Transboundary Water Management in Eastern Europe, the Caucasus and Central Asia

Role of NGOs in promoting Integrated Water Resources Managment

Lake Peipsi

River Dniester

River Danube
Lower Danube Delta

River Kura-Araks

Rivers Chu and Talas

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Integrated Water Resources Managment

Imprint

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FOREWORD

This publication is based on the presentations and other materials presented at the summer school "Transboundary water management and sustainable development in Eastern Europe, Caucasus and Central Asia", organized by Peipsi Center for Transboundary Cooperation (Peipsi CTC); in Nina village, Estonia on 14-18 August 2011.

Peipsi CTC has been organising cross border cooperation summer schools since 2004. In 2011, around 35 water experts, representatives of NGOs and state authorities from Estonia, Russia, Kyrgyzstan, Kazakhstan, Moldova, Ukraine, Belarus, Georgia, Armenia gathered in Nina village, on the shores of Lake Peipsi, to present their case studies and discuss regional challenges on transboundary water management.

Special thanks to all the presenters of the summer school and authors of articles.

ESTONIAN DEVELOPMENT COOPERATION

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Water management and transboundary waters

Water is an essential natural resource. In some regions floods frequently threaten lives and harvests while there are many areas which suffer from drought all the time – fresh water is not distributed evenly in time and space. Water and its management, protection and distribution remains one of the 21st century's most important local, regional and national as well as transboundary issues.

Water is important for household as well as industrial use; it can be the source of power, facility for tourism services, and often, especially in less developed regions, the locals' main income comes from fishing and farming. Thus, sustainable water resources management is particularly important in transitional countries. It can be very challenging when more than one country is responsible for it. Transboundary water management presents a number of challenges to politicians, planners, administrators and scientists due to the involvement of different political and administrative systems. In fact, transboundary basins cover some 45% of the Earth's continental land surface (excl. the Antarctic), thus clearly indicating the global dimension of the problem[1].

Generally speaking, transboundary water management is faced with the task of successfully solving complicated problems dependent on the specific conditions created by the interaction of two or more political systems. Within the EU, these differences in the political systems between the member states are not as dramatic as they are on the EU's external borders, such as transboundary waters located in the border of the EU and Russia or other New Independent States.

Legal framework

Traditionally, the only means available for regulating the behaviour of nation states has been through a system of international law, codified in treaties and conventions. Since the 20th century more than 170 multilateral environmental treaties and instruments have been established but the vast majority of these agreements are regional in their scope. During the last decades, the UNECE and other organizations have advocated a coordinated regional approach to resolving water problems. The new paradigm of cooperation was based upon several principles: the prevention of conflicts over water in accordance with the principles of reasonable and equitable use of transboundary waters, the polluter-pays principle, the precautionary principle and the ecosystem approach in water management[2]. These principles are built into the basis of the UNECE *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (Water Convention), which was adopted in Helsinki in 1992 and entered into force in October 1996. The convention covers the following themes:

- Prevention, control and reduction of transboundary impacts;
- Cooperation on research and development of techniques for the prevention, control and reduction;
- Exchange and protection of environmental information.

According to the Water Convention, transboundary waters are any surface or ground waters which mark, cross or are located on boundaries between two or more states; wherever transboundary waters flow directly into the sea, these transboundary waters end at a straight line across their respective mouths between points on the low-water line of their banks.

The *Water Convention's Protocol on Water and Health* (1999) addresses the prevention, control and reduction of water-related diseases.

Within the European Union, the Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council, establishing a framework for Community action in the field of water policy), entered into force 22 December 2000, plays an essential role in water management. The Water Framework Directive requires the EU member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from the shore) by 2015. The Directive also requires member states to establish river basin districts and a river basin management plan for each of these. The Directive envisages a cyclical process where river basin management plans are prepared, implemented and reviewed every six years. In addition to other EU WFD principles, it also emphasizes the importance of the member states in forming cooperative management institutions which take into account the entire river basin, including transboundary waters. Article 14 of the Directive requires the member states "to encourage the active involvement of interested parties" in the implementation of the directive.

1 Gooch, G. D., Stalnacke, P. (2006) Integrated Transboundary Water Management in Theory and Practice. IWA Publiching. UK

2 Avramoski, O. (2001). Working Paper: Strategies for Public Participation in the Management of Transboundary Waters in Countries in Transition; pp 7-8. Tartu

Integrated Water Resources Management

The basis of Integrated Water Resources Management (IWRM) lies in the notion that different uses of water are interdependent. Integrated management means that all different uses of water resources are considered together. A well known early example of IWRM dates back to 1933 when the Tennessee Valley Authority (United States) integrated the functions of navigation, flood control and power production while addressing the issues of erosion control, recreation, public health and welfare[3]. The contemporary framework of integrated water resources management was put forward at the Dublin Conference in 1992 with the following four principles becoming the basis for future global water reform:

1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment;
2. Water development and management should be based on a participatory approach, involving users, planners and policy-makers on all levels;
3. Women play a central part in the provision, management and safeguarding of water;
4. Water has an economic value in all its competing uses and should be recognized as an economic and social commodity.

In 1996 Global Water Partnership (GWP), a global action network with over 2,500 partner organisations in 158 countries around the world, was founded to foster IWRM. IWRM is defined by GWP as *a process which promotes the coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems*[4]. An IRWM approach focuses on three basic pillars and explicitly aims to avoid a fragmented approach to water resources management by considering the following aspects:

- an **enabling environment** of suitable policies, strategies and legislation for sustainable water resources development and management;
- implementing an **institutional framework** through which to put into practice the policies, strategies and legislation, and
- setting up the management instruments required by these institutions to do their job.

Estonian development cooperation and water management

Development cooperation is defined as aid given by governments and other agencies to support the economic, environmental, social and political development of developing countries. It is distinguished from humanitarian aid by focusing on alleviating poverty in the long term rather than a short term response. The term development cooperation involves the idea that a partnership should exist between the donor and the recipient. Estonia has implemented development cooperation projects since 1998 and this sector has been an increasingly important foreign policy instrument for the country. Estonia spends about 0.1% of its annual Gross National Income on development cooperation and intends to steadily increase its share and advance its status and role among other international donors.

Estonia's objectives and priorities for development cooperation policy are outlined in the Principles of Estonian Development Co-operation, approved by the Riigikogu (Estonian Parliament). In January 2010, the Estonian Government approved the *Strategy of Estonian Development Co-operation and Humanitarian Aid 2011-2015*. This strategy formulates the objectives of Estonia's development cooperation and humanitarian aid; the fields of activities and major partners among the countries and international organisations have been specified up to the year 2015. The priority partner countries of Estonia's bilateral development cooperation are Georgia, Moldova, Ukraine and Afghanistan.

The strategic objectives of Estonia's development cooperation are (1) to contribute to the reduction of global poverty and increase of human development in developing countries, (2) to support peace and stability, the granting of human rights, the development of democracy as well as the promoting of good governance practices in developing countries, (3) to promote economic development, including support for economic reform, integration into the global trade network and agriculture; fostering environmentally friendly and sustainable development and (4) to enhance development cooperation capacity of Estonia's public, private and third sectors and increase the population's awareness of development cooperation and introduce global education. Development of the ICT-sector and e-governance issues is a horizontal field.

So far, Estonia has shared reform experiences mainly with Ukraine, Georgia, Armenia, Albania, Tajikistan, Moldova, Kyrgyzstan, Macedonia, Belarus and

3 IWRM: for sustainable use of water 50 years of international experience with the concept of http://www.fao.org/ag/wfe2005/docs/IWRM_Background.pdf

4 Additional information can be found at: www.gwptoolbox.org

Azerbaijan in the fields ranging from the WTO accession negotiations and reforming the national health care system to the implementation of information technology in state administration. The aim of Estonia's development cooperation is to ensure long-term stability and continuous development in recipient countries. In addition, Estonia participates in multilateral cooperation through voluntary contributions to different agencies implementing needed actions and operations (UNDP, UNICEF, etc).

In the field of water management, Development Cooperation Program has supported Peipsi CTC's (Peipsi Center for Transboundary Cooperation) project "Rational and efficient use of water and energy resources in Central Asia", carried out in Kyrgystan and Kazakhstan in 2003. In 2005 a follow-up project "Increasing public awareness and involvement of NGOs in the management of Kyrgyzstan's and Kazakhstan's transboundary rivers" was implemented by Peipsi CTC. In 2006 Peipsi CTC launched a project in Moldova – "Promoting cooperation in the Dniestr River management through public participation and raising environmental awareness". This was followed by the projects "Promoting integrated transboundary water management and stakeholder participation in Moldova and Ukraine with the help of Estonian expertise" (2008-2009) and "Promoting transboundary cooperation in the River Dniester management" (2010-2011).

Estonian Roundtable for Development Cooperation (acronym: AKÜ) is an umbrella organisation gathering the institutions interested in development cooperation in Estonia, with Peipsi CTC being its founding member. AKÜ's main goal is to improve the creation and implementation of development policy and inform the general public of the issues in development cooperation and their opportunities to participate in it. Additional information can be found at: www.terveilm.net

EU Water Initiative National Policy Dialogues on Integrated Water Resources Management and vision for the future development of the dialogues

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This article gives an outline of objectives, current state and plans for the future development of the National Policy Dialogues on Integrated Water Resource Management.

I Background and objectives

National Policy Dialogues (NPD) on integrated water resources management (IWRM) and water supply and sanitation (WSS) are the main operational instrument of the European Union Water Initiative (EUWI) Component for Eastern Europe, the Caucasus and Central Asia (EECCA). The EUWI, including its EECCA Component, was launched at the Johannesburg World Summit on Sustainable Development in 2002. The United Nations Economic Commission for Europe (UNECE) is the strategic partner chosen by the relevant stakeholders to support the policy dialogue process on IWRM, whereas the Organization for Economic Co-operation and Development (OECD) is the strategic partner for WSS and financial aspects of IWRM.

Since 2006, under the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) NPDs/IWRM have been carried out in four countries: Armenia, Kyrgyzstan, the Republic of Moldova and Ukraine.

In 2010 and 2011, policy dialogues were initiated in Azerbaijan, Georgia, Tajikistan, Turkmenistan and Uzbekistan. Thus, NPDs/IWRM are presently implemented by the UNECE in nine countries. In September 2010, the Government of Kazakhstan has requested the initiation of a NPD/IWRM. If funding from the European Union for continuation of the NPD program is approved, the Kazakh NPD could start by the end of 2011.

The UNECE-supported policy dialogue provides practical assistance to strengthen integrated water

resources management in the countries of Eastern Europe, Caucasus and Central Asia in line with the principles of IWRM. Important references include the UNECE Water Convention, the UNECE/WHO-Europe Protocol on Water and Health and the EU Water Framework Directive (WFD).

