



Water security underpins Moldova’s ability to rekindle dynamism in its economy, realize health and well-being outcomes for its people, and achieve environmental goals. Moldova requires large investments to harness the productive aspects of water if its growth ambitions are to be realized, but until recently, a detailed understanding of the country’s water balance was missing. The recent [Moldova Water Security Diagnostic](#) shows that the country’s water endowments, mostly based on inflows of the Prut and Dniester Rivers, can reliably fulfil the demand. However, Moldova faces high variability of rainfall and water flows, with a high risk of both floods and droughts. Moldova also ranks as Europe’s most climate vulnerable country¹, and vulnerability will intensify with climate change. Moldova’s water security challenges result from a lack of investments in infrastructure, financing, management capabilities, and enabling policies. A water secure future for Moldova would mean that citizens - both urban and rural - can live productive lives, in a clean environment, with reliable water and sanitation services, and based on livelihoods that are resilient to floods, droughts, and pollution, but for which there is still a long journey ahead.

Is Moldova water secure?

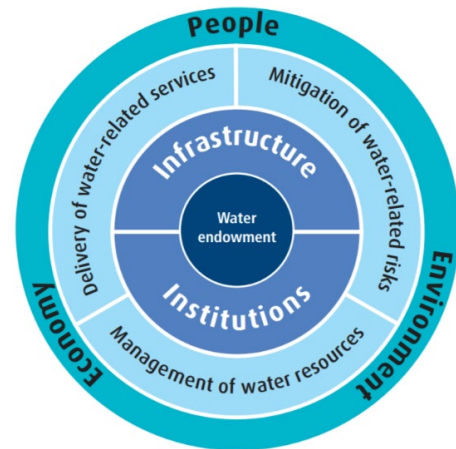
Water security is defined as the ability of a country to deliver services to its people, leverage water resources sustainably, and mitigate water-related risks such as droughts and floods (see figure 1). Assessing the social, economic, and environmental outcomes of how water is managed and used indicates that Moldova is not water secure.

Water security for the environment: Moldova’s environment is degraded, suffering from a legacy of neglect. Restoring ecosystems is vital for improving the habitat and water quality, but also for building resilience to floods and droughts through green development.

Water security for people: Significant gaps in access to water and sanitation services, especially in rural areas, undermine Moldova’s progress on Sustainable Development Goals (SDGs). Almost a million Moldovans rely on often polluted wells, and untreated wastewater is a major public health concern.

Water security for the economy: Water is central to Moldova’s economy, but water productivity is much lower than its neighbors, and there are weak incentives for water use efficiency. Low performance of irrigation service providers and limited uptake of irrigation systems for higher-value crops hinder development. Agriculture remains mostly rainfed and vulnerable to shocks.

Figure 1. A framework for assessing water security



Source: World Bank, 2020.

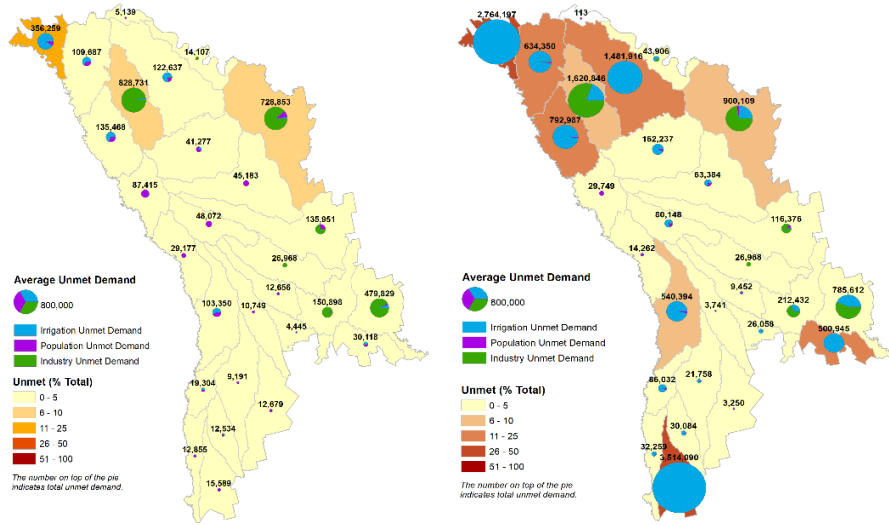
Can water resources reliably meet water demand under future development scenarios?

