



Seventh “Environment for Europe” Ministerial Conference

**Astana, Kazakhstan
21–23 September 2011**

**Strengthening water management and transboundary water
cooperation in Central Asia: the role of UNECE
environmental Conventions**

Submitted by UNECE

INFORMATION DOCUMENT



UNITED NATIONS

Economic Commission for Europe

Seventh “Environment for Europe” Ministerial Conference

Astana, 21–23 September 2011

Item 3 and 4 of the provisional agenda

Sustainable management of water and water-related ecosystems

Sustainable management of water and greening the economy

STRENGTHENING WATER MANAGEMENT AND TRANSBOUNDARY WATER COOPERATION IN CENTRAL ASIA: THE ROLE OF UNECE ENVIRONMENTAL CONVENTIONS *

EXECUTIVE SUMMARY

Water resources in Central Asia

The collapse of the Soviet Union in 1991 resulted in the emergence of five sovereign States in Central Asia — the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan and the Republic of Uzbekistan. As a result, the large rivers flowing through the territories of these countries have become transboundary rivers, with their catchment areas and existing water and energy infrastructure now located in the five new States. Central Asian countries now face the challenging task of finding mutually beneficial solutions for the management and protection of water resources through cooperation.

The most challenging situation with the management of transboundary water resources has emerged in the basins of the Amu Darya and Syr Darya Rivers, the largest rivers in Central Asia which flow into the Aral Sea. Implementation of large-scale plans for the development of hydropower in the upper reaches of the Amu Darya and Syr Darya River basins is likely to further aggravate contradictions between the upstream and downstream countries regarding the types and regimes of water use to pursue, if no balance of interests, acceptable to all States, is found. Moreover, an increase in the river flow fluctuations and expected decrease in river flow in the Aral Sea Basin influenced by climate change, along with the growing demands for water, will probably lead to greater competition for water between Central Asian countries. In addition, Afghanistan is projected to increase its use of the river flow of tributaries to the Amu Darya River.

In the early 1990s, Central Asian States had concluded agreements and established a system of regional organizations for water management, which is now functioning under the auspices of the International Fund for Saving the Aral Sea. Today, however, it is often claimed that the current legal and institutional frameworks for regional water resources

* The document was prepared in the framework of the UNECE Project “Regional Dialogue and Cooperation on Water Resources Management”.

management require strengthening to be able to cope with the existing and emerging challenges.

Although issues of inter-State cooperation on the use of transboundary water resources and, primarily, issues of water allocation, are at the forefront of inter-State relations in Central Asia, the need for broader comprehensive inter-State cooperation on the protection of water resources is also receiving a growing recognition. Such cooperation needs to address water quality and conservation of ecosystems, maintenance of ageing hydro-technical facilities and the safety of tailings dams, measures to adapt to climate change, groundwater management and a number of other substantive issues. There is also a need to improve the efficiency of the everyday mechanisms of transboundary water cooperation, including exchange of information, monitoring, accident prevention and response, and participation of stakeholders. Water management requires strengthening also at the national level. Major principles of integrated water resources management still have to find their way into people's thinking and mindsets, legal and institutional frameworks, and practice.

UNECE environmental conventions: part and parcel of international law

Being UNECE member States, Central Asian countries can benefit from participation in the UNECE environmental conventions and protocols. Although each Central Asian country participates in at least one UNECE convention, with Kazakhstan being a Party to all five, the knowledge of UNECE environmental instruments and the opportunities they provide is often limited in Central Asia. In relation to some UNECE instruments, poor understanding of their obligations sometimes results in misinterpretation of their key provisions.

Five environmental conventions for which UNECE serves as a secretariat — the Convention on Long-range Transboundary Air Pollution (LRTAP Convention, 1979), the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention, 1991), the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention, 1992), the Convention on the Transboundary Effects of Industrial Accidents (Industrial Accidents Convention, 1992), and the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention, 1998) — have been developed by UNECE member States, but they are based on the rules and principles and constitute an integral part of international law.

Presently, the UNECE environmental instruments are regional instruments with States Parties coming from the UNECE region only. However, some UNECE instruments may reach a global scope, insofar as they are opening up to universal participation. For example, the Espoo Convention and the Water Convention have been amended to allow for accession by non-UNECE countries upon approval by their respective Meeting of the Parties. This is particularly important for the Central Asian region, as it makes these Conventions a potential legal framework for cooperation with their non-UNECE neighbours.

