Upgrading agricultural drought monitoring and forecasting in the Dniester River Basin

The goal of the demonstration project is to raise awareness of the authorities and the stakeholders' on main climate change trends, upgraded agro-climatic zones and drought adaptation measures as basis for drought management at national level and within the Dniester River Basin Management Plan.

Outputs

- ∠ Long term climatic-agro data analysis.
- Review and mapping new climate-zoning of Ukraine and Dniester River Basin territory.
- ~ Pilot: upgrading forecast models of crop yield losses caused by droughts and development of remedial measures practices.
- Awareness rising on droughts management for decision makers and farmers.

Interim observations

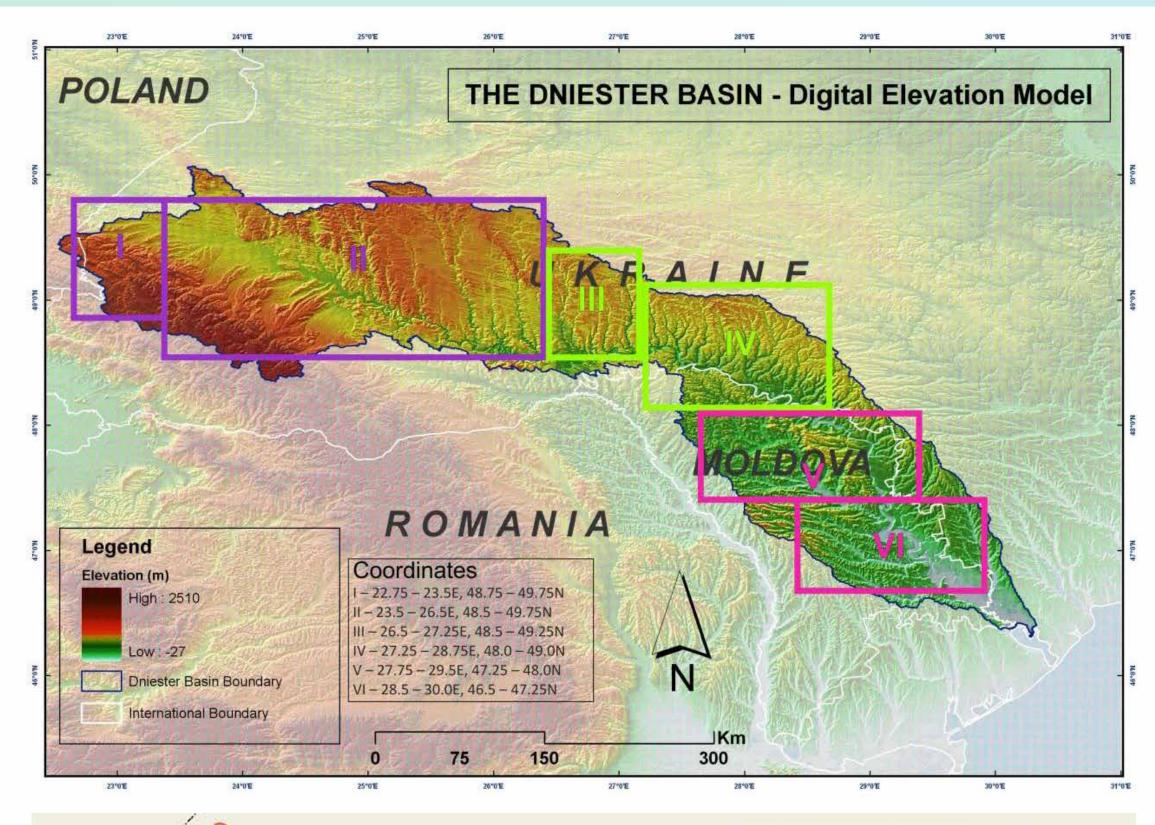
- Nonsymmetrical warming especially in the winter and summer months. Average annual temperature increase more then 0.8°C. Temperature increase in cold period is in average 1.35°C, in warm period − 1.1°C.
- Soil moisture reduction in May by 10-20%.
- ~ Average annual precipitation quantity in Ukraine has no changes.
- ~ There are substantial changes in the precipitation distribution during year. In winter there is a 20% decrease, in summer the precipitation has increased by 5-15%.
- There is no positive effect of precipitation increase in summer time because of intensive increasing of air temperature at the same time.
- Return period of 50-year flash floods is getting to decrease by 10-15% with no substantial changes in annual flow.
- → Droughts in Dniester basin are going to last longer.

