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REPORT OF THE INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS
**« WFD contributions to water management in transboundary river basins:
progress report and needs identified by the basin organizations »**

20 November 2008

INTRODUCTION

There are many transboundary river basins in Europe and almost all the countries are concerned. All kinds of coordination exist, from bilateral co-operation to the involvement of 19 countries for the Danube, which is the most international basin in the world.

The International Network of Basin Organizations (INBO) aims at facilitating **operational exchanges among basin organizations**. It was created in 1994 to mobilize the experience of organizations directly responsible for the implementation of Integrated Water Resources Management (IWRM) at river basin level. INBO is currently present all around the world, with 188 members in 68 countries. INBO could be considered as “**the voice of basin organizations**”.

At a world scale, INBO promotes the WFD principles in each World Water Forum. As regards the 5th World Water Forum in Istanbul (March 2009), INBO jointly co-ordinates with UNESCO/IHP the topic 3.1 “Basin Management and Transboundary Co-operation”.

In Europe, INBO created the **EUROPE-INBO Group for WFD implementation** in November 2003 to enable Basin Organizations and River Basin District Authorities to meet regularly in an informal way, exchange their practical experience, identify operational problems and make field-oriented proposals for the WFD implementation. Strong exchanges on the WFD have been taken place since then, particularly in yearly plenary Assemblies: Valencia (Spain) in 2003, Krakow (Poland) in 2004, Namur (Belgium) in 2005, Megève (France) in 2006, Rome (Italy) in 2007, Sibiu (Romania) in 2008.

The work of EUROPE-INBO group aims at **enriching the WFD Common Implementation Strategy (CIS)**, without duplicating work already being done within this strategy, and INBO is member of the Strategic Coordination Group (SCG) since August 2005. EUROPE-INBO also allows developing WFD concepts and communicating learned lessons **to non-EU countries** (EU bordering countries as well as American, African or Asiatic countries).

In Europe, INBO relies also on two regional networks:

- the Central and Eastern European Network of Basin Organizations (**CEENBO**);
- the Mediterranean Network of Basin Organizations (**MENBO**).

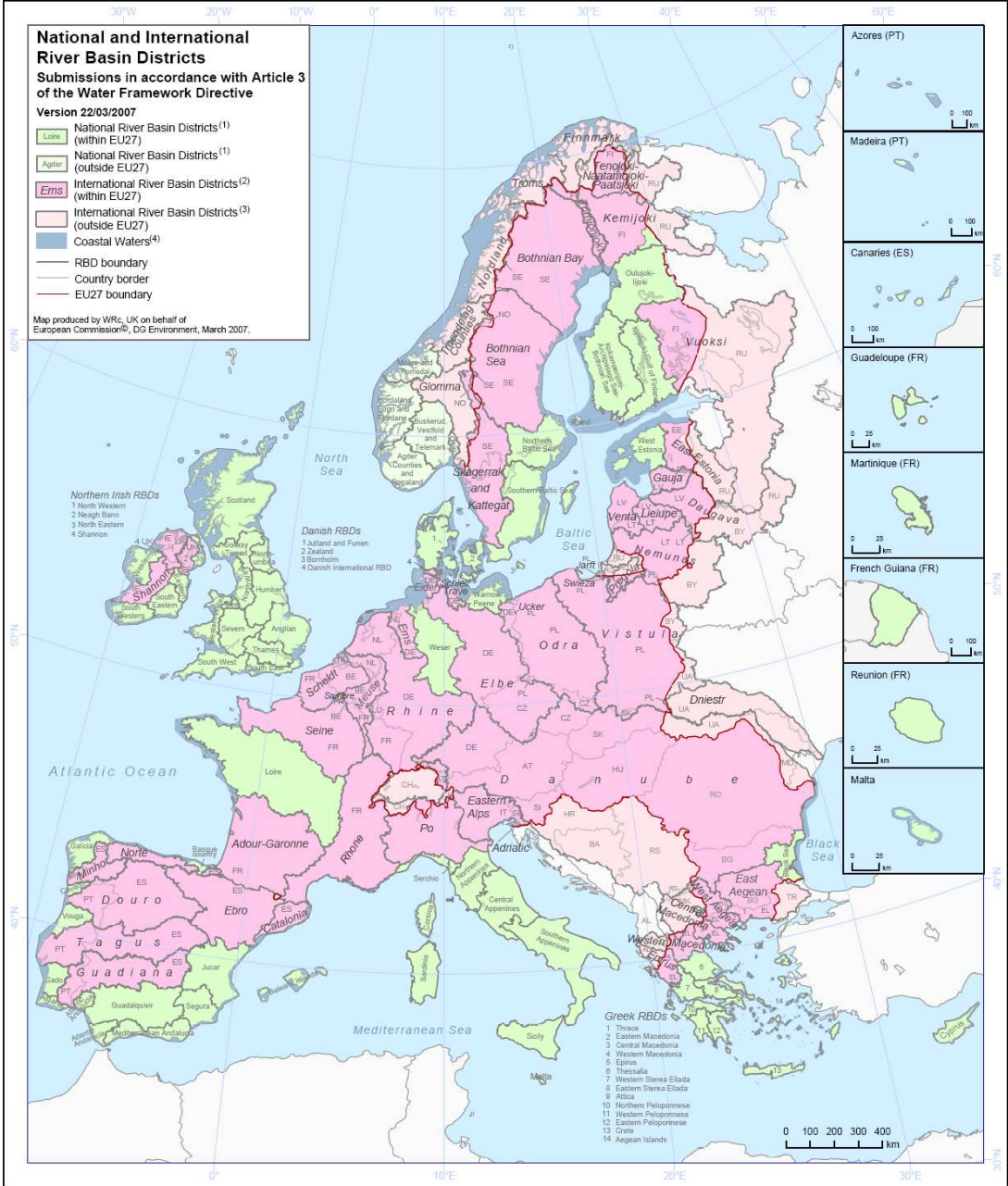
INBO, CEENBO and MENBO are members of the SCG.

As transboundary water management is a major issue for INBO, a **Network of International Commissions and Transboundary Basin Organizations** was created and special sessions were organised in Namur (Belgium) in 2005 and in Sibiu (Romania) in 2008.

Some exchanges are carried out in the frame of the CIS process, UNECE Water Convention or yearly meetings between international commissions, but the specific transboundary issues are not so much taken into account. That is why INBO wished to give a contribution on this topic in the CIS process. The goal is to present, from the angle of the basin organizations, an analysis of the implementation stage at transboundary level, to evidence what goes well and, on the contrary, what makes difficulties, and to identify the needs and recommendations of the basin organizations.

This report has been discussed during the 2008 EUROPE-INBO International Conference on WFD implementation in Sibiu, 1-3 October 2008.

Map of the River Basin Districts delimited by the Member States according to Article 3



This map was established by the European Commission on the basis of Article 3 reports of Member States. It shows national river basin districts (in green) and international ones (in pink). NB: it was commented within INBO that the Sambre is not a distinct district, but belongs to the Meuse District.

I. WFD INPUTS IN A TRANSBOUNDARY CONTEXT: PROGRESS REPORT

I.1. River basin management and International River Basin Districts

- Water has no national and administrative boundaries: the river basin is the most relevant scale for water management. The WFD represents a significant progress, with the **dissemination of river basin management concept all over Europe**.
- The progress is particularly important for transboundary basins, since the WFD requires **delimiting international river basin districts** (*“The Member States make sure that a river basin extending on the territory of more than one Member State is integrated into an international river basin district”*) and coordinating characterisations, management plans, programmes of measures and public participation between the concerned Member States.
- **Among the 110 river basin districts (RBDs) established across the EU, 40 are international river basin districts (IRBDs)**. The international river basin districts cover more than 60% of the territory of the EU, making the international coordination one of the most significant issues and challenges for the WFD implementation.

