

**Note of the International Network of Basin Organisations
for the Common Implementation Strategy of WFD
« WFD contributions to water management in transboundary river basins:
interim evaluation and needs identified by the basin organisations »**

WORKING DOCUMENT – 2nd DRAFT of 26 September 2008

INTRODUCTION

There are many transboundary river basins in Europe and almost all the countries are concerned, at least partly (the transboundary basins cover 54% of the European continent). For some of them, all their surface or ground waters come from or flow out towards a nearby country, member or not of the European Union. All kinds of cases exist, from mere bilateral co-operation to the involvement of 18 countries for the Danube, which is the most international basin worldwide.

The International Network of Basin Organisations (INBO) aims at facilitating **exchanges among basin organisations**. It was created in 1994 in Aix-les-Bains (France) to mobilise the experience of the professionals of administrations and organisations directly responsible for the implementation of Integrated Water Resources Management (IWRM) at river basin level. INBO is currently present in 67 countries.

At a world scale, among its actions, INBO **promotes the WFD principles in each World Water Forum** such as in 2006, in Mexico or in 2009, in Istanbul, where INBO will jointly co-ordinates with UNESCO/IHP **topic 3.1 « Basin Management and Transboundary Co-operation »**.

In Europe, the « EUROPE-INBO » Group for WFD implementation was **created in November 2003**, in Valencia (Spain). 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.

INBO relies also on several Regional Networks:

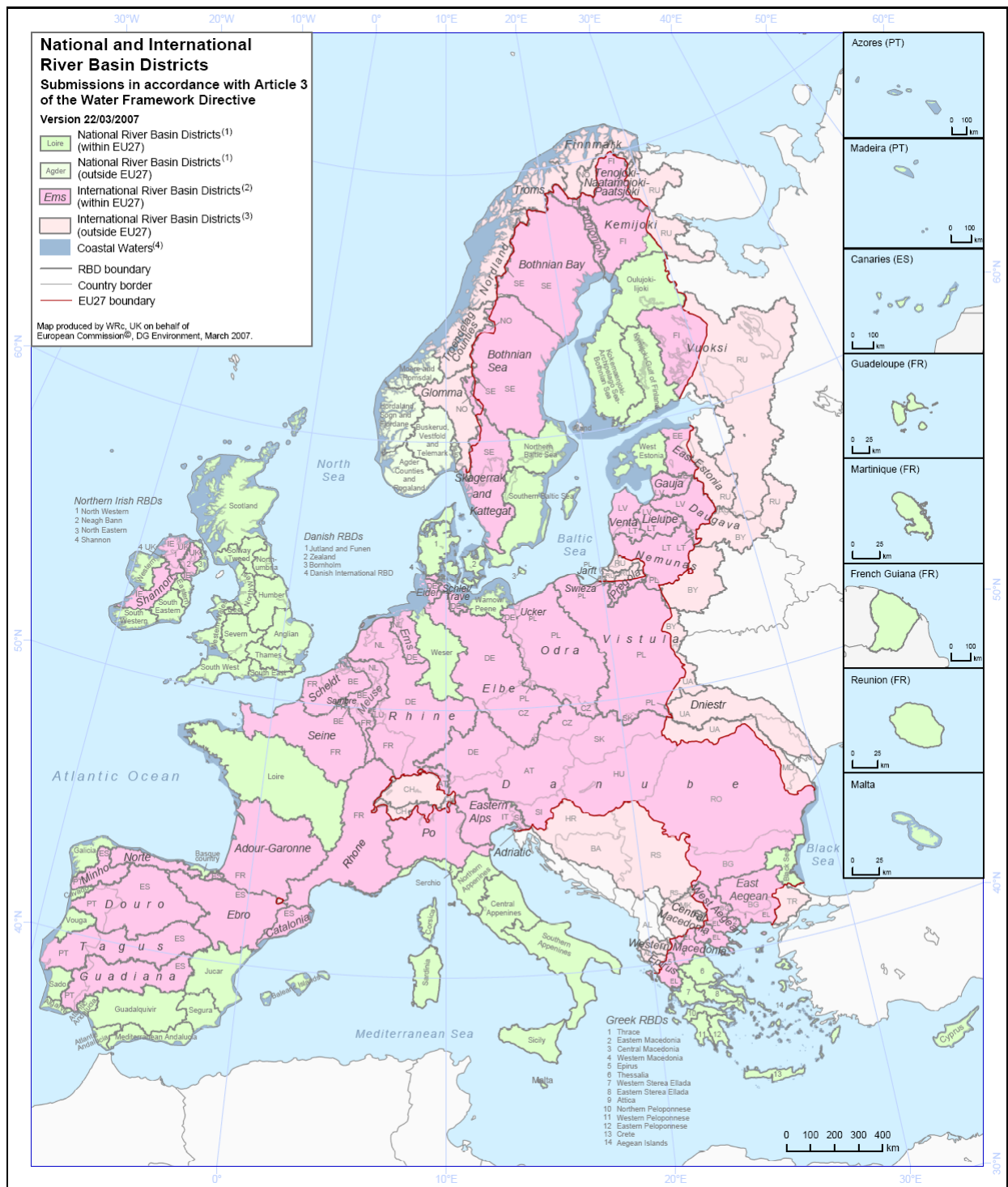
- the Central and Eastern European Network of Basin Organisations (CEENBO);
- the Mediterranean Network of Basin Organisations (MENBO);
- the Network of International Commissions and Transboundary Basin Organisations;

