

THE UNECE WATER CONVENTION: A UNIQUE FRAMEWORK FOR IMPROVED MANAGEMENT OF SHARED WATERS

Francesca Bernardini, United Nations Economic Commission for Europe

1. UNECE region specificities

In our region, an estimated 120 million people do not have access to safe drinking water and adequate sanitation. As a result, they are more vulnerable to serious water-related diseases, such as cholera, bacillary dysentery, coli infections, viral hepatitis A and typhoid. WHO estimates that unsafe water, sanitation and hygiene results in 18 000 premature deaths each year in Europe, mostly in EECCA and SEE, and mostly children. Cleaner water and better sanitation could prevent over 30 million cases of water-related disease each year in the region.

At present approximately a third of the UNECE population lives in countries suffering from water stress.

At the same time some UNECE countries are suffering from more floods than ever before. During the last five years Europe suffered over 100 major damaging floods with severe economic and social impact (e.g. catastrophic floods along the Danube and Elbe rivers in summer 2002, in northern Caucasus in July and August 2002, in the Alps in summer 2005 and along the Danube in the spring 2006). Since 2000 floods in Europe have caused at least 700 deaths, the displacement of about half a million people and at least EUR 25 billion in insured economic losses

Many countries depend on groundwater to meet the demand for drinking water, and are quickly depleting precious aquifers, especially around cities. Today, the water supply of some 140 million European city dwellers comes from overexploited groundwater resources. The needs of irrigation agriculture, too, make excessive demands on the freshwater available. These processes are inflicting irreversible damage on our environment, lowering groundwater tables and threatening natural wetlands as well as causing salt-water intrusion into coastal aquifers. In Spain, for instance, more than half of the abstracted groundwater volume is obtained from areas facing overexploitation problems.

Despite this critical situation, water is still being wasted through inappropriate irrigation practices and huge water losses in the distribution systems. Most countries lose an astounding 30% of clean drinking water in the their supply networks, a figure that in some cases can soar to 60% or more.

Attempts at solving these complex problems in Europe are further complicated by the essentially transboundary nature of water resources. The region has several hundred transboundary water bodies, including 200 transboundary rivers, 40 lakes and around 120 transboundary aquifers. Twenty European countries depend for more than 10% of their water resources on neighbouring countries and five countries draw 75% of their resources from upstream countries. Hungary and Romania, for example, receive between 50 and 75 percent of their total water resources from neighbouring countries.

2. UNECE response: from non-binding to binding instruments

The UNECE region has certainly the advantage of a long tradition of transboundary water cooperation and joint management, dating back to the 70s, when UNECE member states started developing non-binding international instruments, such as declarations, strategies, and policy recommendations on different aspects of water management. But, these soft-law instruments gave rise to piecemeal solutions for many transboundary catchment areas. Cooperation was still based on

differing underlying principles as there was a tendency to choose a sub-set of recommendations, out of the comprehensive package.

In the 1990s, the process of changes in Europe posed new challenges to regional cooperation, in general, and cooperation on environment and security, in particular. With the emergence of new countries, new frontiers cut through Europe and waters which were previously managed at the national level required a new framework for interstate cooperation. One example is the Danube river basin, the largest European transboundary river basin, which is now shared by 19 countries. Other examples include the rivers Daugava, Dnepr, Kura, Syr Darja and Amu Darja as well as Lake Peipsi, which became transboundary waters after the break up of the Soviet Union.

That need has been at the root of a new development: the drawing up of a legally binding convention under the auspices of UNECE, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, also known as UNECE Water Convention.

3. The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes

The UNECE Water Convention was adopted in Helsinki in 1992 shortly before the Rio Conference and entered into force in 1996. To date it has been ratified by 34 UNECE countries and the European Community.

The Convention provides a legal framework for regional cooperation on shared water resources (rivers, lakes and groundwaters). Several bilateral or multilateral agreements between European countries are based on its principles and provisions. A first example was the Danube River Protection Convention in 1994, which develops the Convention's provisions in a more specific subregional context. Other examples are the agreements on the rivers Bug, Meuse, and Scheldt, on Lake Peipsi, as well as on Kazakh-Russian and Russian-Ukrainian transboundary waters. The most recent examples include the 1999 Rhine Convention and the European Union's Water Framework Directive.

Integrated water resources management

The Convention's primary purpose is to strengthen local, national and regional measures to protect and ensure the ecologically sustainable use of transboundary surface waters and groundwaters.

The management of transboundary waters, however, cannot be divorced from the management of national water resources. Consequently, the Convention requires its Parties to apply its principles when developing and implementing local and national policies, action plans, programmes and practices as well as transboundary ones.

It is widely recognized that the traditional fragmented sectoral approach to water management is inappropriate. So the Convention promotes a holistic approach taking into account the complex interrelationship between the hydrological cycle, land, flora and fauna, based on the understanding that water resources are an integral part of the ecosystem, a natural resource and a social and economic good.