I.2. Role of existing transboundary cooperation and role of international commissions

- Progress to date in the implementation of the WFD has proven that real co-operation in transboundary basins is facilitated when there are already established legal and institutional frameworks for transboundary co-operation such as agreements and commissions.
- The WFD does not impose anything as regards the relevant authority (*“The Member States make the suitable administrative provisions, including the designation of the adequate proper authority, for applying the rules planned by this directive in the section of the international river basin district which is located on their territory”*): Member States are free to choose the co-operation methods.
- In practice, the Member States relied on the existing **international commissions, owing to their experience in exchanges between riparian countries**.

For example, the International Commission for the Protection of the Danube River (ICPDR) was designated as a body for WFD co-ordination between the main countries concerned, several of which are not members of the EU; the International Commission for the Protection of the Meuse, renamed International Commission Meuse, was designated as co-ordination unit between France, Luxembourg, Germany, the Netherlands, Belgium and the Belgian regions (Wallonia, Flanders and Brussels); etc.

- The WFD implementation shows the **importance of using and reinforcing the existing international bodies**. Indeed their experience goes back several decades for some of them, or even longer.

The Spanish-Portuguese cooperation on water started with the Treaty of 1864, which established the international rivers boundaries and highlighted the importance of using transboundary water resources for both countries' benefit, without damaging the other part. Bilateral treaties and agreements evolved through history (1866, 1906, 1912, etc.) until the Albufeira agreement was signed in 1998 following the WFD's principles.

The example of the Rhine is the first example in the history of transboundary co-operation in Europe among several countries, with the creation in 1950 of the International Commission for the Protection of the Rhine against Pollution (ICPR) which already gathered the 5 riparian States of the Rhine (Switzerland, France, Luxembourg, Germany and the Netherlands).

For the Danube management, bilateral agreements have existed since the Fifties between ex-Yugoslavia and Romania, Hungary, Albania, Bulgaria.

- The feedback experience we have within INBO shows the **added-value of working methods in the international commissions**: harmonisation of practices, decisions through consensus, appropriation by dialogue and understanding between partners, role of conflict prevention and regulation, information exchange, etc.
- The **role of the UNECE Water Convention** was also underlined. Since its adoption in 1992, several bilateral or multilateral agreements between European countries have been established based on its principles and provisions: agreements on the Danube, Bug, Meuse, Scheldt, Rhine and Sava...The UNECE Water Convention has also been the basis for the development of agreements between EU and non-EU countries such as the agreement between Russian and Estonia on the Lake Peipsi, as well as further East, on Kazakh-Russian and Russian-Ukrainian transboundary waters.
- The WFD led to **amend or supplement the existing international agreements**, in order to make them comply with the new WFD concepts or obligations, such as, for example, the objective of good ecological status, the development of coordinated management plans and programmes of measures, the coordination for floods/droughts prevention and control, the co-ordination of measures against accidental pollution, etc. The WFD also led to **new bilateral agreements** in Eastern Europe.
- The WFD allowed **considering the whole river basin and, therefore, all the riparian States**, allowing involving the States which were not yet represented in the agreements or in the international commissions. The International Commission for the Protection of the Elbe thus integrated Poland and Austria. The International Commission of the Scheldt integrated Belgium and extended its district to smaller border river basins. The International Commission for the Rhine integrated several new countries including Belgium and Austria. The International Commission for the Meuse was extended to 3 new countries (Germany, Luxembourg and Belgium).
- Concerning transboundary lakes and coastal waters, transboundary cooperation had also to be settled and international commissions were more recently created (Leman Lake, Italian Lakes, Wadden Sea...). The management plans of those transboundary lakes and coastal waters generally follow the principles of the WFD.
- The WFD provides fundamental added value: beyond bilateral agreements, it results in having an **overall framework for action** and the international commissions are then a place for **multilateral co-ordination, whose efficiency has been increased with the WFD approach**.

Cooperation in the Rhine River Basin

Cooperation on the Rhine is very old and resulted in 39 treaties, including 14 multilateral ones, and a total freedom of navigation on the Rhine since 1815 with the Treaty of Vienna. The International Commission for the Protection of the Rhine (ICPR) was created in 1950 to jointly solve problems of chemical pollution. ICPR was used as model for the creation of other international commissions, such as the International Commission for the Protection of the Elbe in 1990, the International Commissions for the Meuse and the Scheldt both created in 1994 and the International Commission for the Protection of the Danube River in 1998.

Cooperation in the Danube River basin

The ICPDR (International Commission for the Protection of the Danube River) is an international organization consisting of 13 cooperating States and the European Union. It was created to implement the Danube Convention aiming at making sure that “the Basin’s surface water and groundwater are managed in an equitable and sustainable manner”. Since its establishment in 1998, it has grown into one of the largest and most active international bodies engaged in river basin management in Europe. Its activities relate not only to the Danube, but also the tributaries and ground water resources of the entire Danube River Basin.

The ultimate goal of the ICPDR is to implement the Danube River Protection Convention by promoting and coordinating sustainable and equitable water management, including conservation, and rational use of waters for the benefit of the Danube River Basin countries and their people. The ICPDR pursues its mission by making recommendations for the improvement of water quality, developing mechanisms for flood and accident control, agreeing on standards for emissions, assuring that these measures are reflected in the Contracting Parties' national legislations and are applied in their policies.

Co-ordinated by the ICPDR, the concerned countries developed instruments to allow more effective basin management: a transnational monitoring network for the gathering of comparable data, a warning system in the event of accidents, a data base on discharges into the Danube, the development of flood action plans, etc. In 2000, the Danube States asked ICPDR to prioritise WFD implementation in the Danube River management. The fact that all the basin countries (EU members and non-members) made this request shows the recognised importance of the WFD benefits. The first significant result was the analysis and characterisation of the Danube River Basin District, with the great support of the « UNDP-GEF Danube Regional Project » through the secondment of experts and the organization of workshops. In the next step, 4 key-issues will be dealt with in the Danube management plan: organic pollution, fertilisers, toxic substances, hydro-morphologic changes. The challenges for ICPDR and the Danube countries are huge, in terms of needed financial resources and requirements for technical support. The UNDP-GEF Danube Regional Project has to deal with information differences, especially in non-EU member countries and support the development of ICPDR as a sustainable tool for the management of the most international river basin world-wide.

The WFD allowed passing from bilateralism to multilateralism: bilateralism after the 1st World War with the Commission on the Danube Water Regime, reinforcement of bilateralism after World War II, beginning of multilateralism with the Convention of Sofia creating the international Commission in 1998, reinforcement of multilateralism with the Tisza partnership agreement in 2004 to implement the WFD.

More about ICPDR at its site: www.icpdr.org

Co-operation between Romania and Hungary

The first Romanian/Hungarian transboundary water agreement goes back to 1924. After the second world war, new agreement was concluded between the two neighbouring countries which was renewed in 1986 and 2003. The latest agreement came into force in 2004. Both countries have bilateral transboundary agreements with their common neighbours: with Ukraine (HU from 1993, RO from 1997), with the ex-Yugoslavia (1955).

The main objectives of the agreement in force are: to achieve good water status; to prevent and limit the transboundary effects of floods, droughts and accidental pollution; to develop systems for monitoring water status, to ensure sustainable use of water resources. This agreement took into consideration the goals of the multilateral conventions dealing with water and the implementation of the EU Water Framework Directive as well.