The work of « EUROPE-INBO » group aims at **enriching the WFD Common Implementation Strategy** (CIS), without duplicating work already done within this strategy, and is member of the Strategic Coordination Group (SCG) since August 2005.. The « EUROPE-INBO » Group enables the Basin Organisations and District Authorities to meet regularly, in an **informal** way, to exchange their practical experience, to identify operational problems and to make practical proposals for the WFD implementation.

EUROPE-INBO also allows the WFD concepts to be developed and that the lessons learned are communicated **to the non-EU countries** (EU borders countries as well as American, African, Asiatic countries).

The issue of transboundary basins has naturally emerged during all the INBO and EUROPE-INBO meetings. Special sessions were organised in Namur (Belgium) in 2005 and in Sibiu (Romania) in 2008. This draft note will be discussed by the EUROPE-INBO group in Sibiu on 3rd October 2008.

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



This map established by the European Commission shows the national Districts (in green) and the international Districts (in pink). NB: it was commented within INBO that the Sambre is not a district distinct, but belonged to the Meuse District.

I. WFD INPUTS IN A TRANSBOUNDARY CONTEXT: PROGRESS REPORT

Water has no national and administrative boundary. **The WFD is a significant progress for integrated water resources management in Europe and particularly for transboundary basins**, since it explicitly requires delimiting international river basin districts to produce characterisations, management plans and programmes of measures co-ordinated between Member States, and organising a participation of the interested parties and of the public including for the international districts

The Convention of the United Nations Economic Commission for Europe on the Protection and Use of Transboundary Watercourses and international Lakes, adopted in Helsinki on 17 March 1992 (the Helsinki Convention), also contributed to the development of these approaches, by defining a legal and institutional co-operation framework.

Exchanges and pooling work on transboundary basins were carried out within several bodies: within INBO and UNECE, but also during yearly informal meetings of the international commissions, and also within the CIS, but mainly at the beginning of the process during the production in 2002-2003 of the guidance document on the identification of the international river basin districts.

• Management at the level of River Basin Districts and role of International Commissions

- The WFD allows **disseminating the concepts of river basin management and integrated management all over Europe**. With regard to transboundary basins, the WFD requires in its article 3 that:
"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. Upon the request of the Member States concerned, the Commission does what is necessary to facilitate the creation of the international river basin district. 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".
- **The WFD thus enabled to delimit International River Basin Districts (IRBD)**, while not imposing anything as regards the relevant authority: it mentions «administrative arrangements» and leaves the Member States 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.**
- Thus, for example, when the WFD was published in 2000,
 - 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 (Walloon, Flanders and Brussels);
 - etc.

