

FCSE–UKIM Showcases Flood Modelling Results and DSS Platform at URBANFLOODS Meeting in Tirana, Albania.



Tirana, Albania – 18 June, 2026 – Representatives from the Faculty of Computer Science and Engineering (FCSE–UKIM) participated in the 4th Transnational Meeting of the URBANFLOODS project, held on 17–18 June 2026 in Tirana, Albania, and hosted by Hydrowater Albania.

During the meeting, FCSE–UKIM presented the progress in flood modelling for the Kriva Reka River pilot sites and to the coordination of upcoming reporting activities and Decision Support System (DSS) development. The FCSE–UKIM team presented updates on data collection, hydrological analysis, and hydraulic modelling using HEC-RAS, including preliminary results for the defined return periods (Q50, Q100, and Q200). A central topic of discussion was the integration of static flood modelling outputs into real-time early warning systems. It was emphasized that HEC-RAS provides pre-computed, scenario-based results rather than real-time data. FCSE–UKIM and the project partners agreed on a common approach in which precipitation and weather forecasts serve as the primary trigger for early warning across all pilot sites, complemented by locally defined secondary indicators such as water level or discharge thresholds.

The DSS development team from FCSE–UKIM also presented version 4.1 of the platform. The system is built on a modern architecture, combining a React and TypeScript frontend

with a Node.js backend, and includes secure user authentication. Historical datasets from all pilot sites have been successfully integrated, while real-time data streams are currently operational for North Macedonia and Greece. The platform utilizes GeoServer to visualize flood modelling outputs, enabling dynamic interaction with depth and velocity maps for multiple scenarios. As part of the demonstration, a hazard map and a preliminary risk map for the Macerata pilot site were showcased, highlighting the system's analytical and visualization capabilities.

Partners confirmed that the primary project deliverables will consist of flood extent and water depth raster datasets for the three return periods. A standardized reporting template has been formally adopted. FCSE–UKIM remains fully committed to advancing coordinated flood modelling activities and delivering robust, user-oriented tools that support effective flood risk management and decision-making.

The URBANFLOODS project is co-financed by the European Union under the Interreg IPA ADRIAN programme and aims to strengthen the resilience of urban areas to climate change through the development of innovative flood risk management solutions.