



Policy brief

From Local Incidents to a Potential Eco-Catastrophe

Priorities for Better Water Management in the Vardar River Basin

Executive Summary

In March 2026, a group of eco-activists conducted field monitoring at several locations across the Vardar River Basin in order to document combined pressures and pollution affecting water resources. The monitoring covered the rivers Bregalnica, Konska/Suva Reka, Kamenichka Reka, Kumanovka, Pchinja, and Vardar, where direct sewage and industrial discharges, illegal dumpsites and construction waste in riverbeds, wastewater lagoons, leachate from old landfills, and risks of overflow from mining tailings ponds were identified.

The main conclusion of the field monitoring is that the identified conditions do not represent isolated incidents, but are a direct consequence of inadequate, fragmented, and predominantly reactive water management in the Vardar River Basin. In that regard, critical environmental hotspots become visible only after pollution has already manifested itself, indicating the absence of timely oversight, regular monitoring, and preventive action. Instead of a systemic approach, the institutional response is most often limited to occasional interventions, delayed inspections, and restricted remediation measures without long-term effect. For this reason, it is essential to establish clear prioritization of pollution risks in the Vardar River Basin, adopt a continuous monitoring programme, develop and apply a mechanism for faster inter-institutional coordination, and ensure consistent enforcement of punitive measures against pollution so



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Key Findings

The field reports clearly indicate that water pollution in the Vardar River Basin is not the result of isolated local incidents, but rather a continuous and recurring phenomenon stemming from systemic weaknesses in water management. These weaknesses are manifested through direct wastewater discharges, the creation of illegal dumpsites in and along riverbeds, the presence of high-risk industrial and farming hotspots, as well as insufficient institutional prevention and control.

Addressing this situation requires the establishment of a river basin-oriented water management system, based on risk assessment and risk management, which would ensure more timely, accountable, efficient, and transparent action by the competent institutions.



Context: From a Local Problem to a Potential Eco-Catastrophe

The findings from the monitoring carried out in Shtip, Gevgelija, Makedonska Kamenica, and Kumanovo show that water pollution cannot be treated solely and exclusively as a коммунал/public utility issue. In Shtip, a direct discharge into the Bregalnica River, an erosion-damaged canal, and illegal waste dumping were recorded. In Gevgelija, direct sewage discharges, construction debris, a wastewater lagoon from a livestock farm, leachate from an old landfill, an industrial discharge canal, and sewage flowing into the Vardar River without prior treatment were identified. In Makedonska Kamenica, an accumulation of waste in Lake Kalimanci and a risk of overflow of tailings from the SASA mine into the Kamenichka Reka

In the Kumanovka and Pchinja rivers, illegal dumpsites, bulky waste, and biological waste being carried downstream into the Vardar were documented. These cases point to two important dimensions.

First, pollution has a downstream effect and does not stop at the administrative boundaries of a single municipality.

Second, at several locations there is a direct risk to public health and water supply, as well as a risk of contamination of groundwater and wells, especially where there are direct sewage discharges, dead animals, wastewater from farms, or risks of untreated industrial wastewater spilling into watercourses..





Methodology of the Conducted Monitoring

The monitoring was carried out through field visits to specific locations and visual observation of pressures on water resources. The locations for the field visits were selected on the basis of previously defined criteria:

- 1.) visible sources of pollution,
- 2.) illegal dumpsites/waste in and around riverbeds, bridges, confluences, canals,
- 3.) interventions in the bed of the water body,
- 4.) erosion and bank degradation linked to anthropogenic activities,
- 5.) sensitive sites: confluences, settlements, agricultural zones, protected areas, or
- 6.) previous reports/warnings from local residents or earlier cases covered by the media/institutions.

All observed pressures were geographically identified, appropriately documented through photographs/video recordings, and presented in separate reports. In order to determine the risks and consequences arising from the observed conditions, the relevant provisions of Macedonian legislation concerning environmental protection and water management and protection were consulted, along with expert texts and practices indicating the possible impact of a given condition on water quality and quantity.