II Activities and stakeholders involved

Policy dialogues are based on consultations with relevant ministries, agencies and institutions (including science and academia), non-governmental organizations, parliamentary bodies and other national and international organizations. The dialogue process is usually conducted under the leadership of a high-level government representative such as the Deputy Minister of Water Resources or the Chairman of the State Water Committee. In the respective countries, national Steering Committees are established, which include representatives of relevant ministries, agencies and institutions, as well as non-governmental organizations.

In the countries where NPDs/IWRM are implemented, the following components are included in the NPD work: the preparation of mapping reports on the IWRM situation, including international and national projects and programs, and the elaboration of roadmaps to achieve IWRM. These documents are important to avoid duplication of activities and to ensure clear and transparent communication and coordination with national as well as international organizations involved in the NPD process. At present, such mapping reports are prepared when funding is available for such activities; therefore, they are not prepared in all the EECCA countries where NPDs are implemented.

On the content side, an important outcome of

the NPDs are so-called "policy packages", such as legislative acts, strategies, ministerial orders and plans of implementation. In order to select policy packages for its involvement (upon request of the participating country) UNECE gives priority to the implementation of UNECE instruments, such as the Protocol on Water and Health and to transboundary issues, including the application of different guidelines developed by UNECE (monitoring and assessment, flood management, climate change, etc.). The implementation of the relevant EU strategies and legislation, such as the EU-CA Platform, EU Water Framework Directive, etc., are also important bases. In all cases, the availability of resources is a precondition for engagement in the development of policy packages.

In terms of key topics, issues of strategic water management plans based on IWRM principles (EU Water Framework Directive), drinking water quality (Protocol on Water and Health), management of transboundary waters (Water Convention principles) and adaptation of the water sector to climate change are high on the policy agenda of most EECCA countries.

For countries in Eastern Europe cooperating closely with the European Union through the European Neighbourhood Policy (ENP) and the EU Eastern Partnership, implementation of the EU WFD principles is the main focus of the NPDs.

In all countries, the National Policy Dialogues follow the principles of IWRM that are documented in the UNECE Water Convention, the EU Water Framework Directive and other water related UN and EU policy documents. However, the NPDs/IWRM processes in the nine countries are all unique as far as approaches for introducing IWRM principles, substantive agendas of the dialogues and dynamics of the processes are concerned. Implementation depends on the existing objectives for IWRM in each country, the legislative and institutional framework, as well as the political and socio-economic situation.

On the institutional side, Steering Committees (SC), usually set-up in coordination with OECD, meet at least on annual basis at the national level. They discuss key national water policy issues and adopt decisions on NPD activities. International and donor organizations, such as the European Union, the United Nations Development Programme (UNDP), the Organization for Security and Cooperation in Europe (OSCE), the World Health Organization (WHO) and bilateral donors are invited to the policy dialogue meetings.

In addition to its original function of supporting integration of IWRM principles into national policies, in the countries where they are present, the NPDs and their Steering Committees have become a national coordination mechanism for water-related projects, carried out under the auspices of international organizations (e.g. EC, UNECE, UNDP, World Bank, OECD) and donor countries. This contributes to the further strengthening of national institutions for IWRM.

III Implementation of the National Policy Dialogues on Integrated Water Resources Management until May 2011

Country activities

Armenia

The Policy Dialogue was initiated in 2006. It facilitates implementation of the IWRM principles in the national legislative and institutional frameworks. In 2010, the UNECE and the OECD established a joint NPD/IWRM Steering Committee, which allows more synergies and better coordination of activities. Within the dialogue, a programme of water management measures was developed for the Marmarik river basin. The NPD/IWRM also focused on economic instruments in water management; the OECD organized activities on IWRM financing in the Marmarik river basin and has started similar activities in the Debed river basin. A pilot project on payments for ecosystem services in the Hazran river basin is implemented in 2010-2011 with the support from the funds of the Government of Switzerland through the UNECE.

In 2009, a proposal for an "Action plan on improving health in Armenia through target setting to ensure sustainable water management, access to safe water and adequate sanitation" was elaborated. This proposal for supporting the development of the programme of actions under the Protocol on Water and Health has been submitted for funding from the Finnish Government. A Policy Brief "Summary of results and lessons learned from the implementation of the NPD/IWRM in Armenia within the UNECE NPD on IWRM" was published; it is available from the Armenian Water Portal at http://www.awp.am/en/Reports.html. Plans for the continuation of the NPD/IWRM focus on the economic and financial dimension of IWRM. Activities will include pilot projects to support further development and implementation of IWRM principles in Armenia.

Azerbaijan

The First Steering Committee was organized in October 2010. The NPD/IWRM focuses on the development of a government strategy for the management of water resources. Transboundary water cooperation with neighbouring Georgia, specifically the preparation of a bilateral agreement on management of shared transboundary waters, is another important issue on the National Policy Dialogue agenda. The policy dialogue in Azerbaijan will build on related activities by both the UNECE and the OECD. The recently completed second UNECE Environmental Performance Review of Azerbaijan makes recommendations, which feed into the dialogue. The NPD/IWRM in Azerbaijan is funded by the EC and the Organization for Cooperation and Security in Europe (OSCE). The Government of Finland will contribute with expert support to preparation of the strategy for management of water resources.

Georgia

The UNECE-led NPD/IWRM started in Georgia in September 2010 with the meetings of the UNECE Water Convention Secretariat with the Ministry of Environmental Protection and Natural Resources and other stakeholders. The kick-off meeting took place in March 2011. The National Policy Dialogue on IWRM in Georgia focuses on three major topics: preparation of the National Water Law based on the IWRM principles; setting up the targets for implementation of the Protocol on Water and Health; and transboundary activities, including cooperation with the neighboring Azerbaijan and accession to the Water Convention. In addition to the EC grant, the NPD/IWRM in Georgia is supported by the Government of Finland and the OSCE.

Kyrgyzstan

In Kyrgyzstan, the dialogue process started in 2008 and focused on setting-up a River Basin Council for the Chu basin and developing an action plan to achieve sustainable water management, safe drinking water supply and adequate sanitation in accordance to the Protocol on Water and Health. Three Steering Committee meetings have been organized. Dialogue outcomes feature two policy packages, including a regulation for the establishment of a river basin council for the Chu river basin and an action plan to achieve the water-related Millennium Development Goals through the implementation of the Protocol on Water and Health. In 2010, the NPD process was interrupted by the political changes that occurred in the country. In 2010-2012, the NPD/IWRM in Kyrgyzstan is supported by the EC and by the Government of Finland.

Republic of Moldova

The NPD/IWRM started in 2006. The dialogue has led to three policy packages adopted in 2009-2010, including a Governmental Order on wastewater discharges from municipal sources (2009), a Draft Order of the Agency Apele Moldovei on the establishment of river basin management authorities and river basin councils (2009), and an Action Plan to achieve the water-related Millennium Development Goals under the Protocol on Water and Health. In 2009-2010 with financial assistance of the Government of Switzerland under an agreement between the Swiss Agency for Development and Cooperation (SDC) and UNECE, the Dialogue focused on the setting up of targets and target dates on water and health in accordance with the Protocol. It resulted in a Government Decision on the targets under the Protocol that was adopted on 20 October 2010.

The main focus of the NPD in the future would be the monitoring of implementation of the established targets under the Protocol on Water and Health. Discussions on possible funding from the Swiss Development Cooperation are ongoing. This work will be done in close coordination with the OECD within its NPD/WSS. The International Water Assessment Centre (IWAC) would be ready to also support NPD activities on transboundary water cooperation with Ukraine in the Prut River. These activities would be implemented under the EU Danube Strategy in close coordination with the Danube ICPDR Commission.

Transboundary waters in Europe. Map produced by ZOÏ Environment Network, March 2011.

Tajikistan

Preparatory missions by the UNECE Secretariat took place in March and June 2010. A presentation on the EUWI NPDs was made at the High-level International Conference on the midterm comprehensive review of the implementation of the International Decade for Action "Water for Life, 2005-2015" (Dushanbe, 8-10 June 2010). The First Steering Committee meeting took place in March 2011. The main focus of the NPD is the development of the Water Sector Strategy based on IWRM principles. Transboundary water cooperation with neighbouring Kyrgyzstan, as well as Afghanistan (management of the Upper-Amu Darya Basin), is another important issue on the NPD agenda. The NPD/IWRM in Tajikistan is funded by the EC, UNECE and the German International Cooperation (GIZ). The Danish Ministry of Foreign Affairs has provided an international expert who assists the Government of Tajikistan in developing a report mapping IWRM stakeholders and a roadmap.

Turkmenistan

A preparatory mission took place in March 2010. The NPD kick-off meeting was held in December 2010, followed by the first Steering Committee meeting in April 2011. As a part of the NPD/IWRM in Turkmenistan, an expert group is planned to be established, which will assist Turkmenistan in the adoption of the standards of the UNECE Water Convention, including IWRM principles enshrined in the Convention, on cooperation in national and transboundary contexts and in the support of its accession to – and implementation of – the Convention. In 2011, a national workshop on IWRM is planned to be organized. The NPD/IWRM in Turkmenistan is supported by funds from the Norwegian Ministry of Foreign Affairs, the EC and the GIZ.

Transboundary waters in the Caucuses and Central Asia. Map produced by ZOÏ Environment Network, March 2011.

Ukraine

In Ukraine, the dialogue process started in late 2007. A first policy package, approved by the Steering Committee in 2008, was a plan to achieve sustainable water management, safe drinking water and adequate sanitation under the Protocol on Water and Health. The plan was implemented in 2009-2010 with financial support from Norway and in-kind contributions from Israel. The NPD/IWRM also focused on strengthening legal and institutional framework for water management with the view to tackle the challenges of climate change. Policies for sustainable flood management, based on the EU Flood Directive 2007/EC were elaborated. Two policy packages were elaborated within the NPD/IWRM, namely a draft implementation plan based on the relevant UNECE Guidance on water and adaptation to climate change and a preliminary evidence base of climate change impacts on water resources in the Dniester basin. These policy packages have facilitated the development of a pilot project on "reducing vulnerability to extreme floods and climate change in the Dniester basin", which is now being implemented under the framework of the ENVSEC initiative by UNECE, OSCE and UNEP. The final Steering Committee meeting under the EC grant was organized in November 2010.

In 2011, the NPD/IWRM in Ukraine is funded by the IWAC. Activities will include pilot projects on economic instruments in water management, transboundary water cooperation with the Republic of Moldova and Romania on the Prut and Siret river basins and the organization of the fifth SC meeting. These activities will be implemented under the EU Danube Strategy in close coordination with the International Commission on the Protection of the Danube (ICPDR).

