Strategic Framework for Adaptation to Climate Change in the Dniester River Basin

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The Environment and Security Initiative (ENVSEC) transforms environment and security risks into regional cooperation. The Initiative provides multi-stakeholder environment and security assessments and facilitates joint action to reduce tensions and increase cooperation between groups and countries. ENVSEC comprises the Organization for Security and Co-operation in Europe (OSCE), Regional Environmental Centre for Central and Eastern Europe (REC), United Nations Development Programme (UNDP), United Nations Economic Commission for Europe (UNECE), and the United Nations Environment Programme (UNEP). The ENVSEC partners address environment and security risks in four regions: Eastern Europe, South Eastern Europe, Southern Caucasus and Central Asia.

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FOREWORD BY THE REPUBLIC OF MOLDOVA

The Strategic Framework for Adaptation to Climate Change in the Dniester River Basin was prepared under the Environment and Security Initiative (ENVSEC) with financial support from the Austrian Development Cooperation and the European Union Instrument for Stability. The Framework was reviewed at various stages by the Ministry of Environment of the Republic of Moldova, with the participation of experts from the Moldovan Water Agency (Apele Moldovei), as well as the State Hydrometeorological Service and the Academy of Sciences of Moldova. In this connection, the Ministry of Environment of the Republic of Moldova, , wishes to express its agreement in principle with the approach and process employed in the development of the Strategic Framework, as well as its approval of the outcome of these efforts.

Within the context of adaptation to climate change at the basin level, problems directly related to the aquatic environment and changes in the water regime are of utmost importance and have the greatest urgency. Among all of the problems linked to climate change in the Dniester basin, the participants in consultations held within the framework of the bilateral Working Group on Flood Management and Climate Change Adaptation in the Dniester Basin assigned top priority to problems related to changes in the water regime, degradation of soil and agricultural land, as well as the consequences of climate impacts on human health and the water supply.

One of the critical impacts of climate change in the Dniester basin is a probable change in the volume and seasonal distribution of the water flow. Flooding in the basin is already causing significant losses for the economy and population of the Republic of Moldova, including the loss of human life. Catastrophic floods in 2008 and 2010 provided yet another reminder that the existing flood protection system is performing its functions only in part. As research performed in connection with the drafting of the Strategic Framework shows, further changes in the climate will most likely lead to a rise in the intensity and uneven distribution of precipitation – particularly heavy rains – accompanied by an increase in high water levels in the Dniester river.

At the same time, the document notes that the Republic of Moldova and Ukraine do have some – and in certain respects significant – resources for adaptation to climate change. Important mechanisms for adaptation in the sphere of water resources include the complex of hydraulic engineering installations on the Dniester river and flood control levees built along both banks of the river, primarily below the Dubasari reservoir. The Republic of Moldova has approved the Climate Change Adaptation Strategy, the Water Supply and Sanitation Strategy and the Programme for Development of Water Resources Management and Water Conservation. Optimization of the use of such instruments in the interests of the basin, including further development of the flood protection infrastructure and maintenance of this system in good

working condition, is an important part of the document's recommendations.

Another important adaptation mechanism is the performance of observations for state-of-the-art monitoring and forecasting of hydrometeorological processes in the Dniester basin. Specifically, the hydrometeorological services should have the technical ability to receive and transmit to neighbouring countries information about the threat of emergencies in the basin even in their initial stage. An example of the possible implementation of this sort of approach over the long term is the creation of a single system for the observation of precipitation (including the use of weather radar) and early warning of flood hazards through the forecasting of heavy rainfall in the basin. Further automation of monitoring, improvements in hydrological forecasting and enhanced data sharing in the Dniester basin are high priorities today for adaptation efforts.

The development of a common methodology for the assessment and accounting of water resources in the Dniester basin, along with the calculation of the current and long-term water management balance, are also necessary for the improvement of joint water resources planning by the Republic of Moldova and Ukraine, taking into account climate change.