The main body of the bilateral cooperation is the Hungarian-Romanian Water Commission, which follows 13 valid regulations and additional 4 regulations waiting for endorsement. The Hungarian and Romanian experts are cooperating successfully in the framework of international organizations like EU, ICPDR and INBO. Hungarian and Romanian water management organizations are cooperating within bi- or multilateral projects like PHARE CBC, INTERREG, NATO, USAID, LIFE, French Fund for Global Environment, Swiss Fund or Norwegian Government Fund. In the Romanian-Hungarian cooperation were or are executed more than 40 projects.

Co-operation in the Scheldt River Basin District

Before the WFD, co-operation was initially centered on the Scheldt quality, according to the Charleville-Mézières agreement of 1994. With the WFD, the work area was considerably broadened. A 2nd agreement was signed in 2002: the Ghent agreement, accompanied by an ambitious project supported by INTERREG: the Scaldit project, a financial and methodological tool, the only pilot project applied to an entire transboundary district. The International Commission of the Scheldt was designated as a tool for co-ordination and its responsibilities were consequently enlarged: extension of the river basin to the international river basin district of the Scheldt, extension of surface water to ground and coastal waters, extension of water quality to quantitative aspects. WFD implementation is a priority for the Commission. Working groups concentrated on the multilateral co-ordination of WFD implementation. Working organization was adapted for each stage: data exchange (1995 to 2002), characterisation (2002-2005), management plan (2005-2009). From 2002 to 2005, the working groups of the Commission were mirrors groups of those of the CIS; from 2005 to 2009 the organization was more integrating with only one working group in charge of co-ordinating 7 projects related to the WFD objectives (3 on good status and monitoring, 1 on communication, 1 on the economic analysis and programme of measures, 1 on mapping and data harmonisation). The technical objective is comparability of data and methods and consistency of the programmes of measures (development of a catalogue of reference measures on the District scale).

The national implementation timetables are different, but the riparian States adopted a common work plan, with the same stages. Co-ordination was extended to drought and flood prevention and bilateral protocols between the partners were signed for the exchange of data on extreme flows. This work allowed exchanging information and experience, mutually understanding the procedures and data of the others, benefiting from the experience of the others and complementarity between the methods. The local stakeholders were incited to develop integrated water resources management: transboundary conventions were signed by the nearby partners (Walloon Region, Lille Metropolis Urban Community and Flemish Region) to jointly invest in shared purification systems.

Close co-operation between Spain and Portugal

There is a long tradition of bilateral co-operation between the two Iberian countries on the five transboundary basins (Miño, Limia, Duero, Tagus and Guadiana). The main objective of the first Conventions (1927, 1964 and 1968) dealt with quantitative aspects. The first two concentrated on the distribution of the hydropower potential of the shared rivers. A new agreement, called Albufeira Convention, in honour of the Portuguese city where it was signed, was signed in 1998 and came into force in 2000. The Convention principles are: extension of the reference framework of the previous Conventions; co-operation between the Parties; co-ordination of water planning and management in the basins and the respect and compatibility of the existing situations and those derived from the previous Conventions. The agreement is based on the search for a balance between environmental protection and the use of the water resources necessary for sustainable development of both countries and on the need for co-ordinating their respective efforts for better knowledge and water management in the Spanish-Portuguese basins.

The Convention created two equal bodies on which the co-operation process relies: the **Conference of the Parties**, at high political level, and the **Commission on the Application and Development of the Convention (CADC)** as decision-making body. Information exchange, transboundary impacts, water quality protection, guarantee of a flow regime based on the level of rainfalls, the prevention of exceptional events, the establishment of guarantees and public participation are its essential elements.



Progress was made in the implementation of the Water Framework Directive, with joint studies on floods and the development of documents, which make available to the public the information managed by the CADC, and the organization of participation workshops in the two countries. In the last progresses, it should be underlined the modifications made in February 2008 to the Convention on the flow regime to comply with on both sides. This document, “*Revision Protocol of Agreement on Cooperation for the protection and sustainable exploitation of the waters from the Spanish-Portuguese hydrografic basins*”, establishes a seasonal flow regime, in addition to annual volumes, with the objective of ensuring environmental minimal flows. In addition, a specific body, the **Permanent Technical Secretariat of the Commission**, with a permanent structure and installed for two years in each country, will be created soon. Its mission will be to ensure the CADC effectiveness in fulfilling its duties, and among other tasks, to coordinate the development of homogeneous plans for the river basin districts in the next hydrological planning cycle.

I.3. A common objective to all Europe: the good water status

- Before the adoption of WFD, quality objectives varied a lot from a State to another. With the WFD, all countries have **the same reference for the definition of environmental objectives**.
- The WFD allows passing from a water management orientated towards physico-chemical-water-quality to a **more integrated approach of ecosystem management** (taking hydro-morphology and biology into account, which was not the case everywhere in Europe).
- This common reference is particularly important to ensure the coordinated elaboration of the management plans and programmes of measures in IRBD.

Co-ordination for achieving good status of the Rhine

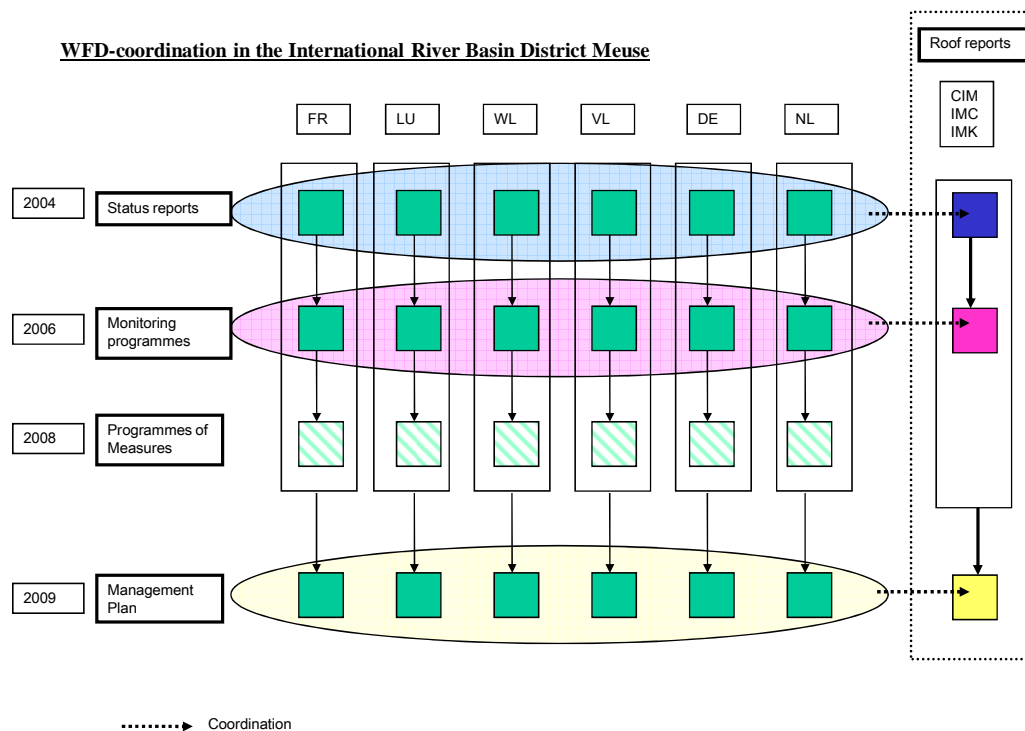
At the invitation of the Government of Luxembourg, the international Commission for the Protection of the Rhine (ICPR) and the Rhine Co-ordination Committee, authority in charge of co-ordinating WFD implementation, met on 2 and 3 July 2008 in Luxembourg. The programme included: environmental quality standards for substances considered to be significant for the Rhine River Basin, management of sediments, continuity of the Rhine and its tributaries for migrating fish, flood hazards.