- The WFD implementation showed the importance of using and reinforcing the existing international bodies, owing to their **experience as regards exchanges between riparian countries** (including those which are not EU members or accession candidates).
- This experience goes back several ten years for some of them. The example of the Rhine is the first example in the history of transboundary co-operation in Europe, 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.
- Since the adoption of the Helsinki Convention in 1992, several bilateral or multilateral agreements between European countries have been established based on its principles and provisions. Examples include the agreements on the Danube, Bug, Meuse, Scheldt, Rhine and Sava. The 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. Progress to date in the implementation of the WFD has proven that real co-operation in transboundary basins only takes place where there are already established legal and institutional frameworks for transboundary co-operation such as agreements and commissions. That's why the UNECE Water Convention has an important role to play to complement the WFD.
- The exchanges within INBO show that **the working methods of the international commissions are similar**: harmonisation of practices through the combination of bottom-up and top-down steps, decisions through consensus, appropriation by dialogue and understanding between partners, role of conflict prevention and regulation. **The work undertaken in 2004 for the characterisation of the international districts strengthened the exchanges and sharing of data**. The international commissions allowed profitable exchanges between Member States for the drawing up of roof reports on district characterisation.
- The WFD also led to **amend or supplement the existing international treaties or agreements**. The amendments concern the contents, 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 the management plan and programme of measures which must be unique or co-ordinated in an international district, the improvement of the means for flood and drought prevention and control, the co-ordination of measures against accidental pollution, etc.
- **The WFD allowed considering the whole river basin and, therefore, all the riparian States**, thus allowing involving the States which were not yet represented. New bilateral agreements were thus signed in Eastern Europe. The WFD also let to **widen the composition of the international commissions**. The International Commission for the Protection of the Elbe (ICPE) thus integrated Poland and Austria. The International Commission of the Scheldt (ICS) in a new treaty integrated Belgium and extended its district to smaller border river basins. The ICM integrated, also in a new treaty, Germany, Luxembourg and Belgium. The ICPR integrated several new countries including Belgium and Austria. The International Commission for the Meuse was extended to 3 new countries (Germany, Luxembourg and Belgium).

- o 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**.

Co-operation in the Rhine River Basin

Co-operation 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 of the Rhine. ICPR was used as model for other international commissions, such as the international Commission for the Protection of the Elbe (ICPE) created in 1990 and the International Commissions for the Meuse and the Scheldt, both created in 1994. New co-operation bodies were created for the WFD implementation in the Rhine River Basin. They were then integrated into the ICPR.

Co-operation in the Danube River Basin

The International Commission for the Protection of the Danube River (ICPDR) was created in 1998 for implementing the Danube Convention aiming at making sure that “the Basin’s surface water and groundwater are managed in an equitable and sustainable manner” and was signed on 29 June 1994 in Sofia (Bulgaria). It is now ratified by 14 countries. 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 organisation 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, bilateralism was reinforced after World War II, beginning of multilateralism with the Convention of Sofia

creating the international Commission in 1998, multilateralism reinforced with the Tisza partnership agreement in 2004 to implement the WFD.

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 ICS 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 ICS priority. ICS working groups concentrated on the multilateral co-ordination of WFD implementation using the guidelines documents. Work organisation was adapted for each WFD stage: data exchange (1995 to 2002), characterisation (2002-2005), management plan (2005-2009). From 2002 to 2005, the working groups copied the European working groups of the CIS; from 2005 to 2009 the organisation was more integrating with only one working group in charge of co-ordinating 7 projects related to the WFD objectives (3 on the achievement of 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.

Co-operation between Romania and Hungary

In Romania and in Hungary, there is a long tradition of co-operation, which goes back to the Soviet era, with the nearby States for transboundary water management, through bilateral agreements. For example, in the case of Romania the following agreements were signed: Hungary (1986, 2003), Ukraine (1997), ex-Yugoslavia (1955), Moldova (1995), Bulgaria (1991). From now on, co-ordination is achieved through the ICPDR and WFD provisions were or will be integrated into the various agreements. Thus, the agreement of 1986 between Romania and Hungary was revised into a new agreement in 2003 whose objectives are: to achieve good water status; to prevent the degradation of

the water status and to control pollution; 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

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

The 1st Romanian/Hungarian agreement goes back to 1924. The accidental pollution of the Tisza, main tributary of the Danube, led to strengthen co-operation. The WFD 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.