In the main, and consistent with their nature as “framework” instruments, the UNECE environmental Conventions lay down general principles, obligations and requirements for their Parties that have been further developed through the adoption of subsequent protocols as well as “soft-law” instruments in the form of guidelines and recommendations. A special feature of the Water Convention that distinguishes it from many other framework-type instruments is that its objectives are achieved primarily through the conclusion by the Parties

to the Convention of separate bilateral and multilateral agreements with respect to specific transboundary waters.

UNECE environmental Conventions: the framework to advance transboundary water cooperation

While the Water Convention is the key instrument for developing cooperation on the management and protection of transboundary waters, the other UNECE environmental Conventions build a comprehensive framework that *complements and supports* the provisions of the Water Convention in this area. Primarily the Espoo Convention, the Industrial Accidents Convention, and the Aarhus Convention, greatly contribute in the pursuit of the goals of the Water Convention, strengthening transboundary water cooperation in the UNECE region and in specific transboundary basins.

In the area of transboundary water cooperation one can identify a common normative framework in three UNECE environmental Conventions — the Water Convention, the Espoo Convention and the Industrial Accidents Convention. This common normative framework is based on several key principles and obligations: i.e., the no-harm rule; the equitable and reasonable utilization principle (enshrined in the Water Convention and corroborated by the principle of sustainability in the Espoo and Industrial Accidents Conventions), the principle of cooperation and the principle of the peaceful settlement of disputes.

In these UNECE Conventions, the general obligation to prevent, control and reduce transboundary impact (so-called no-harm rule) is expressed in terms of “due diligence”, as opposed to absolute obligations. Its due diligence nature is determined by the duty to take “all appropriate measures” aimed at prevention, control and reduction of transboundary impact. The concept of “appropriateness” of the measures required involves a significant amount of relativity and presumes that measures should be proportionate to the capacity of the Party concerned, as well as to the nature and degree of the risk of occurrence of transboundary impact in the light of the specific circumstances.

The three Conventions under consideration have inherently the same definitions of “transboundary impact” and apply the same approach to defining its threshold. The Water Convention uses the expression “significant adverse effect”, which provides an abstract standard of guidance for the assessment of the acceptable threshold of harm. The concrete assessment of the “significance” threshold depends on the specific situation in the catchment area, including the specific circumstances pertaining to the Riparian Parties involved. The Espoo Convention (by defining the list of activities that are likely to cause significant adverse transboundary impact) and the Industrial Accidents Convention (by defining the quantities of hazardous substances) provide useful parameters for the determination of the respective thresholds.

The principle of equitable and reasonable utilization, provided for in the Water Convention and generally recognized as part of international customary law, is particularly relevant in cases where there is a “conflict of uses” between riparians on a transboundary watercourse. Practical implementation of this principle requires a case-by-case assessment, mutual exchange of data and information on a basin, as well as consultations and cooperation.

Another key obligation — the obligation of cooperation — is instrumental to full compliance with the obligation of prevention, control and reduction of transboundary impact and the principle of equitable and reasonable use.

UNECE environmental Conventions: cooperation framework to address specific problems

The UNECE environmental instruments themselves do not offer ready-made solutions to specific problems; rather, their implementation ensures the continuous cooperation of States under common legal frameworks, towards agreed objectives, and with support from their institutional mechanisms. Such cooperation ultimately leads to finding solutions to specific problems at the local, national and transboundary levels.

With regard to the regulation of *water quantity and water quality issues*, the UNECE Water Convention takes an integrated and cross-sectoral approach — a concept which is strongly corroborated also by other UNECE environmental Conventions and protocols. The central aim of such an approach is to strengthen local, national and regional measures to prevent, control and reduce transboundary impacts and to ensure sustainable management of transboundary waters. An integrated approach to prevention, control and reduction of transboundary impact takes into account water quantity as well as water quality — the two being strongly interrelated — the environment in general, human health and socio-economic conditions, and includes the notion of managing shared waters in a reasonable and equitable manner. Under the principle of equitable and reasonable use, one of the core principles of the Water Convention, utilization of a water body that is incompatible with its preservation as a natural resource — i.e., which leads to the depletion of the resource — does not qualify as “equitable and reasonable”. Although water-quantity issues are not specifically referred to in the Water Convention’s text, they may cause transboundary impacts within the meaning of the Convention and therefore are areas where the Parties have to take appropriate measures to prevent, control and reduce transboundary impact.