I.4. A common planning process

- **The WFD commits the Member States to a common process**, with the same objectives, methods and deadlines. This is even more important for IRBD. The **CIS guidance documents** gave a common base for WFD implementation.
- For each district, planning is based on key activities to be renewed every 6 years: characterisation, establishment of a monitoring network, development of management plan and programme of measures. The WFD is a cyclic process, which allows continuous improvement. For the IRBD, each planning stage results in formalising common work in a “roof report”. To lead this planning, the International Commissions set up a WFD co-ordination group and “mirror working groups” of those of the CIS.

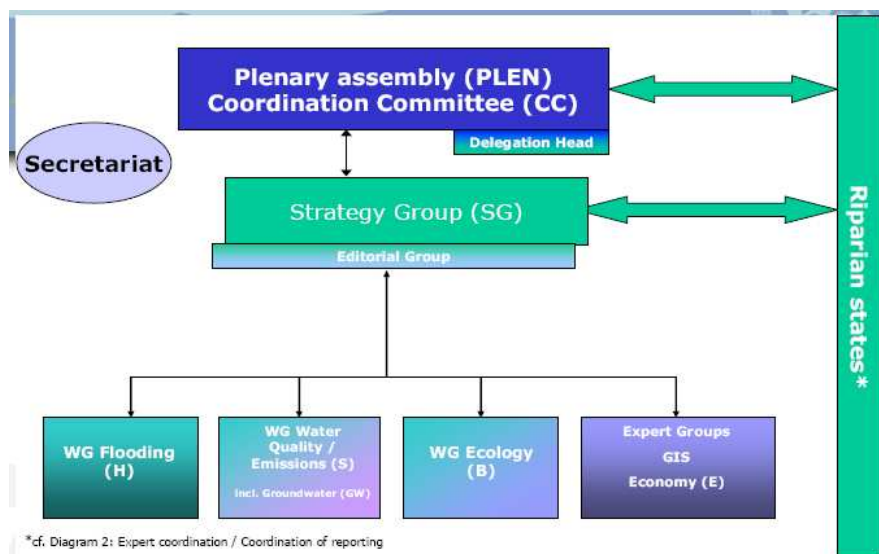
Examples of organization for the planning process:

The Meuse District

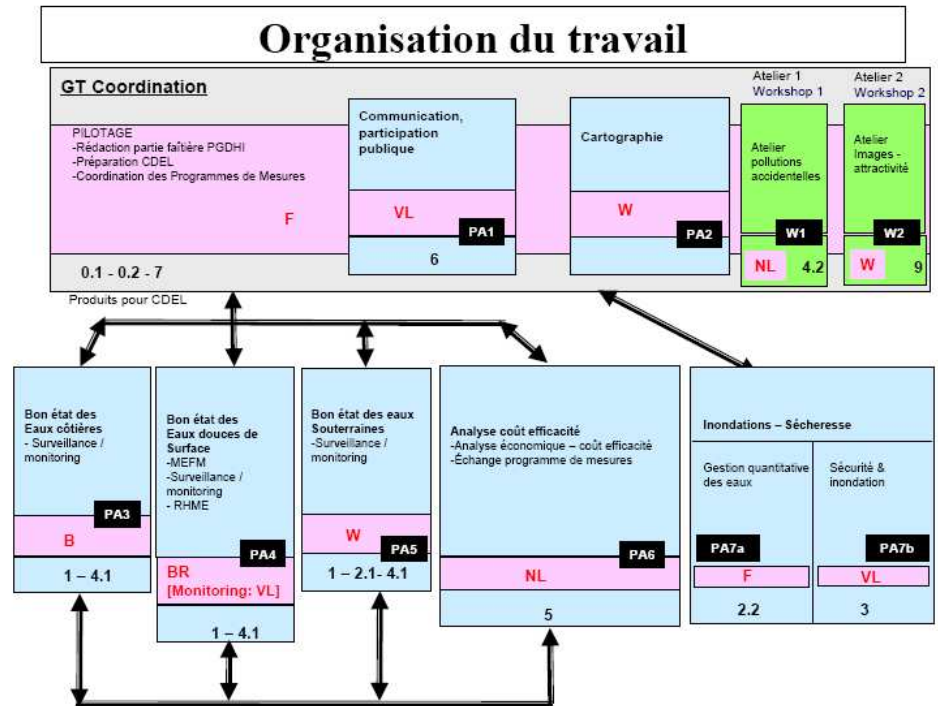


International Meuse Commission 2007

The Rhine District:

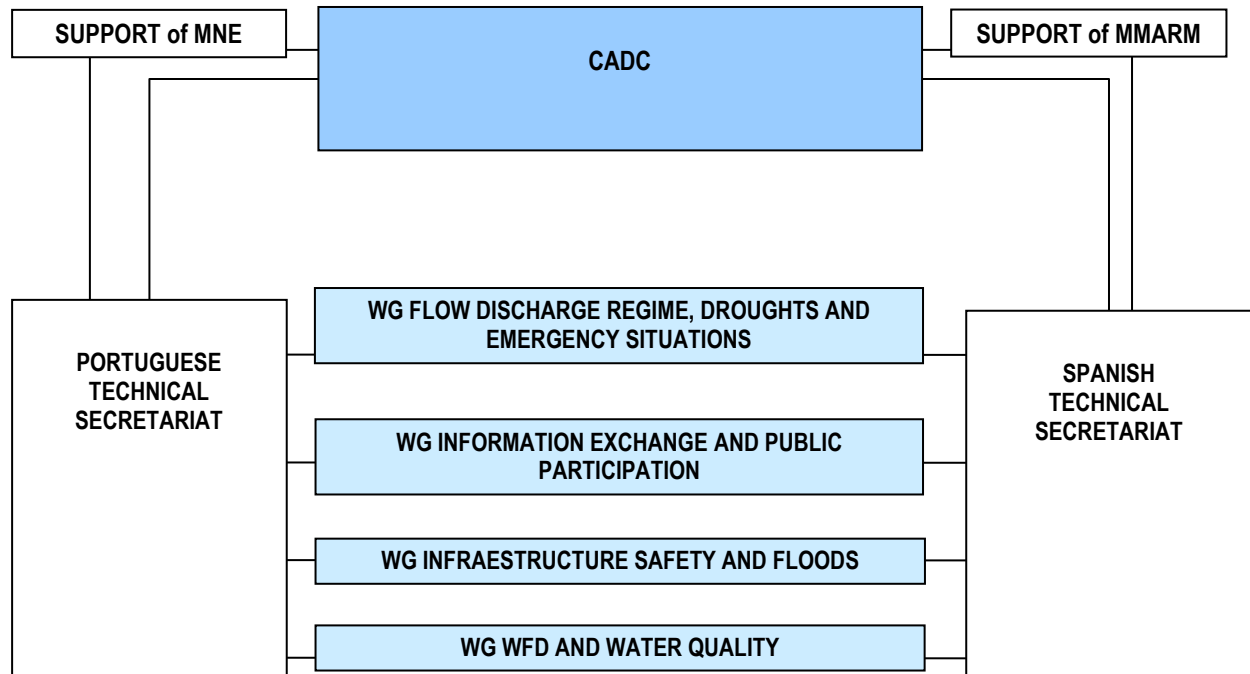


The Scheldt District:



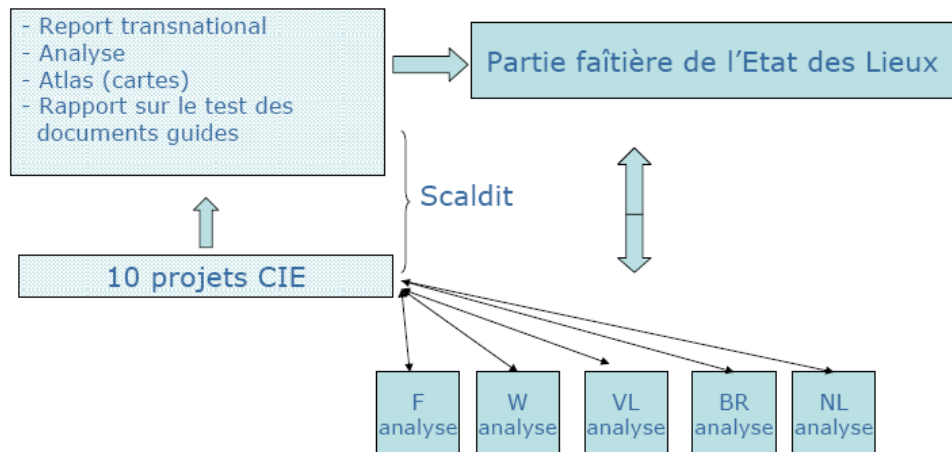
Spain – Portugal : Duero, Tajo, Guadiana and Miño Districts

Commission for the Development and Application of the Agreement (CADC)

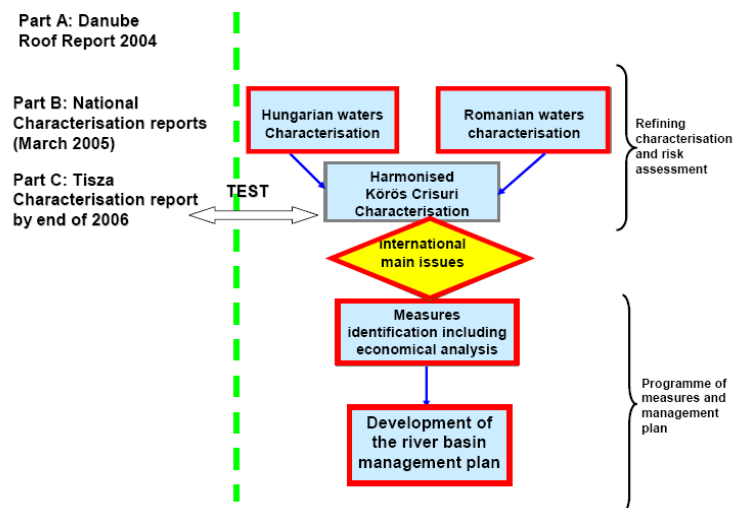


I.5. Characterisation of river basin districts

- The work done in 2004 for this first step of the WFD implementation was particularly fruitful in international river basin districts as regards the exchange and sharing of data.
- The international commissions allowed profitable exchanges between Member States for the drawing up of roof reports on district characterisation.
- The report for the characterisation of international river basin districts (as required by article 5 of the WFD) consists in a roof part, common to the whole international district, and annexes with the reports of each national part.
- An example of organization for the roof report of the characterisation: the Scheldt



- An example using the proposed scheme for the Körös/Crisuri pilot project (Romania / Hungary) in the Tisza District:

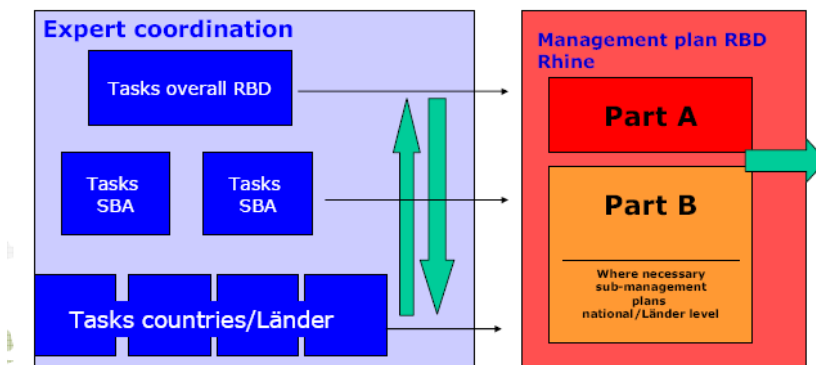


- The characterisation step helped the riparian States to **share an analysis of the water status** in the international district.

I.6. Planning (management plans) and programming (programmes of measures)

- It is essential to clarify the objectives to be reached between riparian countries and to agree on the actions to be undertaken. The WFD allows formalising this step, by requiring the States to coordinate themselves to establish only one management plan for each international district. Where such plans are not produced, Member States can elaborate plans covering the parts of the international district located on their territory.
- In practice, co-ordinated management plans were retained, with a common roof section (part A) and national parts (part B).
- The knowledge acquired through district characterisation helped to identify the important issues and the types of necessary measures.
- To allow operational work and closer cooperation on practical measures, the international commissions of very large river basins (Danube, Rhine) organised **cooperation on a sub-basin scale**.
- Within INBO, basin organizations could carry out exchanges on the method for developing an international district management plan.

Example: drafting of the Rhine management plan



- The aim of the roof report is **to obtain a guidance document**, showing the coordination done and the coherence between the regional management plans, identifying the significant common international topics, dealing with transboundary water bodies which require a joint approach. First of all, the roof report must include a presentation of the international district (roof characterisation, important issues, concerned water bodies). **It should also include shared orientations**. But according to the decisions made in each international district, the distribution between the international roof section (part A) and the national section (part B) seems to be different from one international district to another and there is **sometimes a lack of ambition of the roof part**.
- As the programme of measures can include common measures, INBO underlines the added value that WFD could bring as compared to isolated measures. But the **measures are not enough coordinated**.

Management of the Körös – Crisuri pilot basin (Romania / Hungary)

The accidental pollution of the Tisza, main tributary of the Danube, which occurred in 2000, led to strengthen co-operation between Hungary and Romania. The WFD adopted on the same year created an enabling environment. The Körös/Crisuri sub-basin, main sub-basin of the Tisza, was chosen for a project financed by the French Fund for the Environment, with the aim of testing WFD implementation in 2 years, with a sub-basin approach. Co-ordination on the Tisza basin scale was led by the ICPDR: the bottom-up step of pooling the sub-basin plans led to an overall management plan for the international district of the Tisza. The project results are transferable to the other rivers shared by Romania and Hungary and to all the riparian States of the Tisza and the Danube.

- As regards economic analyses, work is progressing but data are still too often incomplete and **uncertainties remain on the methods to use**: cost and effectiveness of measures, disproportionate cost, way of extending exemptions for delays, etc. The WFD gives a major role to the **economic analysis which remains to be improved** in most Member States (availability of data but also of dedicated human resources). The development of exchanges at the level of the international districts and networks, such as INBO, can enable this best implementation of the economic component and ensure that it fully plays its role in the decision-making process.
- INBO recommends to quickly develop criteria to evaluate the disproportion of costs from the first management cycle to allow the co-ordination of delay extension practices.

Economic analyses in the International Commission of the Scheldt

Thanks to the Interreg project of Scaldit, the Commission has been able to work further on the economic analysis. For instance, a joint catalogue of measures with their costs and assessment methods has been developed as well as a co-ordination of the methods implemented for the cost and efficiency analysis or a common study on the willingness to pay for better quality water. The economic project should go on with implementing joint socio-economic assessment indicators.

