



Prut River Basin

DRAFT MANAGEMENT PLAN



The project is funded
by the European Union



This project is implemented by a consortium
led by Hulla & Co. Human Dynamics KG



The Environmental Protection of International River Basins (EPIRB) project aims to improve the quality of water in transboundary river basins in the wider Black Sea region and Belarus, including Moldova and Ukraine. One of the objectives of the EPIRB project is to improve technical capacities by developing river basin management plans (RBMPs) that conform to the EU Water Framework Directive (WFD) for selected river basins.

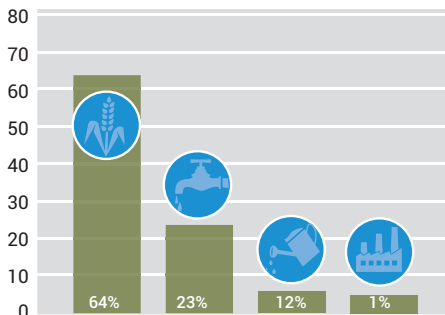
The Prut River Basin is one of five pilot basins chosen for the project.






ABOUT THE PRUT RIVER BASIN

WATER USE: Moldova

Total water use: 15.75 million m³ (2014)



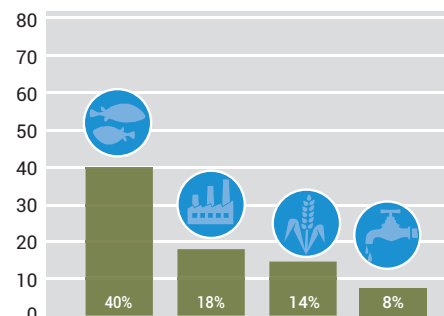
Total area: 27,540 km²
(9,350.012 km² in western Ukraine;
8,123.35 km² in Moldova)

-  Prut Pilot Basin - Ukraine
-  Prut River Basin - Romania
-  Prut Pilot Basin - Moldova

Population: The population of the basin is 798,700 in Moldova and 890,000 in Ukraine. Rural areas constitute a major part of the region, with only two main cities in the Ukrainian section and 15 towns in the Moldovan section.

WATER USE: Ukraine

Total water use: 23.8 million m³ (2015)



*data without the Dniester inter-basin water transfer

Location: The basin is located partly in southwest Ukraine and partly along the length of Moldova's border with Romania. Part of the wider Prut River Basin is located in Romania.

-  Agriculture
-  Irrigation
-  Drinking water
-  Industry
-  Fisheries



The EU Water Framework Directive

is a comprehensive and ambitious body of EU environmental legislation that aims to protect and restore the quality of waters across Europe. It organises water management efforts based on natural geographical formations, such as river basins.

What is a river basin management plan?

River basin management plans (RBMPs) are integrated planning documents that describe the characteristics and challenges of a river basin. Their purpose is to outline a comprehensive set of measures in order to find solutions to complex problems that threaten the aquatic environment. River basin management is a continuous process of planning and delivery, and it is recommended that plans be updated every six years.

The overall Draft Basin Management Plan for the Prut River Basin was developed according to the approaches and methodologies of the EU Water Framework Directive (WFD) and the national water legislation of both Ukraine and Moldova.

The individual draft plans describe the river basin and investigate the pressures that pose a threat to each water environment. They show the impact of these pressures on the state of the waters, identify what types of improvements are possible, and recommend taking specific actions to ensure that the combined efforts achieve the improvements needed in the Prut River Basin.

Cooperation between stakeholders has been of vital importance in drafting the plans, and will also be necessary in performing actions to preserve suitable conditions for both humans and the natural environment. Government bodies, local communities, NGOs and enterprises now have an opportunity to benefit the entire region by working together to achieve water environment sustainability.

A river basin is an area of land with the characteristic that all of its surface water runoff is conveyed to the same outlet, such as a river, lake or sea.

Surface runoff is water from precipitation or other sources that flows over the land surface.

The role of the Water Framework Directive

A water body is an area of surface water or a supply of groundwater with characteristics that distinguish it from other waters around it. A water body may be a lake, a reservoir, a whole or part of a river, a stream, a canal, transitional water, a stretch of coastal water, or a groundwater aquifer.

Good ecological status is defined as a slight variation from undisturbed natural conditions. As artificial and heavily modified waters are not able to achieve this status, the target for these waters is good ecological potential.