Integrated water resources management is a necessary departure from the earlier focus on localized pollution and the isolated management of separate components of the ecosystem, and from planning provisions, which often ignore the profound influences of land use on water quality. This new approach forms a framework for decision-making that compels managers and planners to cooperate in devising integrated strategies for action.

To this end, the Convention envisages two major categories of obligations. The first, more general, obligations apply to all Parties. The second are more specific and must be implemented by Parties sharing transboundary waters.

General obligations of the Convention

Parties are obliged to prevent, control and reduce transboundary impacts, i.e. adverse effects on the environment. These can be effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments and other physical structures, and the interaction among these factors. They also include harm to the cultural heritage or socio-economic conditions resulting from alterations to those factors.

The Parties must ensure that transboundary waters are managed in a way that is ecologically sound and rational, that they are preserved and protected, and that their use is reasonable and equitable. They must also preserve and, where necessary, restore ecosystems. The Convention also stresses that measures to prevent, control and reduce water pollution should preferably be taken at source.

The precautionary principle and the polluter-pays principle should guide the application of such measures, and all water management should meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

To prevent, control and reduce transboundary impacts, the Parties must license and monitor wastewater discharges. Emission limits for discharges from point sources should be based on the best available technology, and biological treatment at least must be applied to municipal waste water. The Parties must also develop and apply best environmental practices to reduce inputs of nutrients and hazardous substances from agriculture and other diffuse sources.

The Parties are also required to effect environmental impact assessment and sustainable water resources management, taking into account the ecosystem approach. The Convention expects its Parties to draw up contingency plans, set water-quality objectives and minimize the risk of accidental water pollution.

Obligations on Parties sharing transboundary waters

Water management needs to be tailored to the specific conditions of the many transboundary catchment areas in the region. Therefore, the Convention gives a framework for action specific to these individual transboundary basins and requests its Parties to enter into river basin agreements appropriate to its provisions.

The Convention also lays the responsibility for setting up joint bodies on the Parties that are riparian to the same transboundary waters. Such bodies can be bilateral or multilateral river or lake commissions. This is the case, for example, for the rivers Elbe, Danube, Meuse, Moselle, Oder, Saar and Scheldt and for the lakes Geneva, Ohrid, Peipsi and the Great Lakes in North America. There can also be other institutional arrangements for cooperation, such as meetings of plenipotentiaries, as is the case with some transboundary water agreements in Eastern Europe.

It is up to these joint bodies to:

- Identify, draw up inventory and exchange information on the pollution sources;
- Elaborate joint monitoring programmes;
- Set emission limits for waste water;
- Elaborate joint water quality objectives;

- Develop concerted action plans for the reduction of pollution loads;
- Establish warning and alarm procedures;
- Represent a forum for the exchange of information;
- Cooperate with other joint bodies in the same basin, and with coastal States that could be affected.

Joint bodies also help to develop integrated water resources management and water efficiency plans in a transboundary context as stipulated in the Johannesburg Plan of Implementation adopted at the World Summit on Sustainable Development in September 2003.

A particular challenge for joint bodies is to provide a forum for sharing information on best available technology and on existing and planned uses of water and related installations. Joint bodies are responsible, in particular, for establishing warning and alarm systems and for mutual assistance. They also participate in environmental impact assessments following, for example, the provisions of the UNECE Convention on Environmental Impact Assessment in a Transboundary Context.

4. Lessons learned from the Convention's implementation

The lessons learned below are built on 15 year-experience of cooperation under the UNECE Water Convention that pointed out a number of peculiarities of transboundary water management as well as possible approaches to improve transboundary cooperation. These patterns, typical of transboundary cooperation, can be very relevant to improve integrated water management also at the national and local level. Achieving transboundary cooperation is always a long and complex journey, for which there is no single path and few short cuts. Instead, there are many routes that can be followed and each cooperation arrangement has to be tailored to the basin's characteristics and reflect a wide range of environmental, hydrological, political, economic, and cultural circumstances.

Law for good water governance

The role of law is fundamental for good water governance and a sound legal framework is essential for stable and reliable cooperation. Transboundary waters agreements need to be concrete, setting out enforcement measures, incorporating dispute resolution mechanisms, identifying clear yet flexible water allocations and water-quality standards, providing for mutual assistance in case of extreme events, taking into account hydrological events, changing basin dynamics and societal values. Finally, they should also consider arrangements for encouraging water-related economic activities, for cost-sharing arrangements and for other aspects of broader economic activity.

The Convention provides a comprehensive and continuously self-maturing framework for transboundary water management. In the relatively short period since it came into force, great strides have been taken towards the Convention's principal objectives. Several basin-specific agreements have been concluded under the Convention's auspices. The Convention's influence has been particularly useful since the break-up of the former Soviet Union in helping countries in Eastern Europe, the Caucasus and Central Asia to draw up agreements regulating the waters which the creation of new international boundaries have made transboundary.

