at the NBA Partner Meeting

Satellite Water Resources Monitoring System

"SATH-NBA" project

The "SATH" project for water resources monitoring and flow forecasting is funded by the Netherlands and the African Development Bank (AfDB), through the ORIO-EVD Funds and the ClimDEV-Africa Special Fund, respectively.

The Niger River Basin is vulnerable to the effects of climate change, which manifests itself in phenomena that are difficult to assess and control: severe droughts, floods, water and land pollution, etc. This vulnerability unfortunately hampers the development of the various riparian States.

To meet these sustainable development challenges, **NBA**, through its Observatory, is implementing modeling tools to develop products that are useful for the proper planning of the basin's development and the sound management of resources. .

In 2017, about 50 participants from Nigeria and Guinea took part in the training workshops, the objective of which was the capacity building of the end-users of climate information based on satellite data as part of the activities of the **SATH-NBA** Project.

The training sessions enabled to discover new innovative techniques for the collection and processing of satellite-based hydrological data and information, present sophisticated products and show how each participant can access these products, but especially how to interpret them for a better use.

After Nigeria and Guinea, the "Satellite Water Resources Monitoring System and Satellite Hydrological Prediction in the Niger Basin" project continued, from 4 to 10 December 2017, its capacity building for end-users of climate information products in Mali, Ivory Coast and Burkina Faso.

Workshops of SATH-NBA project

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Niger Basin Authority (NBA)

Establishment of the Regional Network of Parliamentarians

The President of the Malian National Assembly, Mr. Issaka Sidibé is opening the conference

The Second Conference of Parliamentarians of Member Countries of the Niger Basin Authority (NBA) took place on 27, 28 and 29 November 2017, in Bamako (Mali).

The overall objective of the conference was, on the one hand, to inform and raise awareness of the parliamentarians on the NBA mandate, objectives and difficulties.

On the other hand, it allowed setting up the Regional Network of Parliamentarians to accompany the NBA Executive Secretariat and its Member States in the search for and mobilization of the necessary funds for investments.

The parliamentarians decided to establish this Regional Network of Parliamentarians of the Niger Basin Member Countries. A bureau was also installed for a two-year term:

In addition, the Conference also made recommendations for strengthening the NBA's external communication, continuing thinking about the ways and means of implementing the financing mechanisms, the funding of the National Hydrological Services (NHS).

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Kandadji Dam

An institutional framework for the first large dam on the Niger River

Simulation of the Kandadji Dam reservoir

The Kandadji Dam is one of the three large dams that the Heads of State chose in 2008 to be built as part of the "Shared Vision" of the Niger River Basin.

It aims at supporting low-water levels, developing irrigation and producing hydropower. In particular, low-water level support helps to meet the commitments made by Heads of State to maintain a minimum flow at the Nigerian border.

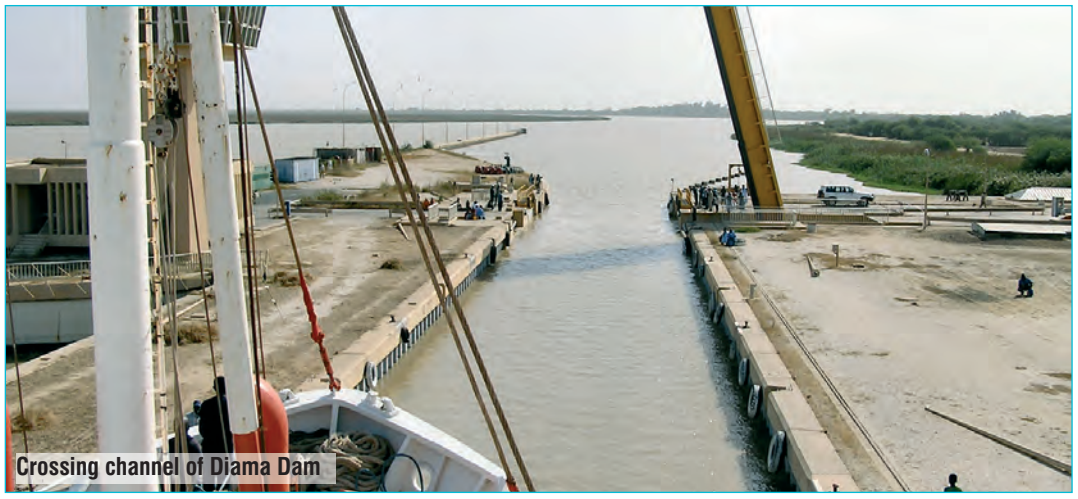
The Kandadji Dam Agency (ABK) is carrying out, with funding from the World Bank, a study on a future dam management structure.

The future management structure will cover the following three functions: multi-sectoral water management, asset management, hydropower plant operation. It also involves developing an implementation plan for the chosen solution and preparing the necessary legal, contractual and financial documents and tools.

www.abn.ne

"OMVS" - Organization for the Development of the Senegal River

Institutional and financial review


Crossing channel of Diama Dam

The history of the Organization for the Development of the Senegal River (OMVS) shows the strong will expressed and supported for more than forty five years by the riparian States to cooperate for a sound and joint exploitation of the resources of the Senegal River, based on:

- free navigation;
- the indivisible ownership of the common structures and the solidarity guarantee for their financing;
- equitable and reasonable distribution of water resources and users' benefits;
- equitable sharing of costs and charges among Member States;
- "the obligation for each Member State to inform the other riparian States before taking any action or project that could have an impact on water availability and/or the possibility of implementing future projects" .

"OMVS" is unanimously recognized as an exemplary river basin management organization, with few equivalents around the world.

Throughout its history, since 1972, "OMVS" has adapted its organization to face the evolutions, to mention only the most important ones, related to the building of the Diama and Manantali dams, but also to the integration of Guinea.

These major events led to progressive and normal consequences from a legal, institutional, organizational and financial viewpoint.

For several years, "OMVS" has mobilized human and financial resources to initiate reforms on these different aspects.

The Conference of Heads of State and Government and the Council of Ministers have decreed the urgency to start a new institutional review simultaneously with a financial analysis to modernize "OMVS" and allow it to continue being part of the history of integrated water resources management and land development in the Senegal River Basin, as its founders had initiated.

This study should enable "OMVS" to sustainably address the political, socioeconomic and environmental challenges by 2050, by integrating adaptation to climate change in the basin.

www.portail-omvs.org

OMVS
ORGANISATION POUR LA MISE EN VALEUR DU FLEUVE SÉNÉGAL

H.E. Hamed Diane Séméga takes command

Appointed head of the Organization for the Development of the Senegal River (OMVS) by the Conference of Heads of State of 17 May 2017, H.E. Hamed Diane Séméga took office on 19 June 2017, on the occasion of a hand-over ceremony chaired by the President of the Council of Ministers, H. E. Cheick Taliby Sylla.


H.E. Hamed Diane Séméga

H.E. Kaminé Komara, who had been High Commissioner since 2013, recalled the main challenges facing the Organization, namely: internal consultation to mobilize the $4 billion needed to finance projects, environmental protection of the Senegal River Basin focusing on the preservation of the Fouta Djalon Mountain, modernization of the "OMVS", and securing of the structures.

The obtained results are many indicators of the Organization's good health in terms of restored image and credibility and have earned "OMVS" to be ranked as one of the world's first river basins for the governance of shared water resources.

The new High Commissioner has in turn emphasized the strategic importance of the Organization's credibility to be strengthened by scrupulous execution of the road map issued by the Heads of State.

In this perspective, absolute priority will be given to the implementation of the project for navigation on the Senegal River and to the fight against climate change in the basin.

H.E. Hamed Diané Séméga was not disoriented when he took office because he had been President of "OMVS" Council of Ministers from 2002 to 2006.

"SOGEM" and "SOGED":

Two new General Managers

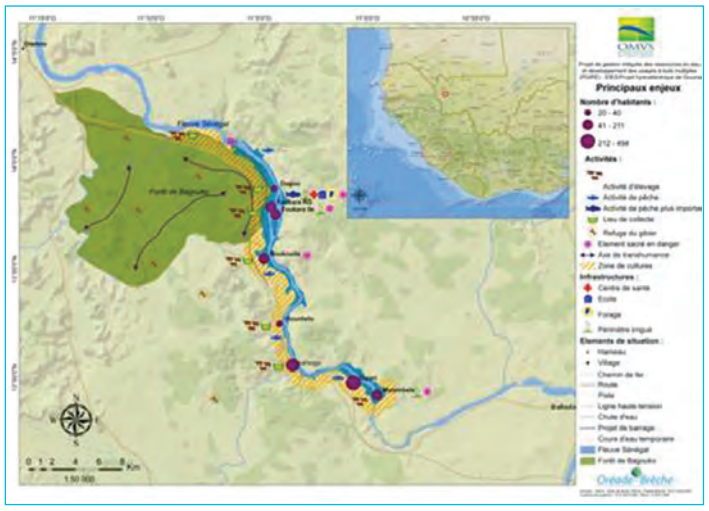
The 17th "OMVS" Conference of Heads of State and Government have appointed new leaders for the two heritage companies.

Mr. Tamsir Ndiaye, outgoing General Manager of "SOGED", has been appointed head of the Manantali Energy Management and Operation Company, "SOGEM".

Mr. Demba Ndaw is now the new General Manager of the Diama Management and Operation Company, "SOGED".

Environmental and Social Management Plan (PGES) of Gouina:

"We did not leave anything to chance"



The Environmental and Social Management Plan for the Gouina hydropower project, located in the Kayes area, is part of **the "OMVS" infrastructure program,** aimed at exploiting the hydroelectric potential of the Senegal River, in order to provide clean energy at a lower cost to the Member States of the Organization.

The "PGES" includes several major components: environmental and social management of construction sites and then of the operating structure, compensation for displaced populations, sustainable management of the Bagouko classified forest and local development.

Regarding the "Sustainable Management of the Bagouko Classified Forest", a compensatory area of 289 ha is added to the classified forest.

The "PGES" especially includes the resettlement of displaced populations.

Consulting and involving all stakeholders is a heavy and demanding machine and this is the second time that populations have been displaced to build an "OMVS" dam.

Taking environmental and social dimensions into account has taken a new positive turn in safeguarding the interests of the affected people. Instead, we learned from recent experiences with the construction of our last dam, Félou, or other foreign dams. We avoided the mistakes of others while trying to capitalize on known successes.

In terms of housing, the traditional village pattern has been respected. But, instead of traditional banco houses, each household has been provided with a house (400 m^2) equipped with toilets, kitchen, and attic. Basic social facilities (school, health center, places of worship, football fields, public space, etc.) have also been built.

Plans for the new villages have been adopted by the Kayes Regional Commission, regrouping at the Governor's

side technical services, NGOs and associations, and mayors.

The NGO "ADIEeS Mali" has been recruited by "OMVS" to present to the populations the village plans, compensation criteria, travel conditions, etc. The choice of the colors for houses was made with the populations. Family homes will be allocated under consensual groupings.

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OMVS
ORGANISATION POUR LA MISE EN VALEUR DU FLEUVE SÉNÉGAL

Mono Basin Authority (ABM)

Togo and Benin united for the Mono Basin transboundary management

The Mono River

The Mono River has its headwaters in Togo, between the city of Sokodé and the border with Benin, and flows towards the South where, close to its mouth, it forms the border between Togo and Benin.

It flows into the Gulf of Benin through an extensive system of brackish lagoons and lakes (including Togo Lake).

The Mono Basin Authority (ABM) gathers the two countries to ensure integrated management of this transboundary basin.

The first session of the ABM Council of Ministers took place in Lomé on 21 and 22 September 2017 and decided on the Strategic Plan, the financing keys and chose Benin as host country for the Executive Board.

This phase of establishing the Authority benefits from the support of the Rhone Mediterranean Corsica Water Agency.

The project also contributes to the development of IWRM at the national level in both countries. The regulatory framework is in place and cooperation contributes to the implementation of the Basin Committees, planning documents and water fees in particular.

The project is working on the emergence and implementation of decentralized cooperation actions on water and sanitation carried out by French local authorities in the Mono Basin.

Volta River Basin

Volta Basin Authority (VBA) A future Water Charter

The Volta River Basin is shared by six countries: Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo.

The six Heads of State and Government of the Volta Basin adopted on 19 January 2007 in Ouagadougou the Convention on the Status of the Volta River and on the establishment of the Volta Basin Authority (VBA).

VBA is planning, with the support of its technical and financial partners, to strengthen its legal-institutional framework with **the future Water Charter of the Volta River Basin.**

The future Volta Basin Water Charter will determine the role and responsibility of the main stakeholders, the procedures, the rules for the use and protection of water resources and the environment for the prevention of conflicts between States and the establishment of the specific bodies responsible for applying these rules and procedures.

Such an approach suggests a new one to water resources management in Africa since the adoption of the Senegal River Water Charter (2002), the Niger Basin Water Charter (2008) and the Lake Chad Basin Water Charter (2012).

The future Charter will make the spirit of basin or community of interests prevail the specific interests of each riparian State by building common large hydraulic structures.

The fight against the proliferation of water hyacinth in tributaries of the river is also a priority.

The Volta River will peacefully drain the six countries and contribute significantly to their sustainable development.