Uzbekistan

A joint OECD/EAP Task Force and UNECE mission to Uzbekistan was undertaken in April 2010 with a view to explore the interest of the Government of Uzbekistan to co-operate in the framework of the EUWI. The Ministry of Health of Uzbekistan expressed an interest in NPD activities on water sanitation issues related to the Protocol on Water and Health. The State Committee for Nature Protection and Uzcommunhizmat (Agency for Water Utilities Management) were also interested in cooperating. The Ministry of Agriculture and Water Sector did not express, however, interest in implementation of the NPD/IWRM. Therefore, the NPD/IWRM is implemented in 2011-2012 in cooperation with the Ministry of Health, the WHO office in Uzbekistan and other relevant organizations. It focuses on issues related to the UNECE/WHO-Euro Protocol on Water and Health. The NPD/IWRM in Uzbekistan is funded by the Government of Switzerland.

Coordination of national and regional activities

The annual meetings of the EU Water Initiative Working Group for the Eastern Europe, the Caucasus and Central Asia (EECCA) region provide for an important platform for the exchange of experience between EECCA countries on the implementation of water-related national policy dialogues. The EU Water Initiative's EECCA Working Group held its 14th meeting in October 2010 in Brussels. It was organized back-to-back with the first meeting of the Working Group on Environmental Governance and Climate Change under the Platform for Environment and Water, which is chaired by Italy in the framework of EU – Central Asia Strategy. The water activities of the EU-Central Asian Strategy will build on the ongoing work of the EUWI EECCA Working Group. The meeting was hosted by the European Commission and co-organized by the Romanian Ministry of the Environment and Forests, the UNECE and the OECD.

Possibilities of linking the NPDs/IWRM with relevant international initiatives in Eastern Europe, the Caucasus and Central Asia have been explored. In 2011, the NPDs in Central Asian countries were included into the third edition of the Aral Sea Basin Programme (ASBP-3), the development and implementation of which is coordinated by the Executive Committee of the International Fund for Saving the Aral Sea (IFAS).

IV Lessons learned and challenges to NPD/IWRM implementation

The experience of implementation of the NPDs demonstrated that the dialogues respond to countries needs and are much "requested": countries in which the NPDs were supposed to end, requested for their continuation; countries which were not initially interested, requested to start NPDs (Kazakhstan).

The National Policy Dialogues should focus on policy issues rather than on technical issues. They should be designed as national platforms where representatives of all competent sectors and key stakeholders meet and discuss policy issues.

Implementation of policy packages (e.g. new governmental regulations) is one of the key objectives of the National Policy Dialogues; the involvement of representatives of Parliamentary and governmental bodies responsible for environmental issues is crucial.

The topics of the NPDs evolve over time reflecting the evolving needs of the respective countries. This means that support to such dialogues needs to be flexible enough to accommodate new demands. This is especially important in the countries plagued with political instability.

The political instabilities in the target countries is one of the major concerns. Supporting and when needed (in case of changes in governments) re-establishing of the NPDs is a very long and resource consuming process.

UNECE plays not only a facilitative and supportive role to the NPDs but also a political role which helps to break-through (e.g. Turkmenistan) and promote international cooperation with countries, which were not involved in such cooperation before.

The NPDs are successfully building on the multiple UNECE activities, including activities under the UNECE Water Convention, UNECE environmental performance reviews (EPR) and others. The UNECE direct contacts and regular cooperation in different UN foras with the governments of the countries in Eastern Europe, Caucasus and Central Asia helps to achieve political commitment of these governments to the NPDs implementation and ensures their long-term sustainability. Synergies of the NPDs IWRM with other UNECE activities – under the UNECE Water Convention and beyond should be maintained and extended.

There are increasing synergies between at one hand national and at the other – transboundary and regional cooperation activities in the EECCA region. There is an increasing number of activities within NPDs supporting national policies for transboundary cooperation with neighboring countries. Coordination with regional initiatives such as Aral Sea Basin Program III opens possibilities to support the regional cooperation processes through the national dialogues.

Cooperation with other international organizations active in the EECCA region is very important to ensure reforms in the water sector are developed and effectively implemented. International partners should go beyond their own interests, work for the common good of improving the situation in the region and use their political weights to support the reforms.

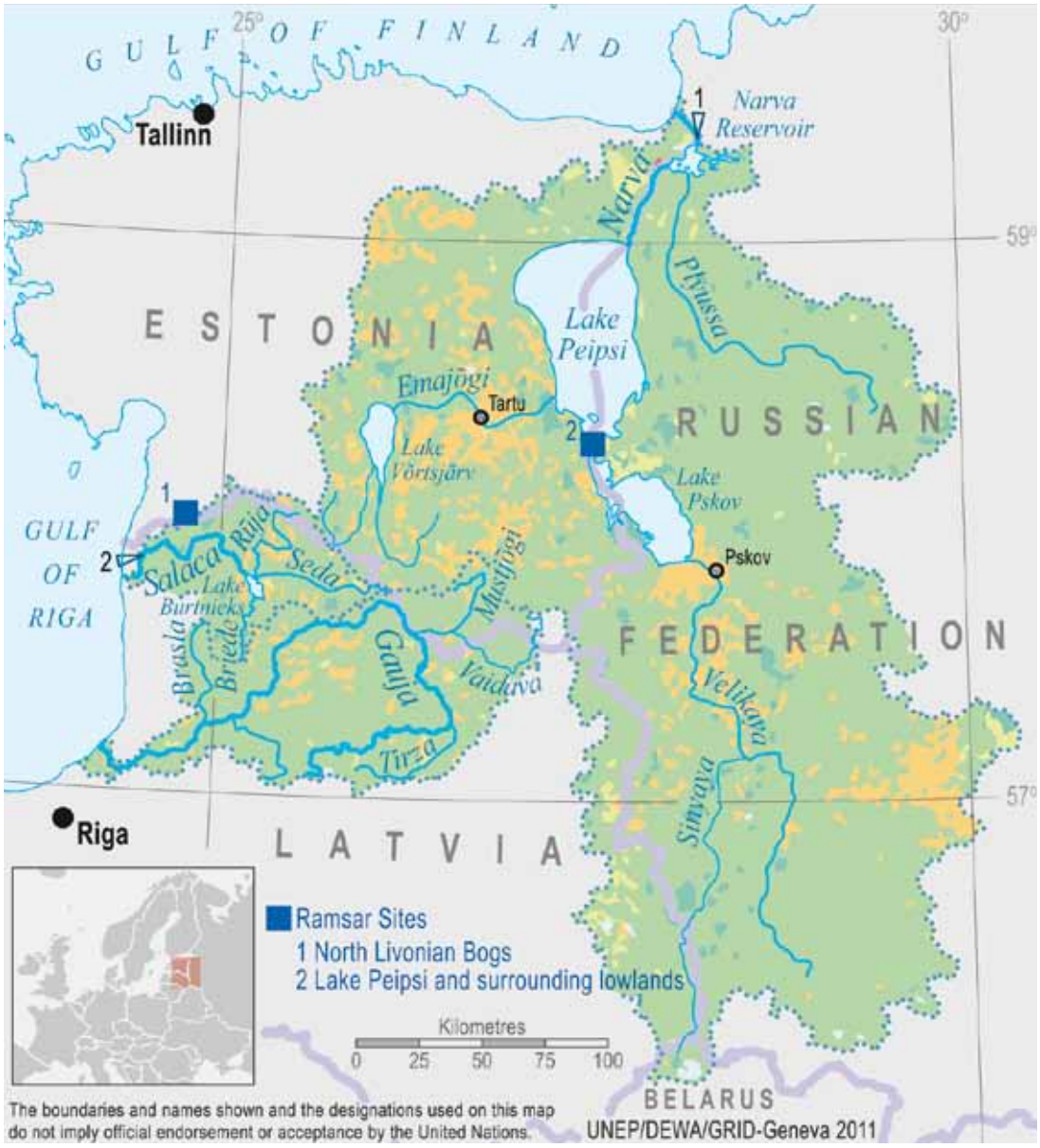
Eastern Europe

LAKE PEIPSI

Location: **Estonia, Russia**
Primary inflows: **Emajõgi, Velikaya**
Primary outflows: **Narva**
Catchment area: **47,800 km²**
Basin countries: **Estonia, Russia,**
(Latvia and Belarus – less than 6% of the basin)
Surface area: **3555 km², of which**
44% belongs to the Republic of Estonia and
56% to the Russian Federation
Depth: **avg. 7.1 m; max.: 15.3 m**
Water volume: **25 km³**
Shore length: **520 km**

Lake Peipsi/Chudskoe-Pskovskoe is the largest transboundary water body and the fourth largest lake in Europe.

Lake Peipsi (3555 km²) comprises three parts: Lake Peipsi itself - 2611 km² (73%), Lake Pskov - 708 km² (20%) and, connecting them, the narrow (minimum width 3 km) but deep Lake Lämmijärv - 236 km² (7%). In spring Peipsi's water level can rise by almost a metre. At its highest level the area of the lake increases by 780 km². In October the level of water is at its lowest. Ice usually forms on Peipsi at the end of November and is the thickest, up to 50-60 cm, in the second half



of March. There are 30 islands in the lake; the largest – Kolpino – belongs to Russia.

Lake Peipsi is an eutrophic and biologically highly productive lake. Eutrophication, caused by high nutrient load, is a major threat to water quality in the lake; fortunately recent years have shown a tendency for the better. However, reduction of phosphorus loads remains the most important challenge for water protection.

Lake Peipsi belongs to the River Narva basin, which also includes another two important transboundary water bodies – the River Narva and the Narva reservoir. Draining Lake Peipsi, the Narva (77 km, average discharge 400 m^3/s) flows into the Baltic Sea. On the Narva River lies the Narva reservoir which is important for the hydropower industry: the Narva hydroelectric power plant with a total power of 125 MW lies on the river and is owned by the Russian Federation. The reservoir's water is used for the plant's activities. In the Republic of Estonia there are two power stations with a total power of 2400 MW and the reservoir's water is used for their cooling purposes. Water uptake from the river is used for providing drinking water for the inhabitants of the City of Narva (population 70,000). The dam holding up the Narva reservoir has a significant impact on the flow of the river and its ecological status: several smaller waterfalls have disappeared; some areas were flooded when the plant was built and the migration of salmon is no longer possible.

Transboundary Water Cooperation in Lake Peipsi

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Estonia regained its independence from the Soviet Union in 1991. Prior to this, Lake Peipsi was a large internal lake where the same legislation, procedures and environmental standards were applied to the entire lake basin. Estonia joined the EU in 2004 thereby making Lake Peipsi a transboundary lake shared by Russia and the EU. The legislation and environmental management system of Estonia have been adjusted to incorporate the requirements of the EU legislative and institutional framework. The EU legislation, norms and standards differ from those of Russia.