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 organisation of participation days 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. These modifications established 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 things, its purpose will be to co-ordinate the development of homogeneous plans for the river basin districts in the next hydrological planning cycle.

• **A common objective to all Europe: the « good water ecological status »**

- Before the WFD, quality objectives and assessment methods varied considerably from one country to another within the European Union. One remembers European water quality maps showing abrupt changes in quality when crossing borders!
- The WFD allowed creating **a common reference frame for assessment**, which allows analysing situations in a comparable way and having a reliable starting base to adopt and follow a common strategy.
- But only the passage between fair and good status must be compared at the European levels and the important point is to harmonise (parameters, frequencies, methods for the determination of the quality index).
- To go further in international river basins, and to start the preparatory work of the programmes of measures required by the WFD, it is essential to clarify the environmental objectives and the definition of good status at the European level and that the States co-ordinate on the ambitions to be retained.
- **The WFD allowed passing from management orientated towards physico-chemical-water-quality to a more integrated approach to ecosystem management** (taking hydro-morphology and biology into account, which is not the case everywhere in Europe).

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.

• **A common planning process**

The WFD commits the Member States to a common process, with the same objectives, the same methods and the same deadlines. This is even more important for international districts.

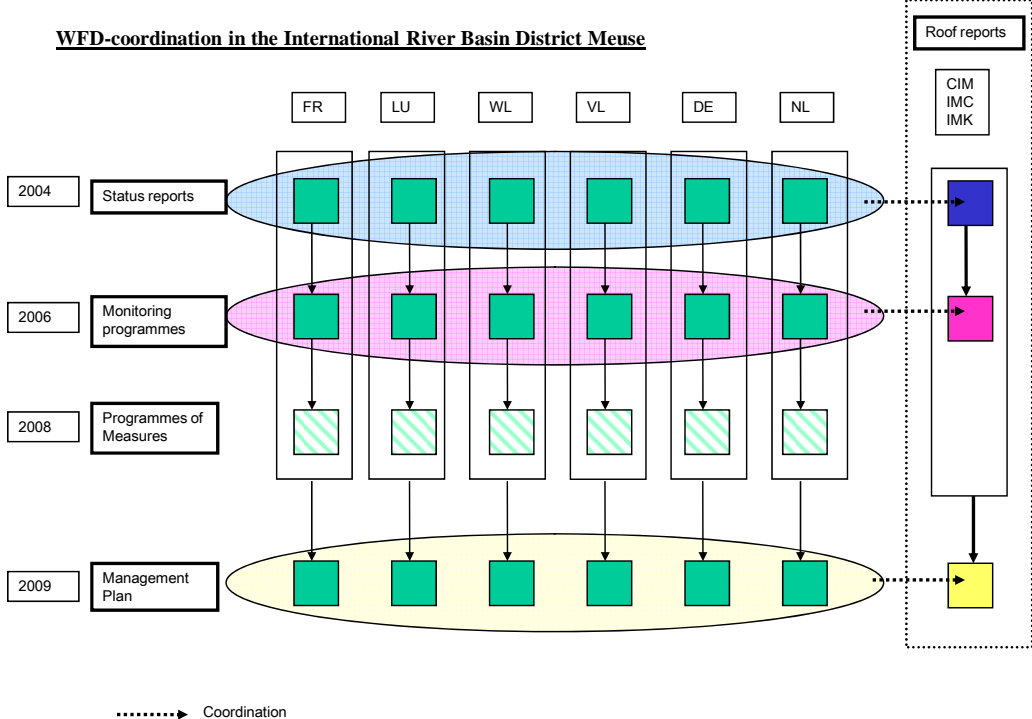
For each district, planning is based on 4 key activities to be renewed every 6 years: characterisation, establishment of a monitoring network, development of a management plan, development of a programme of measures

The WFD has the advantage of being a cyclic process, which allows continuous improvement during the 3 planned management cycles: 2009-2015, 2015-2021, 2021-2027.

For the international river basin districts, 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 working groups, which are “mirror groups” of those of the CIS.