I.7. Monitoring of water resource status

- Before the WFD, assessment methods varied considerably within EU from one country to another. One remembers European water quality maps showing abrupt changes in quality when crossing borders! The intercalibration process now leads to **a common reference frame for assessment**, which will enable analysing situations in a comparable way and having a reliable starting base to adopt and follow a common strategy for IRBDs.
- But it is **still necessary to harmonise criteria** between riparian countries (parameters, frequencies, methods for the determination of the quality index...) and to pursue the consistency of the monitoring systems. For example, there is a need for co-ordination on the density of the measurement networks and the frequency for information gathering (the WFD defines minimal frequencies to comply with, but the countries of a transboundary basin can use different frequencies).
- INBO underlines the importance of continuing the efforts made **to define homogeneous monitoring networks** on the transboundary basin scale, so to obtain a common reference system giving a global vision of the water status in the IRBD.

« Homogeneous Monitoring Network » of the Meuse International Commission

This monitoring network goes beyond the co-ordination of the national monitoring networks and the drawing up of the roof report. It includes common data bases, co-ordination in terms of sampling, analysis and interpretation of results.

I.8. Reporting: Water Information System for Europe (WISE) and the “Inspire” Directive

- The WFD itself does not precisely define the reporting obligations. But the work developed within the CIS led to a guidance document on reporting and to the building of the Water Information System for Europe (WISE). WISE compiles many data and information gathered by various institutions or organizations which, until now, were fragmented or not available. WISE was extended to other directives. These recent developments allowed building **a true and harmonised water information system, which is all the more valuable for the international districts.**

- For the international districts, the reporting obligations led to specify an **overall strategy for the pooling of data** and the development of shared information systems. This led to collaboration agreements between services and institutions that should share information (for example Spain and Portugal share an information system)
- The Inspire Directive also contributes to the production of metadata which can then be developed through catalogues (or bases) of metadata allowing the data producers to describe their data; this arrangement is particularly interesting for the international districts.
- Thus, **WISE and Inspire contribute to the organization of shared information systems** by specifying rules for the administration and providing of data, the networking of information systems by developing the technical interoperability of the information systems (exchange formats and procedures), the development of networked services on the Internet for the sharing and dissemination of data.

I.9. WFD : a driving force for new and non-EU Member States

- For new Member States: As for the 10 previous new Member States accessing to EU in 2004, the most recent Member States in 2007 (Romania, Bulgaria) invested a lot in the WFD process, even before their accession to the EU.

Commitment of Romania from the characterisation step onwards

Romania started working on WFD implementation at the national level and in consistency with the Commission of the Danube when not yet a Member State of the European Union. It thus adopted the WFD methods, by producing a characterisation in due form for the ICPDR, with the production of 11 characterisations of all the Romanian sub-basins confronted with the international one.

Mesta/Nestos Basin (Greece-Bulgaria): an INTERREG project.

This example illustrates the shared will of a non-member country (Bulgaria) and of a Member State (Greece) to jointly implement the WFD in a transboundary basin. The support of INTERREG 3A/PHARE and already existing co-operation agreements/tools facilitated the process. Both countries adopted a common technical and methodological approach to the WFD provisions. They established common frameworks for communication and management involving the managers of the Bulgarian and Greek Basin Authorities, with the aim of jointly defining quality objectives and common programmes of measures.

- For non-EU riparian countries: When a basin is partly outside the EU boundaries, the WFD encourages co-operation with third countries to provide a single management plan (art. 13). The WFD approach extends to the countries neighbouring the EU. These countries invest in the process, whereas they are not obliged by WFD provisions.
- Outside EU: The WFD constitutes a reference frame that can be transposed and considered as an example and a guide of good practices to reinforce transboundary management outside the EU: in the EECCA countries, in Mediterranean countries (Med EUWI / WFD Joint Process), in Latin America (example: the Twinlatin project which aims at disseminating the WFD approach and tools to the Latin American countries which are developing integrated basin management), in Africa (EUWI, European Water Facility).

The Irtysh River Basin (Russia/Kazakhstan)

There have been bilateral conventions between the Government of the Russian Federation and the Government of the Republic of Kazakhstan for the management of transboundary waters since 1992. An agreement had been signed in 1993 for the protection of the Irtysh River Basin. The partnership protocols of 2004 and 2005 integrated the WFD principles and planned the development of a single management plan for the Irtysh. At present, the prospects are to try to extend this co-operation to the entire Irtysh River Basin, by also involving China in this transboundary management

Lessons learned in promotion of WFD in EECCA countries:

- River basin organization (RBO) establishment: in Soviet Union (and to large extent now in EECCA) water quantity and water quality were separately managed by water and environment agencies respectively. Therefore establishment of RBO with IWRM mandate through one or another sectoral agency is almost impossible. On the other hand, RBO establishment may be much more feasible through regional authorities which could integrate sectors much more effectively. Therefore support in integrated management of RBO should be provided through regional development programs rather than through support to one or another sectoral agency;
 - Financial mechanisms of basin management: For the same reasons mentioned above regional authorities in EECCA countries are mostly interested in French experience of financing of basin management when "user pay principle" (UPP) and "polluter pay principle" (PPP) work together to implement principle "water pays for water" at the basin level;
 - Specifics of governance and strategic planning: there are old traditions of water planning in EECCA which, in particular, mean that there is no system of "objectives setting" with measurable targets and clear timeframe and water standards in reality used as criteria for assessment rather than objectives to be achieved. It means that implementation of such WFD principle as "achievement of good status". Within just water and/or environment sector is impossible and requires intervention at the level where strategic planning is a part of governance mandate.
- All this shows that much more efforts in capacity development in and outside water/environment sector are needed in comparison with modest resources allocated for WFD promotion in EECCA countries.

II. CONSTRAINTS AND NEEDS IDENTIFIED BY BASIN ORGANIZATIONS

II.1. A huge workload

- The WFD means many new and very important tasks in terms of workload and significance of issues. For basin organizations of international districts, this means both internal workload (at the national level) and workload at the international level. It is necessary to **carry out national implementation and international co-ordination at the same time**. Work plans, cultural approaches, economic, political situations and working methods are different. The budgetary constraints are significant. Several working languages have to be managed.
- **The decision-making process within international commission is complex** and takes time, since intense and long dialogues are necessary to achieve convergences. There are differences in the WFD interpretation and the level of ambition, which **complicates the harmonisation of the approaches and methods**. All this work takes time and generates a huge cost. **Additional resources are necessary**, both for organisms acting for national parts of the international district and for the international commissions.

II.2. Need for capacity building for transboundary river basin management

- Many founders of the water policies are about to retire and with them a great deal of experience may disappear. In addition, some international commissions have now more than ten years of transboundary management experience with broad multicultural and transversal approaches to share.
- INBO identifies the need of **launching training and professional development programmes** for managers and staff of the concerned basin organizations. Common programmes or seminars would allow exchanging practical experience, better understanding each other and building a common culture.

II.3. Need for increasing the means and actions of international commissions

- It is necessary **to increase the human and financial resources of the international commissions, to reinforce their action** and to promote a clear definition of the roles and commitments of each country.
- It is also necessary to take into account the practical problems which can result from the use of several national languages in the same transboundary basin (additional delays and expenses for translation, etc.).
- It is necessary **to support the creation of new international commissions, to reinforce those already existing, and to strengthen co-operation for the basins shared with the neighbouring countries of the EU** (candidate countries, countries of the CIS and Balkans), through projects supported by the European Commission, for WFD implementation in these basins.
- Such international commissions, authorities or organizations allow better dialogue, the exchange of useful information, the solving of potential conflicts and the sharing of the benefits of better joint management.
- Decision is the responsibility of the interested Parties: the commissions are international and not supranational. It is advisable to think about the working methods needed to improve the effectiveness of international commissions: quid of the decision-making process (the decisions are not made by majority voting but through consensus)? quid of the method (is it necessary to work in bottom-up, top-down or topical steps) and of the work scale (local or international)?

