

Call for nominations of experts

Water scarcity and retention in European landscapes

Proposed by EASAC Environment Programme, endorsed by EASAC Council February 27 2026

Duration: ca 18 months

Deliverables: Full EASAC report with summary statement and in-person launch event, mid 2027

The working group will be active in drafting the report in an approximate period from about May 2026 to June 2027, with a possible in-person meeting in September/October in 2026. WG members are expected to actively participate in the majority of 4-6 working group meetings (most of them online, but with at least one meeting ideally in person). Travel costs related to the work of the WG are usually covered by the nominating academy.

Water scarcity and declining landscape water retention are emerging as critical challenges for Europe's climate adaptation, food security, and ecosystem resilience.

- Water scarcity is no longer confined to Southern Europe — seasonal water stress now affects >40% of EU territory and ~30% of the population.
- Landscape water retention capacity is declining in many regions due to land-use change, soil degradation, drainage, river regulation, and ecosystem loss.
- The EU has multiple relevant policy instruments (e.g. Water Framework Directive, Floods Directive, Nature Restoration Regulation, Common Agricultural Policy, European Drought Observatory), but these remain fragmented, and there is no coherent EU-wide strategy for enhancing water retention across landscapes.
- The European Commission's 2024 Blueprint for Water Resilience emphasises integrated water management, but would benefit from a scientific synthesis of land–water interactions and the mechanisms that build or erode retention capacity.

This topic directly supports key EU climate and environmental priorities:

- European Green Deal and EU Climate Law
- Water Framework Directive and Floods Directive
- Common Agricultural Policy, Farm-to-Fork Strategy and Biodiversity Strategy
- Soil Health Law and Nature Restoration Regulation

Key questions to be addressed in the report include:

- How have climate change and land-use change altered groundwater recharge, soil moisture, and water retention across Europe?
- How are precipitation patterns, evapotranspiration, drought frequency and intensity evolving, and what are plausible scenarios and risks for different regions?
- Which management strategies (e.g. wetland restoration, reforestation/afforestation, soil organic matter enhancement, river and floodplain restoration, urban greening) are most effective, and under what conditions?
- What is the role of advanced nature-based solutions in addressing both “too much” and “too little” water, including compound events?
- How can existing EU policies and funding streams be better aligned to promote retention and sustainable water use?
- What are the trade-offs and synergies between water retention, biodiversity, agricultural productivity, and climate mitigation?
- How should the EU address demand-side drivers (consumption patterns, water efficiency, water quality), technological innovation, and transboundary water governance?

We invite nominations of experts with expertise in:

- Ecohydrology (incl. managed aquifer recharge; groundwater–surface water interactions)
- Climate science with expertise in hydroclimate and precipitation modelling
- Hydrological risk modelling (droughts, floods, compound events)
- Soil ecology and soil hydrology
- Agronomy (rainfed and irrigated systems; water productivity)
- Forest ecology, forest and wetland hydrology
- Restoration ecology, nature-based solutions, and water
- Urban water planning and urban hydrology
- Water technologies and innovation
- Environmental and resource economics (incl. stakeholder behaviour / behavioural science, demand-side adoption, farmer/municipal uptake)
- Political science (EU governance, implementation, compliance)
- Policy analysis (water law/ regulatory implementation and evaluation)