Interreg Danube Region

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HARMONMISSIONS

Best practice example for Mission 1 (Adaptation to Climate Change)

SMART-WATER PROJECT

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Enhancing Biodiversity and Water Quality Management

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Background

The SMART-Water project utilizes AI and multi-sensor systems to enhance the monitoring and management of water quality in key inland waterbodies across Montenegro, Bosnia and Herzegovina, and Croatia. By integrating real-time data into a collaborative web GIS platform, the project fosters cross-border cooperation and addresses climate-related water challenges. The initiative focuses on Lake Skadar in Montenegro, Lake Deran in Bosnia and Herzegovina, and Lake Vrana in Croatia—protected areas vital for biodiversity and local livelihoods. Through this approach, **SMART-Water aims to safeguard these ecologically significant lakes while promoting sustainable water management practices and improving regional collaboration**.

Objectives:

- **Improve inland water quality monitoring and inspection procedures** using AI models and multi-sensor integration with geospatial data
- **Develop a collaborative web GIS platform** that integrates diverse data sources and models, allowing decision-makers from Croatia, Bosnia and Herzegovina, and Montenegro to collaborate and promote cross-border cooperation and communication
- **Engage citizens** in water quality monitoring and protection through awareness-raising and participatory activities

Cross-border importance and regional collaboration

SMART-Water facilitates the exhange of data and information on water quality among the region's countries, allowing them to work effectively together to address the issue of transboundary and interregional water pollution

Applicability in the wider Danube region

The technology and collaborative framework could be applied to other transboundary water bodies facing similar environmental issues.

The project emphasizes the need for cross-border cooperation to effectively monitor and manage water quality. It is recommended that stakeholders regularly update and maintain the multi-sensor systems, ensure data transparency, and expand the platform's use to other water bodies facing climate-related threats.

References: „ACT SMART-SAVE WATER" Project, IPA Cross-Border Cooperation Programme
Total Montenegro News, World Water Day and Sustainable Water Management
Project details on SMART Water implementation in Skadar Lake