II.4. Need for harmonising the methods used for the economic analysis

- It is necessary **to develop exchanges on the methods and tools used**, such as the catalogues of measures, data bases on environmental costs, indicators, etc. Owing to the results of the characterisations carried out by each country in 2004 and to the pooling of data leading to the roof report, it appears that a homogenisation of the methods is not compulsory, but that transparency is essential for a good common understanding of the methods used and a comparability of the obtained results, especially regarding the risks of not achieving good status and cost recovery, and assessing extreme phenomena impacts
- To be transferred to the field (river basin districts), the methods for economic analysis must be better explained to obtain a clear understanding by stakeholders, such as the cost-benefit analysis (justification of exemption).
- Some Member States and basin organizations developed practical tools but the methods used are different from one country to another. Exchange and comparison of experiences (benchmarking) would be very useful.
- The methodology for disproportionate cost estimate differs, which is likely to raise a competition problem especially in the international river basin districts.
- The basin organizations noted **a lack of common data and references** (disproportionate cost). INBO recommends carrying out work at the European level, in the international districts as a priority, to identify the differences in methods and to harmonise criteria. As concerns the water price, it would be useful to build a **“European water price” indicator** with the same components in order to have comparable data.
- It is necessary **to share experiments and harmonise methods** (environmental cost estimate, spreading out of costs, cost recovery rate, model for cost-effectiveness of measures, etc.), to develop **socio-economic indicators and reference values common to all the Member States** (disproportionate cost, impact on the water price, etc.), in order to consolidate the analyses and to support possible exemptions, by taking into account economic and social acceptability: for example the weight of the water invoice as compared to the average income of a household, the weight of the programme of measures as compared to the GDP, etc. This will require networking the work of the economists of the Member States but also efforts for public information on the analysis approaches and methods, so that the interested parties fully understand its advantage and yet fully involve in their use.

II.5. Need for increasing the co-ordination of information systems

- Consistency of water monitoring, observation and information systems, **harmonisation of data and GISs**, use of common models, are essential for sharing knowledge and following-up actions in transboundary basins.
- Information systems on shared rivers and aquifers should be designed in a consistent and global manner on the scale of an entire river basin within agreements between the riparian countries. It is then necessary to define common standards to gather comparable information, to organise true **information systems at the level of transboundary basins** and to centralise the information necessary for the definition and follow-up of public policies.
- The projection systems or cartography are generally quite different from one country to another. Maps on the scale of a district are required. **Coordinated cartography** for a transboundary district is therefore very important.
- Spain and Portugal share a common Geographical Information System for the cartography of shared water bodies.

- The CIS orientation document on GISs (« GIS guidance ») and the tools (« WISE » and « REPORTNET ») contribute to data harmonisation: they must however be supplemented on a case-by-case basis in order to define a common and shared language (data dictionary, common alphanumeric and geographical reference frames) allowing interoperability between the systems and data comparability.

II.6. Need for strengthening co-ordination of actions

- Basin organizations underline **the need for coherence of action** in international districts: do we forbid the same things? do we apply the same kinds of measures? do we ask for the same efforts? is there the same understanding of disproportionate cost?
- INBO notices significant progress made with **the co-ordinated development of management plans and programmes of measures** in some international districts (common catalogues of measures, co-ordinated objectives, common socio-economic and environmental indicators). INBO encourages the continuation and generalisation of this work.
- **The contents of the roof report and its ambition seem to vary from one international district to another.** In an ideal manner, it should set common orientations for monitoring (monitoring points, criteria harmonisation), objectives to be achieved (essential orientations, heavily modified water bodies), programme of measures (measures for common stakes, harmonisation of cost-effectiveness evaluation, choice of the types of complementary measures), action plans against floods (summary of co-ordinated plans when they exist, analysis of cross incidences), complementary plans to fight drought impacts, public consultation. INBO underlines the **importance to increase the ambition** of those roof reports.

II.7. Flood and drought prevention / management – Climate change

- **Increasing co-ordination on floods and droughts is necessary.** If the WFD itself does not directly lead to co-ordination on this matter, it was however supplemented by the Directive of 23 October 2007 on the assessment and management of flood risks and by the paper of the European Commission of 18 July 2007 on drought (which will be reinforced by the adoption of an EU strategy in 2012).
- **Upstream-downstream common cause should be increased:** sharing data, co-ordinating flood and drought warning networks, co-ordinating the information systems.
- With regard to flood prevention and control, the basin organizations confirmed that better **exchange of information and know-how is needed** and that it is essential to **harmonise control plans** between the countries of transboundary basins. They propose to initiate **exchanges between operational centres** for flood prevention and control. It is necessary to strengthen co-operation for the search for **co-ordinated solutions and the sharing of responsibilities**. Protection against floods must use a co-ordinated approach “to get place for water”, combining the protection of the people and properties, the reduction of vulnerabilities, the restoration of free flow in rivers, the conservation and rebuilding of natural flood plains, the forecast of events, the identification of zones at risk, the publication of atlases of flood-prone areas, urbanisation control, the populations’ warning and education.
- **As regards to drought management, it has to be collaborative especially in transboundary basins.** To prevent socio-economic and environmental impacts, it is essential that countries act together to plan and manage drought episodes. Collaborative approaches include agreed drought indicators, applying Drought Management Plans, complementary to RBMPs when necessary, and applying specific progressive measures according to drought phases. When using flow regimes, compliance specifications should be agreed when suffering droughts.

- Transboundary waters will be heavily affected by the impacts of climate change. Adaptation to climate change is consequently indispensable and needs to be coordinated in order to ensure an effective response by riparian countries and avoid impacts. It is advisable to **anticipate the consequences of the climate change** and to start thinking on an international district scale: for each district, it is necessary to assess, according to various scenarios, the hydrological consequences of the climate change (defining baseline scenarios in the district). It is important to **integrate co-ordinated measures** for prevention and adaptation into the management plans and programmes of measures. A guidance document is being developed by the “Climate Change” Working Group under the CIS. A Guidance on Water and Adaptation to Climate Change is also currently developed under the UNECE Water Convention.

II.8. Need for a joint management of transboundary aquifers

- **Transboundary management of aquifers needs to be strengthened.** More efforts must be done to harmonise transboundary aquifers management. **It is urgent to develop real policies of joint management between the States which share these resources.** Agreements for transboundary aquifer management must be developed, taking into account their fragility, especially that of fossil aquifers, and the time needed for restoring degraded situations. The existing agreements should systematically be extended to groundwater.
- The comparison of procedures for delimiting groundwater bodies on both sides of the borders showed the need for carrying out joint work in the case of transboundary groundwater bodies. Within the FFEM Körös/Crisuri project, it was necessary to re-examine these delimitation processes by joint work of the Hungarian and Romanian experts with the support of the experts from the International Office for Water.
- It is necessary to insist on the importance of knowledge of aquifers: precise delimitation, capacity, uses, recharge, fragility, measurement networks, models, studies, etc. such as what is done for the transboundary calc carbon aquifer in the Scheldt district, or the Portuguese – Spanish aquifers.