Another major contribution to the creation of a water management regime has been the adoption of non-binding instruments, such as guidelines and recommendations. These make it easier to apply the Convention by giving its Parties clear and precise parameters for action. They respond to the varying needs of Parties for guidance on several issues, such as the ecosystem approach in water management, the prevention and control of water pollution from fertilizers and pesticides in agriculture, the prevention of water pollution from hazardous substances, the monitoring and

assessment of transboundary rivers, groundwaters and lakes, sustainable flood prevention and public participation.

The progress achieved by Ukraine and Moldova under the joint UNECE-OSCE project on the Dniester River Basin in defining a framework for transboundary cooperation and joint integrated water resources management is certainly exemplary for the region and teaches many lessons and good practices on how such a framework should be developed.

Institutional arrangements

Suitable institutional arrangements at the national and transboundary levels are a precondition for sustainable management of transboundary waters. The setting up of joint bodies among riparian States, such as river or lake commissions, with strong enforcement capacity is fundamental to ensure cooperation among various governmental entities and management of shared resources. Apart from riparian States, a variety of actors – local institutions, NGOs, research institutions, private sector participants, and donors – are involved in the cooperation on transboundary waters. Vertical and horizontal integration in water resources management is a necessity. The joint bodies are the framework where such integration takes place.

For the Convention, one of the main challenges is the undefined, shared responsibilities within national authorities and the lack of coordination between them. In EECCA, the ongoing reform of ministerial environmental departments and water agencies is an opportunity to harmonize responsibilities for water management and improve cooperation among involved entities and to designate appropriate institutions. On the other hand, a never-ending reform of institutions and their responsibilities and assignments could seriously hamper the continuity and sustainability of cooperation and the implementation of the Water Convention.

Capacity of staff of joint bodies is also crucial. Staff should have a broad competence and skills that reach across disciplines. The capacity of managers of transboundary waters, especially at the local level, should be strengthened to raise understanding of the complexity of managing shared water resources and to strengthen their negotiation, hydro-diplomacy and conflict resolution skills.

The establishment in July 2006 of the Chu Talas Commission between Kyrgyzstan and Kazakhstan, with the support of UNECE, OSCE and UNESCAP, is a remarkable example of mutually beneficial way of sharing responsibilities and promotion of constructive cooperation.

Exchange of information and joint monitoring and assessment

Information based on well-organized monitoring programmes is the key prerequisite for accurate assessments of the status of water resources and the magnitude of water problems. These assessments are essential for preparing proper policy actions at the local, national and transboundary levels. Moreover, management of transboundary basins shared by two or more countries calls for comparable information. There is a need for a common basis for decision-making, which requires harmonized and comparable assessment methods and data management systems as well as uniform reporting procedures.

Exchange of information, including information on pollution caused by accidents and on infrastructure projects that could affect downstream countries, is key to building trust and shared vision among riparian countries.

In many EECCA and SEE countries there was a significant decline in water quality monitoring in the 1990s. Since then improvements have been observed but in several countries water monitoring is still inadequate to obtain a clear picture of the status and trend in water resources.

Integration: a major challenge requiring to act in partnership

One of the main challenges for making the management of water resources sustainable is improving the integration of environmental aspects in sectoral policies. It is a difficult task as it involves many actors with different “weights”, different agendas and priorities, e.g. Ministries of environmental protection, physical planning, agriculture, forestry, health, public works, economy, tourism and finance.

The result of integrated water management should be the maximization of the resultant economic, social and environmental benefits. It takes time and deep understanding of the problems of the different stakeholders to reach an agreement on:

- A shared vision: a general political recognition of the problem and an agreed scientific description of it.
- Clearly defined long-term and medium-term goals which are both challenging and attractive.

This requires a new culture of water management calling for opening up of cooperative processes to all main stakeholders as partners: governments, local authorities, business and industry, banking institutions, non-governmental organisations and the public at large.

The common will to cooperate and to resolve existing is a prerequisite for a successful participatory approach. Only negotiations can foster confidence and mutual understanding. Negotiations build reciprocity: participants realize that they are interdependent on each other and cannot effectively exercise unilateral control. Reciprocity means that each participant considers the interests of the other participants, gives in on points that are more important for the others than for themselves and trust that the others do the same.

The shift of conflicts from the interstate to intrastate and local levels also highlights the importance of involving local stakeholders in the efforts to build cooperation and of investing in building local capacity, by strengthening local water user associations and civil society groups, for example.

Moreover, to build sustainable cooperation and to avoid conflicts at the interstate and intrastate levels, the broader social and political context must be understood.

Step-by-step approach

The development of cooperation and joint management of shared water resources is a long process and the wish to obtain immediate results can be misleading and ruinous. At the same time action should not be postponed. A sustainable solution is to adopt a step-by-step approach. It requires agreeing on a prioritization of issues and efforts, and a progressive and rational widening of the scope of water management in accordance with the resources available.

Another crucial requirement is the assessment of the effectiveness of implemented programmes, often a weak point in water management. More efforts should be devoted to set priority objectives and identify indicators of progress.

Information on the Convention and related activities can be found at
<http://www.unece.org/env/water/>