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Burkina Faso

Mouhoun Water Agency Towards the first "SAGE" in Burkina-Faso

Since 2014, the Seine Normandy Water Agency (AESN) has provided institutional and technical support to the Mouhoun Water Agency (AEM).

In 2017, priority was given to the development of the future Samendéni-Sourou Water Development and Management Plan (SAGE) in the Mouhoun River Basin. The operation of two dams located upstream and downstream will face significant environmental and societal challenges in this sector.

Through capacity building and technical assistance, this support deals with Water Police services, the development of the "SAGE", the recovery of financial contributions for water use, the "AEM" Multi-year Action Plan and stakeholders' participation.

Various expert missions focused on:

- Support to the drafting of the terms of reference of the future "SAGE" in the presence of the "AEM" staff and national stakeholders;
- Preparation in Ouagadougou of the International Water & Climate Workshop organized by the "AESN" and AFD and held in Paris in September 2017, in which the "AEM" Director General, the President of the Board of Directors and the Chief of the Sustainable Development Service participated.
- A workshop on sustainable financing mechanisms,
- A capacity building workshop for the Water Police Services in the Mouhoun Basin, with the participation of an expert from the French Agency for Biodiversity (AFB).

Dédougou workshop – May 2017

Drafting a "SDAGE" for the Nakanbé Basin

For this 3rd phase of the project to help the Nakanbé Water Agency (AEN), with support from the Loire Brittany Water Agency (AELB), the year 2017 was marked by more work for the development of the Master Plan for Water Development and Management (SDAGE), a priority objective of the "AEN".

Two expert missions thus focused on:

- Support for writing scenarios for the future "SDAGE". This support allowed a better appropriation of the objectives and stakes and provided methodological elements on the principles for actions in rural and urban areas;
- Capacity building for the "AEN" staff for the development of the "SDAGE", its follow-up by the selected consulting firm, its evaluation, its financing and its implementation.

A study tour in France was organized on the occasion of a meeting of the Loire-Brittany Water Agency's Basin Committee.

The field visits allowed making the implementation of a "SDAGE" more practical as well as its local variations in several Water Development and Management Plans (SAGE).

Zagtouli Sludge Treatment Plant – Ouagadougou

"CICOS"

CICOS
Commission Internationale du Bassin Congo-Oubangui-Sangha

Spatial hydrology - SWOT CONGO
For integrated water resources management in the Congo River Basin


The working group in Nîmes

A specialized Working Group on Spatial Hydrology, gathering seven French Institutions (AFD, BRL, CNES, CNR, IRD, IRSTEA and **IOWater**) was created in 2014 to prepare for the forthcoming exploitation of the **SWOT (Surface Water and Ocean Topography)** satellite, which will be launched by CNES and NASA in 2021.

Its dynamics is part of a strong will for operational research.

Thus, the Congo River Basin, the second largest in the world after the Amazon Basin, was chosen as a pilot basin to test the AFD funded potential applications of SWOT.

This very active working group welcomed, at its 8th meeting in March 2017, in Nîmes, a delegation of **the International Commission of the Congo-Ubangui-Sangha Basin (CICOS),** in order to analyze the situation of hydrological monitoring and spatial applications in the Congo Basin. The future activities to be implemented were identified: establishment of a hydrological information system, development of operational services for navigation and hydropower, transition from altitudes to flows...

The links between the French stakeholders of the project and "CICOS" were formalized by a Memorandum of Understanding signed in September 2017.

AFD

Congo Brazzaville

Strengthening hydrological services: support from a private operator

An AFD-funded project is dedicated to flood control, especially in the City of Pointe Noire.

In this context, a large-scale program for the rehabilitation of the National Hydrological Service (NHS) is being initiated.

This program especially provides for the recruitment of a private operator to support NHS for a few years.

In particular, this private operator will have the mandate to sustain the revenues required for the operation of the NHS and the maintenance of the thirty or so planned hydrometric stations.

Ghana

The White Volta


Joint AEN/Ghana workshop – February 2017 in Ouagadougou

In the Transboundary Basin of the White Volta/Nakanbé and in order to improve transboundary water resources management in Ghana, the project to support the **White Volta pilot Basin** is carried out with the help of the Loire-Brittany Water Agency and with the Water Resources Commission, the White Volta Basin Board and the Volta Basin Authority (VBA).

A joint workshop was thus organized in Ouagadougou in February 2017 in the presence of partners from the two riparian countries, Burkina Faso and Ghana, on the topics of planning, funding and control of invasive aquatic plants.

Training on river assessment for Ghanaian experts was organized in France at the IOWater training center in Limoges at the end of 2017.

Specific support for the development of water discharge guidelines and related legislative instruments will be initiated in 2018.

agence de l'eau Loire-Bretagne

North America and the Caribbean

Canada - Quebec

RES-ALLIANCE: Birth of a community of practice

Launching of the project

The Res-Alliance, a community of practice in adaptation to climate change, coordinated by the Regrouping of the River Basin Organizations of Quebec (Regroupement des Organismes de Bassins Versants du Québec - ROBVQ), was launched on 16 March 2017 during the conference on "Assessment and Prospects in Flood Risk Management":

The purpose of this community is to facilitate knowledge transfer and experience sharing among the various communities that must adapt to the new climate realities that affect water resources management.

For the 2017-2020 period, communities on eight territories, along with their river basin organizations, are taking the same steps to develop adaptation plans and build resilience capacity. They all face significant challenges in terms of erosion and/or flooding of populated areas, as well as for the protection of sources of drinking water and salmon. They also benefit from the support of "ROBVQ" and of a dozen of experts from academia and research involved in the project.

The member communities will be able to rely on tools and training.

All Quebec communities dealing with problems caused by climate change are invited to join "Res-Alliance".

Information about the project, participating communities, tools and how to join them is available on the project website.

The "Res-Alliance" is a project funded by the Green Fund as part of Quebec 2013- 2020 Climate Action Agenda, a program of the Ministry of Sustainable Development, Environment and Fight against Climate Change.

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Cuba

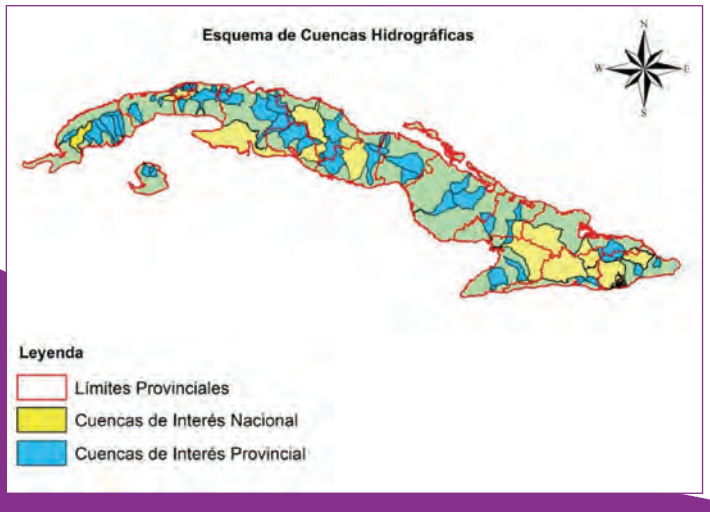
Better guarantee of access to a quality water resource in Havana

Following the signing in March 2017 of the Memorandum of Understanding for integrated and sustainable water resources management, several missions to the National Institute of Water Resources (INRH) were organized in June, September and December, with the support of the Adour-Garonne Water Agency.

IOWater, INBO Secretariat, has associated the Martinique Water Board with the expertise provided to the Cuban partners.

This cooperation plans a support to:

- **The National River Basins Council (CNCH) and the Pilot Almendares-Vento Basin Council (Havana) and its Executive Secretariat;**



- **The characterization of the Almendares-Vento Basin (observation networks, management indicators);**
- **The drafting of the Basin Management and Development Plan** (participatory planning, integration of climate change);
- **The establishment of the Integrated Management Information System in this basin** (water observatory, modernization of the quality monitoring technology, data management and publication).

The island of Cuba, with a ridge along its entire length, determines a large number of small river basins, knowing that 85% of these coastal rivers are less than 40 km long and have a basin area of less than 200 km^2. This led to the differentiation of basins of provincial and national interest on particular issues, such as that of Almendares-Vento, which supplies most of the Havana agglomeration.

It has been chosen as Pilot Basin for this cooperation program.

In the context of the Inland Waters Act, voted in September 2017, and based on the exchanges already made, several additional themes emerged, i.e.:

- The training of stakeholders and public awareness (example of the Martinique);
- The development of participation;
- The implementation of an economic approach, as well as the integration of climate change (example of Garonne Operation 2050);
- The protection of catchment areas in karstic zones;
- The development of biological indexes for monitoring the quality of tropical environments.

North America and the Caribbean

Mexico

National Water Information System (SINA)

"SINA" integrates and provides the general public with a lot of relevant statistical and geographic information on the water sector.

It is an intuitive system, using common language. It can be accessed over the Web and can download reports, information and graphs in Excel and PDF format.

It presents 492 thematic maps available for download in shapefile (shp) format.

It is a statistical and geographic system with 42 topics organized in three sections (environmental, economic and social).

It has technical sheets, a glossary of terms, links to publications generated by the system information, links to the daily level of dams, to websites of interest, as well as to social networks.

"SINA" is an innovative system that gives access to data and easily understandable information for the general public, academics and specialists on the topic.

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Preservation of the Tecocomulco Lagoon


A CCLT Meeting

The Tecocomulco Basin is located in central Mexico and includes territories of three States and seven municipalities.

Its biodiversity is home to species subject to special protection. It is a place for nesting migratory birds. It was ranked as a RAMSAR site in November 2003.

It is the last natural wetland of the former lake system of the Mexico Valley Basin.

Main problems

To the problem of erosion in the basin are added, on the one hand, the deterioration of the lagoon by the use of fertilizers in agriculture, which has caused the proliferation of aquatic plants; and on the other, the existence of an old social conflict between farmers and fishermen.

Since 1999, recurring cyclical floods have exacerbated conflicts between social sectors and institutions, preventing government action for decades to correct or prevent the effects of the disaster. These conflicts culminated in 2004 with serious social and environmental imbalances:

Preservation of the lagoon

On 10 March 2005, after 8 months of field meetings, **the Citizen Advisory Council was established** to preserve the Tecocomulco Lagoon. On 14 July of the same year, this Council was transformed into **the Tecocomulco Lagoon Basin Commission (CCLT),** acquiring legal personality and its own assets in 2006.

It is made up of 26 members, including 18 representatives of the productive sectors and service providers, who are elected by their respective assemblies. The other 8 members represent federal and State government agencies. An Operations Department is responsible for implementing agreements.

Solution to the problems

An intensive process of training and dialogue was conducted to raise the conflicting parties' awareness to the serious deterioration of the Lagoon and its surroundings.

The result was the identification of the problems and a proposal for an "Action Plan for Conservation and Sustainable Use of the Resources of the Tecocomulco Lagoon Basin".

Delta of the Colorado River: restoration of a wetland of international importance

The wetlands of the Colorado Delta once covered an area of more than 400,000 hectares.

The Colorado is one of the most regulated rivers in the world, with more than 80 dams and an increasing water demand for more than 40 million users in the United States and Mexico.

The impact on the delta has been significant, causing the degradation of 80% of these wetlands of great biological richness.

Since 1997, a bi-national coalition of environmental organizations, government and academic institutions has made an effort to restore this ecosystem.

In 2012, a process of integration of the Colorado Delta Wetland Specialized Working Group (GETH) was initiated with the aim of strengthening the participatory process and restoring the environment.

One of the first steps was to organize participatory workshops for the preparation of **the Colorado Delta Wetland Management Program, with CONAGUA support.**

More than 50 people from 21 institutions participated in this process.

To date, the main achievements are as follows:

- Inclusion in 2012 of an environmental component in the International Water Treaty between Mexico and the United States, which guarantees a minimum water flow downstream;
- The flow of the Colorado River along the delta was restored, reconnecting the river to the Gulf of California for the first time in over 20 years.


Delta of the Colorado River

Latin America

"EcoCuencas"

The project is ending in style

"EcoCuencas", a project funded by the WATERCLIMA program of the European Union and coordinated by **IOWater**, **INBO** Secretariat, is ending its third and final year in the best conditions, with tangible results in all the partner countries: Peru, Ecuador, Brazil and Colombia.

After the completion, in each river basin, of an analysis of existing redistributive financial mechanisms and their ability to finance adaptation to climate change, the various Latin American partners developed until December 2017 innovative pilot actions, coordinated by Asconit and under IOWater's impetus.

In Peru, the work carried out by the National Water Authority (ANA) was devoted to existing fees for "uses" and "discharge" in the country. They have led to tangible developments to improve the coverage and efficiency of the fee levying process, broadened the fee liability basis and increased rates in relevant situations, with a view to equity and funding for Integrated Water Resources Management.

At the same time, the project provided thoughts on adaptation to climate change, using innovative methodologies (no regret measures, cost of inaction, etc.).

"EcoCuencas" Workshop at the "EUROPE-INBO 2017" Conference in Dublin – Ireland

In Ecuador, the National Secretariat for Water (SENAGUA) developed a new national instrument for financing water resources protection (entitled "tarifa agua cruda"): definition of the collection formula, proposal for a management model, taken into account in the regulation, support to the constitution of Basin Councils, or formulation of projects able to be financed by the new redistributive instrument.

