

Videocameras and soil moisture sensors, integrated with the regional meteo-hydro monitoring network: testing and recording data

Final Version of June 2023

Deliverable number 5.1.3.

Project Acronym	STREAM
Project ID Number	10249186
Project Title	Strategic Development of Flood Management
Priority Axis	2 - Safety and Resilience
Specific objective	2.2 - Increase the safety of the Programme area from natural and man-made disaster
Work Package Number	5
Work Package Title	Pilot projects
Activity Number	5.1.
Activity Title	Marche Pilot Project
Partner in Charge	LP
Partners involved	PP9 in collaboration with UNIVPM
Status	Final
Distribution	Public

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1. Introduction

Twenty soil moisture sensors and twenty videocameras have been installed and integrated in the regional meteo-hydro monitoring network of Marche Region (see WP4 - deliverable D.4.3.3 and D.4.3.4). Software and databases needed an integration in order include new available data.

2. Integration with the regional meteo-hydro monitoring network: testing and recording data

All sensors and data has been integrated in the regional network. Data streaming is included in the regional broadcasting bone. Soil moisture location was found in collaboration with IRPI CNR Competence Centre of National Civil Protection Service. Dedicated planning and surveys were realized in order to find the best location, close to precipitation and temperature sensors, already present over the regional territory.

Videocameras have been installed close to relevant water level sensors, in order to increase monitoring and valide recorded data. Regional monitoring webgis platform (Winnet7) has been updated with also soil moisture sensor and webcams data in real time (Fig. 1 and 2).

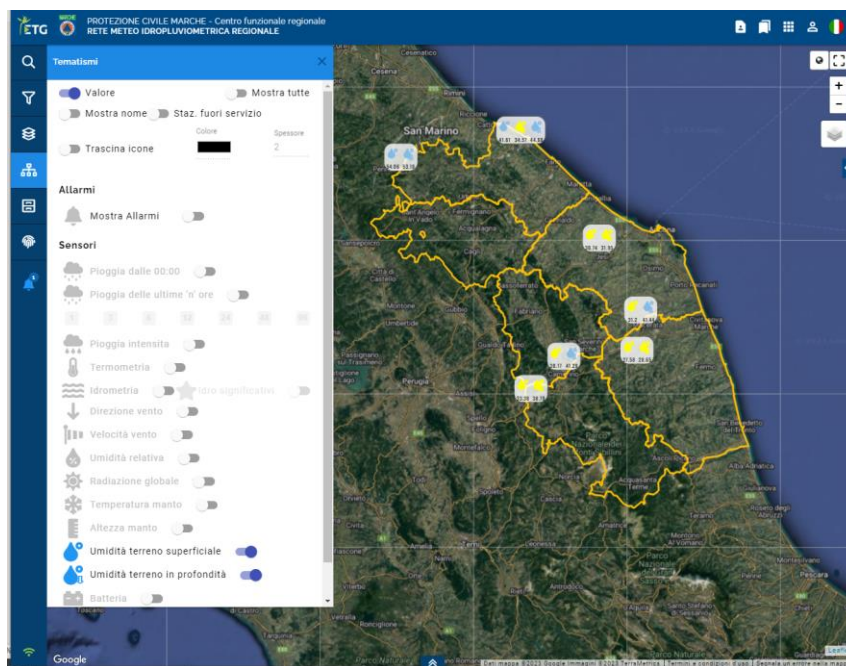


Figure 1. Winnet7 regional network visualizer: soil moisture data snapshots integration