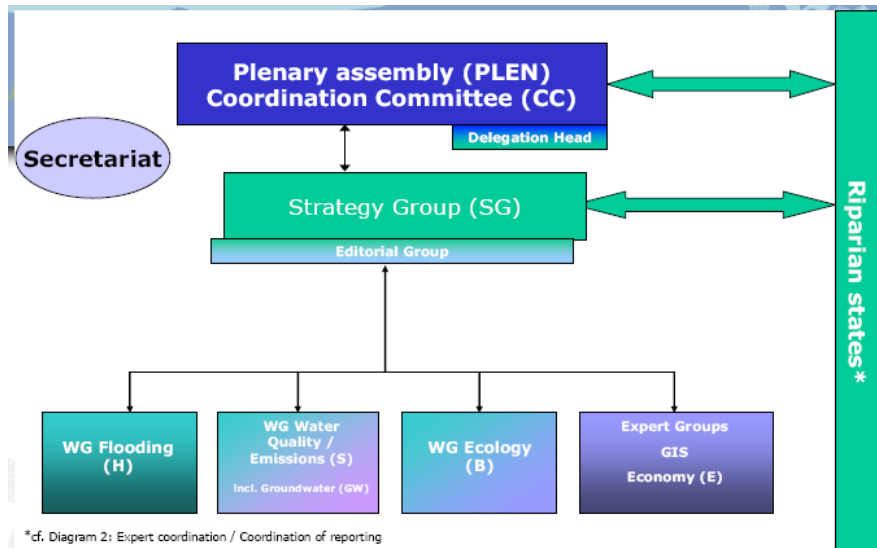
Examples of organisation:

The Meuse District

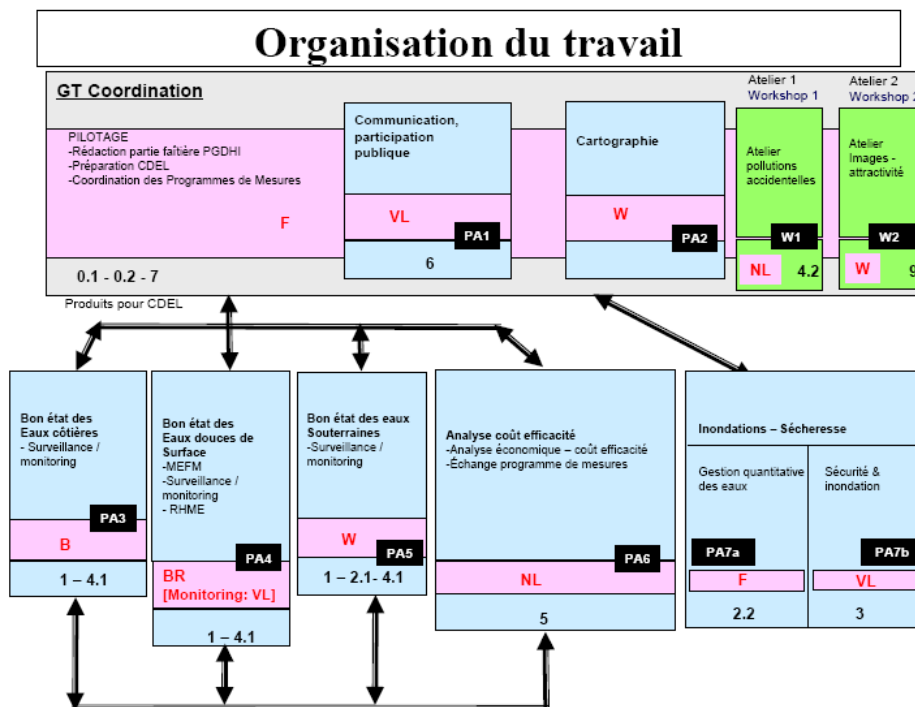


International Meuse Commission 2007

The Rhine District:



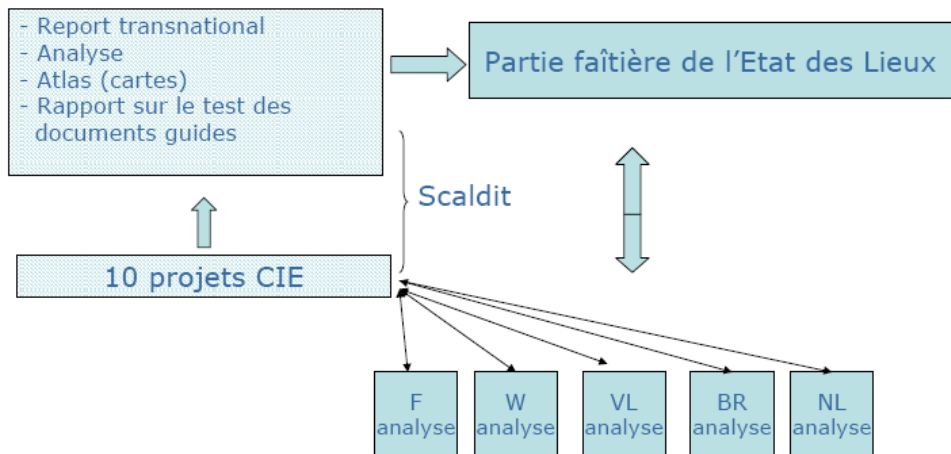
The Scheldt District:



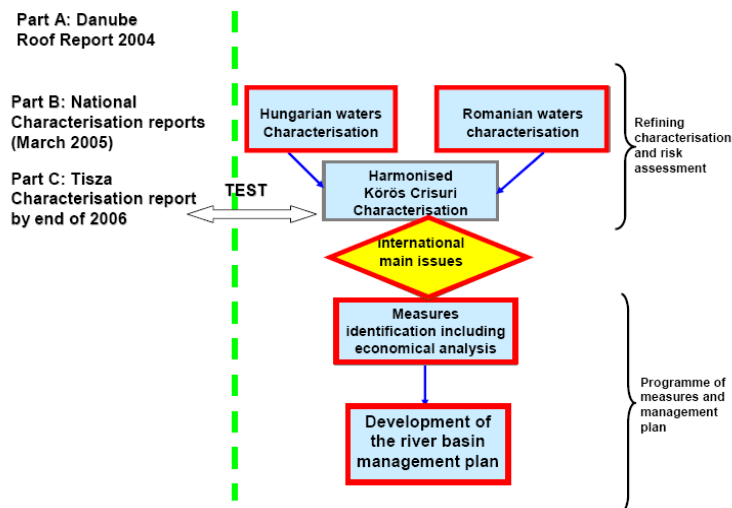
• **Characterisation of river basin districts**

- The international commissions organised themselves by defining working groups similar to those of the CIS.
- 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 organisation for the production of the roof report of the characterisation: the Scheldt



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

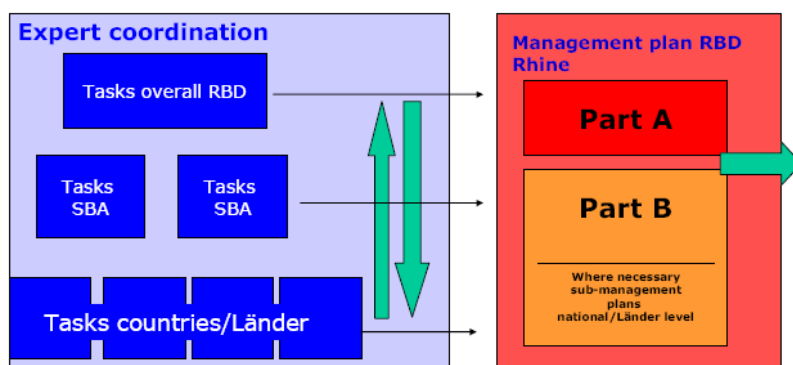


- **The characterisation step led the riparian States to a shared analysis of the water status in the international district.**

• **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 allowed formalising this step, by requiring the States to establish only one management plan for each international district, or failing this to ensure co-ordination of the management 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) concerning the international district as a whole and of the national parts (part B).