Moldova’s water endowments are currently not a binding constraint for its development. A Water Evaluation and Planning System tool (WEAP) highlighted that Moldova has sufficient water resources reliably available to meet demand today, with only 5 percent of total renewable water resources withdrawn on an annual basis, as well as under different development

¹ The Notre Dame Global Adaptation Initiative (ND-GAIN), 2020.

scenarios until 2030. However, climate change, which sees mean temperatures increasing and more variable precipitation, will likely have a drying effect.

Figure 2. Average annual unmet demand in absolute (m³/annum) and relative terms (%) as of total demand for 2018 (left) and 2030 (right) in a scenario with universal water supply access and irrigated areas expanded ten-fold.



Source: World Bank, 2020. Moldova Water Security Diagnostic and Future Outlook. Washington, DC.

Climate change will impact many sectors, and its effects are pronounced for agriculture due to increasing irrigation water demand. This will likely result in the expansion of water stress hotspots along the north and middle Prut, and in the south-east and south-west of the country, and require trade-offs between environmental flow requirements and irrigation water demand in drier years (see figure 2). A range of measures can be harnessed to manage water insecurity risks to livelihoods and the economy, such as adaptive irrigation and climate resilient agronomical practices, demand management and water use efficiency, allocations to high value uses and seasonal storage.

Governance and legal-regulatory framework in the water sector

Moldova has a comprehensive legal framework that is largely aligned with the European Union Water Framework Directive. However, while reform efforts have progressed, limited oversight and the slow operationalization of legal frameworks limit water sector performance. Even in a context of ample water resources endowments, functions are needed to plan, allocate, manage trade-offs, protect resources and manage risks in the face of climate change. The negative consequences of the stalled reform of Moldova’s water agency “Apele Moldovei” include limited basin-level planning, incomplete water permit registration, inefficient use of scarce financial resources within the agency, slow reorganization of management of irrigation schemes, limited action on flood protection, and lack of leadership on its *de jure* water supply and sanitation (WSS) mandate.

Moldova has made important steps to develop the framework for WSS services, having passed Law No. 303/2013 on the Public Water Supply and Sanitation

Services and having established a regulator, the National Energy Regulatory Agency (ANRE) in 2014. Important initiatives, supported by the European Union and bilateral partners, have played a key role in strengthening the enabling environment and institutional capacities such as for regional planning and delivery of infrastructure, as well as for utility service provision. Valuable lessons were generated with respect to management models to expand services to rural areas, as well as for irrigation development and scheme management by water user associations.

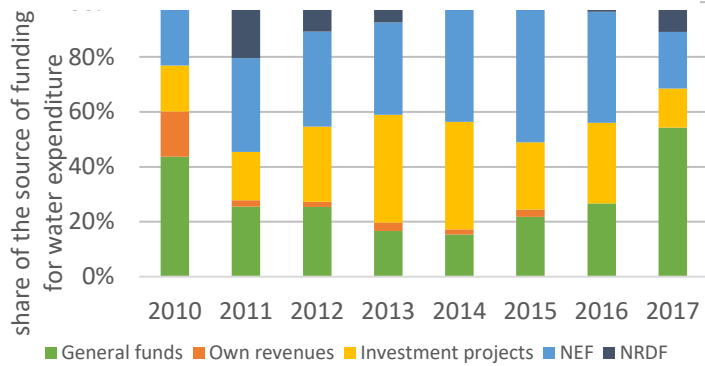
Performance continues to be hindered by lack of a capacitated lead entity and insufficient execution of critical functions such as investment planning and prioritization and the monitoring of sector performance. While Moldova’s recently revised National WSS Strategy 2014–2030 endorses SDG targets 6.1 and 6.2 and articulates strategic reform directions, major efforts will be required to operationalize these ambitions.