Institutional Cross-border Cooperation

There are three bilateral agreements concerning water use and protection in the Lake Peipsi region:

- The 1994 Agreement between the Republic of Estonia and the Russian Federation on the Conservation and Use of Fish Resources in Lake Peipsi, Lake Lämmijärv and Lake Pihkva.
- The 1996 Agreement between the Republic of Estonia and the Russian Federation on Environmental Protection.
- The 1997 Agreement between the Republic of Estonia and the Russian Federation on the Protection and Sustainable Use of Transboundary Watercourses.

In order to achieve the aim of the fish resources agreement, an intergovernmental fishery commission was established, which meets, as a rule, twice a year. This commission prepares recommendations for the coordination of scientific research and the determination of total allowable catch for different species. It also draws up technical measures for the conservation of fish resources such as the allowed minimum size of fish, the percentage of by-catch, establishment of close seasons and areas. Before every session of the commission the joint working group of the Estonian and Russian researchers will meet in order to elaborate on the common measures for the conservation of fish resources.

Pursuant to the agreement on the protection and

sustainable use of transboundary watercourses, a joint commission between Estonia and Russia was formed in 1997 and two working groups were established. The activities of the working group on the integrated water resources management include elaboration and implementation of water management and water protection programmes; analysis and assessment of the situation; inventory of water pollution sources; exchange of information and ensuring public participation. The working group on monitoring, assessment and research covers topics like elaboration of joint monitoring programmes and coordination of joint monitoring activities; harmonisation of monitoring programmes and methods for water users; organisation of scientific studies; elaboration of joint databases; provision of information to the public and the counties on the status of transboundary waters.

As a result of comprehensive cooperation, the same understanding of problems and the same targets have been achieved. Systematic exchange of information on the situation in water management and water quality is ensured. Joint monitoring on Lake Peipsi and on the Narva Reservoir pursuant to the agreed monitoring programme is carried out and water management plans on both sides are drawn up.

Other problems and questions to be solved include the implementation of the water management plan and achievement of the good quality of water bodies. Compliance of monitoring programmes with international guidelines is essential; assessment criteria of the situation of water bodies must be coordinated and a regulation for the Narva reservoir should be elaborated. Another challenge is to ensure the comparability of laboratories. Also, at the moment the number of scientific studies is rather low.

NGO's Role in Transboundary Water Cooperation in Lake Peipsi/Chudskoe

Peipsi Center for Transboundary Cooperation (Peipsi CTC)

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There are several NGOs working on both sides of Lake Peipsi/Chudskoe. In the field of transboundary water management the main actor in Estonia is Peipsi Center for Transboundary Cooperation, and in Russia – Lake Peipsi Project, Pskov.

Peipsi Center for Transboundary Cooperation is an international non-profit organization working to promote balanced and knowledge-based development of border areas, especially in the Lake Peipsi/Chudskoe region and the border areas of the EU. Peipsi CTC, founded in 1993, focuses on three main areas of activities: cross-border and development cooperation (on water management and public participation), environmental awareness building and community development.

Peipsi CTC has outstanding experience in the development of cross-border interaction mechanisms and facilitation of cooperation in the Estonian – Russian border area and we have also gained experience from working in many other transboundary water regions in the Eastern European, Balkan and Central Asian countries. We organize annual events such as summer schools, Peipsi Forums, roundtables, study tours, and prepare publications and information lists designed to promote interaction and cooperation between state, regional and local officials, NGOs, educational institutions and international organizations. We believe that public participation and active stakeholder involvement is essential to managing lakes and their basins for sustainable use. NGOs in the Lake Peipsi area play an important role in the policy development process, their role includes networking, collaboration among government agencies and local communities.

Peipsi CTC is also represented in the Working Group on Integrated Water Resources Management of the Estonian-Russian Joint Commission on the Protection and Sustainable Use of Transboundary Waters which usually meets twice a year.

One of the most important joint projects of Lake Peipsi NGOs has been the UNDP/GEF project *Development and Implementation of the Lake Peipsi / Chudskoe Basin Management Program* (2003-2005).

The overall objective of this project was to develop and start the implementation of a Lake Peipsi/Chudskoe Basin Management Program, including practical recommendations for the Lake Peipsi/Chudskoe nutrient load reduction and prevention and the sustainable conservation of habitats and eco-systems in the cross-border region. The project substituted for uncoordinated small-scale projects that were otherwise implemented separately on the Estonian and Russian sides without sufficient coordination, education and public information components and without taking into account interests of local stakeholders. The project had been designed to meet the needs of the joint Estonian-Russian Transboundary Water Commission, local governments in the Lake Peipsi/Chudskoe area, regional and local NGOs, schools and the general public. Partners of that project, in addition to the NGOs of the Lake Peipsi area, included the Estonian Ministry of the Environment, Ministry of Natural Resources of the Russian Federation and the United Nations Development Programme Russia.

In 2007–2009 another joint project of Peipsi CTC, Lake Peipsi Project, Pskov, and Center for Transboundary Cooperation, St. Petersburg, was implemented: EU Interreg 3A/TACIS-funded PEIPSIMAN project, which included several information dissemination and training activities as well as an investment in the reconstruction of the Pskovkirpich settlement (Pskov city area) wastewater treatment plant.

In recent years, the major obstacle to effective transboundary water cooperation between the NGOs has been the absence of suitable financial instruments. However, in late 2011, the first projects, supported within the Estonian-Latvian-Russian cross border cooperation programme, were launched. Peipsi CTC together with its Russian and Latvian partners will implement two projects in the field of environmental education and management: "*People with Nature. Promoting nature education as efficient means of awareness raising*" and "*Tartu, Rezekne, Pskov: Green Management for Urban Development & Planning in EE-LV-RU Border Capitals*".

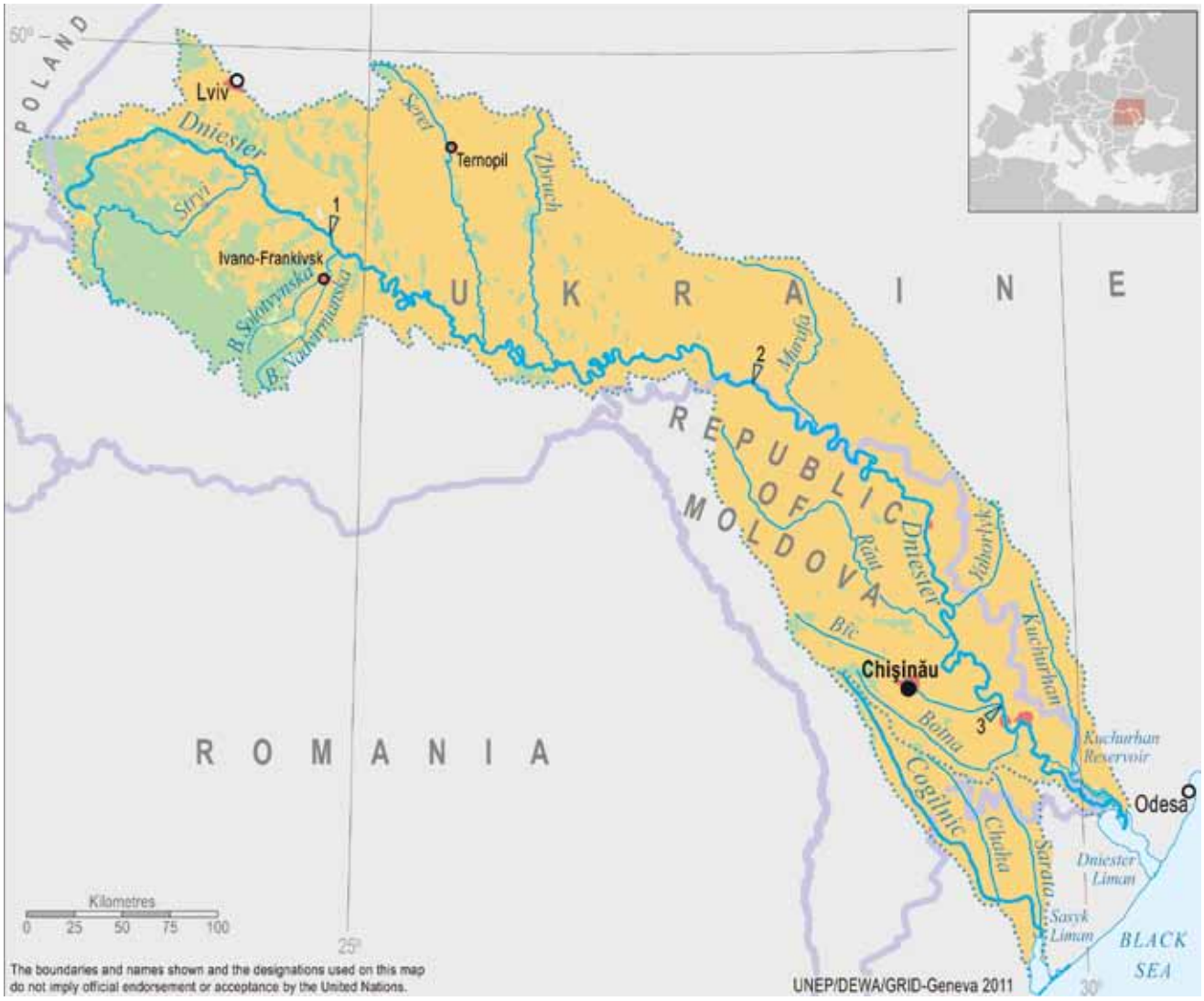
Eastern Europe

RIVER DNIESTER

Length: **1380 km**
Origin: **Ukrainian Carpathians**
Mouth: **Black Sea**
Countries: **Ukraine, Moldova, Poland (less than 2% of the river basin)**
Basin area: **72 100 km²**
Avg. discharge: **310 m³/s at mouth**

The upper and lower reaches of the Dniester flow within Ukraine for 629 km. Another 225 km of the river is shared by Ukraine and Moldova while 475 km run within the borders of Moldova. Only a very small upper part of the Strviazh River (a tributary of the Dniester) lies within the territory of Poland. The Dniester's most important tributaries in Ukraine are Strii and Zolota Lipa, and in Moldova - Răut and Bîc.

In Moldova the Dniester separates the bulk of Moldova's territory from Transnistria, which is part of Moldova's secessionist region of Transnistria or Pridnestrovie ("Left Bank of the Dniester"). Since its declaration of independence in 1990 and the War of Transnistria in 1992, it has been governed as the Pridnestrovian Moldavian Republic, an unrecognized state which claims the territory to the east of the river Dniester as



well as the city of Bender and its surroundings on the west bank. Transnistria's sovereignty is not recognized by the member states of the United Nations and it has no diplomatic relations with any of them.

The total population of the Dniester River basin in Ukraine and Moldova is about 8 million people, with over 5 million living in Ukraine and 2.7 million in Moldova.