Peruvian and Ecuadorian work carried out in the shared pilot Catamayo-Chira River Basin also facilitated closer links between the Basin Councils on both sides of the border to steer the management of the nine boundary basins. A meeting of these Basin Councils was held in early October 2017. The actions were coordinated with the "Aguas Sin Fronteras" project, funded by the same European Union's program WaterClima.

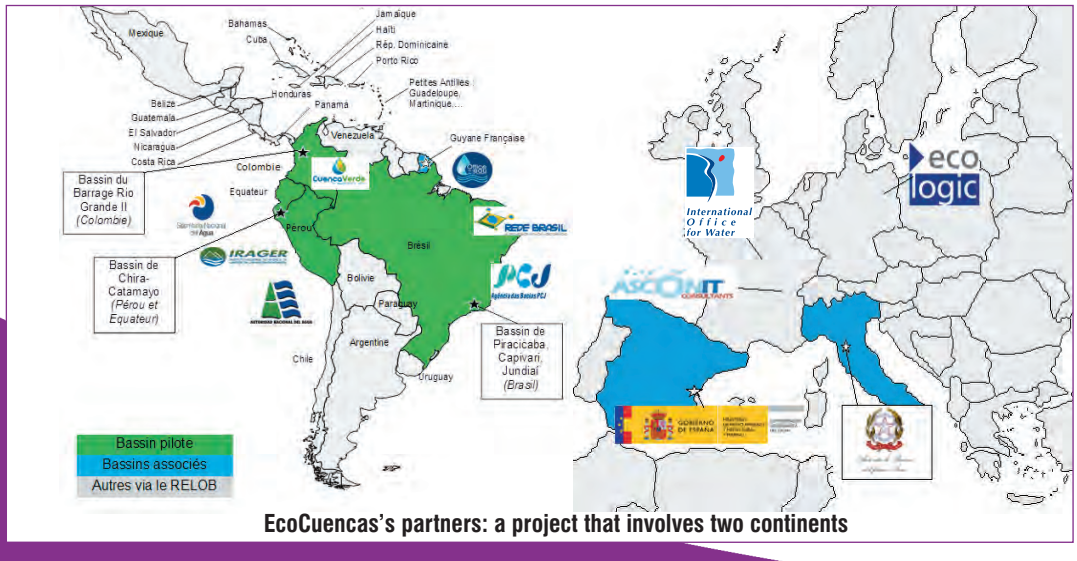
In Colombia, the Water Fund of the "Corporación Cuenca Verde" has designed and implemented a pilot project of "payment for environmental services" in the micro-basin of the Rio Grande II dam, essential for the supply of drinking water to the city of Medellin.

The process started with the identification and the complete analysis of the plots potentially concerned, then with the prioritization of these plots according to objective criteria. After the signing of specific agreements, 25 families were able to benefit from a payment in exchange for services allowing the improvement and / or the conservation of water quality in the basin. This payment, the amount of which was defined by a method based on opportunity costs, was accompanied by technical assistance for the evolution of agricultural and forestry production practices.

In Brazil, the project allowed the Piracicaba Capivari Jundiai (PCJ) Basin Agency to conduct strategic thinking on the reform of existing fee mechanisms (inflation-linked indexation, integration of new parameters for discharge fees), institutional functioning of planning (proposals for the internalization of this function), adaptation to climate change and good practices in this direction, or even the operation of Water Information Systems.

Feedback, summarized from the outcomes of the project and of various events organized in all countries, as well as from a participation in international highlights, such as the OECD Water Governance Initiative (WGI) in June 2017 in Paris, EUROPE-INBO in Dublin in September 2017 or ENCOB in Aracaju in November 2017, is available on the "EcoCuencas" website:

www.ecocuencas.com



EcoCuencas's partners: a project that involves two continents

Colombia

New water resource policy

Cooperation with CORPOBOYACA and the Basin municipalities during the Rio Chicamocha flood on 16 and 17 May 2017

Since 2013, the French Adour-Garonne Water Agency has supported the Ministry of Environment and Sustainable Development (MADS) and the Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) on basin governance and the implementation of instruments adapted to the national context, as part of the process of consolidation of the National IWRM Policy (PNGIRH), including the drafting of the first Strategic Plans for the Macro Basins established since 2012 and the structuring of Macro Basin Committees (CARMAC).

At the same time, technical support was provided to the Water Resources Information System (SIRH), in order to integrate interoperability methods and a common language for all Colombian data producers.

This collaboration is continuing in a second stage, primarily with the Boyaca Environmental Authority (CorpoBoyaca), and more recently with that of Chivor (CorpoChivor).

In the second half of 2017, thematic meetings were held on:

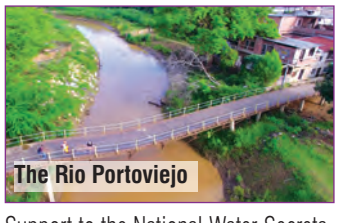
- The reform of the National Water Plan;
- The creation of a graphical interface to make data available on the CorpoBoyaca website;
- Integrated wastewater management on the scale of a department or a micro river basin.

More than 185 officials from the Ministry, Environmental Authorities and local Authorities attended these sessions.

The topic of adaptation to climate change has been omnipresent throughout the exchanges in this second stage.

Ecuador

Basin Councils in Ecuador: fostering participation



The Rio Portoviejo

Support to the National Water Secretariat (SENAGUA) for the development of Integrated Water Resources Management in Ecuador, co-financed by the Adour-Garonne Water Agency (AEAG), continued in 2017 both at the level of the Rio Portoviejo pilot Basin in the province of Manabí, and at the national level for all the basins.

The work was part of the memorandum of understanding signed in the spring of 2016 by SENAGUA, the Ministry Coordinating Strategic Sectors (MICSE), the French Embassy, the Adour-Garonne Water Agency and **IOWater**, **INBO** Secretariat.

Two areas have especially been the subject of closer cooperation:

On the one hand, participatory planning, through the constitution of River Basin Councils in the 9 River Basin Districts according to the 2014 Water Law.

Mechanisms adapted to the Ecuadorian context were proposed.

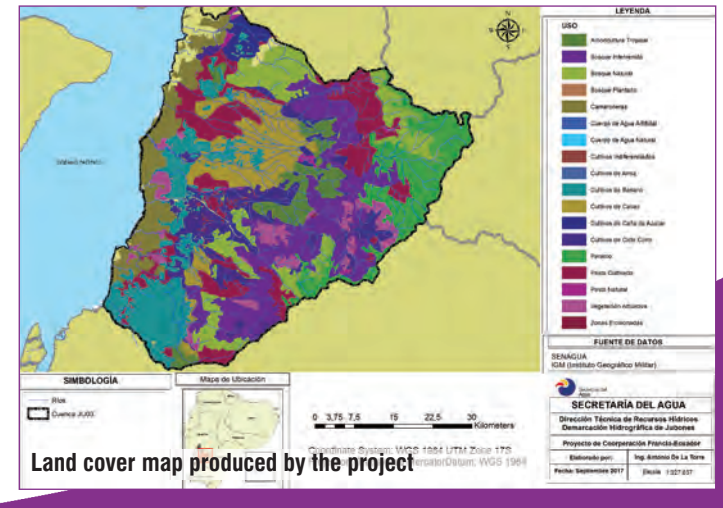
To support the Basin Councils, Local River Basin Planning Units (UPHL) have advanced in the preparation of an inventory, as well as in participatory assessments.

The initial methodological exchanges have thus been concretized in practice.

On the other hand, two guides were drafted for water information systems.

A specific module was developed as part of the Ecuadorian National Information System.

It provides access to all the maps produced for the inventory of the basins as well as practical information for the members of the Basin Councils.



Land cover map produced by the project

Latin America

Brazil

International Conference of the PCJ Basins Planning for extreme events

100 people participated in the International Conference

The occurrence of extreme hydrological events requires changes in the planning of water resources management. Climate change is resulting in changes in rainfalls and droughts that are not foreseen in the basin plans. An example of this is the PCJ Basins, in the State of São Paulo, that have experienced a serious water crisis between 2014 and 2015, and currently still receive irregular precipitations.

This subject was the theme of the International Conference, organized by the PCJ Consortium in July 2017, as part of the Brazil Forum for Environmental Management, in the city of Campinas.

The event was also part of the activities of the Networks of Basin Organizations for the preparation of the 8th World Water Forum, which will take place in March 2018, in Brasília.

The PCJ Consortium is aware of the impacts of climate change on the management of water resources: 22 Future Water Sustainability Goals were defined for raising the community awareness and guiding contingency measures to be taken in the Basin Management Plans and Municipal Water Resources Plans.

The International Conference especially highlighted that the secret to water resources sustainability is the long-term planning and the pricing values used for the society to become aware of the real value of water.

In Brazil, the politicization of the water topic leads to delays in investments and in the development of the sector in the country.

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ADASA - Federal District of Brasilia
Training program on Integrated Water Resources Management

In the field of water resources management, the Regulatory Agency for Water, Sanitation and Energy of the Federal District of Brasilia (ADASA) is responsible for the implementation of the policy defined by the Federal District Water Law and for technical and institutional support to the three Federal District Basin Committees.


Visits in the "Alpes-Maritimes"

In 2016, the Federal District suffered from an exceptional drought which led to rationing decreed by the ADASA for the whole territory.

As part of the cooperation with IOWater, INBO Secretariat, launched in 2016, the program continued in 2017 with the specialization in France of the managers of strategic projects for water resources management in the District.

The training, focusing on 5 modules, was carried out in Sophia-Antipolis:

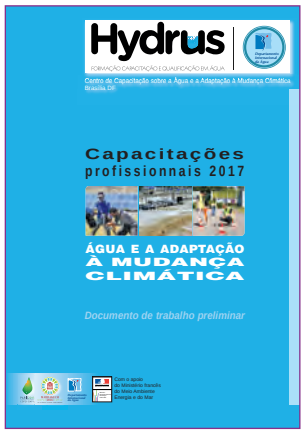
- Principles of integrated water resources management (IWRM);
- Basin Management Plans;
- Data and information management, measurement networks and regulations;
- Governance, scarcity management and adaptation to climate change;
- Environmental Contracts (rivers, water bodies).

The practical part of this training took place in the French "Alpes Maritimes" and the "Alpes de Haute Provence" with the organizations in charge of the implementation of water management policies in the Siagne, Var and Verdon River Basins.

Adasa
Agência Reguladora de Águas, Energia e Saneamento Básico do Distrito Federal

Brazil

"HYDRUS-Brasil" Training Center on Water and Adaptation to Climate Change



The "HYDRUS-Brasil" association continued its development in 2017, as part of the Action Plan for Water and Climate supported by the French Ministry of Ecology and Solidarity-based Transition (MTES):

- **A pilot training course on "Adaptation to Climate Change in Basin Management Plans"** was organized on 18 and 19 April in Brasilia with the support of ADASA. It gathered 35 participants representing the various governmental institutions in charge of managing water and the environment in the Federal District;
- **Two digital training modules** for e-learning were developed in Portuguese on the themes of "Efficiency of drinking water supply systems and leak detection" and "Energy saving in water and sanitation utilities".

The inauguration of the managerial training center, took place in Brasilia on 17 April, in the presence of the ADASA Director-President, the Chief of Staff of the Governor of the Federal District, the Ambassador of France in Brazil and **INBO** Secretary General;

www.hydruscapacitacao.com.br

Triangular cooperation for better basin management

For four years, the Brazilian State of Rio Grande do Sul has benefited from a cooperation program involving the Basin Organizations of the Piracicaba, Capivari and Jundiai Rivers (PCJ) and the French Loire-Brittany Water Agency.

In this context, the officials of the Rio Grande do Sul State services and Basin Committees made technical visits in several Brazilian States and in France, in order to study the functioning of various models of existing Basin Agencies. .

But none of the presented models satisfactorily meets the expectations and constraints of this State of southern Brazil, where the law has been planning the creation of agencies for more than twenty years.

On the other hand, **the managers involved in the cooperation project have developed a new model,** based on a partnership with a regional development bank.

This innovative model is the subject of a draft decree, currently in its finalization phase. Its effective application now depends on the decision of the Government.

At the same time, with the technical and financial help of the Loire-Brittany Water Agency, a technical and methodological support was provided for starting **a pilot project in the Rio Ibicuí Basin,** one of the 25 river basins of Rio Grande do Sul.

Inspired by the example of the Local Contracts of the Loire-Brittany Basin, a "Pact for water management in the Ibicuí Basin" was signed in November 2016 by all the partners and began to be implemented in 2017.

A student from the University of Maine completed a six-month internship in the Rio Ibicuí Basin, developing a digital model called SWAT (Soil and Water Assessment Tool).

Its outcomes support, if need be, the importance of measurement networks and information systems for effective water management on the scale of a large river basin.

The hiring of a project manager and facilitators is also planned, in order to prepare the collective elaboration and execution of the projects that the Basin Agency, which is being created, will be able to finance.

All the actions carried out under this triangular cooperation will be highlighted during the next World Water Forum, to be held in Brasilia in March 2018.