Key Messages from the Field

The field monitoring points to four dominant and recurring categories of pressure on water resources in the Vardar River Basin. These are manifested through:

1. the discharge of untreated wastewater,
2. the illegal dumping of solid waste and construction debris in and along watercourses,
3. the presence of structural risks associated with old landfills, farms, industrial facilities, and tailings sites, as well as
4. degraded or damaged infrastructure that further worsens water quality and increases the vulnerability of aquatic ecosystems.

Systemic Weaknesses

A common denominator is the lack of continuous monitoring based on the identification of pollution risks, insufficient coordination among municipalities, inspection services, and public utility companies, as well as limited public accountability regarding which measures have been ordered and whether they have been implemented. Instead of timely prevention, practice is often reduced to intervention only after the damage has already become visible.

Political determination

Water management must be fully integrated with the systems for waste management, sanitary protection, and inspection oversight of industrial, mining, and agricultural operators. The Vardar River Basin should be treated as a single functional unit, which requires the consistent application of an approach based on the local identification of problems and their resolution from the lowest to the higher levels of governance. Such a bottom-up approach is essential, because local institutional inaction or delayed response inevitably produces broader, regional consequences across the entire river basin.

Priorities for Institutional Response

Priority	Key Measure	Time-frame	Duty-bearers
Immediately	Stopping direct discharges (where possible), carrying out extraordinary inspections, and taking samples at critical hotspots	0–3 months	Municipalities, the State Environmental Inspectorate, the Sanitary Inspectorate, and public water supply and sewerage utility companies.
Short-term	Cleaning riverbeds and banks, removing illegal dumpsites, and identifying and sanctioning the responsible parties.	3–12 months	Municipalities, public utility companies, JSC Water Economy, municipal inspection services, and the Ministry of Environment and Physical Planning.
Mid-term	Remediation of old landfills and high-risk sites, stabilization of tailings facilities, and introduction of treatment for industrial and farm wastewater.	12–24 months	The Ministry of Environment and Physical Planning, municipalities, operators, and inspection authorities.



Key Recommendations

It is necessary to establish a water monitoring programme based on clearly defined criteria, with particular emphasis on the presence of direct discharges, proximity to settlements and wells, a history of landfills or industrial activities, the recurrence of incidents, and the ecological sensitivity of the location.

For each critical hotspot, a clear response protocol should be determined in advance, with a precise allocation of responsibilities regarding reporting, sample collection, the issuance of orders, and the implementation of remediation measures.

The focus of institutional action must shift from occasional clean-up operations to the prevention, control, and remediation of the very source of pollution. Where there is a risk of leachate, tailings sites, industrial canals, or farm lagoons, structural and systemic solutions are needed, including closure, stabilization, treatment, or appropriate technical upgrading. At the same time, transparency must be significantly improved through the regular and public disclosure of inspection findings, analysis results, and the status of ordered measures.

Civic monitoring should be institutionally recognized as a useful mechanism for the early detection of problems and the timely alerting of the competent authorities. In this regard, support for local organizations and activists through training, financial assistance, and formalized mechanisms for submitting field findings can significantly contribute to stronger prevention, more effective institutional response, and greater transparency and accountability.



About the Policy Brief

This document was prepared within the framework of the project “Civic Monitoring for Accountable Water Management”, implemented by the Citizens’ Association FLOROZON – Center for Environmental Democracy Skopje, as part of the sub-granting programme of the project “Good Environmental Governance in the Green Agenda for the Western Balkans”, implemented by the Center for Legal Research and Analysis, the Macedonian Young Lawyers Association, and Front 21/42, with financial support from the European Union.

The project “Civic Monitoring for Accountable Water Management” aims to contribute to more accountable, transparent, and effective water resource management through a strengthened role of civil society organizations and local activists in monitoring conditions on the ground.

The preparation of this document stems from the need to translate field-identified conditions into concrete public policy recommendations, with particular emphasis on establishing a river basin-oriented approach, strengthening monitoring, improving inter-institutional coordination, and ensuring more decisive application of legal mechanisms for pollution prevention. At the same time, the document affirms the importance of civic monitoring as a mechanism for the early detection of problems and for enhancing public accountability in the water sector.

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