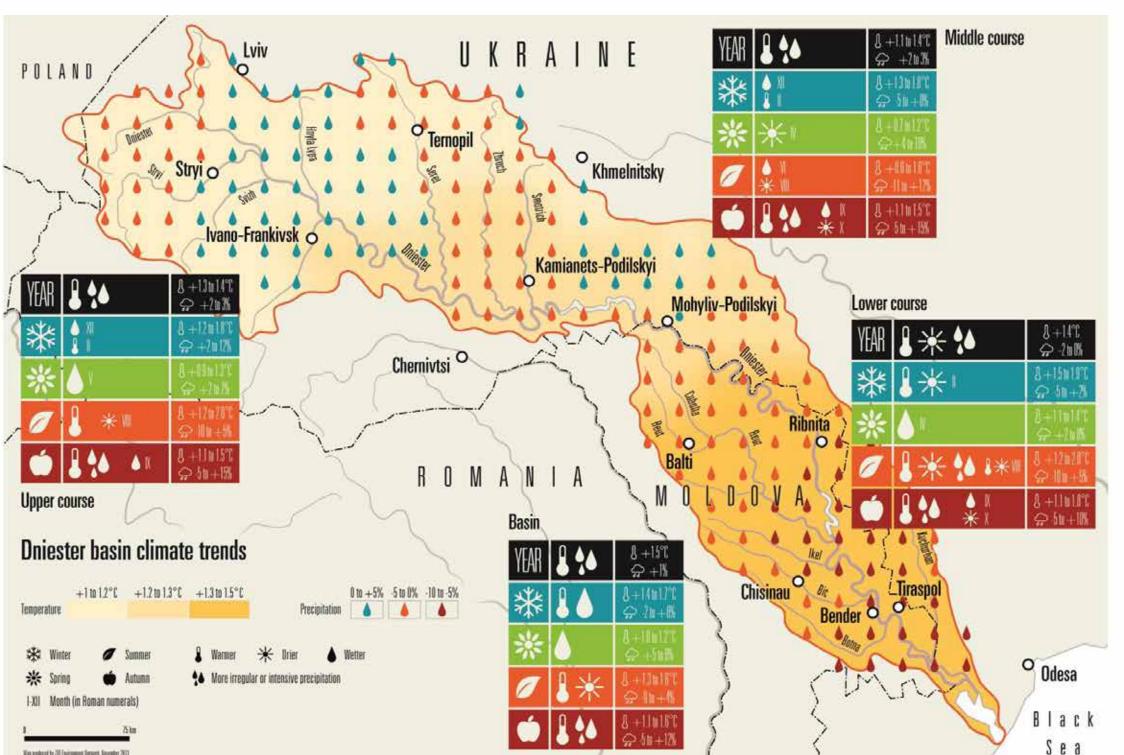
Cooperation: Ukraine - Moldova

- Moldavian counterparts will present mapping of the soil moisture as a function of erosion.
- Ukrainian counterparts will analyze long-term data on water holding capacities for main types of soils in Ukraine and development of the monitoring system on agro and droughts.

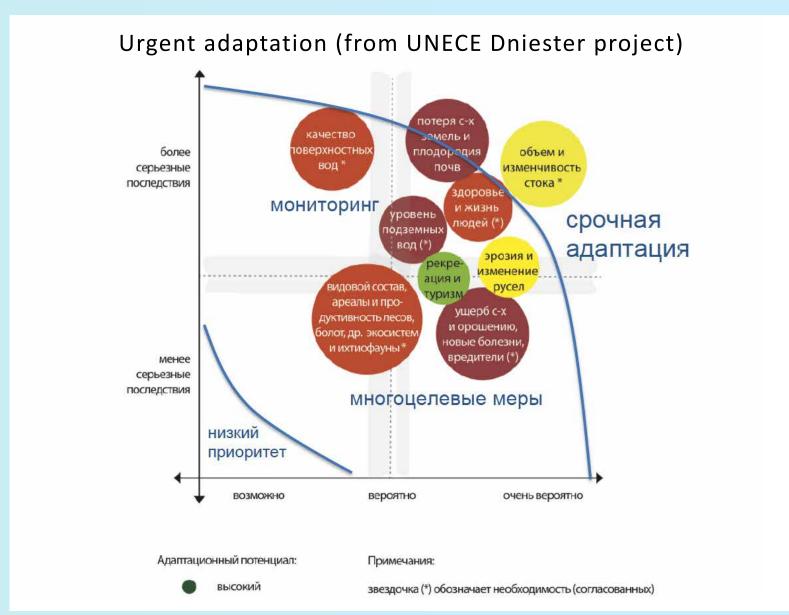
Partnership

- → Moldova: GWP Moldova; Soil Research Institute
- → Ukraine: HydroMetCentr of Ukraine; GWP Ukraine









Integrated Drought Management Programme in Central and Eastern Europe



Need for regional and national drought policies

Key principles of the programme

Expected changes of average annual and seasonal climate characteristics in the Dniester basin in 2021-2050 in comparison with 1971-2000 (A1B global scenario, model ensemble REMO-ECHAM5). Source: Ukrainian Hydromet Institute, 2012

From reactive to proactive approach

Knowledge base & sharing best practices

Vertical planning & horizontally integrated sectors

Building capacity for integrated drought management

OBJECTIVE

Increase the capacity of the Central Eastern Europe region to adapt to climatic variability by enhancing resilience to drought.

ACTIVITES

Knowledge management: best practices in early warning and drought

planning management. **Guidance on technical and institutional aspects**: tools and methodologies to support better drought risk management and response.

Advocacy: stakeholder participation in integrated drought management through regional and country dialogues.

Capacity building: drought risk awareness raising through vulnerability assessments and risk mapping to develop preventive action against drought.

RESULTS

- Guidelines for preparation of the drought management plans within river basin management plans according to the European Union Water Framework Directive.
- National consultation dialogues to discuss preparation of drought
- management plans.
- Compendium of good practices.Drought information exchange platform.
- Demonstration projects testing innovative solutions for better resilience to drought.
- Capacity building trainings and workshops on national and regional
- levels.





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