

EU Green Week
PARTNER EVENT

**North Macedonia' priorities as new
Party to The Protocol on Water and Health
in the area of WASH and climate**



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#WaterWiseEU



Water Governance in North Macedonia

- North Macedonia has advanced considerably in establishing a framework to regulate the use of water, but significant gaps exist. The economy still needs to make significant efforts to implement the EU acquis in water management.
- The main legal basis for water resources management, regulation, and protection in North Macedonia is the national **Law on Waters**, which is well-aligned with the European Union's Water Framework Directive.
- UN Water assessed the implementation progress of integrated water resources management (SDG 6.5.1) and gave North Macedonia a score of 22 (out of 100) in 2018 and 33 in 2021, indicating a low level of implementation of IWRM principles.
- Responsibility for implementing water-related policies is divided across seven government regulations and institutional agencies.
- The Ministry of Environment and Physical Planning in North Macedonia lacks the resources and capacity to implement the water strategy. Capacity is even more limited at the subnational level.



Water Resources Management

- Expected reduction of precipitation due to climate change and increase in demand driven by economic growth, emphasize the need for highly effective management, development and protection of water resources.
- However, the following factors currently impair effective Water Resources Management :
 - Fragmented institutional arrangements
 - No formal transboundary coordination
 - Data and information required to support IWRM in the country is inadequate.
 - Limited local technical and institutional capacity to support sustainable water management.
 - Priority investments need to be identified.



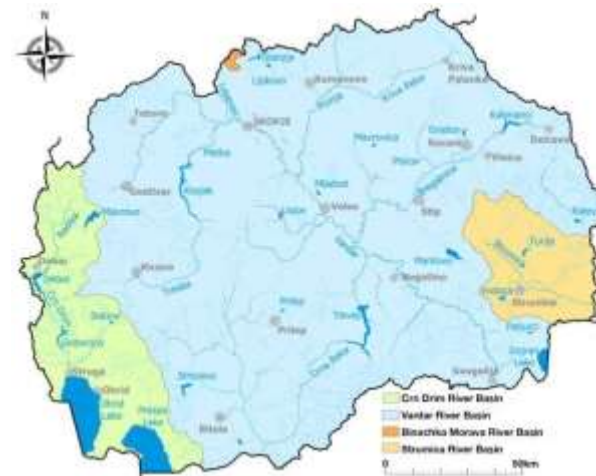
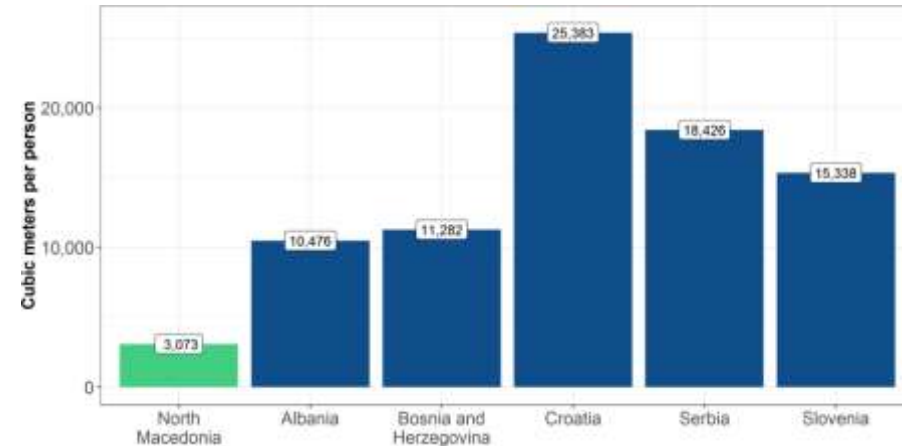
Overview of North Macedonia's Water Resources

North Macedonia's total water resources per capita are 3,073 m³/person. While not water stressed, it is one of the most arid countries in the Balkan region.

Most of the country's water resources originate within its borders but with significant spatial and temporal variance, meaning effective and efficient water management and storage is imperative.

- Existing springs, as well as precipitation are largely concentrated in the **western region**.
- The bulk of water supply from springs and precipitation occurs between the late fall and the late spring.
- Water stress is felt most acutely in the **eastern region** of the country, where available surface water resources are scarce, and in the central Vardar River valley, where average precipitation is lowest and high concentrations of agricultural and industrial activity lead to high demand.

Per Capita Water Resources (m³)



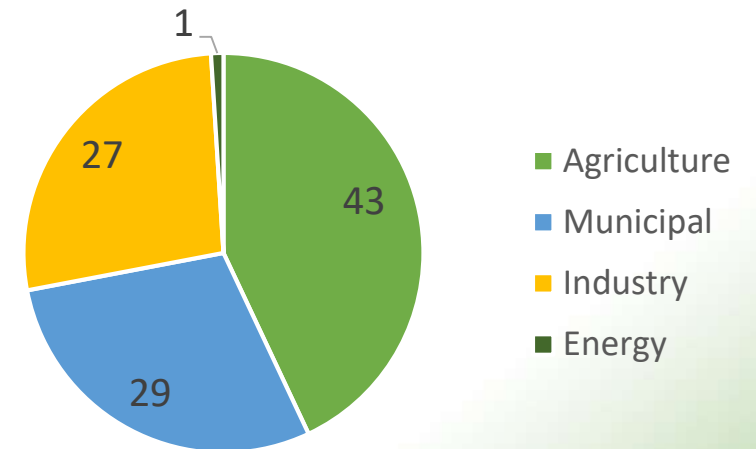
Source: Ministry of Environment and Physical Planning, 2010.