The availability of safe, high-quality water is essential to society. People need water for drinking, farming, producing electricity and manufacturing goods.

Modern society also imposes many pressures on water – from pollution to overuse. And because water is constantly flowing from one place to another, threats to water quality in one river may harm an entire river system.

The aim of the EU Water Framework Directive (WFD) is to establish an integrated approach for protecting the quality and availability of freshwater resources. It is implemented through river basin management planning and requires that other environmental priorities, economic considerations and social issues are considered and taken into account.

The WFD stresses the importance of frequently studying plant and animal species that are directly dependent on surface waters. Ecological aspects are a top priority in river basin management and should therefore be monitored extensively. Living organisms are good indicators of the health of rivers and lakes because they react quickly to changes in their environmental conditions.

According to WFD requirements, “good” status must be achieved in each water body in a river basin. This means meeting targets for minimising both the level of pollutants and damage to natural ecosystems in surface waters. Groundwater must also meet targets for minimum pollutant levels, and aquifers must not be depleted by overuse.

WATER FRAMEWORK DIRECTIVE PLANNING SEQUENCE



A photograph showing two individuals in a river. On the left, a person in a light blue t-shirt is holding a long-handled net. On the right, a person in a wetsuit and yellow gloves is pouring water from a blue bucket into the net. The net is submerged in the water, and a white plastic bag is attached to its handle. The background shows a riverbank with green foliage.

Water monitoring

encompasses the collection of data using consistent methods in order to evaluate the status of the water environment. Field-based inspection, automated monitoring stations and laboratory measurements conducted on samples are used in combination to observe water status.

MONITORING

In order to ensure good water quality, water bodies must be frequently monitored. The monitoring programme for river basin management is based on a wider range of assessments than those carried out in the past. As such, in the Programme of Measures (PoM), a new monitoring system is proposed for the Prut River Basin in both Moldova and Ukraine that will meet the requirements of the WFD. The system will monitor flow rates, ecological status and chemical status in surface waters, and chemical and quantitative status in groundwater.

Monitoring is essential for effective river basin management. The use of monitoring data helps to classify water bodies, assess human threats and natural changes, and determine the effectiveness of measures for improvement. Comprehensive water quality monitoring provides not only the means to monitor progress in improving water quality, but also the ability to quickly identify and resolve new threats.

KEY STATISTICS

CURRENT MONITORING SYSTEM IN THE PRUT RIVER BASIN

SURFACE WATER

Monitoring locations

Moldova: 30

Ukraine: 13

GROUNDWATER

Monitoring locations

Moldova: 34

Ukraine: 0

STATUS CATEGORIES UNDER THE WATER FRAMEWORK DIRECTIVE

A water body's status indicates the degree of deviation from its natural condition. The further a water body deviates from its natural condition, the worse its status.

Ecological status may be affected by modifications to the physical shape of a surface water body (its hydromorphology). Modifying a water body's hydromorphology may damage its natural ecosystems.

For surface waters, "good" status consists of an ecological and a chemical component, and the classification uses the poorest individual element result to set the overall classification. For groundwater, quantitative and chemical components are assessed separately but are then combined to provide a single, overall classification.

AIMING FOR IMPROVEMENT

While the goal of the WFD is to achieve "good" status in all water bodies, this is not always immediately possible. In some water bodies, environmental objectives may have to be lower, if reaching "good" status is unfeasible or prohibitively expensive.