- Example of drafting the roof section of the Rhine management plan:



- As the programmes of measures include common measures, the basin organisations underlined many times the added value brought by the WFD as compared to isolated measures.
- The basin organisations **pooled the “acquis” of district characterisations**, 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**. The basin organisations carried out exchanges on the method for developing an international district management plan, based on national/regional plans **and a roof report**. The principle of this roof report: aiming at obtaining an orientation 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 must include shared orientations. 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 different from one international district to another.
- 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 developing 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 ICS has been able to work further on the economic analysis. By 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 ICS economic project should go on with implementing joint socio-economic assessment indicators.

• Follow-up of water resource status: monitoring

- On one hand, intercalibrating the methods for assessing ecological status allows **improving comparison** between the results of the various countries.
- On the other, significant efforts were made (sometimes even before the WFD) to **define monitoring networks on a transboundary basin scale**.
- But it is necessary to pursue the consistency of the systems for follow-up and evaluation. For example, there is a need for co-ordination on the density of the measurement networks and the information gathering frequencies, as, although the WFD defines minimal frequencies to comply with, the countries of a transboundary basin can use different frequencies. For such a purpose, it is often useful to rely on exchange on the basic characteristics of the environments to harmonise the definition of the water bodies at the national borders.
- INBO underlines the importance of continuing the efforts made (sometimes even before the WFD) to define homogeneous monitoring networks on a transboundary basin scale as a common reference system, giving a global vision of the water quality improvement in a district.
- Under the UNECE Water Convention, guidelines on monitoring and assessment of transboundary rivers, lakes and groundwaters have been developed to address the specific challenges of the transboundary context.

« 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.

• Public information and participation

- The EUROPE-INBO Group applauds the first initiatives which allowed developing a **common strategy for public participation** on the scale of some international districts.
- INBO recommends applying this step in all the international districts, while relying on **international commissions**. INBO recommends **adapting the tools** according to the targeted public, geographical scale, consultation objectives and to the territory specificity, especially in the international districts. It also recommends **co-ordinating the**

consultation process and timetable in the international river basin districts and developing the feeling of membership and identity on a basin scale.

• Reporting, the European Information System for Water (WISE), 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 organisations 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.
- 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 organisation 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.
- For the international districts, the reporting obligations resulted in specifying an **overall strategy for pooling data** and for the development of shared information systems. This led to collaboration agreements between services and institutions which have to share information.

• Flood and drought prevention / management

- **Increasing European 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 usefully 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).
- With regard to flood prevention and control, the basin organisations 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.

- **Upstream-downstream common cause should be increased:** sharing data, co-ordinating flood and drought warning networks, co-ordinating the information systems.
- 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 necessary to integrate co-ordinated measures for prevention and adaptation **into the management plans and programmes of measures**.

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 transboundary impacts. The Guidance on Water and Adaptation to Climate Change currently developed under the UNECE Water Convention and its Protocol on Water and Health provides a step-by-step framework for assessing climate change impacts on water resources, identifying measures and adaptation strategies that take into account the transboundary context.

• A driving force for the New Member States and non-Member States

- In transboundary basins, the new dynamics of the WFD motivated the future Member States in their accession to the EU.

Commitment of Romania from the characterisation step onwards [Namur 2005]

Romania started work for 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 while relying on its long tradition of water policy, 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): a long history of water co-operation strengthened by 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.

- The WFD also motivated the non-EU member States to also apply the WFD principles and steps, whereas they were not forced to do it. Indeed, when the basin is partly outside the EU boundaries, the WFD encourages co-operation with third countries to provide a single management plan (art. 13). Thus, the WFD approach extends to the countries neighbouring the EU.

- Although the Directive only concerns a priori the Member States, it constitutes a reference frame that can be transposed to other countries and can be regarded as an example and a guide of good practices to reinforce transboundary management outside the EU, including on other continents: 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, in Central Asia (example: the Irtysh basin).