The transboundary calc carbon aquifer in the Scheldt district

The calc carbon aquifer is shared by France and the Belgian Flemish and Walloon Regions. This formerly abundant resource was distinctly managed by each country, privileging the economic and social development, which led to an overexploitation: general lowering of the groundwatertable, threat of reduction or rupture of water provisioning to all users, acceleration of the damage of karstic origin on the surface. The final declaration of the Tournai Workshop (9 February 2007) established the following recommendations:

- Coordination between the parties: a preliminary technical phase with an exchange of information on water, its management and its stakes (these contacts must be held regularly within a permanent neutral framework such as river international commissions, groupings of communes,...) and a definition of common studies and actions to be held ; then a dialogue between decision makers (to bring together the persons in charge concerned for each part, with the participation of international or regional institutions and internationally recognized experts).
- Actions depending on each party: to set up coordinated and homogeneous monitoring networks (piezometry and water quality) in order to constitute data banks, assess the evolution of the groundwatertable and model it; to adopt legislative and administrative provisions such as declarations and authorizations for withdrawals and rejections; to associate all the categories (public and private) of users to develop and implement sustainable solutions.

II.9. Need for a real public participation at the international river basin district level

- INBO applauds the first initiatives which allowed developing a **common strategy for public participation** in some international districts.
- INBO recommends to develop such common strategies in all the international districts, relying on **international commissions and the reinforcement of NGOs participation**. Tools must be adapted to the targeted public, geographical scale, consultation objectives and to the territory specificity, especially in the international districts. INBO recommends also recommends to **co-ordinate not only the consultation process and timetable but also the content of the consultation process**, so to develop the feeling of membership and identity on a basin scale.

In line with the Albufeira Agreement principles, periodically public participation sessions are carried out, where Spanish and Portuguese public participates. In April 2008 a Technical Session meeting took place in Lisbon, where it hold a Public Participation table and included the following issues: compliance of environmental objectives, supply and demand, management of extreme phenomena and knowledge exchange.

- The children must be taught a water citizenship on a transboundary basin scale in particular, by developing educational tools and a transboundary Youth Parliament for water, on the basis of the experiences of the Youth Parliament initiated by Solidarité Eau Europe in several countries and of the educational kit developed by the Danube Commission for schoolchildren. Culture has often been built around water as water can gather people together: it is necessary to take well the cultural dimension into account in the transboundary implementation of the WFD.

II.10. Need of supporting relations with non-EU member States

- The needs for financing actions rising from the WFD are considerable. The bill is particularly heavy for the recent new Member States and even more outside the EU. A more significant financial support from the international or bilateral donors would be necessary. Cooperation projects/programmes constitute a solid base to accompany the non EU-members in the implementation of integrated water management. This is all the more important that **the objective of good status might not be achieved in transboundary basins on account of the lack of capacity of the riparian non-EU Member States**.
- This means reinforcing co-operation programmes for the management of the basins shared with countries neighbouring the EU within the European neighbourhood policy (the Mediterranean, Eastern Europe, Black Sea, Caucasus, Central Asia).
- These co-operation programmes could be **twining agreements** between countries or basins. Specialised assistance (technical assistance and exchange of information - TA/EX) and long-term twinning agreements between administrations are really fruitful to export IWRM and WFD principles. Other European projects, as TWINBASIN, has allowed transferring knowledge on transboundary basin management, to non-EU member (e.g. Uzbekistan). Very positive outcomes are reported from the twinning arrangements concluded within the TWINBASIN Project. The interested countries have expressed their regrets that this programme is now completed and wish it would be continued and still supported by European fundings.
- INBO notices the **growing interest in basin management of non-EU countries**, with an increasing participation of representatives of these countries in its assemblies and an increasing number of requests for information and partnership. This is observed not only for the countries geographically close to Europe (Central and Eastern Europe, Caucasus), but also in Latin America and Africa.

CONCLUSIONS

- For the **first time in history**, 29 countries (the 27 EU countries + Switzerland and Norway) were committed to jointly manage their water resources on a river basin scale, which represents an unequalled effort for good governance on this scale. The WFD is a great progress for integrated water resources management in Europe.
- The WFD is a tremendous **working framework which allows overcoming cultural differences and bringing people together in spite of the language barrier**. It caused new awareness of the importance and need for sharing information and experience beyond borders.
- There is a long tradition of transboundary co-operation in Europe (bilateral agreements, conventions for international rivers). Where this cooperation has been important in the past, it facilitates the implementation of the WFD. But generally, the importance and dynamism of the existing practical co-operation remain still too little known and must be better emphasised and disseminated. The WFD is an opportunity to strengthen these kinds of co-operation.
- In parallel with bilateral agreements, the WFD represents an operational frame for **multilateral coordination on the river basin scale**. The WFD **confirmed/reinforced the role of the international commissions** as platforms for international co-ordination.
- The WFD provides added value to water resources management, especially in transboundary basins, for which it is a **common reference frame with common objectives and common follow-up indicators**.
- The WFD leads to the **harmonisation of practices** and to the improvement of management tools between riparian countries, including with our new neighbours in the Balkans and Eastern Europe. It also allows strengthening relations between the transboundary basins having a common set of requirements whose implementation requires experience sharing.
- It is also a **tool for European integration: integration between Member States of the European Union and integration of non-EU Member States**. A good example is the management of the Danube which involves in the ICPDR 19 States, 10 of which being EU Member States (including 2 new ones in January 2007), 1 is an accession candidate and 8 are not members.
- Most managers of basin organizations agree on the fact that the WFD influenced and **improved upstream/downstream political, technical and cultural relations and thus a better European integration**. The WFD gathers the riparian States in a **community of interest**: working together to find solutions to common problems. The countries, either located upstream or downstream, have the same tasks and the same obligation to apply the WFD; they share a **joint responsibility** for the management of the river basin.
- To this institutional co-operation is added the richness of personal and informal exchanges within international and regional networks, such as those of the « INBO Family ».
- Appropriate collaboration is needed to reduce floods and droughts impacts, and adapt to climate change impacts.
- The basin organizations gathered in the EUROPE-INBO group underlined the added value of the WFD and the interest and huge work of looking further into the coherence of the methods and actions. It is thus advisable to provide increased resources for WFD implementation, especially in a transboundary context.

- **Specific constraints and needs were underlined** : a huge workload and need for additional resources in basin organizations, need for capacity building, need for increasing means and improving decision-making in international commissions, need for harmonization of economic analysis, increase coordination of information systems, increase coordination of actions, increase coordination for floods/droughts management and climate change, joint management of transboundary aquifers, real public participation at the level of the international river basin district, ...
- The **necessity of supporting capacity building of riparian non-EU countries** must be particularly underlined: EU countries will do as much as possible, but they will be **limited by what the non-EU riparian countries will be able to do** to reduce pollution, improve hydromorphology, etc. Joint implementation of WFD with non-EU countries is a major issue of concern for EU Member States.
- **The success of WFD implementation in transboundary basins is certainly the most relevant indicator to evaluate the work done for WFD implementation in Europe.**
- This successful example of regional initiative **can inspire other areas in the world** and seems to be **a factor for disseminating the principles of good governance**. The WFD may not be universal and cannot be exported as it is, but **its approach and its principles are transferable**, such as characterisation, the formulation of management plans at basin level, the definition of deadlines and measurable objectives, the development of monitoring, agreed indicators and common reference frames for data management, the introduction of the cost recovery principle, the participation of the interested parties and of the public
- If the WFD approach can be useful outside EU, EU countries can also benefit from the experiences of non EU countries for the implementation of WFD.

INBO will continue its efforts to support exchange of fruitful experience on WFD implementation for all interested basin organizations in Europe and Neighbouring Countries, as well as at international level.