On-site training

Latin America

Peru

Cooperation in the Quilca-Chili Basin


Rio Chili in Arequipa

In recent years, the National Water Authority (ANA) has developed an ambitious river basin management policy at national level, accompanied at the end of 2012 by a new method for calculating fees for water uses and wastewater discharges.

IOWater, **INBO** Secretariat, intervened to advise ANA in setting up these financial mechanisms as part of a project financed by the World Bank and then by the Artois-Picardy Water Agency.

In 2016 and 2017, this cooperation program focused on the Rio Chili Basin aiming to strengthen the Autonomous Water Authority of this river basin and to consolidate the fees and the Water Resources Council of the Quilca-Chili Basin (CRHC).

Joint work focused on four key areas:

- **Economic mechanisms** (fees, water funds);
- **Participation** (sharing of experience to improve the representativeness of the "CRHC)";
- **Planning** (adaptation to climate change);
- **A case study** in the Quilca-Chili Basin.

The choice of the Quilca Chili Pilot Basin was strategic in view of the experience accumulated by the local team and the ambition of the managers to consolidate their action at regional and national level.

The project is coming to an end with a very positive assessment of the actions carried out in the Quilca-Chili pilot Basin.

Strategic topics were identified for an extension of this cooperation in 2018:

- Institutional organization, training in decision-making by basin organizations;
- Training of operators of water and sanitation services;
- Information systems and basin observatories;
- Plans for basins and hydrographic regions;
- Sustainable financing of actions of general interest at basin level.

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Artois Picardy Water Agency brings an expertise on water fees


The Artois Picardy Water Agency discussing with Peruvian experts at the ANA in Arequipa

In the cooperation program initiated in 2013 for five years with the National Water Authority (ANA) in Peru in the Rio Chili Basin, the French Artois Picardy Water Agency has provided an additional support to the Peruvian fees system but also a sharing about the operation of Basin Committees.

Peruvian experts were particularly interested by the French fees for economic activities and especially on the methods of recovery implemented for fish processing industries.

Experts' missions also focused on financing the Program of Measures of the Management Plan as well as on the Basin Committees' representativeness.

www.eau-artois-picardie.fr

Argentina and Uruguay

Navigation on the Uruguay River

The Administrative Commission for the Uruguay River (CARU) is a binational Argentine/ Uruguayan organization, whose main functions are to monitor, regulate, plan and manage the water resources of the Uruguay River.

To this end, measures are being taken to improve the integrated management of the Uruguay River.

This involves, among other things, the hydraulic and environmental monitoring of the river, the preservation of resources, the control of floods and low waters, the integral and sustainable use of the river for the production of hydropower and drinking water, for irrigation and river transport.

Port of Concepción on the Uruguay

For many decades, commercial shipping on the river has only been possible in the first 350 kilometers of the Río de la Plata estuary up to the cities of Salto (Uruguay) and Concordia (Argentina).

Conference of the President and Vice President of CARU

As part of this last objective, it is planned to develop a navigation infrastructure along the river. Actions are being taken to continuously improve navigability conditions.

During the last decades, thanks to dredging work and signaling systems, oceanic vessels have been able to reach Concepción del Uruguay and river transport to go up to Paysandú (Uruguay).

Currently, dredging has started to maintain the navigation of Panamax-type ocean vessels and improve the section up to Paysandú-Salto for convoys of 4 loaded barges.

In the future, it is planned to connect the upstream sections with the downstream one of the Salto Grande dam in a first stage, to allow navigation up to Monte Caseros (Argentina) and Bella Unión (Uruguay).

Later, the challenge will be to extend navigation upstream to the cities of Paso de los Libres (Argentina) and Uruguaiana (Brazil).

A final stage will allow navigation to the cities of Santo Tomé (Argentina) and Sao Borja (Brazil), approx. 800 km distant from the ocean.

To enable navigation upstream of the Salto Grande dam, dredging is planned, supplementing the construction of dams and locks which, in addition to navigation, will bring additional benefits such as: hydropower, drinking water, irrigation and the mitigation of extreme events (floods and droughts) becoming more and more frequent and intense, due to the effects of climate change.

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CARU
Comisión Administradora del Río Uruguay

Uruguay River Basin

CARU President and Vice President (Cap. Nav. ® Gastón Silbermann)

Asia

China

The China-Europe Water Platform

Ministerial Conference in Turku - Finland

The China-Europe Water Platform (CEWP) was established in 2012 with the goal of promoting cooperation between these 2 large regions of the world. It has been addressing the major issues related to water and sustainable development through high-level political dialogue, technical and scientific exchanges and the promotion of innovative technologies.

Four topics are being covered:

- Water management and ecological security,
- Water in rural areas and food security,
- Water in urban areas,
- Water and energy.

More than 20 Member States of the European Union have shown their interest, and 10 of them take a significant part in facilitating the Platform.

France is leader of the topic "water management and ecological security", in partnership with Finland and Portugal.

The 5th Annual Conference of the China-Europe Platform was held on 21 and 22 September in Turku, Finland.

It gathered about 400 participants from 22 countries, with a large Chinese delegation from the Ministry of Water Resources, institutions under its authority, and companies.

Mr. Chen Lei, Chinese Minister of Water Resources and Mr. Karmenu Vella, EU Commissioner for the Environment, signed a Memorandum on the establishment of an EU-China Water Dialogue. They signed the Turku Declaration with representatives of 12 Member States.

In a village of 60 stands, nearly 180 BtoB meetings were organized with the economic stakeholders.

P.I.A.N.O.
Policies, Innovation And Network for enhancing Opportunities for China-Europe water cooperation

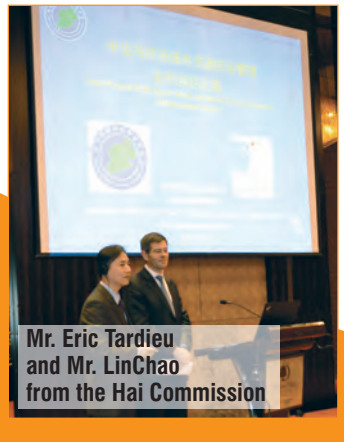
The European Union will provide a €6 million financial support to the Platform's activities, through a "Partnership Instrument", which will co-finance actions on the four working themes and provide support to the Secretariat.

The Hai River Basin, which has been the subject of a French-Chinese bilateral cooperation since 2012, will be the reference basin for testing the application of the WFD principles in China. The Finnish and Portuguese partners will carry out activities on the Taihu Lake and Shanghai Region respectively.

This 4-year project amounting to €1.9 million started in January 2018.


High Level Seminar – Beijing – 6 December 2017

Seminar on participatory management in basins


Mr. Eric Tardieu and Mr. LinChao from the Hai Commission

A high-level seminar was held on 6 December 2017 in Beijing, co-financed by the European Delegation in China, to present the feedbacks from the cooperation in the Hai River Basin and the practices of European countries in basin management and ecological security.

It allowed exchanging with the Chinese Ministry of Water Resources (MWR), its 7 Basin Commissions and their specialized institutes on their concerns and their expectations from the European partners for support regarding good practices and innovative technologies.

Nearly 60 Chinese participants took part in the work, accompanied, on the European side, by some thirty representatives of the public and private sectors, mainly from Estonia, France, Finland and Portugal.

The seminar, whose work was facilitated by Mr. Eric Tardieu, **INBO** Permanent Technical Secretary, was opened by Mr. Liu Zhiguang, Director General of Cooperation at MWR, Mr. Chris Wood, Head of the Delegation of the European Union in China and Mr. Jean-Baptiste Main de Boissière, Minister Counselor at the French Embassy in Beijing.

China

French-Chinese cooperation on integrated management in the Hai River Basin


Steering Committee - Tianjin - March 2017

As part of an agreement signed in 2009 between the Ministry of Ecology and Sustainable Development (France) and the Ministry of Water Resources (China), a solid cooperation developed and allowed the testing and adaptation of French institutional and technical solutions in line with European practices to meet the challenges of the Chinese water crisis.

The cooperation project for Integrated Water Resources Management in the Hai River Basin, launched in 2011 and coordinated on the French side by **IOWater**, **INBO** Secretariat, with the support of the Seine-Normandy Water Agency, SIAAP and the Great Lakes of the Seine, helped to test the application of new governance tools in the Zhou River Pilot Sub-Basin with very practical results: production of an analysis of the situation of water resources, establishment of an operational coordination group for water management and a management plan and action plan with an investment program estimated at 9 billion Yuan.

This project entered its 3rd phase in 2016 with the replication of the approach used on a much larger basin, that of the Luan (50,000 km²), in a context of adaptation to climate change whose effects are already very marked in this Northeast region of China.

Year 2017 was marked by an analysis of the situation in the Luan Basin, and by the drafting of a guidance document describing the feedback from the French-Chinese cooperation for the implementation of participatory basin management according to the principles of the European Water Framework Directive.

As an accompaniment to the historical institutional component, an economic component, financed by the AFD-implemented FEXTE tool, enabled the realization of complementary technical expert appraisals in the following areas:

- **Water data:** improved management and access to the data necessary for the preparation of Basin Management Plans;
- **Discharge standards:** recommendations on the evolution of discharge standards and link with the quality objectives set for watercourses;
- **Wetlands:** analysis and recommendations on wetland restoration projects, a component carried out by Biotope following a call for tenders.

At the same time, **IOWater** has provided:

- **The identification of the specific needs of Chinese partners** for technical solutions to address the main problems encountered in the pilot basins;
- **The inventory of French companies potentially interested in the Chinese market,** as part of a joint action with the competitiveness clusters and the clusters of the "France Water Team" Network;
- **A connection,** during the project's conclusion seminar, with the support of the China Water Enterprises Confederation (CWEC).

The conclusion seminar of the FEXTE project was held on 5 December in Tianjin. It allowed presenting the project achievements to a wide audience including institutions and local authorities of the Hai River Basin, as well as representatives of French and Chinese companies interested in a collaboration.


Technical visit of the drainage system in Beijing - March 2017

Asia

Cambodia

The Stung Sen Basin Program of Measures


Visit of the Metz wastewater treatment plant

The third phase of this project, which was supported by the Loire-Brittany and Rhine-Meuse Water Agencies, increased the help provided to the Cambodian Government and the Tonle Sap Authority for the implementation of the pilot Stung Sen River Basin Management Plan.

A study visit in the Rhine-Meuse River Basin was organized in June 2017.

The participants were able to improve their use of the sampling equipment and techniques and the visit of the Regional Water Laboratory of the city of Limoges allowed them to visualize the analytical techniques, the organization of a water laboratory and the "sampling service".

This study visit also allowed the Cambodian partners to discover the techniques for sanitation and waste management with the visit of the HAGANIS wastewater treatment plant in Metz in particular, and to meet the authorities of the Rhine-Meuse Basin during the meeting of the Basin Committee on 3 June 2017.

Laos

Strengthening IWRM in two pilot basins

The third phase of the project to strengthen IWRM took place in a context of recent legislative evolution in Laos with the National Assembly's revision of the Law on Water and Water Resources in May 2017 and the reorganization of MoNRE.

It ended with the organization of an interministerial workshop on 14 December 2017, on the premises of the Ministry of Water Resources and Environment, that allowed sharing the feedback and results with the main institutional water stakeholders in Laos, and presenting them the lines of work planned for the future.

In 2017, the technical teams of the Department of Water Resources (DWR) of MoNRE organized their work along two lines:


Workshop on the Laos Water Information System

- **The development of the Laos Water Information System "LaoWIS";**

The Data Management team continued to feed the database with data from the DWR and its partners. A workshop was organized in Vientiane to increase coordination with these partners.

- **Integrated Management in the second pilot basin of "Nam Sa - Nam Kadan".**

The team in charge of the characterization of the Nam Sa - Nam Kadan Basin carried out two field assignments to collect data useful for analyzing the situation in the basin. During these two missions, 37 village chiefs were interviewed on socioeconomic issues related to water use and management.


Field surveys in the Nam Sa - Nam Kadan Basin

Following these field surveys, training on data valuation was carried out by the French experts so that the DWR team could produce a first set of maps and then a basin characterization report.

The French experts continued to provide technical support to the members of the Secretariat of the Nam Ngum Basin Committee (NNRBCS) in the implementation of the Basin Management Plan.

Myanmar

Basin Management


Training in Naypyitaw

The Loire-Brittany Water Agency is supporting a pilot project in Myanmar.

Year 2017 marked the beginning of a new process of Integrated Management in the Pilot Balu River Basin.

In particular, a training course on the concepts and tools used was organized in Naypyitaw and attended by members of the Ministries of Natural Resources and Environmental Conservation, Transport and Communication, Agriculture, Livestock and Irrigation, as well as local stakeholders in the Balu Basin.

Fundamental work was done to collect the data necessary for the characterization of the Balu River Basin from the specialized services.

Central Asia

Kazakhstan

Syr-Darya River Basin

The Syr-Darya River / Aral Sea Basin

As part of the Global Climate Action Agenda, launched at the COP22 in Marrakech and supported by the French Ministry of Ecological and Solidarity-Based Transition (MTES), a project aims to improve water governance in Kazakhstan. Field visits and 2 workshops were jointly organized with the National Water Authority and the Syr Darya Basin Authority.