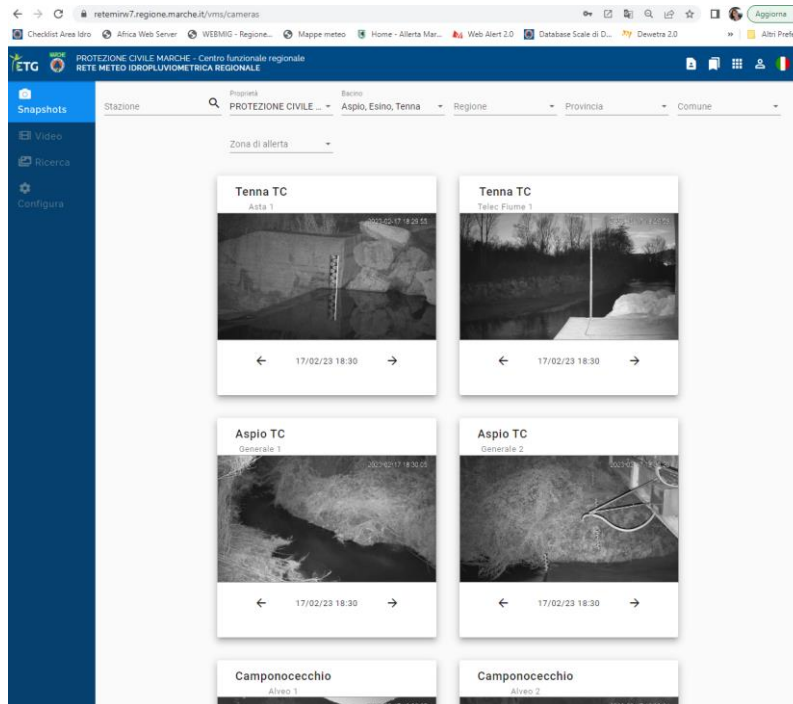


Figure 2. WInnet7 regional network visualizer: videocamera data snapshots integration

Soil moisture data could also be freely downloaded through SOL platform at <http://app.protezionecivile.marche.it/sol>. User registration is required. All soil moisture data, after installation, are and will be available by this data platform in real time for public use. A dedicated web page was realized (Italian and English version).

