

**CLIMATE CHANGE ADAPTATION MEASURES FOR THE DNIESTER RIVER BASIN
IN THE AREAS OF MONITORING AND ECOSYSTEM RESTORATION AND CONSERVATION
SUPPORTED BY THE PROJECT COMPONENT
“CLIMATE CHANGE AND SECURITY IN THE DNIESTER RIVER BASIN”**

As decided during the ninth meeting of the Working Group on Flood Management and Climate Change Adaptation (Chisinau, 2-3 July 2014) of the ENVSEC project “Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus”, as well as based on consultations with basin stakeholders

Improvement of the information base for climate adaptation to climate change

A solid information base, including efficient monitoring, supports decision-making within the basin, the further development and the implementation of adaptation policy, and a quick reaction to extreme events under changing climate.

| # | What? | Why? | Where? | How much? | Comments |
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| 1. | Further automation of hydrological monitoring in the basin, and strengthening the exchange of monitoring data (including installation of precipitation gauges in the areas where precipitations are formed). <i>Status – planned</i> | Automation of additional monitoring posts helps improve the timely collection and exchange of information to mitigate damage from floods and other extreme events which will become more frequent and intense under climate change. | Five priority locations were tentatively selected. They are located at Zhuravno, Sambor, Matkiv, Glinnoe and Bendery. Alternatives were suggested by the representatives of Moldova and finally purchase of a mobile device for measuring water flow was selected instead of the stations in Glinnoe and Bendery. | Automation of one post is within the range of EUR 10,000 – 15,000. | World Bank and other donors support large-scale automation in Moldova. Besides cross-country exchange, also inter-agency (and inter-regional (e.g. Chisinau-Tiraspol) exchange of data needs to be addressed. |
| 2. | Initial creation of the joint platform on data exchange between hydrometeorological services of Moldova and Ukraine. <i>Status – ToR is almost finalized</i> | Quick access to information will help in taking efficient management decisions. | Joint page on the websites of the hydrometeorological services. | 15,000 EUR | A group of experts is created to explore options for this and the ToR is almost finalized. |
| 3. | Modelling and mapping of flooded areas and risk zones (incl. risks of flash floods) with the use of modern geo-information technologies in accordance with the requirements of the EU Water Framework Directive and EU Floods Directive. <i>Status – under implementation</i> | Flood maps will help mobilize and allocate resources for flood protection and could be used for prohibiting construction and reconstruction activities in flood risk zones. | The Dniester delta. The majority of works were implemented within the project on reducing vulnerability to extreme floods and climate change. | 4,000 EUR for additional consultancy-related works. | The whole area of Moldova is being covered by flood risk / hazard maps with EIB support. There is a need for research on bathymetry of the river in both countries. |

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| 4. | <p>Calculation of the current and the long-term water use balance of the Dniester basin.</p> <p><i>Status – at finalization stage</i></p> | <p>Calculation of water use balance will help identify which sectoral needs may be at risk from climate change and what is required to ensure their operation. The balance is also necessary for the development of the management plan for the Dniester river basin.</p> | <p>For the entire basin in the transboundary perspective, and for selected sub-basins.</p> | <p>15,000 EUR</p> | |
| 5. | <p>Improvement of hydrological forecasting of inflow to the Dniester reservoir (short-term) and strengthening the exchange of the forecasts within the basin.</p> <p><i>Status – under implementation</i></p> | <p>Improved forecasting is needed to better plan the management of the reservoirs' storage capacity under changing climate.</p> | <p>From the Dniester source to Mohyliv-Podilskyi (benefitting the entire basin)</p> | <p>25,000 EUR</p> | <p>The approach currently used by Ukraine's Hydrometeorological Centre needs to better account for weather variability under climate change.</p> |
| 6. | <p>Development of a model of functioning of the cascade of the Dniester reservoirs and its further implementation into the exploitation rules of the Dniester reservoirs as well as its adaptation for real-time decision-making in situations of extreme events.</p> <p><i>Status – under implementation</i></p> | <p>The management of reservoirs is one of the most significant instruments of adaptation to climate change and disaster risk reduction in the Dniester basin.</p> | <p>Dniester reservoirs (benefitting the entire basin)</p> | <p>Implemented by AGWA with project support.</p> | |
| 7. | <p>Training and preparation of awareness materials on actions required during floods for local administrations, civil protection units, schools and the general public.</p> <p><i>Status - completed</i></p> | <p>Awareness activities will help the society to reduce damage from floods under changing climate.</p> | <p>Most vulnerable areas to floods</p> | <p>Organisational support</p> | <p>The majority of works were supported by the project on reducing vulnerability to extreme floods and climate change. Finalization of activities was supported by the current project.</p> |
| <p>Ecosystem restoration and conservation <i>Ecosystem restoration and conservation represents the increasingly popular worldwide and in Europe ecosystem-based approach to adaptation, which reduces the vulnerability and increases the resilience of human communities in the face of climate change.</i></p> | | | | | |
| 8. | <p>Restoration of water exchange between the Dniester and floodplain</p> | <p>Flood mitigation by natural ecosystem restoration</p> | <p>Floodplain areas under the road Mayaki-Palanca in the Dniester</p> | <p>Feasibility study on assessment of the</p> | <p>The construction activities will be also</p> |

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| | meadows by restoring water culverts and channels under the road Mayaki-Palanca. <i>Status – under implementation</i> | | delta | current state of water culverts – 5,000 EUR and construction activities – 10,000 EUR | funded by a project supported by the Swiss government. |
| 9. | Creation of forest margins and riverside protective bands in Ramsar wetlands (5-7 ha). <i>Status – at finalization stage</i> | Flood mitigation and river bank protection | Ramsar wetland – island Turunchuk | 20,000 EUR | It is more efficient to perform re-forestation activities gradually. |
| 10. | Feasibility study for one wetland to be inundated during floods in Moldova and development of the relevant justifications <i>Status – at finalization stage</i> | Improving of the state of the populations of species which quantity reduced greatly after loss of wetlands. | The area is located close to the village Talmaza in Moldova in the Lower Dniester and belongs to Ramsar wetlands. | 5,000 EUR | |
| Awareness raising activities | | | | | |
| 11. | Afforestation events in transboundary areas on the Dniester accompanied by training for foresters and local authorities on selection of species and areas for afforestation at the banks and water protection zones. <i>Status – completed</i> | Raising awareness will help make public and other stakeholders aware of adaptation measures and how to implement them. | The tributaries Kuchurgan and Deep Turunchuk incl. the area of Nizhnednestrovskiy National Nature Park. | 5,000 EUR | |
| 12. | Public awareness raising activities: support of the art-contest “Colours of the Dniester” and conducting of the Dniester expedition as awareness raising activity. <i>Status – completed and under implementation</i> | | | 2,500 EUR per activity on average | Professionals need to be involved to present information to the public. |