

# COOPERATING BEYOND BORDERS

SUCCESSFUL EXAMPLES OF TRANSBOUNDARY  
WATER MANAGEMENT



SEMINAR PROCEEDINGS

COUNCIL OF EUROPE, STRASBOURG, FRANCE  
WEDNESDAY, 11 DECEMBER 2013



## I. ORGANIZATION OF THE SEMINAR

The seminar *Cooperating Beyond Borders: Successful Examples of Transboundary Water Management* was held at the Council of Europe in Strasbourg, France, on 11 December 2013. The seminar was organized by the World Water Council and the Cercle français de l'eau in collaboration with the European Parliament and the generous support of the Rhine-Meuse Water Agency.



Member of Parliament, Burkina Faso, Pascaline Tamini.

The overall objective of the seminar was to exchange experiences among various countries in implementing transboundary water management policies and programs. The seminar took a global perspective, and focused attention strongly on addressing the continuing need to adapt water management and cooperative agreements according to regional needs. As the underlying processes of water cooperation are increasingly globalized, the discussions examined how transnational trade-offs frame international agreements for water management.

The seminar was organized into five sessions which focused on different aspects of transboundary water cooperation in producing energy, establishing a nexus approach, implementing a regional legislation, developing joint scientific programs and setting international agreements. These entailed a series of empirical and conceptual talks on themes connecting water management to trans-national needs.

More than 100 international and European high-level decision makers and experts gathered at the Council of Europe to share and learn from examples of how countries can succeed in their transboundary water management and cooperation programs.

## 2. SUMMARY OF THE PROCEEDINGS

The seminar was designed to allow room for discussion within each session and was followed by an extended discussion on water cooperation agreements in the final session.

### WELCOMING REMARKS

The French former Minister of Environment and President of the Loire-Bretagne Basin Committee, Serge Lepeltier, opened the seminar as a moderator by providing an overview on transboundary water management and the imperative need to cooperate to ensure access to water for all in the future.

Recorded on video, Janez Potočnik, European Commissioner for the Environment, delivered the first speech on the importance on water as a key to sustainable development and the risks related to global changes. As a key component of the international agenda, the Commissioner called for improved management of water to guarantee access to all stakeholders and sectors. He then emphasized the benefits of an integrated approach implemented by the Water Framework Directive of European Union since 2000.



President of the European Parliament Water Group, Richard Seeber.

Richard Seeber, President of the European Parliament Water Group, presented the challenges taken on by the European Union to ensure good quality water in sufficient quantities across all member states by 2015. Additional policy has been developed in support of the European Union Water Framework Directive in the form of a

Blueprint to Safeguard Europe's Water Resources. This aims to provide additional support to those water bodies which are not likely to reach 'good status'. Mr. Seeber emphasized the importance of information sharing and the establishment of joint practices and shared legislation in order to engender a holistic approach to basin management.



President of the World Water Council, Benedito Braga.

The President of the World Water Council, Benedito Braga, used the case of the Rhine and Danube to emphasize that European Union is a renowned symbol of international cooperation and successful transboundary water management. He underlined how cooperation solutions have to be integrated to fully consider the multiple uses of water such as navigation, irrigation, flood management or hydropower. Mr. Braga highlighted the importance of ensuring parliamentarians are fully aware of these realities in view of the 7th World Water Forum.

## The Itaipu Dam - Sharing the Flows for Energy

The session highlighted how the Itaipu dam is a pioneer in water cooperation for energy supply and how hydropower can satisfy human and economic needs within the climate change context. 50 years ago, Brazil and Paraguay developed a joint program in order to share the flows of the Parana River. The Itaipu dam now provides 75% of Paraguay's electricity needs and meets 20% of Brazil's demand.

Jean-Francois Donzier, Permanent Secretary of the International Network of Basin Organizations, made the first presentation by providing an overview of water cooperation agreements signed in past centuries between riparian countries either for navigational uses, flood management or hydropower. He then presented how hydropower allows for adaptation to peak consumption and energy storage. He underlined the unexploited potential of hydropower in the context of climate change adaptation and mitigation strategies. Mr. Donzier identified key characteristics for successful agreements and the need to manage water at a basin scale for sustainable outputs. The cases of the Senegal River Basin Development Authority and the Mekong River Commission were presented as successful examples in relation to this.



Itaipu dam, Brazil.

In order to look at these examples in depth, a joint-presentation was made on the Parana River by Francisco Pedro Domanicky Lanik, Executive Coordination Director from Itaipu Binacional Paraguay and João José Passini, Deputy Director for Environment from Itaipu Binacional Brasil. They explained how a border conflict between Paraguay and Brazil became a source of wealth through energy integration via the construction of the Itaipu dam. Despite initial difficulties given the different statutory and regulatory environments, the speakers explained how the Itaipu dam project led to a transboundary agreement to take into account the local specificities of each country.