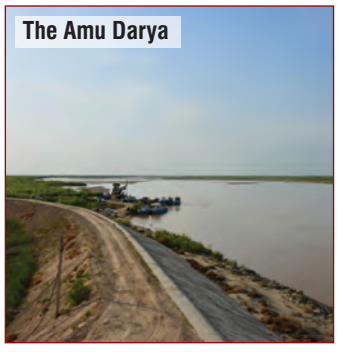
The expected results for the Syr-Darya Basin are as follows:

- Development of a Flood and Drought Management Plan;
- Revision and adoption of the River Basin Management Plan integrating the aspects of drought and flood management;
- Update and adoption of a Program of Measures with the implementation of selected "soft" measures;
- **Establishment of a Basin Water Information System, which will provide new water-related data services.**

This project will be presented to the interested donors.

Assessment of crop water requirements

Amu Darya River Basin


The Amu Darya

The Amu Darya Basin is shared by Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan.

A research work was done as part of the PEER Project **"Transboundary water management for the Amu Darya adaptation to climate change uncertainties"** implemented by SIC-ICWC with the financial support of USAID.

The research results showed that the observed global warming made earlier sowing possible and would shorten crop development phases and the growing season and would decrease water requirements.

The Wurzburg University's REMO model was used for forecasts of climate change until 2050.

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Kyrgyzstan / Kazakhstan

Water Accountability in the Transboundary Chu-Talas River Basins

The "Water Accountability in the Transboundary Chu-Talas River Basins" project is financed by the Swiss Agency for Development and Cooperation (SDC).

It aims at promoting a modern water resources management in the Chu-Talas River Basins.

The activities, which started in December 2016, focus on the modernization of demand planning and of the water distribution system.

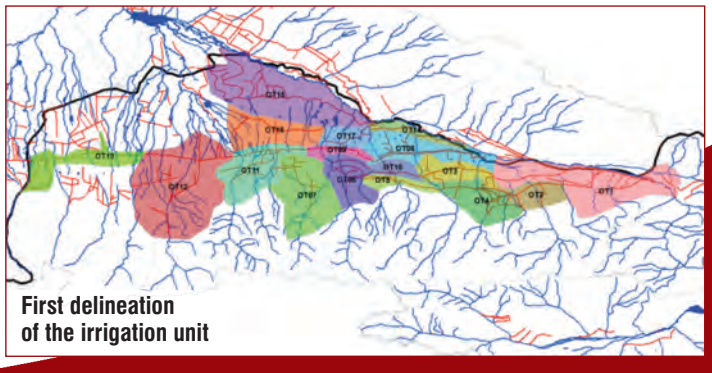
They include:

- The full digitization and automation of the current accounting procedures;
- The development of new capabilities for planning, operational analysis as well as reporting and data and knowledge exchange.

Whereas in the existing system, data had in many cases to be communicated via fax and or telephone, with a modern digital system, the users, at the level of Water Users' Associations, will be able to immediately query selected data on their computer terminals or tablets.

The main expected results are:

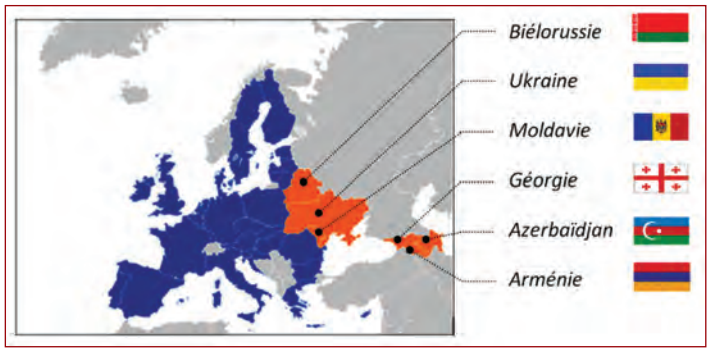
- **At local level,** the water allocation for irrigation will be followed on line on tablet, on a daily basis;
- **At basin and national levels,** the national and basin authorities will have access to new information services (reports, indicators, bulletins, maps);
- **At transboundary level,** data sharing will be reinforced with regular production of joint bulletins.


First delineation of the irrigation unit

Eastern Europe and Caucasus

"EUWI+ for Eastern Partnership"

Basin management and WFD implementation in 6 Eastern European and Caucasian countries



This 4-year project (2016-2020) is part of the flagship action of the European Commission in the field of water resources management under the Eastern Partnership (EP).

It was initiated by the European Commission's Directorate-General for European Neighborhood Policy and Enlargement Negotiations (DG NEAR), which is the main financial support, with co-financing to be provided by the participating Member States (Austria and France).

It increases the convergence with the EU water-related Directives in six Eastern neighbor countries: Armenia, Azerbaijan, Belarus, Georgia, Moldova and the Ukraine.

The project progress is monitored at high level by the Ministries responsible for the Environment and Water Management in each one of these 6 countries.

To ensure real and sustainable progress in participatory basin planning and monitoring, the project combines a capacity-building effort with the establishment of local expertise. It thus follows an innovative intermediary approach between technical assistance and institutional twinning between countries. In each country, it plans to:

- Improve the legal and regulatory frameworks in the spirit of the WFD provisions;
- Provide technical support for the development of a pilot River Basin Management Plan (RBMP) in a basin district of the country, with a transfer of competences for transposition into other basins;
- Build capacity for the implementation of key RBMP measures related, in particular, to the European Directives on Urban Wastewater, Nitrates, Floods, etc.;
- Build capacities for monitoring water status;
- Develop and strengthen national water databases and ensure data compliance with the Shared Environmental Information System (SEIS) principles for data collection and sharing;
- Organize stakeholders' participation at each level, especially that of the basin, with the setting up of Basin Committees.

The development of participatory management will be tested in several pilot basins:

Armenia (Sevan, Hazdan) **Azerbaijan** (Kura upstream of Mingachevir Reservoir), **Belarus** (Pripyat), **Georgia** (Alazani / Iori, Khrami / Debed) **Moldova** (Prut) and **Ukraine** (Dnepr- phase 1).

The project is coordinated with the various water cooperation initiatives and builds on the results and lessons learned from the EU's regional projects in Eastern Partnership countries, including "Environmental Protection of International River Basins (EPIRB)" (2012-2016).

This ambitious project is taking place under the auspices of UNECE and OECD, which lead the interministerial process of National Dialogues, and UBA (Austrian Environment Agency), leader of the Consortium of Member-States, which is directly in charge of surface and ground water monitoring aspects and support for laboratory accreditation.

Moldova

The Moldovan and Artois Picardy Water Agencies renew their cooperation agreement

A roundtable on wastewater was organized by the Moldovan Ministry of the Environment during the World Water Day on Wednesday 22 March 2017. The Moldovan Water Agency took advantage of this event to renew its cooperation agreement with the French Artois Picardy Water Agency.

The terms of the agreement, which lasts for five years, focus on institutional, scientific and technical cooperation on water management and protection of water resources as well as on the implementation of the European Water Framework Directive.

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"RAINMAN CE 968" - Integrated Heavy Rain Risk Management

RAINMAN project partners in Vienna, 5 October 2017

Ten Partners from Germany, Austria, Czech Republic, Croatia, Hungary and Poland started the joint development of practice-oriented innovative methods and new tools to reduce fatalities and damages due to heavy rainfalls.

The Lead Partner is the Saxon State Office for Environment, Agriculture and Geology from Germany.

The project will be implemented from July 2017 to June 2020.

The main expected outputs are:

- New tools for assessment of heavy rain risks;
- Innovative forecast and smart warning tools;
- Measures to reduce health and environmental damages, as well as to improve emergency response.

The project was launched on 4-5 October 2017, in Vienna.

The partners discussed the concepts of assessment and mapping of heavy rains risks in **selected 7 pilot areas** with different geographic characteristics. During the implementation of the project, local authorities will receive tools for testing the best management of heavy rains risks.

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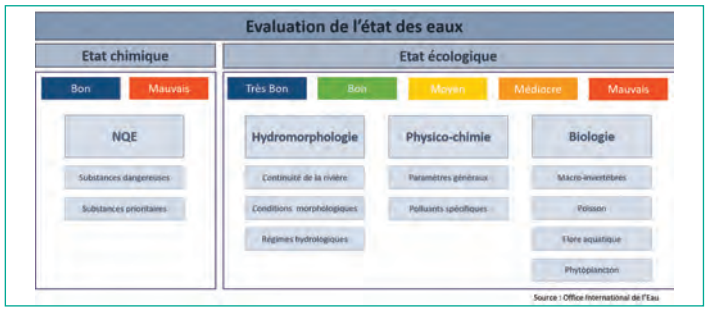
http://www.interreg-central.eu/Content.Node/RAINMAN.html

First workshop organized by the Environment Agency Austria, Vienna 4 October 2017

Indicators of European countries to assess water status



A study identified the indicators used by the Member States for the Assessment of Water Status as part of their report on the implementation of the Water Framework Directive.

The information was collected directly from the professionals in charge of this assessment during interviews and exchanges. It led to the drafting of comparative summaries.

For physicochemical quality elements, the analysis aimed to compare the limits used by the 9 selected countries (France, Luxembourg, Belgium (Flanders), the Netherlands, Italy, Austria, Germany, Spain and the United Kingdom).

Regarding the biological quality elements, comparison was done on the main measured criteria. It has shown significant differences in the methods used, mainly related to the characteristics of the measurement stations (adaptations according to the hydro-morphological characteristics of each country).

On the other hand, although the methods are sometimes quite distinct, the inter-calibration work carried out in the Member States allows obtaining an identical result whatever the method used.

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www.iowater.org/documentary-portal

Invasive Alien Species

The experiences of European countries to detect them

Invasive Alien Species (IAS) are considered to be one of the main causes of the loss of biodiversity in the world.

The 2014 European regulation on the prevention and management of the introduction and propagation of invasive alien species aims to address this issue.

A study on the monitoring and routes of IAS introduction and propagation presents bibliographic elements, examples of practices in various European countries as well as recommendations for the implementation of the European regulation.

15th "EUROPE-INBO 2017" Conference 20 - 2

The 15th "EUROPE-INBO" International Conference took place in Dublin-Malahide, Ireland, from 20 to 23 September 2017.

The participants, coming from 33 countries, discussed, in four roundtables, the current crucial issues related to water resources management in the European Union, such as:

- The future of the Water Framework Directive (WFD) to be reviewed in 2019;
- Adaptation to climate change in basins;
- Stakeholder and public participation in water resources management;
- New threats for aquatic environments.

Workshops allowed, on the one hand, discussing the organization of water data management and reporting to the Commission, and, on the other hand presenting the progress made by the European cooperation **"EcoCuencas"** project, whose purpose is the development of financial mechanisms, with a view to sustainable development, for adaptation to climate change in pilot basins in Brazil, Colombia, Ecuador and Peru.

The participants formulated many recommendations on all these topics during these workshops and the four roundtables.

It was recalled that, despite efforts made to reduce the pressures of human activities on water resources, the goal of "Good Status" of Water Bodies will not be achieved in all basins by the 2017 deadline.

Giving thought on the future of water policy in Europe must rely more on experts from Basin Organizations.

The review of the Directive must be concerned with a better citizens' acceptance in order to achieve greater efficiency.

This implies that the objectives are understandable to the people, accessible and appropriate, and that progress made is recognized.

It is necessary to improve water governance by better involving Local Authorities and the economic field stakeholders.

The arrangements for allocating European funds must be simplified in order to enable more efficient and sustainable investments to meet the needs of the least developed countries of the European Union.

The "one out, all out" principle, applied to the assessment of "Good Status", masks the progress recorded and is demobilizing for the stakeholders involved at all levels.

The WFD should evolve on a wider basis of proven scientific advances. A cautious approach to revising it should be a continuation of the process, with a particular focus on improving the effectiveness of field actions.

Indeed, there is a need to improve the operational conditions for its implementation by both a more pragmatic approach, based on reliable data, to the objectives and deadlines to be achieved, and by the inclusion of the WFD into a European water policy better integrated in the other EU sectoral policies (agriculture, energy, transport, marketing of chemicals, etc.).

Innovative projects should be promoted and the provision of adequate financial and technical support should increase.

Enabled by the gradual implementation of the INSPIRE Directive, the development of information systems and their interoperability will be the key drivers of this better integration by extending them to climate change data in a context of great uncertainty. The current system is still largely insufficient to assess the real status of water and environments and their evolution in many EU territories.

The preparation of the 3rd cycle of River Basin Management Plans for 2022-2027 must already be initiated, with a more realistic definition of the objectives to be achieved and by taking into account the UN Sustainable Development Goals including SDG6, as well as the Paris Agreement on Climate.

Regarding adaptation to climate change in the freshwater sector, the COP 21 of Paris in 2015 and the COP 22 of Marrakech in 2016 demonstrated the need to accelerate without delay the implementation of appropriate actions to be quickly included in the Basin Management Plans.

The Paris Pact on "Water and Adaptation to the Effects of Climate Change in the Basins of Rivers, Lakes and Aquifers" launched by **INBO** in partnership with the United Nations Economic Commission for Europe (UNECE) during COP21, clearly summarizes the priority actions to be implemented for adaptation in basins.