As climate change becomes more pronounced, up-to-date ecosystem-based approaches to adaptation have an increasingly important role to play. These approaches include concern for the most vulnerable natural complexes (for example, floodplain meadows in the Dniester delta that are suffering from disruptions in water exchange with the main channel of the Dniester below the levee of the Mayaki-Palanca highway) and setting aside sections of the floodplain for flooding during high water levels in the Dniester.

The rapid entry into force of the Treaty between the Government of the Republic of Moldova and the Cabinet of Ministers of Ukraine on Cooperation in the Field of Protection and Sustainable Development of the Dniester River Basin is of particular importance in this regard, along with the approval of rules for the operation of the Dniester reservoirs.

This document, in our view, offers a comprehensive synthesis of the results of research performed and experience in the implementation of projects related to climate change in our region and is in line with the Republic of Moldova's Climate Change Adaptation Strategy and complements it. We believe that successful implementation of the recommendations contained in the document by the countries in the basin will make a contribution not only to the prevention and mitigation of adverse impacts of climate change, but also to the strengthening of stability and sustainable development in the Dniester basin as a whole. It should also help to improve transboundary cooperation among specialized organizations, not just in the area of water resources, but also in the areas of environmental protection, agriculture, energy and other key economic sectors of Moldova and Ukraine.

Further, we expect that the practical implementation of the Strategic Framework for Adaptation will play a useful role in promoting the efforts by the Republic of Moldova to meet the commitments it has made under the Association Agreement with the European Union, which was ratified last year.

Sergiu Palihovici
Minister of the Environment
Republic of Moldova

FOREWORD BY UKRAINE

Climate change is causing significant shifts in the distribution of water resources over space and time, and this in turn is leading to a massive increase in the scope and frequency of natural hazards.

Over recent years Ukraine has felt the full force of consequences arising from changes in the hydrological regime of rivers – there has been an increase in both the number of natural disasters and in the costs associated with recovery. At the same time, there has also been an increase in the frequency and duration of droughts that are causing serious losses for the population and virtually all sectors of the economy. Adaptation to climate change is therefore not only a social imperative, but an economic one as well.

Ukraine and Moldova are united not just by common borders and a long history of friendly ties, but also by the Dniester River basin, whose waters serve as a life-giving resource for more than 10 million people in the two countries. Some 7 million of these people live within the basin itself. Considering the transboundary status of the Dniester basin, we welcome the activities of the Environment and Security Initiative, under which efforts were undertaken

Ukraine views the following as top priorities in the context of ensuring sustainable development: cooperation with reputable international organizations such as the United Nations Economic Commission for Europe, the Organization for Security and Co-operation in Europe, and the United Nations Environment Programme; expansion of the geography of international cooperation; and the establishment of direct contacts with governmental and non-governmental foreign partners. Joint work within the Dniester basin under the Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus project offers such an opportunity and provides a new impetus for the further strengthening of professional ties with colleagues from the Republic of Moldova. The implementation of concrete adaptation measures also helps to reduce the risk that conflicts will arise in the process of coordinating flood and drought forecasting, prevention and recovery activities in the basin, as well as activities related to the use and distribution of scarce water resources.

The interests of all of the stakeholders in the water resources management and environmental sector were

Ukraine endorses the outcome of the development of the Strategic Framework for Adaptation and it is planning to apply these results in its own work.

Last year was an important year for Ukraine, since our country, like the Republic of Moldova, signed and ratified an Association Agreement with the European Union. The agreement covers a broad range of issues, including issues related to climate change and the protection and sustainable use of water resources; it also provides for a number of strict commitments, including deadlines for compliance with them.

We are grateful for the support provided by the United Nations Economic Commission for Europe and the Organization for Security and Co-operation in Europe within the context of this project, and we see it as an important contribution to the fulfilment of Ukraine's commitments to deepen cooperation with the European Union.