The Dniester is currently facing environmental problems due to pollution, unbalanced hydrological regime dealing with hydro-construction etc. The environmental degradation of the Dniester is made worse by the frozen Transnistrian conflict, which, inter alia, negatively impacts the use of existing infrastructure for wastewater treatment.

Public Participation and Transboundary Water Cooperation on the Dniester River

„Eco-TIRAS" International Environmental Association of River Keepers

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Ukraine Research Antiplage Institute named after I.I.Mechnikov

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During Soviet times, the water basin was managed as one system but since 1991 Moldova and Ukraine have been managing their respective parts of the river separately. The application of the IWRM approach to the river basin is essential.

Institutional cross-border cooperation: legal framework and state of affaires

A bilateral "*Agreement between the Government of the Republic of Moldova and the Government of Ukraine on the Joint Use and Protection of the Cross-Border Waters*" was signed in 1994 (hereinafter "the 1994 Agreement") and a Meeting of Plenipotentiaries was instituted as a cooperative mechanism. Five regulations complement the 1994 Agreement:

- Regulation on flood protection in the cross-border watercourses and inner waterbodies (2006);
- Regulation on ecological monitoring of waters and water quality control (2006);
- Regulation on measures for unavoidable dangerous and emergency pollution of cross-border waters(2006);
- Regulation on stakeholder participation in the activities of the institution of Plenipotentiaries (2007). This regulation established a detailed procedure for public participation in the work of the Dniester Commission;
- Regulation on cooperation between Moldova and Ukraine in the management of the joint Dniester River basin website (2007).

Plenipotentiaries meet once a year but their meetings are not productive and have no impact on the river's condition as the issue of the river basin and ecosystem is not addressed and no joint plans and programmes have been prepared.

NGO activities: networks working in the Dniester River basin

One of most active NGO communities in the former USSR operates in the River Dniester area. Along the Dniester there are many local NGOs which engage in educational activities, cooperate with local authorities to elaborate local action plans, share environmental information and carry out practical actions to protect nature and develop tourism. In this region NGOs are the main promoters of modern approaches to the IRBM.

Eco-TIRAS is the association of the Dniester River NGOs established by the NGOs of Moldova and Ukraine in 1999 for promoting transboundary river basin cooperation based on Integrated River Basin Management. Eco-TIRAS is the umbrella for 60 NGOs in Moldova and Ukraine (mainly middle and lower Dniester) and the Dniester Group of Ukrainian Rivers Network comprises 34 Ukraine-based NGOs (mainly upper and middle Dniester).

The NGOs' activities vary greatly – among other things they deal with the following: cleaning of banks; tributaries, sources, restoration of forest belts and water protective zones; expeditions along the river; drafting proposals for valuable natural territories to be taken under protection, registration of Ramsar sites; environmental control and education (youth summer schools); campaigns against unsustainable solutions. Every year, in the first half of July Eco-TIRAS and its member NGOs organize the Dniester River Festival (5th festival in 2011). The NGOs continue to carry out international transboundary cooperation. In 1998 – 2010, Biotica, Eco-TIRAS, Ecospectrum and the Black Sea Women's Club organized six international conferences addressing the Dniester River Basin management. On their initiative Dniester River Days are organized both in Moldova and Ukraine. Thus stakeholders (scientists, politicians, specialists, environmental NGOs, university and school teachers) from both countries can meet and publicly discuss the means for improving the river's condition. All proceedings have been published and are available on the Internet (See www.eco-tiras.org <Publications>).

Several times the Ukrainian NGO "Natural Heritage", Odessa, has organised a campaign for the protection of the Dniester and its ecosystem, and Eco-TIRAS has supported it in Moldova. In 2001 Ukraine started constructing a road crossing the wetlands of international importance in the lower Dniester area, aiming to reach another part of Odessa oblast without crossing the Moldovan border. The communities of both NGOs organised a campaign in their respective countries which resulted in an agreement between the countries addressing the manner of use of the road. Even the countries' presidents were involved and as a result the Ramsar wetlands were saved.

There was another campaign for sustainable management of the Lower Dniester National Park in Ukraine (illegal construction of numerous villas on the protected meadows and the indifference of the park administration towards the impact of such activity on the nature) that was organised by the NGO "Natural Heritage" and supported by Eco-TIRAS.

Lobby and Public participation of NGOs

In 1997-1999 the NGO "Biotica" Ecological Society, founder and member of the "Eco-TIRAS", initiated the preparation of the modern river basin agreement for the Dniester. Biotica successfully lobbied for the Parliamentary Regulation on Measures for the Improvement of the Environmental Condition of the Dniester River Basin (No. 1246 of 10.07.1997), which obliged the Moldavian Government to start negotiations with Ukraine regarding a new agreement on the Dniester River basin management. Despite the negotiations no specific results were achieved because Ukraine was reluctant to support the idea of the river basin agreement.

At the Fifth OSCE Forum in 2001 Eco-TIRAS drew the attention of the OSCE and the UNECE to the necessity and perspectives of the Dniester River negotiations for preventing possible water-related conflicts, particularly in view of the existence of the frozen Transnistrian conflict. In 2004 the OSCE and the UNECE supported the idea and initiated the Dniester project. As a result of its first stage, the Transboundary Diagnostic Study for the Dniester River Basin (2005) was prepared by the intergovernmental working group. Another result was the analysis of bilateral legislation, where Parties confirmed that the Dniester needs a modern river basin agreement. The NGOs were actively involved in both processes.

In 2007 the Dniester-II stage elaborated the "Action Programme to Improve Transboundary Cooperation and Sustainable Management of the Dniester River Basin" and established working groups where the NGO representatives play an important role as coordinators and experts. Thus, the Sanitary-Epidemiological working group is one of the most successful and is led by a representative of Eco-TIRAS. The working group elaborated the regulation on joint control of the Dniester River water, the methodology of water analyses and performs said analyses once in every three months. This prevents inter-state conflicts arising from the issue of water quality.

To improve the dissemination of public information and promote public participation in the Dniester's management issues, the NGOs successfully lobbied for the adoption of two regulations for the Institute of Governmental Plenipotentiaries on boundary waters (2007): Regulation on stakeholder participation in the activities of the institution of Plenipotentiaries, and the Regulation on cooperation between Moldova and Ukraine in the management of the joint Dniester River basin website.

Dniester-III – "Implementation of the Action Programme" (2009-2011) – focuses on the signing of a new modern Dniester Basin Agreement and the completion of the Dniester Programme. NGOs are included in the new draft Dniester Agreement – Art. 27 of the draft agreement between Moldova and Ukraine on the protection and sustainable use of the Dniester river basin:

The Dniester River Commission is composed of representatives of the competent ministries and departments of the Parties. The Commission also includes representatives of regional authorities and NGOs.

Problems related to public involvement within the NGO sector include the lack of professionalism and arising from this, concentration on secondary problems. Better cooperation with other sectors is necessary for solving such problems. In Moldova and Ukraine donors do not support the transboundary cooperation of the NGOs and thus the funding of joint activities is problematic.

Strong involvement of competent public helps to improve the transboundary water cooperation.

Eastern Europe

RIVER DANUBE and its LOWER DANUBE DELTA

Length: 2 857 km

Origin: Schwarzwald (Black Forest) mountain range, Germany

Mouth: Black Sea (via Danube Delta in Romania and Ukraine)

Countries: Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia, Ukraine

Basin area: 801 463 km^2

Main sub-basins: Tisza, Drava, Sava, Danube Delta

Avg. discharge: 6430 m^3/s in delta

The Danube is Europe's second longest river after the Volga. The river flows through or acts as part of the borders of 14 countries, but in total 19 countries share the Danube River Basin, which makes it the world's most international river basin. So the Danube River Basin is home to 83 million people with a wide range of cultures, languages and historical backgrounds.

The Danube River Basin can be divided into three sub-regions: the upper basin, the middle basin, and the lower basin (including the Danube Delta). Most of the Danube Delta lies within Romania, and some of its northern fringes, and most recently formed areas are in Ukraine. In the area around the delta lives about 420 000 people. It is the largest remaining natural wetlands in Europe and provides a habitat for over 5,000 animal and plant species. Almost the whole Danube Delta area in Ukraine and Romania is covered by the Danube Delta Biosphere Reserves. It's protected under three international conventions: 1990 – UNESCO "Man and Biosphere Program", 1990 - the List of the World Cultural and Natural Heritage, and 1991 - RAMSAR Convention. The core of the reserve (312,400 ha) was designated as a UNESCO World Natural Heritage Site in 1991.

Today the protection of environment and biodiversity is on the political agenda of the different Danubian States. In 1998 the International Commission for the Protection of the Danube River was established, consisting of 14 states and the European Union. The commission deals with the whole Danube River Basin, which includes tributaries and the groundwater resources. Its goal is to implement the Danube River Protection Convention by promoting and coordinating sustainable and equitable water management, including conservation, improvement and rational use of waters and the implementation of the EU Water Framework Directive.

To achieve integration in the management of water resources in the Ukrainian part of the Danube River Basin, the Danube River Basin Management Department (DRBMD) was founded in April 2008 by the State Committee of Ukraine for Water Management decree. In July 2009 with the support from the EU-funded project "*Improving cross-border cooperation in integrated management of water resources in the Lower Danube Euroregion*" the Ukrainian Danube River Basin Council (UDRBC) was established. UDRBC is viewed as a voluntary platform to bring stakeholders together and provide a dialogue between them. It's not a legal entity now.

Transboundary Cooperation in Water Management in the Danube Delta Sub-basin. Experience of the Centre for Regional Studies

Centre for Regional Studies

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The NGO Centre for Regional Studies (CRS) was established in October 1998 in Odessa. The CRS is a voluntary association of citizens aimed at the consolidation of efforts of scientists, public and political representatives, and private citizens to promote sustainable development of the Odessa Region and Ukrainian Black Sea Area.

Main activities of the CRS include:

- research, including theoretical and applied analysis
- project management
- information and consultation support to state authorities and local self-governments
- trainings and educational programmes

CRS research activity consists of

- regional studies
- interregional transboundary studies
- preservation, restoration and sustainable use of wetlands
- preservation of the environment and bio-diversity in the Black Sea Area and Danube Delta

The Centre for Regional Studies is a member of the Ukrainian National Association of Regional Development Agencies, Danube Environmental Forum and Civil Forum of the Danube Region.

One of the CRS priority areas is transboundary cooperation in the Danube Delta, a good neighbourhood region of Ukraine, Romania and Moldova.

The platform for the support of transboundary cooperation among national agencies in the Danube River Basin is the International Commission for the Protection of the Danube River (ICPDR) established in 1998 under the Convention on the Protection of the Danube River (1994). The ICPDR unites ministerial representatives responsible for water management, technical experts, civil society representatives and researchers in order to secure sustainable and fair use of water resources in the Danube River Basin.