On the issue of *drinking water supply and sanitation*, the legal framework provided by UNECE environmental instruments has at its heart a specific instrument on this topic, the Protocol on Water and Health to the Water Convention. The Protocol further develops the integrated approach to the management of transboundary waters and, more specifically, the obligation to set water-quality criteria and objectives. The Protocol is the first international agreement adopted specifically to ensure, by linking water management and health issues, the adequate supply of safe drinking water and adequate sanitation. The core obligations of the Parties to the Protocol — to set and implement targets with regard to the quality of drinking water, bathing water and wastewater, to establish and maintain national and/or local surveillance and early warning systems to prevent and respond to water-related disease, and to cooperate and assist each other in the implementation of the Protocol’s provisions — serve to translate the human right to water into reality.

The UNECE instruments offer a sound framework for cooperation at the transboundary level on adaptation of water resources to *climate change*. The Water Convention includes the precautionary principle, which implies taking action even before adverse impacts are fully proven scientifically. The Convention facilitates transboundary cooperation on adaptation to climate change through its provisions and mechanisms for institutional cooperation. Also, the Espoo Convention may provide a framework for ensuring that activities proposed within the

framework of a country's adaptation strategies do not cause significant adverse transboundary impacts in neighbouring countries. Its Protocol on Strategic Environmental Assessment introduces climate change considerations into the development of plans and programmes. The issue of climate change best illustrates the flexibility and responsiveness of UNECE environmental instruments. Several soft-law instruments (in particular, the *Guidance on Water and Adaptation to Climate Change*) have been developed and a number of specific projects are running under the umbrella of the Water Convention to assist countries in pursuing effective adaptation and to strengthen their capacity in this area.

The provisions of the UNECE environmental Conventions, in particular the Water Convention, provide a good framework for transboundary cooperation on *floods*. This includes the obligations to prevent and control transboundary impact; to exchange information; to develop contingency planning; to establish joint monitoring programmes; to inform of critical situations; to operate warning and alarm systems; and to notify and consult with each other when planning new activities which may cause significant transboundary impacts. Several soft-law instruments were developed under the auspices of the Water Convention to further specify the respective legal obligations of Parties, to promote exchange of good practices for flood prevention and to assist countries in the shift from the current perspective of mere "flood defence" to an integrated approach to flood management.

Groundwater management is addressed in several UNECE environmental instruments since groundwater abstractions — both from domestic and transboundary aquifers — cover a substantial share of the overall amount of water supplied to the population and to various economic sectors. The distinguishing features of groundwaters, in particular, the difficulty of their identification and their vulnerability in case of pollution, in connection with their non-renewable or less renewable character with respect to surface waters, call for specific regulatory attention to ensure proper and effective application of the UNECE environmental instruments, in particular the Water Convention, in this area. In particular, the due diligence standards making up the obligation of prevention, control and reduction of transboundary impact in relation to groundwaters are higher and more specific than those applicable to surface waters.

The UNECE environmental instruments provide for a wide range of measures aimed at conserving and restoring *ecosystems*. These include the establishment of water-quality objectives and criteria, development of concerted action programmes for the reduction of pollution, environmental impact assessment and strategic environmental assessment. The Espoo Convention and, indirectly, the Water Convention are also important instruments for the protection of the *marine environment*.

The UNECE environmental Conventions place a strong emphasis on institutional cooperation between their Parties in the framework of so-called "*specific agreements and joint bodies*" designed to support cooperation on the Convention's implementation and application, between two or more Parties. Such an emphasis reflects the framework nature of the Conventions, which establish basic regulatory, procedural and institutional parameters for bilateral and multilateral cooperative activities and measures, with a view to pursuing the main objectives of the Conventions. Specific agreements and joint bodies allow for adapting the provisions of a Convention to specific circumstances of bilateral and multilateral cooperative activities. The principles of "equality", "reciprocity" and "good faith", enshrined with some minor variations in the UNECE Conventions, are to be applied to bilateral and

multilateral cooperation in the form of specific agreements. While other conventions strongly favour bilateral and multilateral agreements to achieve strengthened implementation, the Water Convention provides for the mandatory conclusion by Riparian Parties of transboundary water agreements and requires the establishment of joint bodies.