Water as a Key Driver of the Economy

- With a relatively low baseline of water resources available per capita (about 3,074 m³/year), North Macedonia faces the challenge of balancing the withdrawal needs of various water-reliant sectors.
- **Hydropower** provides close to one-third of the country's electricity supply.
- **Adequate access to drinking water, sanitation, and irrigation** services is essential for North Macedonia's rural development.
- The **agriculture sector**, relies heavily on irrigation to achieve sustainable yield.
- **Water quality** remains a significant problem for many Roma households. Children in Roma settlements are at particular risk from untreated water and lack of waste management facilities.

Percentage of Water Withdrawal by Sector



Overview of water infrastructure

Water supply

North Macedonia has about **8 billion m³** of freshwater sources.

Water is used for human consumption (drinking water), irrigation, industrial, economic and other purposes.

- **80%** of the inhabitants were supplied with water from **centralized drinking water systems**
- **10%** of the population is supplied to **local rural water supply systems** and
- **10%** have their own, **individual water supply**.

Water losses in water supply companies remain high, ranging from **40 to 65%**.

Sewerage

The current state of sewage systems differs in **urban and rural areas**. Overall, existing systems are quite old, composed of different materials, the pipes are cracked and there are leakages of wastewater.

Urban wastewater and storm water systems are not separated.

By now, 12 cities and towns (incl. Skopje) have built separate sewerage systems.

Irrigation

Most irrigation systems in North Macedonia were built before the 1990s. For this purpose, more **than 27 large dams, more than 120 small dams, about 1,400 km of main canals / pipelines and about 6800 km of detailed irrigation networks were built.**

The existing network is old, destroyed or not functioning and needs to be repaired.



Delivering Water Services

- **Access to quality drinking water** is almost universal in North Macedonia. About 20% people still lack access to safely managed drinking water services (SDG 6.1), and 88% people lack access to safely managed sanitation services (SDG 6.2).
- **Wastewater treatment** also represents a serious challenge. Only 27,5 % of domestic wastewater is safely treated before being discharged.
- **Water supply and sanitation services** are generally inefficient, with high levels of non-revenue water (60%) and an average of more than four pipe breaks per kilometer annually.
- High rates of **rural-urban migration and climate change impacts** may further stress the country's outdated water infrastructures.
- Low percentage of irrigation infrastructure is being actively used. Many farmers rely on independent irrigation schemes.
- **Climate change** is expected to increase the occurrence and severity of droughts. All key sectors (municipal, agricultural, hydro, and tourism) that rely on water are expected to be impacted, increasing competition for increasingly scarce water resources.
- The area around Skopje is considered to be at higher risk of water scarcity.



Priority actions to Achieve Water Security in North Macedonia

Priorities	Challenge	Proposed Action
1: Support Integrated Water Resources Management for improved water security outcomes	Fragmented and decentralized governance	Prepare a detailed assessment of the institutional complexity of water and environmental management and regulation in the country
	Lack of formal transboundary coordination in other key basins in the region	Enhanced regional cooperation and the pursuit of transboundary agreements
	Lack of data and information in support of IWRM	Reform and improvement of the national Hydromet service; enhanced regional co- operation and data sharing with neighboring countries and the EU
	Limited local technical and institutional capacity to support sustainable water management	Implement education, training and awareness- building programs (for technical personnel, the general public, as well as decision- and policy-makers.
2: Achieve universal access to safe and sustainable water supply and sanitation services	Low efficiency and extensive deterioration of existing water supply and sanitation infrastructure and utilities Lack of effective and widespread wastewater treatment; Increasing pressure on existing WASH services in urban areas due to large-scale migration from villages to urban centers	Develop a review of the existing regulatory and institutional framework, providing recommendations for enhancing the collection of user fees and water infrastructure funding;
3: Continued modernization of irrigation and drainage services	Outdated, inefficient, and under-utilized irrigation infrastructure network result in reliance on unregulated private schemes that utilize groundwater	Regulation of groundwater withdrawals for agriculture; better coordination between agricultural and other water-using sectors when it comes to effective basin-level and country-level water resources management
	Erosion due to poor land management in the agriculture	Improved land management and erosion control practices in agriculture
4: Address water sector financing challenges	Financing issues have prevented updating, maintenance, and expansion of water infrastructure.	Develop a climate-informed comprehensive Water Investment Plan to guide future policy reform and strategic investments in the water sector.
5: Strengthen water sector resilience to extreme events	Frequent occurrence of damaging floods	Conduct a comprehensive assessment of possible flood risk reduction actions, including flood hazard mapping and zoning, improved land use planning, and improved forecasting and early warning system to minimize damage.
	Increasing occurrence and severity of droughts under climate change.	Conduct a detailed and comprehensive assessment of the potential impacts of water demands and water supplies across all sectors and the country



Thank you for your attention!

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