Since 2000 the ICPDR has been a basis to implement

the principles of the EU Water Framework Directive. As a result, the Convention signatory countries developed and adopted a joint document, the Danube River Management Plan (2010), delineating four major sub-basins: Tisza, Sava, Prut and Danube Delta. Following the EU Water Framework Directive more specific management plans have to be prepared for corresponding sub-basins.

The Declaration of Delegation Heads of Moldova, Romania and Ukraine "*Towards the Preparation of the Danube Delta Basin Management Plan for Regional Sustainable Development*" adopted in 2007 boosted cooperation in the Danube Delta sub-basin.

Traditional transboundary cooperation in the Danube Delta sub-basin embraces hydro-economic and environmental activity.

International activity in water economy to improve the environmental and sanitary condition of water objects and hydro-economic systems is based on bilateral agreements:

- Procedure for Monitoring of Prut River Water Quality within Bilateral Cooperation between Romania and Moldova, 1992
- Agreement between the Governments of Ukraine and Moldova on Joint Use and Protection of Transboundary Waters, 1994
- Agreement between the Governments of Ukraine and Romania on Cooperation in Water Economy of Transboundary Waters, 1997.

Transboundary water protection cooperation focuses on the unique character of the Danube Delta, Europe's biggest wetland. Almost the entire territory of the Delta is occupied by the Ukrainian Danube Biosphere Reserve and Romanian Danube Delta Biosphere Reserve. In 1991 the Danube Delta was included in the UNESCO List of World Cultural and Natural Heritage.

In addition to traditional cooperation priorities, today especially significant is the implementation of integrated water management approach, which in the Danube Delta sub-basin primarily means:

- development of trilateral cooperation (tripartite agreement)
- preparation of the Danube Delta Sub-Basin Action Plan

Transboundary cooperation in the Danube Delta requires public awareness and involvement, which includes NGOs. Actively involved NGOs in the Danube Delta are:

- Centre for Regional Studies, Ukraine
- GALATS Centre of Environmental Consultations, Romania
- ECOS Regional Centre of Environmental Research, Moldova
- Centre of Environmental Consultations in Kagul, Moldova

CRS cooperation with other NGOs is promoted in a number of projects:

Joint Environmental Monitoring, Information Evaluation and Exchange for Danube Delta Integrated Management, 2010-2012

Improved Resistance of the Danube Delta to Climate Change through Land and Water Integrated Management, 2011-2014

Improving Cross-Border Cooperation in Integrated Management Of Water Resources in the Lower Danube Euroregion, 2007-2009

Cooperation in Water Management in the Odessa Region, 2007-2008

Limited information access and insufficient public involvement in transboundary cooperation in the Danube Delta sub-basin are urgent issues requiring governmental attention. Basis for the dialog can be created by the establishment in the future of the Danube Delta Forum to stimulate transboundary cooperation of governmental agencies and NGOs in environmental monitoring and exchange of information on the environmental situation.

The Caucasus and Central Asia

RIVER KURA-ARAKS

Length: 1 364 km
(Length of Kura:1 364 km, Araks: 1 072 km)
Origin: the Caucasus Mountains, Turkey
Mouth: Caspian Sea
Countries: Turkey, Armenia, the Islamic Republic of Iran, Georgia, Azerbaijan
Total basin area: 188 078 km^2
Avg. discharge: Kura 443 m^3/s for directly downstream from Aras River confluence

In Azerbaijan Kura River receives the Araks River (also known as Aras) as a right tributary. The Kura River contributes 55% of the flow and the Araks River contributes 45%. The river system has 10,000 tributaries and covers five above mentioned countries. The discharge of the Aras is much less than the Kura, because of the more arid conditions and equally intensive water use, so downstream of the confluence the river is still called the Kura. About 52% of the river's flow comes from snowmelt and glaciers, 30% comes from groundwater seepage, and roughly 18% from precipitation. Because of high water use, many of the smaller tributaries of the Kura no longer reach the river, instead disappearing in the plain many kilometres from their original mouths.

The Kura River originates in northern Turkey (174 km), passes through Georgia (426 km), and Azerbaijan (764 km) and then reaches the Caspian Sea. There are 6,500 small and medium size rivers in the basin. The Araks originates in Turkey and after 300 km forms part of the international borders between Armenia and Turkey, for a very short distance between Azerbaijan and Turkey, between Armenia and Iran, and between

Azerbaijan and Iran. The Araks River joins the Kura River after crossing the Azerbaijan border.

About 16 million people live in the Kura-Araks basin.

There is an international lake in the Caucasus – the Jandara Lake (catchment area 12,5 km^2, basin 102 km^2), of which 67% is located within the territory of Georgia, 33% belongs to Azerbaijan. Inflow to the Lake Jandara comes mostly through the Gardabani Canal from the Kura River (from Georgia).

Institutional cross-border cooperation

During the Soviet era, all three countries of the South Caucasus Region (SCR, consisting of Georgia, Armenia, Azerbaijan) were within the USSR and water resources management of the Basin was contingent upon the policy that the USSR was implementing at the time. Area of the South Caucasus consists of two basins – Caspian Sea and Black Sea basins.

There is neither an agreement nor a joint body covering the entire Kura-Aras River basin. Bilateral commissions (between Armenia and the Islamic Republic of Iran, between Azerbaijan and the Islamic Republic of Iran) act on the basis of the Agreement between the USSR and Iran of 1957. Bilateral commissions on boundary waters (between Armenia and Turkey, between Georgia and Turkey) act on the basis of the Convention between USSR and Turkey of 1927. Since 2004, there is an Interstate Commission of Armenia and Turkey on the Use of Akhuryan Water Reservoir.

The Intergovernmental Commission on Economic Cooperation of Azerbaijan and Georgia acts since 2004. Its functions cover, among others, the cooperation in the area of monitoring of the environmental safety of transboundary waters, including the assessment of pollution in the Kura River, and joint clean-up measures.

Transboundary Water Cooperation of South-Caucasus States

National Water Partnership of Georgia

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The KURA-ARAS NGO Coalition of South Caucasus Countries was established in 1999 to promote the development of regional water cooperation. In 2001 by the Coalition's initiative June 2 was proclaimed as Day of Kura-Aras Rivers Protection.

Legal Framework of Transboundary Cooperation

- Memorandum of Mutual Understanding between the Ministry of Environmental Protection of Georgia and State Committee of Environment and Nature Use Control of Azerbaijan in Development and Implementation of Monitoring and Assessment Pilot Projects in the Kura Basin (16.09.1997)
- Agreement on Environmental Protection between the Governments of Georgia and Azerbaijan (18.02.1997)
- Protocol of Negotiations on Water Use between the Governments of Georgia and Azerbaijan (27.12.1997)
- Protocol of Agreement between the Soviet Republics of Georgia and Armenia on Water Withdrawal from the Debed River (5.11.1971)
- Agreement on Environmental Protection between the Governments of Georgia and Armenia (1997)

International Projects Implemented in the Region

A number of water management cooperation projects between Armenia, Azerbaijan and Georgia have been implemented during last ten years. The financial support has been received from different financial instruments and funds – TACIS, UNDP/GEF/SIDA, EU, and USAID. Projects' activities have included for example harmonization of monitoring activities, field sampling and analysis, introduction of a geographic information system in the process of water monitoring and facilitation of data information exchange between the three countries. Series of seminars and workshops have been carried out on the theme of integrated river basin planning; a regional Kura-Aras NGO forum has been established. Another important theme that cooperation projects have been targeting is reducing degradation in the Kura Aras River Basin.

Recommendations to Governments and International Organizations

- To secure real public involvement in planning, designing, financing, implementing and monitoring processes.
- To organize joint celebration of international and national holidays, such as International Water Day, Kura-Aras Basin Protection Day, River Days, Day of Rural Women, etc.
- To promote social design work with various civic groups for their capacity building and full-scale involvement.

The Caucasus and Central Asia

RIVERS CHU and TALAS

CHU

Length: 1 186 km
Origin: confluence of the rivers Joon Aryk and Kochkor in Kyrgyzstan
Mouth: Kazakhstan
Countries: Kyrgyzstan, Kazakhstan
Basin area: 62 500 km^2
Avg. discharge: 70 m^3/s

TALAS

Length: 661 km
Origin: confluence of the rivers Karakol and Uch-Koshoy in Kyrgyzstan
Mouth: Kazakhstan
Countries: Kyrgyzstan, Kazakhstan
Total basin area: 52 700 km^2
Avg. discharge: 27,5 m^3/s

The Chu River flows through the Chuy Valley, within which the Kyrgyz capital of Bishkek and the Kazakh city of Shu are located. As it flows through valley, the Chu forms a border between Kyrgyzstan and Kazakhstan for more than a hundred kilometres. Much of the Chu's water is diverted into a network of canals to irrigate the fertile black soils of the Chuy Valley for farming, both on the Kyrgyz and Kazakh sides of the river. The Chu flows into Kazakhstan, where it disappears in the steppe just before reaching the Syr Darya, of which it would be drained during wet years.

The Talas River rises in the Talas Province of Kyrgyzstan and flows west into Kazakhstan. It runs through the city of Taraz in the Zhambyl Province of Kazakhstan and vanishes before reaching Lake Aydyn.

Institutional Cross-border Cooperation

In January 2000 the Agreement on the Use of Water Facilities of Inter-Governmental Use on the Chu and Talas Rivers was signed between the Government of the Kyrgyz Republic and the Government of the Republic of Kazakhstan. Facilities, such as dams, water reservoirs and canals, are located in the territory of Kyrgyzstan. Under the Agreement, the Parties have agreed that

operation and maintenance costs for the facilities specified in the Agreement would be shared on a pro rata basis in accordance with the water volume received by each Party. Under Article 5 of this Agreement, the Parties commit themselves to establish a permanent commission to determine the operation mode for water infrastructure and the share of each Party in funding operation and maintenance costs. The Agreement became effective in February 2002 upon the ratification by the Parliaments of both countries.

In February 2002, the Governments of Kyrgyzstan and Kazakhstan submitted a request to the UNECE and UN ESCAP for assistance in establishing an intergovernmental transboundary water commission, including the development of the Commission statute and other actions aimed at the effective implementation of the bilateral agreement addressing the Chu and Talas rivers.

The Commission coordinates maintenance and use of infrastructure on the Chu and Talas rivers. These activities directly affect the population living in the regions adjacent to the two rivers. More than 1 million people in Kazakhstan and 1.2 million people in Kyrgyzstan live in this international water basin. The peoples living in the river basin are diverse in their origin, culture, and water management needs. It is crucial that they be involved in the process of water management.