Financing for water security

The current levels of financing for water security are inadequate. On-budget expenditures are far below the required needs to meet the SDGs: they were just 1.4 percent of government expenditure in 2017, far below OECD and international benchmarks of 5 percent. Two thirds of all sector expenditures came from development partner resources, indicating a

heavy reliance on external sources. Investments in irrigation, water resource management (WRM) and flood protection have been modest - just 15 percent of all water-related expenditures. The financing framework should be revisited, with future earmarking of fees and levies for WRM. Financing for irrigation is also a priority given its economic potential, but it should be based on an irrigation development plan which is currently missing. State Irrigation Enterprises operating partly functional schemes pose a significant financial burden which should be addressed.

Figure 3. Public spending on water by sources of financing, 2010-2017



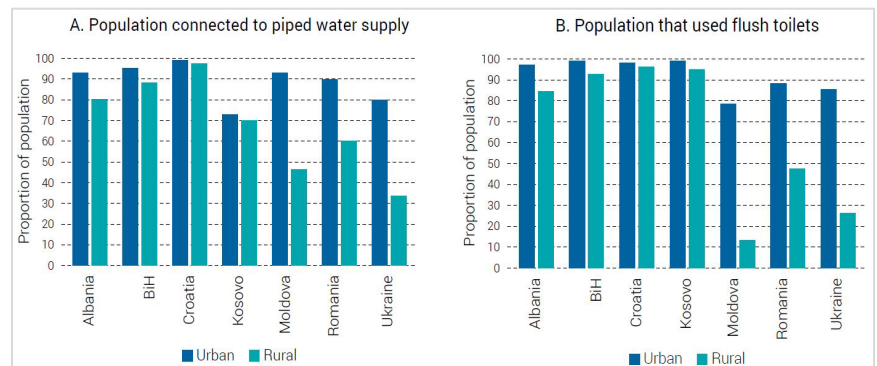
Source: World Bank, 2020. Moldova Water Security Diagnostic and Future Outlook. Washington, DC.

There has been a sustained bias for financing in urban areas due to a lack of national planning and support for rural services. Domestic funding remains fragmented: the National Ecological Fund (NEF) and National Regional Development Fund (NRDF) are the two primary sources, with the NEF providing the most important source of funds for the rural communes. However, while the NRDF has a good implementation track record, poor performance and transparency issues hamper the effectiveness of NEF. Given the large financing gaps, a financing framework would help mobilize more resources from tariffs, government and partners and support a more coherent use of national funds.

Spotlight on access to services in rural areas and inclusive development

Inclusive development remains a major challenge in the sector. The rural-urban discrepancy in access is large, and the poorest segment of the rural population has the lowest level of service. Access to flush toilets is 94 percent for urban areas and only 48 percent for rural areas. This leaves most rural households using outdoor pit latrines of poor hygienic status, often lacking nearby handwashing facilities.² Sewer systems serve 3.6 percent of the rural population, while reaching 76.3 percent of urban residents. Only one in three households in rural areas has access to a publicly managed drinking water supply.

Figure 5. Access to piped water supply and flush toilets for Moldova and comparators



Source: World Bank, 2019. A State of the Sector - Review of Water Supply and Wastewater Services in the Danube region. Washington, DC.

Pathways to Water Security

Moldova's water security is challenged by a lack of infrastructure, financing, management capabilities, and enabling policies. Moldova requires a comprehensive and long-term approach to addressing these challenges, so that accelerated investments turn into better water supply, sanitation and irrigation services, management capacities are in place to ensure water resources are leveraged sustainably now and in the future, and resilience is integrated into the system. The [Moldova Water Security Diagnostic](#) highlights priority actions for the short and medium term to enhance water security for water and sanitation services, for climate resilient and irrigated agriculture, and for building resilience in water management. The proposed [World Bank Water Security and Sanitation Project](#) aims to support Moldova in addressing some of these priority areas, and other on-going and planned actions should be pursued programmatically in line with available finances and capacities.

² Household Budget Survey. 2018.