As a follow-up to this pact, an inventory of innovative projects and successful experiences in adapting to climate change in pilot basins should allow for the dissemination of knowledge and a better sharing of good practices and the use of a common language and references.

Better integration between the WFD, the Flood Risk Management Directive and the Marine Strategy Directive should be sought for, especially when defining climate change adaptation measures to be incorporated into the Basin Management Plans and Programs of Measures.

The application of these Directives is still too sector-based and too often depending on separate administrative services!

126 participants coming from 33 countries © INBO – C. Runel

"To facilitate the implementation of European Water Directives"

23 September 2017 - Dublin – Ireland

Closing ceremony © INBO - C. Runel

Given the development of water shortages in many EU regions, it is becoming essential to better manage water demand, foster water savings and especially to improve the recycling of treated wastewater and the Nature Based Solutions.

These adaptation measures must be based on a multisectoral approach with all economic sectors having an impact on the concerned areas, basins and sub-basins. Sectoral policies (energy, agriculture, urban planning, transport, recreational activities, fisheries and fish farming, etc.) and the adaptation measures that concern them, must also be integrated and consistent.

The development of new Programs of Measures should be an opportunity to improve or reinforce some adaptation actions already present in current programs, taking into account the evolutions that will be highlighted by the improvement of local knowledge on climate change and its effects on territories, uses and environments.

The stakeholders' and public involvement in basin management is crucial for improving water resources management.

Stakeholders' information and participation in decision-making processes from the start should still be developed for greater ownership of the measures and actions of the Basin Management Plans.

Public access to monitoring results and to knowledge about water and aquatic environments, their status and evolution, is an obligation that facilitates this ownership and therefore improves effectiveness.

From the start, the WFD emphasized the need for public participation in the drafting of Basin Management Plans.

This participation is based not only on the setting up of decision-making or consultative bodies at different local levels but also on a relevant representation of the different categories of users in these bodies.

It is also necessary to enhance the public understanding of the challenges ahead and efforts must be made for the consultations to mobilize more users with better representativeness so that the financial efforts needed are understood and accepted.

The participants in **"EUROPE-INBO"** Conference stressed the importance of these participatory approaches to achieve better results in water resources management.

As regards the emerging environmental issues, improved knowledge and better measurement tools enable to show new threats to aquatic environments: new pollutants coming from the human, animal or plant health protection sector, new hazardous substances or micro-pollutants, endocrine disrupters.

More difficult to control than organic pollution, these pollutants, that are present in small quantities, can enter the food chain with harmful effects on health or the environment.

Aquatic environments also have to deal with the quick development of invasive alien species for which the remedies are poorly understood.

Finally, river basins suffer from the effects of hydromorphological changes induced by human actions (river works, works on the banks, obstacles to flow, etc.).

All this inevitably leads to a degradation of environmental assets, this is why it is essential to bring water and biodiversity policies closer and to give priority to Nature Based Solutions, whenever possible.

The participants in **"EUROPE-INBO"** Conference highlighted the need to take actions that are more effective and more respectful of nature to find the best remedies to this degradation of our aquatic heritage.

The conference also examined various international cooperation initiatives for the development of good governance in the basins and sub-basins of Eastern Europe, Caucasus and Central Asia or of the Mediterranean area.

These examples show that the EU and the Member States must maintain a high level of solidarity with the neighbor countries and help funding good governance. The implementation of the principles and tools of the European Directives in these countries of the Neighborhood Area, supported by Twinning Projects with Member Countries in particular, allows for a significant improvement in water governance and enables transboundary cooperation, when the case arises.

The participants congratulated **Mr. Jean LAUNAY,** President of the French National Water Committee, for the masterful way in which he fulfilled with determination and success the chairmanship of the **EUROPE-INBO** group during the year 2016/2017.

The Presidency of the EUROPE-INBO Group for the coming year has been entrusted to Ireland until the next conference in 2018 to be held in Seville, Spain, from 17 to 20 October 2018.

EURO-RIOB
EUROPE-INBO

www.inbo-news.org

Europe

"Peer-to-Peer"

Renewal of the cooperation mechanism between European basins for the implementation of the Water Framework and Flood Directives!

In November 2017, the DG Environment of the European Commission selected the consortium composed of **IOWater**, **INBO** Secretariat, (France-lead partner), the National Institute of Hydrology and Water Management (Romania), the Secretariat of the Mediterranean Network of Basin Organizations (Spain), Ecologic Institute (Germany), to extend the Peer Review Mechanism set up in 2015 and 2016.

This new Peer-to-Peer project aims to provide basin organizations with a simple, voluntary and targeted system to allow mutual learning among peers on the WFD and Floods Directive implementation.

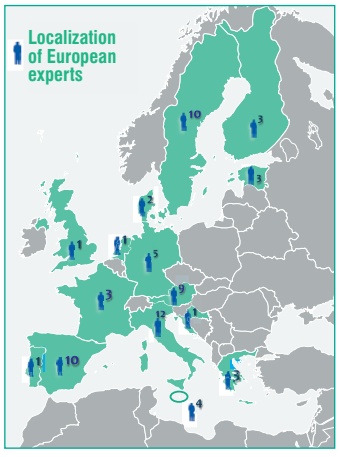
The institutions involved in the implementation of these Directives are invited to join this community by applying to participate in the exchanges as an expert or as an institution entrusted with an expert mission.

Linked to the Common Implementation Strategy (CIS), the mechanism also includes 5 online seminars to disseminate the best practices.

All materials, related to the Peer Review Mechanism of the previous phase and the new Peer-to-Peer project, are available on the project website:

Commission européenne

www.aquacoope.org/peertopeer



Rhine River Basin

Symposium on "Low flows in the Rhine catchment" September 20-21, 2017 in Basel, Switzerland

During the last decades, several low flow periods occurred with severe impacts on the different uses of the Rhine.

For that reason the International Commission for the Hydrology of the Rhine Basin (CHR) with the support of the Swiss Federal Office for the Environment (FOEN), the International Commission for the Protection of the Rhine (ICPR) and the Central Commission for the Navigation of the Rhine (CCNR), thus the three "Rhine Commissions", have decided to address this issue by organizing the international symposium **"Low flows in the Rhine catchment" on 20-21 September 2017 in Basel.** It gathered around 70 participants.

The first results of the ICPR and the CIPMS (International Commissions for the Protection of the Moselle and Sarre) expert groups on low flows as well as information from the CCNR about the impacts of low flows on the navigation were presented.

Examples of monitoring, management and mitigation measures were also presented.

In a nutshell, one of the main outcomes of the workshop is that low flows in the Rhine are not being worse than 100 years ago but are nowadays affecting numerous – more or less vulnerable - uses (navigation, industry, agriculture, energy production, etc.).

The water demand is increasing in the Rhine Basin. Low flows can impact aquatic ecosystems, especially when they occur together with higher water temperature.

On top of that, scientists expect more frequent summer low flow events in the future. This will lead the public authorities, scientists and users of water resources in the Rhine Basin to improve the resilience of the river and its environment.

More information can be found on:

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Low flow in the Rhine in November 2015 (Koblenz, Germany)


The ICPR presenting preliminary results during the symposium

Water Information Systems facilitating transboundary management in the Rhine river basin

The International Commission for the Protection of the Rhine (ICPR) develops, manages or uses different types of Water Information Systems (WIS) which are essential tools for the cross-border exchange and compilation of data within the Rhine River Basin. However, the prerequisite for all water information systems remains a real and well-organized exchange between the working bodies that collect and produce data related to water quality and quantity issues in the basin.

For the purpose of data management related to the implementation of both the European Water Framework Directive and the Floods Directive within the Rhine Basin, the ICPR has concluded a cooperation agreement with the German Federal Institute of Hydrology (BfG) comprising the use of the Water portal "WasserBLIcK" (data exchange and hosting platform) and the production of different maps for the general and specialized public.

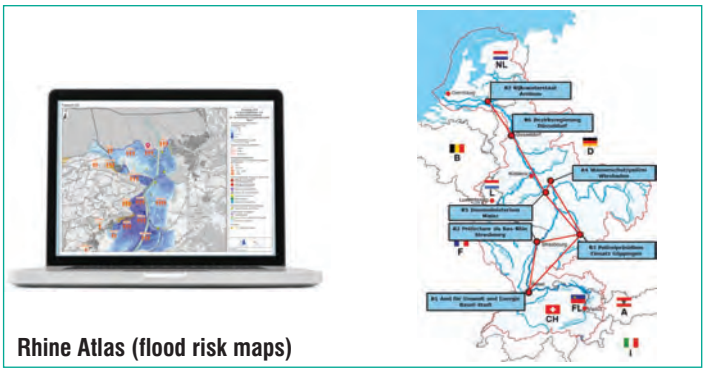
Rhine Warning and Alarm Plan

The ICPR has strengthened its international Warning and Alarm Plan (WAP). The WAP is more and more used as an instrument for exchanging reliable information on sudden water pollution measured by monitoring stations along the Rhine, Neckar, Main and smaller tributaries.

The "Rhine Atlas" is a supra-national awareness tool comprising aggregated flood hazard and risk maps of the countries, available on the website of the ICPR. It is raising risk awareness, supporting the implementation of preventive measures in flood-prone areas and represents a database for risk calculations.

Flood forecasting and announcement contribute to reducing damage in case of a flood event.

Therefore, the Rhine countries cooperate at an international level when exchanging data on discharge and precipitation and using them for flood forecasting. National mobile applications like "Meine Pegel" (my gauges) disseminate information and warnings on water levels.



Rhine Atlas (flood risk maps)

The GIS instrument "ICPR FloRiAn (Flood Risk Analysis)" aimed at evaluating the effect of measures to reduce flood risk and at estimating its future evolution. The ICPR uses this tool to assess risk reduction and evolution along the Rhine taking into account the impacts of measures.

The ICPR is currently analyzing past low flow events and investigating into the consequences of low water on different uses of the Rhine. This could be the basis for a possible Low Water Monitoring Network. The International Commissions for the Protection of the Moselle and the Saar (ICPMS) are already testing such a system on the main tributary of the Rhine, the Moselle.

Participation of stakeholders within the International Commission for the Protection of the Rhine (ICPR)

The ICPR grants an observer status to Non-Governmental Organizations (NGO) and other stakeholders, thus giving them the possibility to participate in the plenary assemblies and in working and expert groups. The observer status offers public participation to a certain extent and enables information dissemination to a larger public.

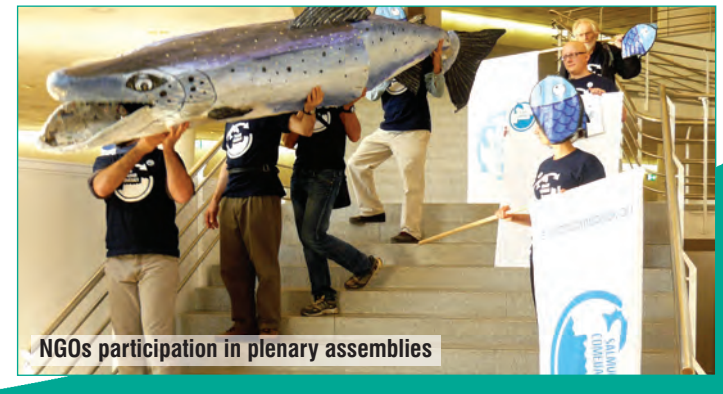
Since the Ministerial Conference of 1998 - and as set out in the new Convention on the Protection of the Rhine of 1999 - observers can officially participate in ICPR work.

The ICPR recognizes three types of observers:

1. Other States located in the Rhine River Basin which are not officially signatories to the ICPR Convention (Belgium-Wallonia, Liechtenstein and Austria), but are yet and due to the EU Water Framework Directive (WFD) and Floods Directive (FD) actively involved in ICPR work.
2. Intergovernmental organizations (IGO) such as other river commissions or the International Commission for the Navigation of the Rhine.
3. Non-Governmental Organizations (NGO). The ICPR considers the NGOs as representatives of the civil society as well as of the various environmental, economic, cultural or recreational functions of the Rhine River Basin for public participation. Currently, there are 20 NGOs (international and national ones) with observer status.

In the meetings, official decisions are up to the countries, but observers (IGOs, NGOs) can express their opinion, raise critics and actively take part from the beginning in the development of different "products" (brochures, reports, plans and programs). Further, the WFD and FD strongly require public consultation and participation in the process of drafting River Basin Management Plans and flood risk management plans of the Rhine Basin.

Consequently, those plans are available to the public and the observers for a period of six months prior to their publication. Received requests for adaptation of the draft and questions from the public and observers are then discussed in detail within the ICPR bodies in charge, if necessary integrated into the plans and finally published together with the reaction on the requests on the website of the ICPR.



NGOs participation in plenary assemblies

Europe

Spain

Simulation tools to manage water resources

The **IIAMA-UPV** has developed simulation and optimization tools in order to manage water resources. They are based on the design and application of hydroeconomic models with the aim of supporting decision-making.

These tools allow evaluating the economic direct drought impacts in recent decades and the potential benefits of applying mitigation measures or changes in management.

"SIMGAMS" allocates the available water resources on the river basin scale, considering priorities, according to the law and the system operating rules and uses. It calculates the costs of water scarcity for each user.