Executive Coordination Director for Itaipu Binacional Paraguay, Francisco Pedro Domanicky Lanik.

This provided the basis for the Itaipu dam project and enabled it to become one of largest hydropower facilities in the world. A short video was then presented on the social and environmental actions led by Itaipu Binacional in the region.



Deputy Director for Environment for Itaipu Binacional Brasil, João José Passini.

Discussion after the presentation focused on the capacity of the dam to deliver green energy. The speakers outlined the need to focus on future needs of the communities in the Itaipu Dam catchment area and the choices societies have to make to guarantee sustainable access to clean energy. Specific attention was given to the partnerships made with the food industry and Non-governmental organisations (NGOs) to reduce water pollution in the region.

## The Mekong River - From a Peace Process to a Nexus Approach

Despite the political context, the Mekong region in the 1950's offered one of the first spaces for regional environmental negotiations. Through the constitution of several organizations (Mekong River Commission, ASEAN), a regional approach is now evolving towards a nexus approach. The session showed how the issues discussed among the Mekong riparian countries reflect an international situation where environmental, social and economic trade-offs are to be made in order to guarantee a sustainable future.



Mekong River, Xayaburi, Laos.

The second session examined the nexus approach implemented in the Mekong region with a first presentation on the competing needs for water, food and energy made by Pithaya Pookaman, Adviser to the Minister of Natural Resources and Environment of Thailand. The lower Mekong basin enables 60 million people to grow their food and the area is affected by the production of biofuels and the development of hydropower, explained Mr. Pookaman. To reduce opposition to mainstream dams and their transboundary impacts, he underlined the importance of scientific understanding to enable a body of knowledge for decision making. He then explained how the integrated approach employed by the Mekong River Commission provides a framework for cooperation on data exchange, maintenance of minimum flows, water use monitoring and prior consultation on projects to be implemented.



Adviser to the Minister of Natural Resources and Environment of Thailand, Pithaya Pookaman.



Chair of IUCN's National Mekong Water Dialogue, Dao Trong Tu.

In the following presentation, Dao Trong Tu, Chair of IUCN's National Mekong Water Dialogue, gave an overview of the future challenges and trade-offs which will need to be considered in the lower Mekong River Basin in order to provide water, food and energy. He underlined the need to address these trade-offs at the highest political levels of riparian countries in order to propose joint solutions to reduce negative impacts on the environment, ecology and livelihoods in the region. To conclude, he explained how the cooperation process should form the basis for common benefits.

To elaborate on this matter, Yang Qian, Deputy Director General of the Department of Policies, Laws and Regulations from the Ministry of Water Resources of China, shared his perspective as an upstream country. He gave details on the data exchange agreement concluded with the Mekong River Commission for flood management. Mr. Qian underlined the need for upstream parties to minimize impacts for downstream countries as well as the need to share water resources among all riparian states.

## Achievements of the European Water Framework Directive

In 2000, the European Water Framework Directive (WFD) was adopted and changed water policies among all member states of the European Union by putting the ecological state of the water bodies at the heart of management decisions. The session reviewed the successes and the recommendations to further improve the implementation process.



Rhine River, Drachenfels, Germany.

**P**aul Michelet, General Director of the Rhine-Meuse Water Agency illustrated the achievements of the WFD through the example of the cross-border cooperation in the Rhine River basin. He detailed the legal and technical mechanisms employed by the International Commission for the Protection of the Rhine to coordinate their objectives and actions in implementing the WFD.



State Secretary for Water in Hungary, Péter Kovács.

To further discuss the subject, Péter Kovács, State Secretary for Water in Hungary, provided a national perspective on the Danube River basin cooperation framework. As Hungary shares borders with seven neighboring countries all with different legal frameworks, he presented different transboundary cooperation agreements employed, including the WFD, for flood management, hydrological forecast, water quality protection and integrated basin management.

Maggie White, General Secretary of the International Secretariat for Water, highlighted the need to involve civil society representatives and the general public to influence plans and decision making processes in order to ensure their implementation. She presented a study made by Solidarity Water Europe on public participation with the RhineNet project. She demonstrated the benefits of early mobilization of stakeholders to raise awareness, enable data collection, and identify common understandings. Ms. White shared with the audience the Blue Passport initiative proposed to raise awareness and participation in “basin consciousness” among citizens.



General Secretary of the International Secretariat for Water, Maggie White.

