

Expert group leader:

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## IAD Expert Group: **Sediment dynamics & Hydromorphology**

The **Danube River Basin (DRB)** is one of Europe's most dynamic fluvial systems, where sediment dynamics and hydromorphological processes shape landscapes, sustain biodiversity, and impact socio-economic activities. Growing pressures from human interventions and climate change underscore the need for sustainable river basin management.

**The expert group aims to:**

- Advance the **understanding of sediment dynamics and hydrogeomorphic changes**
- Assess the **impacts of human activities and climate change** on sediment connectivity and river morphology
- Explore the **ecological implications of altered sediment regimes** on riverine habitats and biodiversity
- **Enhance public awareness** regarding the importance of sediment balance in sustaining river health
- Develop science-based recommendations for **integrated river and catchment management**
- Promote interdisciplinary and transdisciplinary collaborations among hydrologists, geomorphologists, ecologists, engineers, policymakers, and stakeholders
- **Support river restoration efforts** by providing knowledge on sediment transport processes and sustainable management practices

**Proposed activities:**

- **Organize workshops**, seminars, and scientific sessions within IAD conferences
- Conduct **collaborative research projects** and synthesize knowledge on sediment-related issues
- Develop guidelines and **policy recommendations for sustainable sediment management**
- Establish a platform for **knowledge exchange** among scientists, practitioners, and decision-makers
- Engage with local communities and stakeholders to foster participatory river and catchment management

The establishment of this expert group aligns with IAD's mission to promote **interdisciplinary research** and foster **sustainable management** of the DRB. By **bridging scientific knowledge with practical applications**, this initiative will significantly contribute to addressing current and future challenges in sediment dynamics and hydromorphology. I kindly seek the endorsement of IAD for this initiative and look forward to further discussions on its implementation.