"OPTIGAMS" determines the optimal allocation of water from the economic point of view, as well as the losses of each user when the demand is not met and calculates water scarcity costs. It allocates water with the aim of minimizing the total water scarcity cost.

Developed methodology

The developed methodology uses demand curves that relate the value of water to supply on the basin scale.

To obtain agricultural demand curves, an optimization model has been developed to maximize the farmer utility function.

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"SAIH", the eyes of the Segura River Basin

A SAIH system station

The Automatic Hydrological Information System (SAIH) provides the Segura Basin Authority (CHS) and the whole population with real-time information on the water reserves in the reservoirs, the flow on the river beds, or on rainfall and temperatures.

In the case of the Segura, which suffers from water scarcity and cyclical floods, the computerization and interconnection of communication systems are of vital importance to control every drop of water.

One of the great innovations offered by this system is its visualization on a screen, available on the "CHS" website. It is a very intuitive web application that allows citizens to have any relevant information about the conditions in the basin.

The "CHS" has 168 control points distributed throughout its territory, offering real-time information updated every 5 minutes.

The basin's hydrological planning includes special flood and drought control plans. The SAIH is one of the pillars of this planning. The data provided by this system are vital for generating alarms that help mitigate the damage caused by these phenomena.

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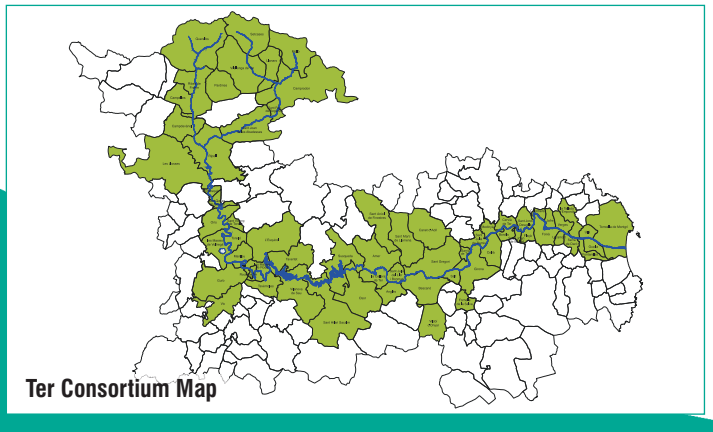
The SAIH network controls the volume in reservoirs

The "Consorci del Ter" will celebrate its 20th anniversary

In 2018, the "Consorci del Ter", established in 1998, will be 20 years old. During this period, this consortium, currently composed of 70 local bodies (City Councils and County Councils) of the north-east of Catalonia, has carried out many projects for the environmental conservation, protection and management of the Ter River and its tributaries.



Ter Consortium Map

The LIFE Riparia-Ter and LIFE Potamo Fauna projects as well as many activities have improved the natural environment, its habitats and the most endangered species of fauna and flora.

The "Consorci del Ter" project has enabled work in awareness raising and environmental education, allowing the basin inhabitants to discover, know and appreciate the natural elements of the river.

It also allowed local dynamism and promotion of the area.

It improved landscapes, natural environment and many elements of cultural heritage related to water such as fountains, bridges, mills, ice pits, river factories, ditches, etc.

All these projects created a product for the promotion of the area, the "Ruta del Ter" a bike and hiking trail along the Ter between its headwaters in the Pyrenees and its mouth in the Mediterranean Sea in the Empordà Bay.

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www.liferiparia.com

www.lifepotamofauna.org

www.rutadelter.cat

Italy - Oristano Province

"MARISTANIS" for the protection of six wetlands

The wetlands and hydrographic system of the Oristano area, located in Sardinia, constitute a unique ecological system, rich in biodiversity and offer significant economic, social and cultural benefits. They also help to reduce the impact of the damage caused by extreme weather events such as floods, to maintain good water quality and contribute to groundwater recharge or to carbon sequestration.

The "MARISTANIS" project aims to develop integrated management of these wetlands.

Co-financed by the MAVA Foundation, this project covers 12 municipalities with a population of about 80,000 inhabitants, six Ramsar Sites for a total of 10,206 hectares, almost 25 thousand hectares of the Marine Protected Area, 10 Sites of Community importance and 7 Special Protection Areas.

Over the 2017-2022 period, the objectives of the project are the restoration of optimum hydraulic conditions in Ramsar wetlands, the protection of marine and coastal habitats and the increase in the natural resilience of the coast to climate change.

It plans to give priority to artisanal methods and traditional fishing to safeguard species with high trophic interest, but also to the protection of endangered species, such as sea turtles and migratory birds.

Better management of wetland natural resources will provide new economic opportunities in the fishing, fish farming, agriculture, and ecotourism sectors.

The project will enable the preservation of the historical and architectural heritage associated with the history of wetlands and the improvement of cultural landscapes of great ecological value.

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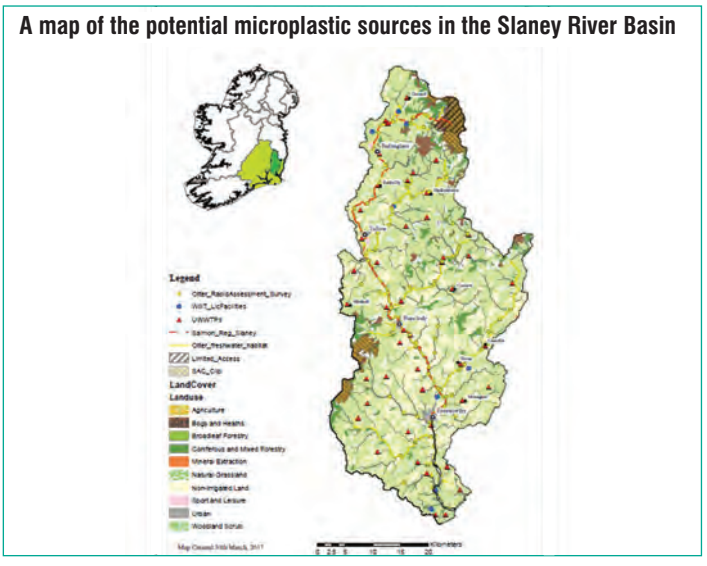
www.medwet.org

Ireland

"Microplastics" the new pollutants to monitor

A map of the potential microplastic sources in the Slaney River Basin



Are our river basins threatened by the emerging novel pollutants microplastics? While, the study of microplastics in freshwater systems is relatively new, what is being found is that, similar to marine environments, microplastics are ubiquitous in freshwater bodies. The fact that these plastics can be ingested and accumulate up the food chain is a potential cause of worry.

These microplastics are small pieces of plastic which are smaller than 5 mm.

A preliminary Irish EPA funded study of 2015 indicated that:

1. The main microplastic sources identified were from industry, landfill, Waste Water Treatment Plants (WWTP) and the application for land treatment of sewage sludge.
2. Manufacturing industries were found to discharge microplastics into sewers.
3. WWTPs were identified as receptors of an abundance of microplastics, 90% of them being incorporated into sewage sludge used in land treatment in Ireland.
4. Potential impacts to human health were identified as a result of consumption of contaminated drinking water, with the highest risk being from untreated water (wells, some private group schemes and unfiltered public supplies) with potential for microplastics to also pass through public water supply filtration systems.
5. There are potential risks to protected habitats and species in Ireland. In the higher trophic levels, the otter and kingfisher will probably consume and accumulate microplastics from lower trophic levels.

A larger research project, again funded by the EPA, is aiming to address knowledge gaps relating to the sources, pathways and fate of microplastics in river basins. The project is focusing on the South-Eastern River Basin District in Ireland, and includes the River Slaney and its tributary network, a catchment previously identified as being at high-risk.

The Project Team
Sources, Pathways & Environmental Fate of Microplastics

https://freshwatermicroplastics.com

FRESHWATER MICROPLASTICS
SOURCES PATHWAYS ENVIRONMENTAL FATE

France

AGENCE FRANÇAISE POUR LA BIODIVERSITÉ
ÉTABLISSEMENT PUBLIC DE L'ÉTAT

"SANDRE" Technical Secretariat

French National Service for Water Data and Common Reference Frames Management

Establishing a common language

The French regulatory framework

In the water sector, which is quickly changing, particularly as a result of climate change, being able to acquire, analyze and disseminate data from various origins is becoming a major strategic challenge.

"SANDRE's" first concern - since its creation in 1992 - has been to define a common language and a framework for water data exchange as a fundamental element of knowledge. Since then, French and European legal texts have forced administrations to make their data accessible and reusable. Today, however, there are still obstacles to overcome, such as the costs of disseminating data, the sensitive nature of the fundamental interests of the nation, of privacy, etc. The **"SANDRE"** solves technical constraints and allows water stakeholders to disseminate water data, while making them usable and comparable.

This is how its contributors massively feed the French Water Information System (WIS) under Decree of 11 December 2009: they thus enrich the common heritage on "SANDRE" basis.

In order to better communicate on **SANDRE**, two videos were made.

In 2017, **"SANDRE"** gave access to more than 17,332 metadata and more than 713,175 object identifiers (**SANDRE** codes for lakes, rivers, water bodies, monitoring sites, parameters measured in water, taxon names, etc.) that can be used freely.

"SANDRE" contributes to the improvement of data: more than 20,000 file compliances and 30,000 actions were made in this direction. The **"SANDRE"** website welcomes more than 800,000 visitors a year.

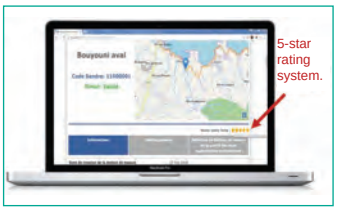
IOWater has taken care of "SANDRE" Technical Secretariat since its establishment in 1992 and still does it today with the support of the French Agency for Biodiversity (AFB).

Adapting to the stakeholders' needs

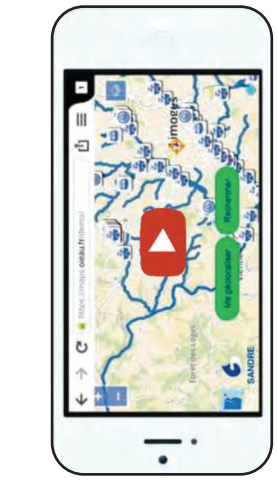
The **"SANDRE"** Atlas Catalogue has been enriched with new cartographic layer management functionalities in France mainland and overseas territories. Its interface is now usable with tablets, smartphones, etc. In particular, it is possible to directly annotate the maps.

Geographic data now include the **"SANDRE"** quality control system. The results of the checks are published in the Atlas Catalogue. In the continuity, the descriptive sheets of each geographical datum include a 5-stars evaluation system allowing the user to give his opinion. These **"SANDRE"** data are used in data exchanges between water stakeholders; more than 30,000 exchange files are tested each year via the **"SANDRE"** online services.

Today, almost all smartphones and tablets are equipped with GPS. The **"SANDRE"**, cartographic application allows, with this geolocation, searching in real time and visualizing all the **"SANDRE"** geographical objects within a radius of 5 km.



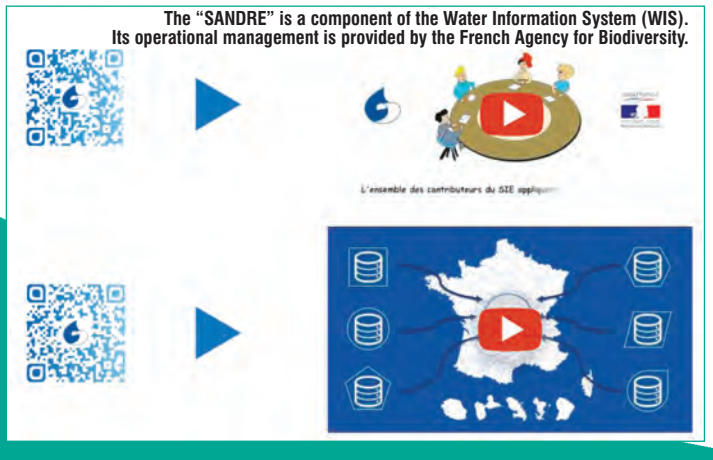
Field technicians can therefore enhance reality with their smartphone or tablet to locate visible objects, such as a dam, or unapparent as a regulatory zoning.



INSPIRE

Under the European **INSPIRE** Directive, **IOWater** is a contributing Member to the writing of specifications on the interchange of water data.

The **INSPIRE** Directive is a European Directive aimed at facilitating the dissemination, availability, use and re-use of geographic information in Europe. It is directly linked to **"SANDRE"**, which itself guarantees the interoperability of water-related information systems at the French level. In this context, the **INSPIRE** themes were integrated into in the search for geographical data in the **"SANDRE"** Atlas Catalogue.



www.sandre.eaufrance.fr

SANDRE

France

AGENCE FRANÇAISE POUR LA BIODIVERSITÉ
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International Office for Water

Water Development and Management Plans

Pooling and dissemination of data, information, knowledge and experiences

Accompanying, federating stakeholders, and developing their skills

Daily exchanges with the facilitators of "SAGEs" and Contracts allow the updating of the fact sheets, the collection of feedbacks, the response to specific requests, etc.