The discussions that followed the presentations stressed the need to consider citizens requests and the limits of public participation to WFD governing processes for transboundary water management.

## Transboundary Groundwater Cooperation

About 97% of the world's available freshwater resources are found among 400 transboundary aquifers worldwide. More legal and institutional arrangements to manage these aquifers are needed, including strengthened science and policy interactions. The session discussed transboundary aquifer management from a multi-disciplinary perspective, focusing on its scientific-hydrogeological, socio-economic and legal-institutional dimensions.

The Minister of Agriculture for Tunisia, Mohamed Ben Salem, opened the session as a keynote speaker and presented the joint scientific program led by Tunisia, Algeria and Libya for the North-West Sahara aquifer system with the involvement of the Sahara and Sahel Observatory. The Minister explained how the exploitation of the basin had encouraged economic growth. He highlighted a number of risks the aquifer is exposed to and key challenges to mobilize additional investments and international support.



Minister of Agriculture for Tunisia, Mohamed Ben Salem.

Shammy Puri, Secretary General of the International Association of Hydrogeologists presented successful cases of the Haute Savoie-Geneva aquifer and the Lower Bavaria-Upper Austrian aquifer. He demonstrated how the municipal agreement for the Haute Savoie-Geneva aquifer was possible without an international framework. He recalled the need for greater political recognition of aquifer systems as member States of the EU led the way in implementing the Water Framework Directive and its complementary Groundwater Directive.

The Executive Director of the Kuwait Institute for Scientific Research, Muhammad Al Rashed, highlighted the example of the Umm er Radhuma-Dammam Aquifer System, shared by Oman, Saudi Arabia, UAE and Yemen.



Secretary General of the International Association of Hydrogeologists, Shammy Puri.

He explained that the aquifer was only utilized by Oman and UAE for domestic uses, agriculture and industrial purpose such as water injection for the oil industry. As a regional initiative to share the resource, he presented the Unified Water Strategy of the Gulf Cooperation Council, which was designed to manage the aquifer based on information produced through a joint scientific research program.

The discussions which followed mentioned the need for strengthened institutions and legal tools for aquifer management to enable States to have equal capacity for international negotiations.



Sahara desert, Mali.

## What Outcomes for Transboundary Water Cooperation?

The last session focused on lessons learned during the day, from information sharing to efficient and constructive transboundary cooperation programs. Global legal frameworks were evoked, such as the 1992 UNECE Water Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

Jerome Delli Priscoli, Senior Adviser of the US Army Corps of Engineers, opened the session by focusing on how international agreements set general principles that can be used to help and guide international negotiations. He explained how water is regional and local, and, thus, it is the negotiations, agreements or consensus among those regional and local parties that is the key to success. He mentioned the key role played by civil society and NGO and communities in the design, operation, impact assessments and other phases in establishing such organizations.



Senior Adviser of the US Army Corps of Engineers, Jerome Delli Priscoli.

The Secretary of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes for the United Nations Economic Commission for Europe, Nicholas Bonvoisin, outlined the key principles of the Convention and the reasons for ratifying the Convention. He stressed the capacity given to governments to enter into institutional agreements and create institutional bodies. Mr. Bonvoisin ended his presentation by demonstrating how trust within a cooperation process is an essential ingredient for peace and security.



Secretary of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes for the United Nations Economic Commission for Europe, Nicholas Bonvoisin.

Speaking on behalf of civil society organisations, Lesha Witmer, Member of the Steering Committee for the Butterfly Effect, provided an example of how disputes between Ukraine and Moldova were solved through an international convention. She emphasized the limitations associated with not having enough treaties that include stakeholder participation. Civil society involvement is a solution and not only in conflict resolution mechanisms. In this view, she called upon parliamentarians for greater involvement as their role is to look at overall regulation and not only specific interests.



Member of the Steering Committee for the Butterfly Effect, Lesha Witmer.

## CLOSING REMARKS



Guy Fradin, Chairman of the Board of the Rhine-Meuse Water Agency, underlined the complexity involved when sharing water between communities and riparian States. Mr. Fradin focused on the different security issues related to cooperation programs and the importance of political commitments to ensure agreements succeed. He notified that cooperation agreements take time to develop successful frameworks. In this regard, he called for the inclusion of a stand-alone goal for water within the sustainable development goals post-2015 and highlighted the role the 7th World Water Forum could play in enabling an improved international framework for transboundary water management.



Chairman of the Board of the Rhine-Meuse Water Agency, Guy Fradin.



Member of the European Parliament, Sophie Auconie.