The UNECE environmental Conventions have different levels of detail with regard to the regulation of new projects and activities — so-called “*planned measures*”. Here, the procedures and mechanisms of the Espoo Convention provide a comprehensive procedural set for implementation of obligations under this and other UNECE environmental Conventions. The UNECE Conventions provide for the obligation of a Party planning an activity to notify the affected Parties and to consult on the potential effects of such activity. However, they leave the decision-making power with the Party planning the activity, which makes the final decision. As clearly enunciated in the Espoo Convention, the Party of origin shall ensure that in the final decision “due account” is taken of the outcome of the environmental impact assessment, comments received from the public of the affected Party and the outcome of the consultations between the Parties. Obligations to notify and consult on “planned measures” are applicable to a selected number of activities which may have a significant impact on the environment.

Efforts to develop joint programmes for *monitoring* the conditions of transboundary waters and to carry out joint assessments contribute to building trust among riparian countries and lead to the strengthening of transboundary water cooperation. In this area, the Water Convention obliges its Parties to establish programmes for monitoring the conditions of transboundary waters, therefore requiring countries to provide for effective monitoring systems for the national parts of transboundary basins. The Convention also imposes an obligation on Riparian Parties to establish and implement joint programmes for monitoring the conditions of transboundary waters, as well as to carry out joint or coordinated assessments of the conditions of transboundary waters. Countries may pursue a step-by-step approach in implementing these obligations, depending on available resources and human capacity.

The UNECE Conventions provide for the obligation to *exchange information*. Regular exchange of data and information on transboundary waters lays down the foundations for cooperation to ensure effective protection of such waters, management of water quality and quantity, as well as the prevention, control and reduction of transboundary impacts. Exchange of information under UNECE Conventions may take place in a variety of forms, in particular within the framework of the relevant specific agreements and/or through a joint body. The UNECE Conventions are rather specific with regard to the content of the information to be exchanged. In addition to the obligation to exchange reasonably available data, i.e., to ensure regular two-way flow of existing information, the obligation to exchange information also includes the obligation to provide information upon request. In line with the core obligation of cooperation “on the basis of equality and reciprocity”, the obligation to exchange data under the Water Convention and to endeavour to provide information upon request exists for all Riparian Parties, whether situated upstream or downstream.

The Industrial Accidents Convention is the central framework for the prevention of *accidental pollution*, preparedness and response, including accidents on transboundary waters. In addition to the obligation to identify hazardous activities, the Industrial Accidents Convention includes obligations to ensure emergency preparedness, to establish an industrial

accident notification system, to notify affected Parties in case of an industrial accident and to take adequate response measures. In the area of water management and transboundary water cooperation, these requirements are corroborated by the Water Convention's obligations to develop contingency planning for transboundary waters, to inform other Riparian Parties of critical situations, to set up coordinated or joint warning and alarm systems and to provide mutual assistance upon request. Joint activities of these two Conventions focus on the prevention of industrial accidents in transboundary river basins. Safe operation of *tailings management facilities* have been addressed by the two Conventions through soft-law guidelines on this issue.

With regard to the issue of hydropower, it is important to stress that the UNECE environmental Conventions do not prohibit building new *dams*, including large dams. There are dams all across the UNECE region, and new dams are being built in the countries participating in UNECE Conventions. The Conventions require that certain procedural steps are followed and certain obligations are implemented when a new dam is planned to be built or a major change in an existing dam is planned. The application of these requirements leads to better quality of decisions, improves environmental protection, enhances mutual understanding among riparians and contributes to the prevention of differences and disputes. The key obligation that international law imposes on States in this area is to take all necessary measures in order to maintain and protect water installations on international watercourses. Under the Water Convention, this obligation is covered by the core obligation to prevent, reduce and control transboundary impact.

