

Water Under Pressure: Why Romanian Water Law Struggles with Resilience

Ágota Szekeres

PhD Candidate at the Ferenc Deák Doctoral School of Faculty of Law of the University of Miskolc,

Researcher at the Central European Academy, ORCID ID:
<https://orcid.org/0009-0003-5074-0090>.

Across Romania, water systems are being pushed closer to their limits. Rivers face pollution loads they were never designed to absorb, groundwater bodies are increasingly stressed, and wastewater infrastructure struggles to keep pace with demographic change, climate variability, and economic pressure. These challenges are usually described in biological or hydrological terms, yet the capacity of water systems to survive disturbance is shaped just as much by law as by ecology.

Romania's central legal instrument for water services, Law No. 241/2006, governs drinking water supply and wastewater management for households, public institutions, and economic actors. At first glance, it appears comprehensive and technically detailed. It regulates operators, tariffs, infrastructure, and responsibilities. What it does not do, however, is explicitly embrace resilience as a legal objective. This omission has consequences for ecosystems, public health, and long-term water security.

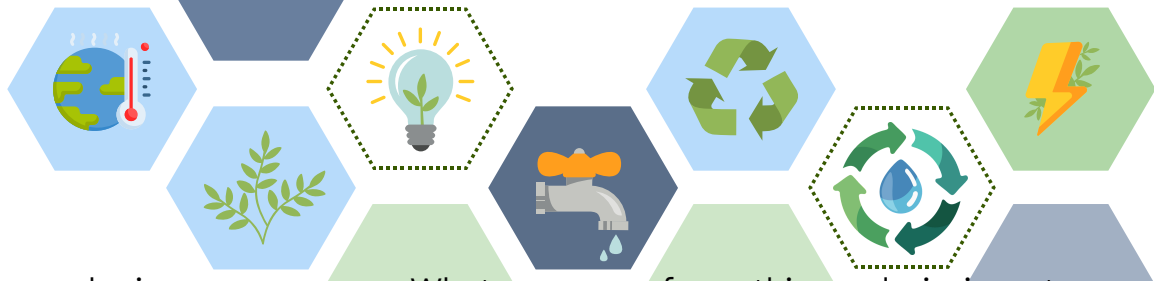
Resilience in environmental systems is not simply about maintaining service delivery.^[1] It is about whether a system can absorb shocks, adapt to new conditions, and continue to function without transferring damage to ecosystems or vulnerable populations. From a legal perspective, resilience requires forward-looking rules, precautionary obligations, and institutional mechanisms that prioritise prevention over repair. Romanian water law, by contrast, remains largely reactive.

The structure of water governance in Romania illustrates this problem clearly. Over the past two decades, water services have been regionalised, merging numerous local providers into regional operators. The stated aim was efficiency, investment capacity, and service quality. While regionalisation has delivered some technical improvements, the legal framework disperses responsibility in a way that weakens ecological accountability. Local authorities approve strategies and tariffs, operators manage infrastructure and finances, and environmental protection appears mainly as a compliance requirement rather than a guiding principle. When pollution occurs or ecosystems deteriorate, responsibility becomes diffuse, and legal intervention is often delayed.

This is particularly visible in wastewater regulation. For many years, Romanian law tolerated widespread reliance on individual wastewater systems without effective oversight. Only in 2021 did emergency amendments clearly prohibit the discharge of untreated wastewater into the environment and impose a stronger obligation to connect to public sewerage networks. From an environmental science perspective, this reform came late.^[2] Nutrient pollution, microbial contamination, and degradation of surface and groundwater bodies had already become entrenched problems in many regions. The law responded only after damage had become systemic, rather than embedding preventive safeguards from the outset.

^[1] Falk, D. A. (2016). The resilience dilemma: Incorporating global change into ecosystem policy and management. *Arizona State Law Journal*, 48(1), 145-170.

^[2] Romania, Emergency Ordinance No. 144, 2021, §14.



The same reactive logic governs infrastructure planning. Law No. 241/2006 allows and even encourages investment in water and wastewater systems, yet it does not require climate risk assessment, ecological vulnerability mapping, or adaptive planning as binding legal duties. Infrastructure is treated primarily as an economic asset to be depreciated and recovered through tariffs, not as a socio-ecological system embedded in river basins and ecosystems. As a result, biological realities such as drought cycles, flood frequency, and ecosystem thresholds remain marginal to legal decision-making.

Tariff regulation further illustrates the imbalance. The law strongly emphasises financial sustainability and cost recovery, allowing operators to disconnect users for non-payment while offering limited social protection mechanisms through local assistance schemes. From a resilience perspective, this approach prioritises economic stability over social and ecological stability. Disconnection may protect operator finances in the short term, but it can also push households toward unsafe water sources and unregulated wastewater disposal, increasing environmental and public health risks.

Environmental protection is formally present in the legislation, yet it functions largely as **an external constraint rather than an internal objective**. Compliance with environmental standards is required, but there is little emphasis on ecosystem restoration, cumulative impacts, or long-term resilience of water bodies. Law No. 241/2006 does not meaningfully integrate river basin management principles, despite Romania's obligations under EU water law. The result is a fragmented regulatory landscape in which biological degradation is addressed through sanctions after the fact, rather than through legally mandated prevention and adaptation.

What emerges from this analysis is not a failure of regulation, but a failure of orientation. Romanian water law is built around continuity of service, financial viability, and administrative control. These are necessary elements, but they are not sufficient for resilience. Without explicit legal duties to anticipate risk, protect ecosystems proactively, and integrate scientific knowledge into planning, resilience remains incidental rather than structural.

For researchers working on water biology, ecology, and environmental systems, this legal gap matters. Laws shape incentives, priorities, and responses. When legal frameworks lag behind ecological realities, even the most advanced scientific knowledge struggles to translate into protection on the ground. Strengthening resilience in Romania's water systems therefore requires not only better infrastructure and monitoring, but also a legal shift toward precaution, adaptability, and ecosystem-centered governance.

Romanian water law contains glimpses of resilience, but they remain implicit, fragmented, and incomplete. In a context of accelerating environmental change, that is no longer enough.

At a time when biological limits are being tested with increasing frequency, water law can no longer afford to operate as a neutral technical framework. It must actively shape how societies anticipate risk, protect ecosystems, and distribute responsibility for environmental harm. Romanian water legislation shows that resilience cannot be left to infrastructure alone or postponed until failure becomes visible. Without embedding precaution, ecological thresholds, and adaptive governance into the legal core of water services, legal systems risk becoming instruments that manage collapse rather than prevent it. In the long term, the resilience of rivers, aquifers, and communities will depend not only on scientific knowledge, but on whether the law is willing to learn from it. If law continues to react only after ecosystems are already degraded, can water governance still claim to protect life rather than merely regulate its loss?