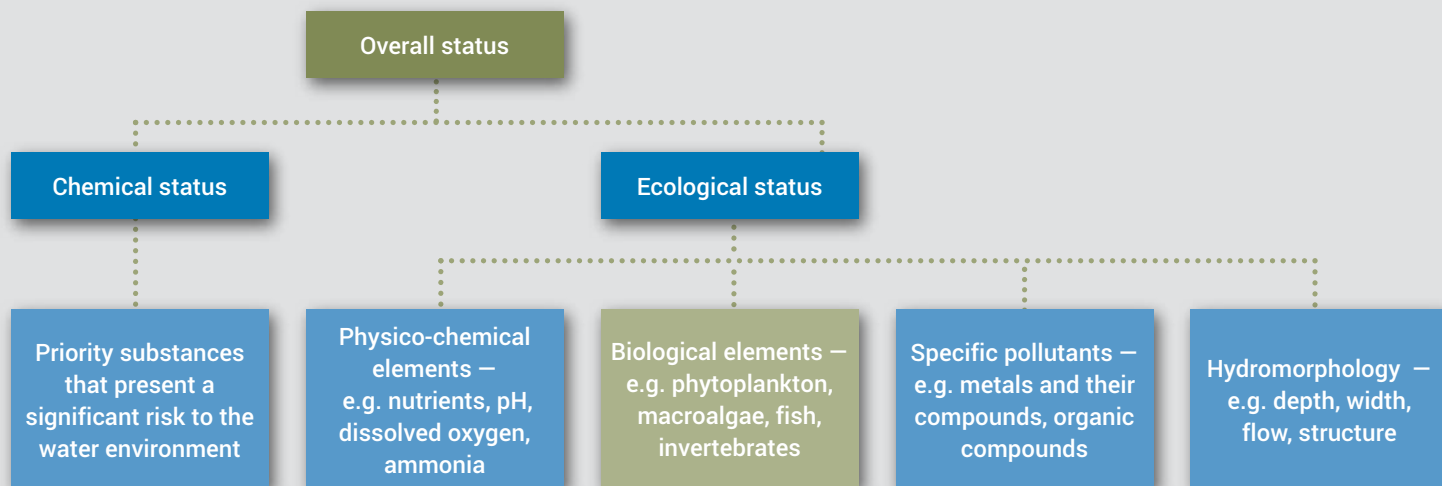
Heavily modified and artificial water bodies must have as many characteristics of "good" status as possible, given the physical changes that have been made. Artificial and heavily modified water bodies are measured against "ecological potential" rather than status.

Environmental objectives will only be finalised when a WFD-compliant status assessment system is established for all water bodies in both Moldova and Ukraine. Target dates for each water body will be set accordingly.

Heavily modified and artificial water bodies

are bodies that have been altered for human use – irrigation or power generation, for example.

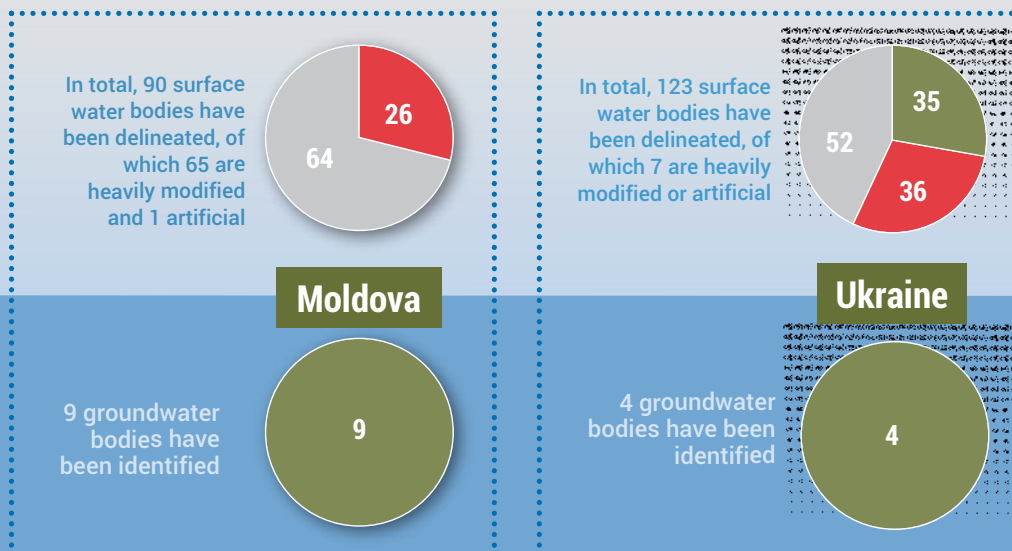
THE COMPONENTS OF OVERALL STATUS FOR SURFACE WATER BODIES



STATUS OF WATER BODIES IN 2015

**SURFACE
WATERS**

**GROUND
WATER**



WATER BODY STATUS ASSESSMENT:

- Not at risk of not achieving good status
- Possibly at risk or at risk of not achieving good status
- Data not available

The chart indicates both the number and percentage share of water bodies for each status category.

Based on what is considered sufficient data, Moldova has identified 14 water bodies that will be unable to achieve "good" status by 2021, while Ukraine has identified 12.