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

II. CONSTRAINTS AND NEEDS IDENTIFIED BY BASIN ORGANISATIONS

• A huge workload

- The WFD means many new and very important tasks in terms of workload and significance of issues. For the basin organisations 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**. This is all the heavier as work plans, cultural approaches, economic, political situations and working methods are different, as the budgetary constraints are significant and as it is necessary to manage several working languages.
- The language barrier means work slowdown. Data availability/comparability is a limiting factor. Consultations are necessary at 2 levels (internal and between partners). The international commission is a political decision-making body, which complicates the decision-making process. Intense and long dialogues are necessary to achieve convergences. It is necessary to take into account differences in WFD interpretation. The level of ambition of the least ambitious partner determines the final level of ambition of the project («the chain is not more solid than the weakest link»). All this work takes time and generates a cost. **The harmonisation of the approaches and methods is complex. Additional resources are necessary.**

• 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.
- The basin organisations propose the **launching of training and professional development programmes** for the managers and staffs of the basin organisations concerned. Common programmes or seminars would allow exchanging practical experience, better understanding each other and building a common culture.

• 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. *[Some people do not agree with this point : to be discussed in Sibiu]*
- 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 countries neighbouring 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 organisations 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)?

• **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, 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.
- Some Member States and basin organisations developed practical tools but the methods used are different from one country to another. The methodology for disproportionate cost estimate differs, which is likely to raise a competition problem especially in the international river basin districts, for the industrialists in particular, who, according to their geographical location, may be imposed measures for 2015 or profit from time delays.
- The basin organisations noted **a lack of common data and references** (disproportionate cost). The « EUROPE-INBO » Group 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 account of 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 fully involve themselves in their use.

• **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 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.

• Need for strengthening co-ordination of actions

- The basin organisations underlined **the need for coherence of action** in international districts: do we forbid the same things? do we take the same kinds of measures? do we ask for the same efforts? is there the same understanding of the disproportionate cost?
- INBO noticed 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 indicators). The participants encouraged 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), public consultation.

• Need for making up for lost time regarding groundwater

- If joint management of transboundary rivers and lakes is much progressing, that of transboundary aquifers is not. **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: capacity, uses, recharge, fragility, measurement networks, models, studies, etc. such as what is done for the transboundary calc carbon aquifer in the Scheldt district.

- **Interest 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 States, either lately admitted or outside the EU. A more significant financial support from the international or bilateral donors would be necessary. Projects, such as SCALDIT on the Scheldt or the Körös/Crisuri project, substantially increased co-operation between riparian regions. Such projects constitute a solid base to accompany the countries non EU-members in the implementation of integrated water management.
- 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), through projects supported by the European Commission for the implementation of the Framework Directive in these basins. These co-operation programmes could be twinning agreements between countries or basins for example. This also means, whenever necessary, supporting the creation of new International Commissions in these regions.
- Generally speaking, 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 through the increased number of requests for information and partnership concerning the application of the WFD principles. This is observed not only for the countries geographically close to Europe (Central and Eastern Europe, Caucasus), but also for the countries which are less close (Latin America, Africa).

CONCLUSIONS

- The WFD is a tremendous **working framework which allows overcoming cultural differences and bringing people together in spite of the language barrier** (especially with pragmatic approaches). It caused new awareness of the importance and need for sharing information and experience beyond borders.
- A long tradition of transboundary co-operation and water management in Europe and among the new Member States and neighbour countries facilitates WFD implementation. Generally, the importance and dynamism of very practical co-operation, which has already existed for a long time, remain still too little known and must be better emphasised and disseminated. The WFD is an opportunity to strengthen these kinds of co-operation. **The WFD and the UNECE Water Convention are complementary.** The joint implementation of both legal instruments – WFD and Water Convention - can therefore support progress in IWRM of transboundary basins in the EU and beyond.
- 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.**
- 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 is an unequalled effort for good governance on this scale.
- 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.
- The WFD is a great progress in the implementation of integrated water resources management in Europe. It is also a **tool for European integration.** A good example is the management of the Danube which involves 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. In parallel with bilateral agreements, the WFD allowed **integration on the river basin scale at multilateral level.**
- Most managers of basin organisations 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.
- The **guidance documents** produced within the CIS gave a common base for WFD interpretation and implementation.

- 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 ».

- The basin organisations 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.
- Improving WFD implementation could also pass through better account taking of the quantitative aspects which would allow improving integrated management.
- **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 and common reference frames for data management, the introduction of the cost recovery principle, the participation of the interested parties and of the public