To close the seminar, Sophie Auconie, Member of the European Parliament, thanked all the participants involved in the preparation of the seminar and called for the implementation of integrated water management strategies to ensure sustainable practices in transboundary water management. She also highlighted the role of the European Parliament in making water high priority in the global agenda. She ended her presentation by speaking about the need for broad cooperation to make access to water and sanitation a reality for all.



Rhine River, Rudesheim am Rhein, Germany.

#### **Key messages to make water cooperation programs a success within a transboundary context were shared during the seminar:**

- Participatory approach involving civil society organizations leads to sustainable cooperation frameworks;
- Integrated Water Resource Management is a holistic approach;
- Integration is a slow and gradual process in which similarity between countries acts as a facilitator;
- Transboundary aquifers on all continents need to be recognized, and principles of good governance should be adopted by countries;
- With the Water Framework Directive, Member States of the EU have implemented successful legislation which can be replicated;
- Parliamentarians and local authorities should be fully involved in the development of transboundary water agreements;
- Scientific knowledge should be a foundation for decision makers in the preparation of transboundary water agreements;
- Financial support for the process can increase political will and facilitate dialogue.

## ACKNOWLEDGEMENTS

The organizers would like to thank all the seminar participants for their enthusiastic contributions:

<b>Muhammad Al-Rashed</b>	<i>Executive Director of the Water Resources Division at the Kuwait Institute for Scientific Research</i>
<b>Sophie Auconie</b>	<i>Member of the European Parliament</i>
<b>Mohamed Ben Salem</b>	<i>Minister of Agriculture of Tunisia</i>
<b>Nicholas Bonvoisin</b>	<i>Secretary of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes for the UNECE</i>
<b>Benedito Braga</b>	<i>President of the World Water Council</i>
<b>Jerome Delli Priscoli</b>	<i>Senior Adviser of the US Army Corps of Engineers</i>
<b>Francisco Pedro Domaniczky Lanik</b>	<i>Executive Coordination Director of Itaipu Binacional Paraguay</i>
<b>Jean-François Donzier</b>	<i>Permanent Secretary of the International Network of Basin Organizations</i>
<b>Guy Fradin</b>	<i>Chairman of the Board of the Rhine-Meuse Water Agency</i>
<b>Torkil Jønch Clausen</b>	<i>Chief Water Policy Adviser of the DHI Group</i>
<b>Péter Kovács</b>	<i>State Secretary for Water of the Ministry for Rural Development of Hungary</i>
<b>Serge Lepeltier</b>	<i>President of the Loire-Bretagne Basin Committee and Mayor of Bourges</i>
<b>Paul Michelet</b>	<i>General Director of the Rhine Meuse Water Agency</i>
<b>João José Passini</b>	<i>Deputy Director for Environment of Itaipu Binacional Brasil</i>
<b>Pithaya Pookaman</b>	<i>Advisor to the Minister of Natural Resources and Environment of Thailand</i>
<b>Janez Potočnik</b>	<i>European Commissioner for the Environment</i>
<b>Shammy Puri</b>	<i>Secretary General of the International Association of Hydrogeologists</i>
<b>Yang Qian</b>	<i>Deputy Director General of the Department of Policies, Laws and Regulations of the Ministry of Water Resources of China</i>
<b>Léna Salamé</b>	<i>Programme Specialist of the Division of Water Sciences at UNESCO-IHP</i>
<b>Richard Seeber</b>	<i>President of the European Parliament Water Group</i>
<b>Andras Szöllösi - Nagy</b>	<i>Rector of the UNESCO-IHE Institute for Water Education</i>
<b>Dao Trong Tu</b>	<i>Director of the Centre for Sustainable Water Resources Development and Adaptation to Climate Change in Vietnam and Chair of IUCN National Working Group on the Mekong Programme</i>
<b>Pierre Victoria</b>	<i>Executive Director of the Cercle français de l'eau</i>
<b>Maggie White</b>	<i>General Secretary of the International Secretariat for Water and Solidarity Water Europe</i>
<b>Lesha Witmer</b>	<i>Member of the Steering Committee for the Butterfly Effect</i>

### Photo credits

Cover photos: Creative Commons; © IUCN Water

Seminar photos and portraits: © Rémy Gauderat

Other photos:

Itaipu Dam: cc-Frank Kehren; Mekong River: cc-International Rivers; Rhine River: cc-Ben Kempner; cc-barnyz



[www.worldwatercouncil.org](http://www.worldwatercouncil.org)

CERCLE FRANÇAIS DE L'EAU 

[www.cerclefrancaisdeleau.fr](http://www.cerclefrancaisdeleau.fr)



[www.eau-rhin-meuse.fr](http://www.eau-rhin-meuse.fr)



[www.europarl.europa.eu](http://www.europarl.europa.eu)