In 2017, a webconference was organized on the drafting of communication plans. A study was made on the SAGEs' scoreboards. It includes recommendations to help facilitators in the development of this tool for monitoring and evaluating the actions completed.

The "Gest'eau" website disseminates 184 fact sheets on the Water Development and Management Plans (SAGEs), 285 sheets of environmental contracts and more than 8,000 documents. The "Sharing experiences" section, regularly updated, gives access to a range of resources (feedback, reference documents, regulations, R & D, etc.) on various topics related to aquatic environments and management tools.

A monthly newsletter gathers the main news and publications of the past month.

An enriched digital book on the "SAGEs"

GEST'EAU

What is a Water Development and Management Plan (SAGE)? How is it designed and then implemented? By whom?... The answers can be found in the enriched digital book drafted by **IOWater**, **INBO** Secretariat.

A free application is available on the Web or can be viewed on smartphones (Android) and tablets.

It is especially intended for local elected representatives to show them the interest of having a "SAGE" on their territory.

An overview of similar approaches used in other European countries is also proposed, as well as a review of the current situation of the "SAGEs" in France.

This enriched digital book allows you to go beyond a mere linear reading. It uses a panel of media: dynamic opening of text blocks, videos, audio recordings, data-visualization, slideshows, etc.

See on:

www.oieau.fr/.eaudoc

www.gesteau.fr

(section "Our publications" then "Enriched digital books"):

The glossary on water and aquatic environments

The "Glossary on Water and Aquatic Environments" includes more than 1,600 terms available in French, English and Spanish.

The glossary base is regularly enriched with new concepts:

- Broadening its contents to all topics related to biodiversity.
- For each term, adaptation of reading levels to various publics.

The glossary also complies with the "linked data" principles, which aim to promote **the publication of structured data on the Web,** using semantic technologies.

This allows linking the terms of the glossary with each other or with concepts from other dictionaries: interoperability is possible with existing semantic bases such as DBpedia (Wikipedia) or the GEMET thesaurus of the European Environment Agency.

Europe

France – International Cooperation

Martinique

1% of the Water Board budget is devoted to international cooperation actions

The Martinique coast

The Martinique Water Board (Office de l'Eau – ODE) is strengthening its cooperation actions on integrated water resources management and basin governance, with third countries of the Caribbean area.

Decentralized cooperation actions...

The Board has the possibility to devote 1% of its budget to actions for regional cooperation.

In this context, "ODE" is for example running a drinking water management project in the Belle Anse district in Haiti, with AFD - UNICEF co-financing.

"ODE" is intervening in Cuba, with the Adour-Garonne Water Agency. It provides technical assistance to improve the characterization of a Cuban pilot river basin

... And experience sharing

Since 2015, the Water Board has worked to include Martinique into a regional dynamics by developing a knowledge repository on tropical and subtropical island ecosystems. It is also developing innovative projects specific to tropical countries, particularly in the sanitation sector.

These actions aim at setting up the Caribbean Basin Islands Regional Network.

The Board is responsible for the study and monitoring of water resources, aquatic and coastal environments and their uses.

"ODE" federates water and environmental stakeholders. It facilitates project management by providing advice, assistance, techniques and training.

The Board is levying water fees for funding actions to preserve water resources.

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Artois and Picardy – Cooperation with Madagascar

Assessment mission of the Artois Picardy Basin Committee

Since 2009, the French Artois Picardy Water Agency has been cooperating with the NGO "Water Solidarity Program (PS Eau)" to strengthen a network of water and sanitation stakeholders in Madagascar.

The purpose of this network is to support water and sanitation projects, but also to enable the sharing of experiences between stakeholders and to create a documentation center on the subject.

A field visit

Elected representative of the Agency and Ampanotokana City Council

The elected representatives of the Artois Picardy Basin Committee visited the island in July 2017 to assess this cooperation.

The delegation took advantage of this trip to visit a project financially supported by the Rhone Mediterranean and Corsica Water Agency and carried out with the technical support of the NGO INTER AIDE in the municipality of Ampanotokana.

A time of exchanges between the elected representatives and Ampanotokana City Council enabled a very fruitful sharing of experiences on the responsibilities of Local Authorities in both countries.

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Europe - Mediterranean

The Euro-Mediterranean Water Information System (EMWIS)

SEMIDE
EMWIS

Better management of knowledge on water in the Mediterranean area

Closer to innovation

In 2017, EMWIS continued its actions about innovative solutions to meet the water-related challenges in the Mediterranean, illustrated by the following examples:

- **Climate services for agriculture,** combining short, medium and long-term local weather forecasts with phenological models and in-situ data to help farmers better manage their crops by adapting to climate change (www.visca.eu);
- **The Satellite-based Wetland Observation Service** (SWOS) provides valuable maps and indicators for natural park managers and also for water resources management (ecosystem restoration, floods) and for monitoring some Sustainable Development Goals; (www.swos-service.eu/),
- **A circular economy approach in sludge management** in small and medium-sized urban wastewater treatment plants with the production of biogas and biological fertilizers that meet health standards (www.life-anadry.eu)

Training workshop on Water Information Systems, Sophia Antipolis, July 2017

Mediterranean Water Knowledge Platform

This project, labeled by the Union for the Mediterranean, led to significant actions in 2017, thanks, in particular, to the support of the French Ministry of Ecological and Solidarity-based Transition. In June 2017, a technical training on the implementation of National Water Information Systems gathered representatives of 10 Mediterranean countries for three days in Sophia Antipolis to deal with the institutional aspects of governance, financing, technical architecture and data use to meet the challenges of Integrated Water Resources Management.

The experience of the Tunisian precursor system, "SINEAU", highlighted good practices and pitfalls to avoid.

In October 2017, with the support of the Secretariat of the Union for the Mediterranean (UfM), EMWIS organized a workshop in Barcelona for the Water Departments of the Member Countries.

This workshop provided an opportunity to discuss good practices and funding arrangements for National Water Information Systems and their use for water resources management planning in a climate change context.

In conclusion, this Platform will be able to support the preparation of indicators responding to both national strategies and Sustainable Development Goals, as well as to the Water component of the Shared Environmental Information System (SEIS) in the Mediterranean: it will also provide factual elements for the development and implementation of the Union for the Mediterranean Water Agenda.

VISCA
SWOS Satellite-based Wetland Observation Service
ANADRY

www.emwis.org/initiatives/MWKP

Workshop for exchanging experiences, Barcelona, October 2017

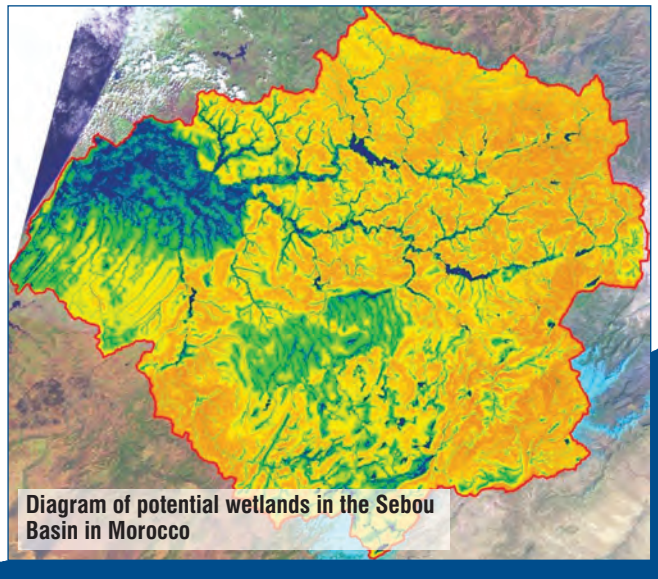

Diagram of potential wetlands in the Sebou Basin in Morocco

Tunisia

Water Resources Management for Rural and Agricultural Development (PAPS-Water)


Tunis

The EU-funded Sectoral Policies Support Program for water resources management for rural and agricultural development (PAPS-Water) in Tunisia, which had been implemented since October 2014, was completed on 14 September 2017.

The closing workshop was organized under the auspices of the Ministry of Agriculture. The results were widely disseminated to all stakeholders in the Tunisian water sector.

The "capacity building" component achieved the following:

- Definition of a structured training plan for the entire Ministry of Agriculture, Hydraulic Resources and Fisheries;
- Realization of many training courses for the various bodies of the Ministry;
- Establishment of a communication strategy and plan for the National Water Supply Company (SONEDE) and the Agricultural Training and Popularization Agency (AVFA).

The capacity building of executives and employees of the Administration has provided them with the necessary knowledge to help in the implementation of the reforms initiated under PAPS-Water.

Lebanon

6th Beirut Water Week

The Ministry of Energy and Water of Lebanon and the Mediterranean Network of Basin Organizations (MENBO) organized, from 27 to 29 March 2017, the 6th Water Week of Beirut, on the topic: "Post COP22: What possible governance for the Water-Energy-Food nexus?"

Exchanges dealt with climate change and the establishment of necessary adaptation policies.

Financing, account taking of geopolitical conflicts and hydrodiplomacy for the management of transboundary basins, securing hydraulic infrastructure, technologies and information systems fed the discussions. The importance of jointly considering the limitation of CO2 releases and the adaptation to change and of addressing governance issues on all scales (local, basin, country and world-wide) was reminded.

The means for action are globally the same at all geographical levels:

- Dialogue and cooperation to avoid conflicts,
- Observation, measurement to know the resources in quantity and quality,
- Planning via water management schemes,
- Sharing information and experiences,
- Promoting basin management,
- Training the stakeholders,

These actions have been promoted by **INBO** and its networks for more than 20 years.


Mr. Pierre Roussel, IOWater President, honored at Beirut Water Week

Morocco

Success of the European twinning project

For 2 years, between 2015 and 2017, the twinning project on "Governance and Integrated Management of Water Resources in Morocco", funded by the European Commission, has been able to instill a real dynamic in the implementation of the new Water Law adopted in August 2016.

Real collaborative work has been carried out by the European team led by France, accompanied by Spain and Romania, and the Moroccan beneficiaries supervised at national level by the Water Research and Planning Department of the State Secretariat in Charge of Water and the Pilot Sebou River Basin Agency (ABH).

IOWater, **INBO** Secretariat, managed this project on behalf of the French Ministry of Ecological and Solidarity based Transition with the support of the French Water Agencies, the BRGM and the main Spanish and Romanian public institutions working on the Water Framework Directive (WFD) in their respective countries.

The Sebou Valley

The outcomes especially include:

1. A plan with convergence towards the main principles of the European Water Directives, which is divided into 5 groups of priority actions: sovereign responsibility, planning, monitoring, water data management and coordination with donors for financing projects.
2. An analysis report on legislative and institutional gaps between Morocco and the EU, which served as a guide for finalizing the Water Law 36-15 and the drafting of the implementing decrees.
3. A proposal for a harmonized structure of the new Basin Management Plans and a methodological guide for updating these plans in Morocco.
4. A division of the pilot Sebou Basin into water bodies to structure the long-term advances to be achieved in the monitoring of surface and ground water.
5. An inventory of structured data sources in the form of an online catalogue with transfer of the Geonetwork tool. This work especially served to support the development of a cartographic Atlas of the Sebou Basin.
6. A prototype control board for monitoring the implementation of the Management Plan and a brochure presenting the new concepts to prepare the Basin Council Members to their new and increased prerogatives.

The project has thus helped to develop in Morocco water resource management practices that meet European standards and which enable to improve efficiency in the implementation of future projects to meet the challenges of sustainable development and adaptation to climate change.

Turkey

"Young Ambassadors" for the protection of natural resources

An EU-funded technical assistance project was awarded to the group led by WYG Turkey. It aims at raising the awareness of the Turkish society to the protection of the environment and water resources.

Training of trainers, development of educational material, study visits to EU Member States have been implemented. The Western Mediterranean Basin, the Konya Basin and the Eastern Black Sea Basin are the 3 pilot basins of the project.

Two delegations of some forty Turkish students came to meet French water stakeholders in August and September 2017.

The young "Ambassadors" were able to meet people of the European Commission and Parliament, the French Seine-Normandy and Artois-Picardy Water Agencies, the Interdepartmental Syndicate for the Sanitation of Greater Paris (SIAAP), **INBO** and **IOWater**.

These meetings were an opportunity to share information and recommendations on projects for youth and on the process of Youth Parliaments for Water in France on several scales.

In a general manner, bridges have been established between various initiatives raising youth awareness to water management and partnership agreements should be established between the institutions concerned.

The "Ambassadors" visit at INBO home office in Paris

www.inbo-news.org

Water and Climate:
8th World Water Forum
18-23 March 2018 - Brasilia
Basin Management and Climate Change
Please participate in the sessions!

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 2018" - Seville - Spain - 17 - 20 October 2018**
  For European Water Directives Implementation
- **Handbooks for Integrated Basin Management**
- **World Water Forum 2018 in Brasilia**
- **COP21 - COP22 - COP23 :**
  "Paris Pact on Water and Adaptation to Climate Change"
  Global Alliances for Water and Climate

Privileged links with websites:
worldwaterforum8.org / worldwatercouncil.org
gwp.org / iowater.org / emwis.org
unesco.org / water.europa.eu
cop23.com.fj / newsroom.unfccc.int
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