PROGRAMME OF MEASURES

The Programme of Measures (PoM) is the core of the RBMP for the Prut River Basin, as it actually describes how the environmental objectives can be met. Different water bodies need different approaches to achieve “good” water status, and addressing them is only possible through stakeholder collaboration.

The PoM examines the actions needed to properly deal with water issues. Tackling pollution, for example, often requires new legislation or better law enforcement to be in place. The proposed measures operate at a variety of different geographical scales: some of them apply across the country, while others are more localised.

Various economic aspects of the proposals were explored in order to strike a good balance between financial costs and the prioritisation of measures. A cost-effectiveness analysis was conducted in order to estimate budget costs and assess the usefulness of prospective actions.

The table on the following two pages showcases important identified water issues and provides a short description of the proposed measures.

CURRENT WATER PRESSURES AND PROPOSED MEASURES

PRESSURE

Untreated wastewater from outdated urban sanitation systems leads to organic pollution and chemical pollution.

PROPOSED MEASURES

Moldova and Ukraine will rehabilitate outdated wastewater treatment plants and construct new ones for urban settlements that do not already have them. Both countries will further develop regulations on the basis of the EU Urban Wastewater Directive. Furthermore, Moldova will explore technical solutions for sewage sludge disposal.



PRESSURE

Farming practices and the use of nitrogen fertilisers lead to nutrient pollution.

PROPOSED MEASURES

Both Ukraine and Moldova will adopt codes of good agricultural practices in accordance with the EU Nitrates Directive. In addition, the countries will harmonise their national legislation with the Nitrates Directive.



PRESSURE

Issues stemming from conflicts of interest and unsatisfactory regulation expose water resources to pollution and overuse and take a toll on the aquatic environment across the whole basin.

PROPOSED MEASURES

The two countries will take further actions to prevent unauthorised water abstraction, to promote water-efficient technologies in different sectors of the economy, and to achieve cost recovery on water consumption.



CURRENT WATER PRESSURES AND PROPOSED MEASURES (CONTINUED)



PRESSURE

Due to river morphology, small hydropower plant operations and other watercourse modifications, natural habitats are subject to deterioration.

PROPOSED MEASURES

Natural river conditions will be restored to the maximal extent possible, and the prevention of illegal gravel and sand extraction will be a priority for Ukraine and Moldova in moving forward.



PRESSURE

Natural hazards such as flooding and drought have occurred more frequently in recent years and are causing serious damage to local communities.

PROPOSED MEASURES

The restoration of floodplains (especially the wetlands of Prutul de Jos and Padurea Domneasca in Moldova) will help to avoid severe flooding and droughts in the lower course of the Prut River. In Ukraine, there are plans to study floodplains and wetlands and to develop measures for their conservation and restoration.



PRESSURE

Inadequate landfill capacity in the Chernivtsi region of Ukraine allows polluted runoff from solid waste to contaminate the environment.

PROPOSED MEASURES

Landfills will be constructed or rehabilitated in the Kosiv and Verkhovynsky districts, and a waste-processing complex will be constructed in Kolomyia and Ivano-Frankivsk.

PUBLIC PARTICIPATION

The involvement of stakeholders that are fully informed is essential in developing a well-founded RBMP. Numerous public meetings were held in Moldova and Ukraine in 2014 and 2015, with the participation of delegates from Romania.

The general public in both countries were given the opportunity to provide written feedback and comments. As a result, the contributing parties have played an active role in shaping the documents, most of which have been incorporated in the final version of the draft plans.

IMPLEMENTING THE RBMP

The national authorities responsible for Prut Basin management in Ukraine are the Ministry of Ecology and Natural Resources, the State Agency of Water Resources (with its regional subsidiaries the Dniester-Prut Basin Administration for Water Resources, and Ivano-Frankivsk Oblast Administration for Water Resources) and the State Service for Geology and Mineral Resources. The government authority responsible for implementing the RBMP in Moldova is the Ministry of Environment and its subordinate institutions.

Stakeholders in a river basin include government authorities, basin organisations, NGOs, residential and business water users, the scientific community, journalists, downstream states and the general public.





This publication presents at a glance the Draft River Basin Management Plans for the Prut River Basin, prepared in the framework of the EPIRB project. The full Draft River Basin Management Plans are available at <http://www.blacksea-riverbasins.net/en/pilot-basins/prut-basin>

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