Cooperation between Kyrgyz Republic and Kazakhstan on Water Use in the Chu – Talas Basin

Institute of Water Resources Ecology and Desertification Problems – IWREDP PA

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In Soviet times a number of biggest for their period hydro-economic and irrigation systems were built in Central Asia: on- and off-river water reservoirs of complex use, arterial canals of long extension, irrigation facilities, etc. Some reservoirs were planned as irrigation sources of inter-republican use. At present they are still used in the interests of several states. However, for almost 20 years all operation and maintenance expenses have been covered by Kyrgyzstan, where they are located.

The emergence in Central Asia of five independent states after the disintegration of the USSR significantly affected all hydro-economic activity, and issues of joint water use became extremely complex. The countries where major water resources originate (Kyrgyzstan and Tadzhikistan) have completely different interests in their development compared to the downstream countries (Kazakhstan, Turkmenistan and Uzbekistan). The issues of water distribution, compensation of operation and maintenance expenses, etc. have become really urgent. Therefore, conclusion of agreements on interaction mechanisms for joint use and development of hydro-energetic resources requires significant efforts.

Cooperation between Kazakhstan and Kyrgyzstan in the Chu-Talas basin is an example of successful cooperation experience. The Agreement on the Use of Hydro-Economic Facilities of Intergovernmental Significance on the Rivers Chu and Talas was signed

in 2000.

According to the Agreement Kazakhstan undertakes to compensate part of maintenance expenses for hydro-economic facilities located in Kyrgyzstan but supplying water to both states. The Agreement affects a significant part of the population living in the Chu-Talas Basin.

The Chu Basin is located in the northern part of Kyrgyzstan and the river runoff is regulated by the Orto-Tokoi Reservoir situated upstream.

The Talas runoff is regulated by the Kirov Reservoir. The river length is 558 km, 444 km located in Kazakhstan.

The economy of both countries within the basin area is dominated by agriculture. The share of crop production received from irrigated lands, inundated pastures, flow meadows and hayfields in recent years has comprised the stable two-thirds of the total agricultural output.

By the initiative of the Kazakh and Kyrgyz governments the beginning of 2003 was the kick-off point for the international project "Assistance in the Establishment of the Kazakh-Kirgiz Commission on the Rivers Chu and Talas". The establishment of the joint water commission was supported by the UN ECE, UN ESCAP, UN OSCE, Asian Development Bank, European Union and Estonian-Russian Peipsi Centre for Transboundary Cooperation (2001-2006).

The project was aimed at assistance to Kazakhstan and Kyrgyzstan in the establishment of the Chu-Talas water commission to implement the bilateral agreement. The project resulted in the development of Provisions on the Kazakh-Kyrgyz Commission on the Use of Hydro-Economic Facilities of Intergovernmental Significance on the Rivers Chu and Talas, preparation of Recommendations on Covering Maintenance and Repair Expenses on the Facilities and Structures of Intergovernmental Significance and development of Programme of Public Involvement in Transboundary Water Management on the Rivers Chu and Talas.

The implementation of the Agreement on the Use of Hydro-Economic Facilities of Intergovernmental Significance on the Rivers Chu and Talas and the activity of the Chu-Talas Commission promoted the reduction of social and political tension in the region.

This is an example of successful cooperation between countries in the use of transboundary water resources and successful activity of international organization to support Kyrgyz-Kazakh interaction. The experience can serve as a case of best practice for Central Asian

countries and used to establish joint water commissions in other regions.

However, in spite of successful cooperation in the Chu-Talas Basin, the Program of Public Involvement has faced a number of obstacles.

The activity of NGOs and other public agencies at the republican level is insufficiently developed. In Kyrgyzstan these organizations are in embryo, in Kazakhstan they have been already established but their role in decision-making and implementation control processes is insignificant. Thus, the NGO capacity in both countries can be evaluated as insufficient for integrated water management.

At present the development of a new basin agreement in the context of integrated water management and broad public involvement in management of Chu-Talas water resources is underway.

NGO's Role in Promoting Integrated Water Resource Management at Transboundary Level

The Center "Cooperation for Sustainable Development of the Republic of Kazakhstan"

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At present, the countries of Central Asia experience transition to the implementation of the Integrated Water Resource Management (IWRM) approach in the practice of state management. The importance of this issue can be attributed to a hard situation in Central Asia regarding drinking water supply and sanitation. The following water-related issues of the region have been acknowledged the sharpest: increasing water shortage, surface and ground water pollution, immense loss of water increasing all permissible levels, insufficient supply of high quality drinking water, intergovernmental conflicts over water distribution and the threat of water resource depletion resulting from population growth and economic activity. The implementation of the IWRM approach can help resolve these problems.

One of the key factors for IWRM implementation is stakeholder capacity development, where NGOs can assist in training, knowledge and experience exchange, communication culture promotion and IWRM skills development.

NGOs can be involved through participation in joint commissions and water distribution talks, cooperation with NGOs from neighboring countries, development of legislative documents and other acts, and organization of public awareness campaigns.

The Center of Support for the Sustainable Development of Kazakhstan has implemented a number of capacity building projects in Central Asian countries in the sphere of water management: the development of an IWRM university course and a training module for water basin councils, and the study of an educational capacity regarding water resources.

Higher educational institutions of Central Asia experience shortage of modern materials to develop and deliver university courses on water resource management. Therefore, the creation of a university course on integrated water resource management is

quite timely and significant for Kazakhstan and other Central Asian countries. The project was implemented with the financial support from the Almaty UNESCO Office for Kazakhstan, Kirgizstan, Tadzhikistan and Uzbekistan.

The IWRM course program includes fundamental water management principles and problems and the IWRM decision-making process, including transboundary aspects.

Thus, Course Module 10 is devoted to international cooperation and improvement of transboundary water management. The module includes the following issues: international legal principles of cross-border cooperation in transboundary water management, key positions of the European Water Directive on cooperation in transboundary water basins, international agreements on transboundary waters, practical international cooperation experience in transboundary basins, and the protection and use of transboundary water resources in EURASEC and SCO countries.

The IWRM course materials can be found on the UNESCO web-site www.unesco.kz.

The Kazakhstan Water Code implies the establishment of basin councils for integrated water management. However, the advisory status of such councils prevents their active involvement in decision-making at local level. In order to improve water resource decision-making, it is necessary to incorporate IWRM principles in the state management practice. To this end, the Center of Support for the Sustainable Development of Kazakhstan with the support of the Astana OSCE Center has developed a project on pilot training seminars for basin councils and their stakeholders.

Within the project, the Center held three pilot seminars for council members and their stakeholders in the Balkhash-Alakol, Chu-Talas and Ural-Caspian Councils.

One of the project results was the training module "Improved Decision-Making based on the IWRM Approach" developed for basin councils and their stakeholders respecting recommendations of seminar participants.

To develop further results of these projects, The Center of Support for the Sustainable Development of Kazakhstan with the financial support from the Almaty UNESCO Office for Kazakhstan, Kirgizstan, Tadzhikistan and Uzbekistan and in cooperation with the Center of Support for the Sustainable Development of Kirgizstan and Civic Initiatives Support Center of Tadzhikistan prepared a review of educational practice on water management issues for Kazakhstan and other Central Asian countries and developed a number of recommendations to improve water-related education and training.

Special attention has to be paid to IWRM international aspects and transboundary cooperation. The Center is actively working to incorporate IWRM principles in administrative practice through seminars and roundtable discussions on the issue and is ready to cooperate with all organizations that need assistance in promoting IWRM at transboundary level.

WATER and HEALTH

Protocol on Water and Health

The Protocol on Water and Health Issues to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes was adopted in London on June 17, 1999.

The goal of the Protocol is to promote health protection and human well-being, both individual and collective, at all relevant levels, including state-wide, cross-border and international contexts.

Water resource management is to harmonize social and economic development with the protection of natural ecosystems. Moreover, the improvement of water supply and sanitation is fundamental in order to break the vicious circle of poverty.

For the accomplishment of the Protocol goal, the Parties undertook the following commitments:

a) to provide access to drinking water for all,

b) to implement sanitary and preventive measures regarding complex water management systems in order to ensure a sustainable use of water resources, a proper quality of natural water not endangering human health and an appropriate protection of water ecosystems.

According to Articles 11 and 12, if the Parties possess Transboundary waters they shall additionally cooperate and provide mutual assistance in the prevention, minimization and reduction of Transboundary risks connected with water-related diseases. In particular, they shall:

a) exchange information and knowledge on transboundary waters and water-related problems and risks with other bordering Parties,

b) according to Paragraph 5b, Article 6, try to implement joint or coordinated water management programs with other bordering Parties, as well as monitoring and early notification systems and emergency action plans to react to disease outbreaks and individual cases and to minimize such outbreaks, especially, connected with water pollution or extreme climatic phenomena,

c) adapt, following the principles of parity and mutuality, their other agreements and acts to prevent any contradictions with the Protocol principles and to determine their mutual behavior and relations regarding the Protocol goal,

d) at the request of any Party, provide mutual consultations regarding the harmful impact of water-related diseases on human health.

In case the Protocol Parties are simultaneously signatories of the 1992 Convention on Transboundary Watercourses such cooperation and assistance connected with the transboundary consequences of water-related diseases, are performed in accordance with the Convention positions.

The 2000/60/EC Water Framework Directive of the European Union approved by the European Parliament and the European Council on October 23, 2000, is the main water policy act of the European Community.

Considering the position of Moldova and Ukraine as EU neighbouring countries and their orientation to harmonize national legislation with EU directives, the Water Directive sets principal guidelines for the Dniester Basin countries to develop their water policy.

Ukraine, Moldova and Kyrgyzstan are countries moving towards the implementation Convention and Protocol principles and basing their policy on the EU Water Directive guidelines.

Implementation of Article 13 of the Protocol on Water and Health Issues in the Dniester River Basin

„Eco-TIRAS" International Environmental Association of River Keepers

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Moldova and Ukraine are signatory states of the Protocol and the Dniester is their transboundary river. The Dniester is the biggest river of Western Ukraine and Moldova and together with the Danube, Dnieper and Southern Buh belongs to the four biggest rivers of the Black Sea watershed. With a length of 1380 km it provides drinking water to major cities of Ukraine and Moldova. The Dniester Basin extends into the seven regions Ukraine (Lviv, Ivano-Frankivsk, Chernivtsy, Ternopil, Khmelnitsk, Vinnytsia, and Odessa). Within Moldova, the Dniester Basin covers the major part of the country's area (59%). The total population of the Dniester Basin is over 7 million people, with a very high for Eastern Europe population density of over 110 people/km^2.

The transboundary Dniester, a major drinking water resource for Moldova and Ukraine, especially for the Odessa Region, is facing a severe pressing from both sides. Especially harmful for the environmental condition of the river is the impact of hydro-energy affecting the Dniester hydrology. Developing irrigation, soil erosion, pollution from chemicals, wood-cutting, industrial and household discharges considerably deteriorate Dniester ecosystems.