With regard to the issue of *navigation* and the environment, the legal basis for cooperation is provided by UNECE legal instruments on inland water transport and on the environment. Even though navigation is not specifically referred to in the Water Convention, its principles of reasonable and equitable utilization and of the prevention of significant transboundary impact provide the framework for balancing navigation with other uses of transboundary waters. Catchment-wide thinking and transboundary cooperation in the planning of navigation-related activities are increasingly called for.

The key instrument for the implementation of the rights to access to environmental information, *public participation* and access to justice in environmental matters is the Aarhus Convention. Adopted in 1998, it took into account the norms and experience of the other UNECE Conventions in advancing the role of the public in various areas of environmental protection. Nowadays the relevant provisions of preceding UNECE environmental Conventions are increasingly interpreted and applied in the light of the concepts and principles of the Aarhus Convention. This is true also with regard to public participation in water management and transboundary water cooperation.

On the issue of *civil liability*, the UNECE legal framework includes the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the Industrial Accidents Convention and the Water Convention. The Protocol, not yet in force, provides for a comprehensive regime for civil liability and for adequate and prompt compensation for damage resulting from transboundary effects of industrial accidents on transboundary waters.

All UNECE environmental Conventions contain provisions on *dispute settlement*. Although the Conventions explicitly mention negotiations and also provide for an "opt in" formula for

compulsory arbitration or adjudication, their dispute settlement provisions reflect the freedom of Parties to choose the means of dispute settlement acceptable to them. It is important to emphasize that the tasks of the joint bodies for bilateral and multilateral cooperation, especially under the Water Convention, usually cover the widest range of prevention and joint management measures which contribute to conflict prevention and the avoidance of disputes.

UNECE environmental Conventions: ready to help

By becoming a Party to a UNECE environmental Convention, a country becomes part of its institutional regime, based on the Meeting (or Conference) of the Parties, its Bureau, subsidiary bodies and the secretariat. Such institutional framework places great emphasis on implementation: it assists Parties through the exchange of experience, capacity-building and development of soft-law guidelines and recommendations.

Each UNECE environmental Convention has developed its own tools to assist implementation. Capacity-building seminars, awareness-raising trainings, pilot projects, advisory services and assistance programmes and guidance instruments tailored to specific subregions are set up under these Conventions.

Non-Parties to UNECE environmental Conventions, including in Central Asia, take part in many activities under the Conventions' umbrella and often become the beneficiaries of capacity-building activities and projects of the UNECE Conventions. However, non-Parties have a limited capacity to initiate a new area of work for the Convention, and do not participate in the decision-making process in the bodies of the Conventions.

UNECE environmental Conventions: for Central Asia

The UNECE environmental Conventions have been implemented for more than a decade by other countries in the UNECE region. Their institutional infrastructure promotes region-wide and subregional cooperation, information sharing, exchange of experience and technical assistance, and provides help in accession and implementation. The collective body of experience, embodied in the Meetings/Conferences of the Parties and their subsidiary institutions, is a guarantee against biased interpretations of their provisions. The diversity of parties to the UNECE environmental instruments demonstrates their usefulness for all countries, regardless of the level of social and economic development or the availability and quality of water resources.

The central UNECE instrument for water management and transboundary water cooperation — the Water Convention — has been the basis for many bilateral and multilateral transboundary water agreements across the UNECE region and for the work of numerous joint bodies for transboundary water cooperation. It enshrines a balanced approach, based on equality and reciprocity, which offers benefits and places similar demands on upstream as well as downstream countries.

The UNECE environmental instruments are an authoritative and coherent legal framework — in other words, common “rules of the game” — which can be applied as an appropriate overarching legal framework for water management and transboundary water cooperation in Central Asia.

Central Asian countries are encouraged to use the UNECE environmental instruments and benefit from their tools and mechanisms. Central Asian States which are not Parties to respective instruments can, among others, invite awareness-raising missions and events to be organized by respective Conventions and protocols, participate in the capacity-building programmes and activities under UNECE environmental instruments, and attend meetings under these instruments. Diagnostic studies, assessment of national legislation and cost-benefit analyses can also be initiated as instruments to inform the decision-making processes when considering accession. Although UNECE environmental instruments represent a coherent framework, step-by-step accession to individual instruments is reasonable and practical, with accession to the whole system as a long-term goal. These efforts should be supported by capacity-building activities on international water law in Central Asian countries.