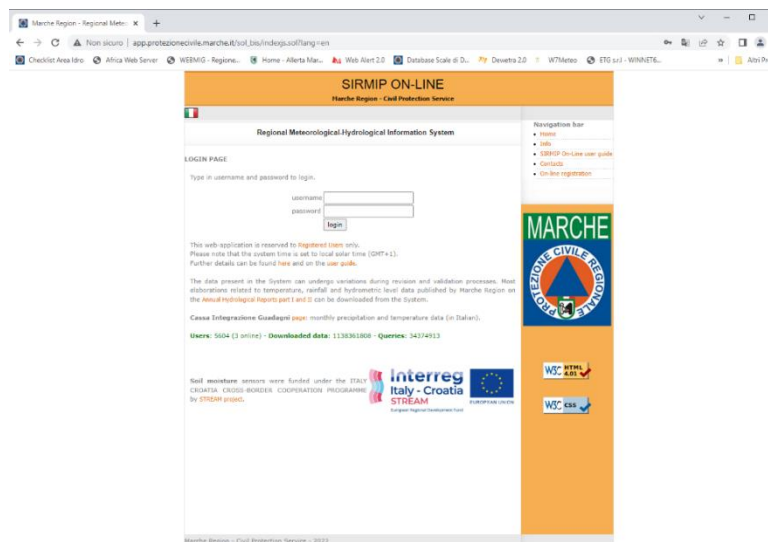


Fig. 3 SOL main web page

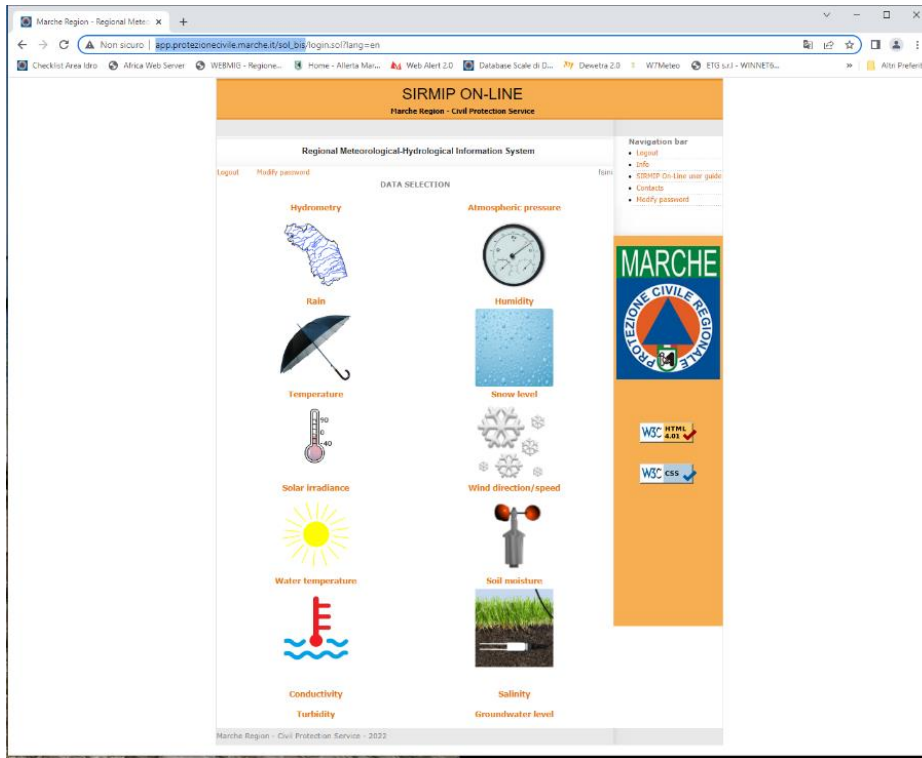


Fig.4 SOL data web page

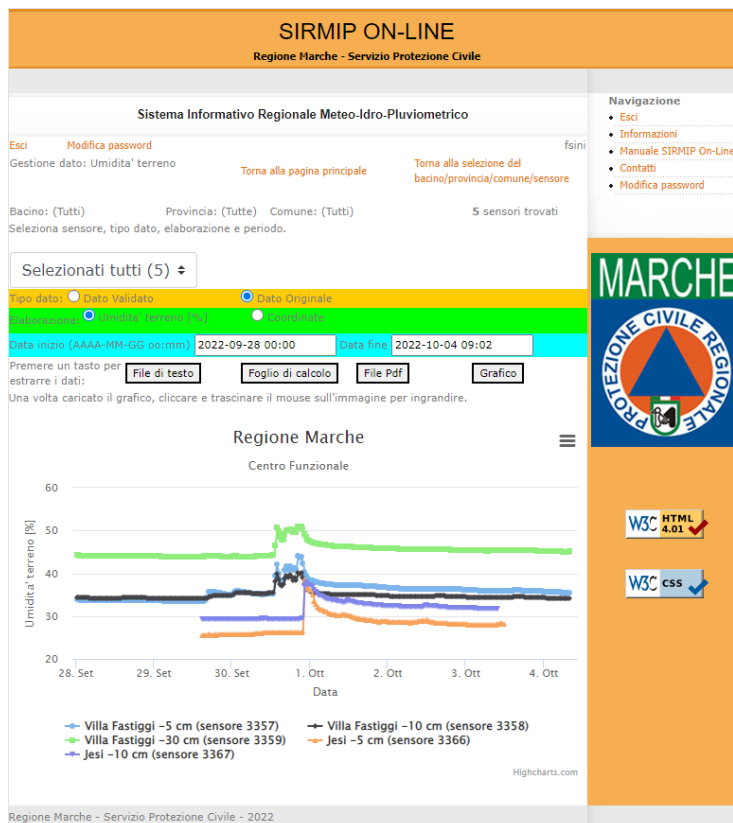


Fig. 5 SOL soil moisture data visualization and download

3. Conclusion

Marche Region implemented new 20 soil moisture sensors and 20 videocameras in order to enhance its monitoring capability and better calibrate modelling with new data. Sensors had been integrated in the regional network and software and databases had been updated to join and validate new available dataset. Data have been tested and recorded in the regional monitoring databases and visualized through Winnet7 and SOL web platforms. Ownership of the new sensors, data and IT visualizers are by Marche Region.