The basin has several large intakes of drinking water on both Moldovan and Ukrainian parts, and for many years our countries have been blaming each other for their pollution.

Before 1991 the river basin was managed as a unified system, however, after that Moldova and Ukraine started to manage the territory separately. In 1994 they signed the Bilateral Agreement on the Joint Use and Protection of Transboundary Waters but it doesn't involve any other stakeholders except water agencies. The main cooperation mechanism of the countries is meetings of authorized governmental representatives from these agencies.

For many years representatives of Moldovan and Ukrainian environmental NGOs have been insisting on the adoption of a new water basin agreement and institutional mechanism based on an integrated water management approach and water basin principles (a river commission).

The project "Transboundary Cooperation and Sustainable Management of the Dniester River Basin" supported by the OSCE and UNECE, has been developing in Moldova and Ukraine since 2005. Two phases of the project: Dniester-I and Dniester-II have been already implemented and Dniester-III is currently underway. The project aims at the promotion of regional cooperation between Moldova and Ukraine through the development of an Intergovernmental Agreement on the Dniester Basin. The project also includes the preparation of a Protocol of Sanitary and Hygienic Water Quality Assessment to the Agreement, which would give a basis for mutual efforts in the prevention of negative water quality impact on human health.

The goal of the Protocol is to develop joint sanitary and hygienic criteria for water quality assessment in order to receive comparable monitoring data for joint activities. In order to implement the Protocol, each Party should establish a working group approved by a Meeting of Authorized Governmental Representatives of Moldova and Ukraine or by the future River Commission. When coordinated, the Protocol will come into force after it has been approved and signed by the Authorized Representatives on the Joint Use and Protection of Transboundary Waters. Such mutually developed documents are an efficient instrument to include health-related issues in the programs of water resource management and use, which can ensure prevention of water-related diseases, one of the main goals of the Protocol on Water and Health Issues.

Moldova and Ukraine should demonstrate a political will and sign a new basin agreement to involve all stakeholders in the solution of Dniester Basin problems, including Health Ministries, and to establish a River Commission with a working group on sanitary and hygienic monitoring of water quality. In addition, it is crucial to provide access of population, especially children, to improved water supply sources. Moldova has adopted a goal to achieve by 2020 the supply of improved water and sanitation to 80% of the total population including 100% of children institutions and 45% of rural population.

Protocol on Water and Health Issues in Moldova

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The UNECE area includes 140 million people (16%) without centralized water supply, 85 million (10%) without improved sewage systems and over 41 million without access to safe drinking water sources. 13,5 thousand deaths before the age of 14 occur because of low quality drinking water.

What concerns the Protocol goals; in Moldova we also considered recommendations of the WHO, as well as national and international experience. We prepared the procedural document "Guidelines to Develop Goal Accomplishment Criteria", which took into account the existing situation, infrastructure, political, legislative and normative framework. It was important to evaluate the goal accomplishment progress by priorities at the time of evaluation and to give a timeframe of their full accomplishment considering financial opportunities. Now it is necessary to sign an agreement on goal criteria and to ensure its full public and stakeholder visibility.

In 2009 we observed rather low water quality levels in water intakes and water supply systems. The number of samples exceeding maximum permissible levels by sanitary and chemical criteria comprised 70.8% compared to 58.3% in 200. Especially serious is the situation in the Călăraşi, Glodeni, Taraclia, Ceadîr-Lunga, Comrat, Ungheni, Căuşeni, Cahul, Hînceşti, Anenii Noi, Sîngerei, Făleşti and Teleneşti Districts, where this indicator reaches 85-100%. At the same time the relative ratio of samples exceeding microbiological limits decreased (8.4% in urban systems compared to 10% in 2008, and 14.8% in rural systems compared to 16.7% in 2008).

In order to accomplish the Protocol goals, the Moldovan Ministry of Environment and the Apele Moldovei Agency plan in 2010-2015 to evaluate the goal accomplishment progress, to construct a water purification station and regional water supply network in Nisporeni, and to implement, with the support of the World Bank, water supply projects in 23 villages.

The efficiency of water resource management, development, protection and use systems has to be achieved by 2017.

In 2010-2011 the ministry of Environment, Ministry of Health and Apele Moldovei Agency plan to prepare and adopt the Water Law and in the upcoming years – the Water Management Strategy for Emergencies and the Underground Water Management Strategy. In addition, in 2011–2013 we plan to develop and approve framework documents on water resources, water management and monitoring, and in 2012 – to coordinate and sign with Ukraine a joint water management agreement and to start the development of a National Water Monitoring Program of Moldova.

We also continuously increase public awareness on possible negative impacts on surface and underground water resources from economic activity (workshops, information campaigns, publications etc).

Improving Water Systems as prerequisites for better Rural Health – the case of Kyrgyz Republic

Kyrgyz Alliance for Water and Sanitation

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Background

Kyrgystan is a largely mountainous country with a few large fertile valleys. Its population is around 5 million and there are 1700 villages, 16 small towns, and 2 cities. With the collapse of the former Soviet Union, the new state's control over and maintenance of the provision of services such as water also more or less stopped. In addition to political changes this was also due to the lack of government resources necessary for providing such services.

As a result, the village water systems fell into disrepair and many of them stopped functioning altogether. In many cases water was collected from rivers and irrigation ditches. The incidence of serious waterborne diseases such as hepatitis increased and affected large numbers of the rural population. As a consequence, rural health declined.

Improving Rural Water Supply and Sanitation

In 2001, the World Bank and Department for International Development (United Kingdom) agreed to fund the Rural Water Supply and Sanitation Project (RWSSP) and the Asian Development Bank funded the "*Community Based Infrastructure Services Sector Project*". Assistance was offered to rural communities and villages for the creation and rehabilitation of their drinking water systems which they would then own and operate themselves.

A critical part of these large-scale projects was raising community awareness, and for this, participatory approach was used. Several information meetings were organized, leaflets were distributed in all Kyrgyz villages and information was disseminated through the mass media. The RWSSP actively encouraged the participation of the whole village community in decision making, information campaigns, planning, construction, operation and management as well as monitoring of the WSS. Participation and involvement of local people are basic principles which are relevant to improving local governance and citizens' use of public resources. The project and engineering team in cooperation with local administrations organized workshops for 4 distinct groups of people in each village: men, women, the youth and schoolchildren. These were carried out separately to ensure as wide participation as possible and to make sure that different voices (especially those of women) could be heard.

As a result the list of problems faced by the village was prioritized and in many cases a water problem tree was drawn, identifying the causes and consequences. Finally, the project teams along with the village initiative group implemented the observation, technical and social survey of the current water supply situation in the village. The villages with severe water problems and clear interest in addressing them were selected to participate in the project and were assisted in mobilizing the entire village. Meetings of household (quarter, street level) representatives – Village Constituent Assemblies (VCA) – were held and on the basis of the VCA the Community Drinking Water Users Unions (CDWUU) were formed. The CDWUUs participated in several training sessions – financial management, water quality monitoring, etc. Duties of the CDWUUs and local administrations included mobilizing the village in order to ensure a 5% cash and 15% in-kind contribution to the cost of the rehabilitation their water system as well as

participating in the tendering committees of the rural water supply system. Afterwards the CDWUUs were encouraged to sign agreements with households and budget institutions and private enterprises regarding their monthly payment of water tariff.

As a conclusion, the importance of preparatory stages – capacity building, awareness-raising , selection of villages and creating the village organization (in this case the CDWUU) – cannot be underestimated. If these are not done properly, the subsequent stages will be undermined. A variety of methods for increasing and stipulating participation should be used. The aim should be the establishment of a strong sense of community ownership of the WSS. Encouraging support from local partners is also important and helps strengthen the capacity of the village's water institutions such as the CDWUU. Involvement of women in community management of the village's WSS is essential. Women are directly affected by the presence or absence of affordable and safe water. It is important to find practical ways to encourage women's participation, to build their capacity and confidence. Successful capacity building is essential for the community water supply systems managed by community based organizations to be sustainable.

As a result, in the period of 2002-2010, the projects helped improve the access of rural communities to clean drinking water in about 500 villages in Kyrgystan.

The Kyrgyz Alliance for Water and Sanitation (KAWS) is a network organization which has been continuing the above-mentioned process. Naturally, this network is initiated by the 46 CDWUUs themselves.

Acronyms

EECCA	Eastern Europe, the Caucasus and Central Asia
ENP	European Neighbourhood Policy
EU	European Union
EUWI	European Union Water Initiative
GEF	Global Environment Facility
GIS	Geographical Information System
GWP	Global Water Partnership
ICPDR	International Commission for the Protection of the Danube River
IWRM	Integrated Water Resources Management
NGO	Non-governmental organization
NPD	National Policy Dialogues
OECD	Organization for Economic Co-operation and Development
TACIS	Technical Assistance to the Commonwealth of Independent States
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development
WFD	Water Framework Directive – Directive 2000/60/EC of the European Parliament and of the Council of 23 Octiber 2000 establishing a framework for Community action in the field of water policy
WHO	World Health Organization
WSS	Water supply and sanitation

Peipsi Center for Transboundary Cooperation (Peipsi CTC) is an international non-profit organisation, which works to promote balanced and knowledge-based development of border areas, especially in the Lake Peipsi region, Estonian-Russian border area.

The organisation, founded in 1993, focuses on three main areas of activity:

- Cross-border and development cooperation
- Environmental awareness building
- Community development

We implement projects on the both shores and in the vicinity of Lake Peipsi. Our development cooperation projects have contributed to the management of transboundary water bodies and public participation in the Western Balkans and the CIS countries.

www.ctc.ee

Peipsi Center for Transboundary Cooperation

The Annual Cross-Border Cooperation Summer Schools takes place in Lake Peipsi region. Besides theoretical lectures, practical seminars and group works, study visits to the exciting places in the border areas of Estonia and Russia are organised.

The Annual Peipsi Forums on Estonian-Russian cross-border cooperation is committed to discussions about the achievements in cross-border cooperation of the current year, and a venue for making collaboration plans for the forthcoming year.

Development cooperation with Eastern Europe, the Caucasus, Central Asia and the Balkan countries to transfer Estonian experience of public participation in the transboundary water management.

Raising environmental awareness. Peipsi CTC carries out environmental trainings and study days, and offers nature study programmes for schools meant to obtain knowledge in different aspects of nature education, biology and geography by way of using active learning methods.

Lake Peipsi Living Room in Kasepää village is an exhibition providing information on the natural conditions of Lake Peipsi and an overview of the daily life.

Research projects in the Lake Peipsi region to identify challanges to socio-economic development and regional development potential in the Estonian-Russian border area.