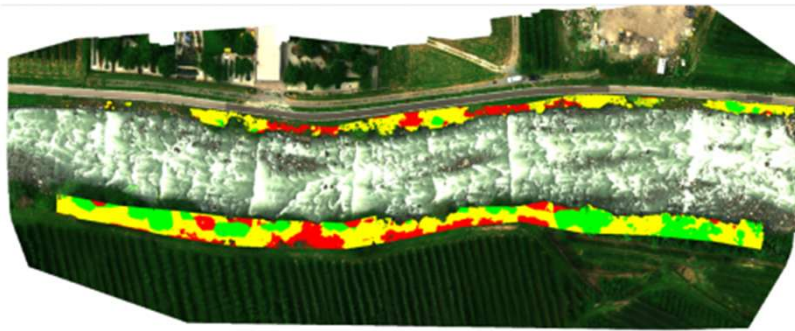


# WEQUAL PROJECT



The [WEQUAL](#) project (WEB Service Center for multidimensional QUALITY design and teleoperated Green Infrastructure monitoring) involves the creation of an Integrated Environmental Assessment System based on ICT infrastructures and systems for the detection / monitoring of water courses, for the design of investments at low environmental impact. This system is functional to the decisions of the designers in the design / construction phase of the work and of public officials in the planning stages of the interventions and monitoring. The works of hydraulic arrangement must have as its objective the best compromise between land management, interventions on the watercourse and settlement planning through a respectful approach to the environment. This is in accordance with the provisions of the EC in the Green Infrastructures (Nature June 2010) for which it is necessary to plan investments according to essential requirements of integrated territorial approach and maintenance of an acceptable level of ecosystem services.

The WEQUAL project is carried out together with the partners:

- [Maccaferri Innovation Center](#)
- [UNIBZ](#)
- [Naturstudio](#)

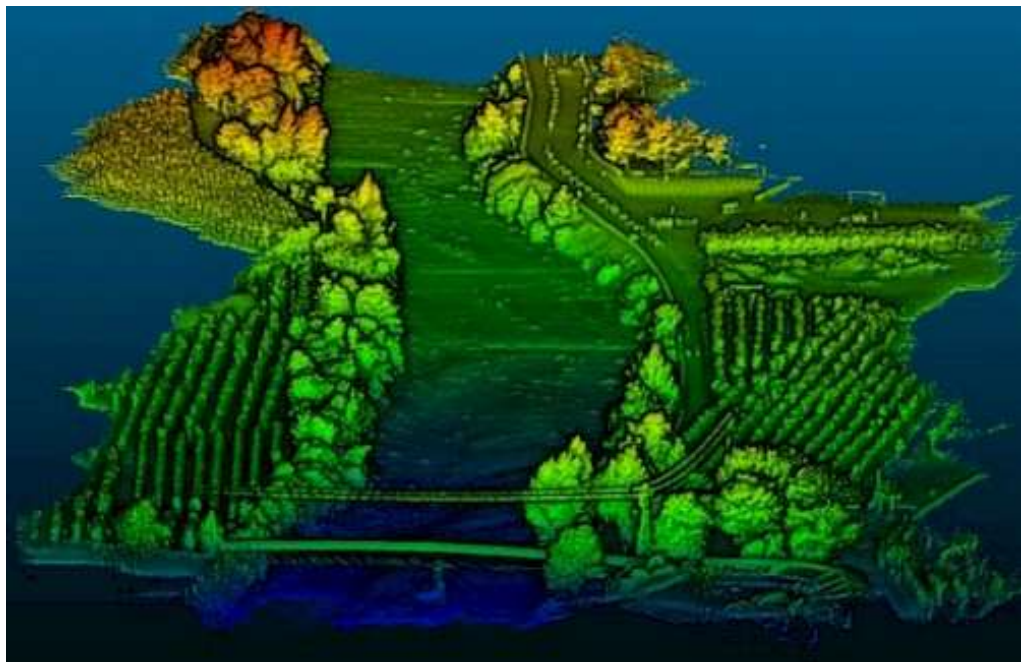
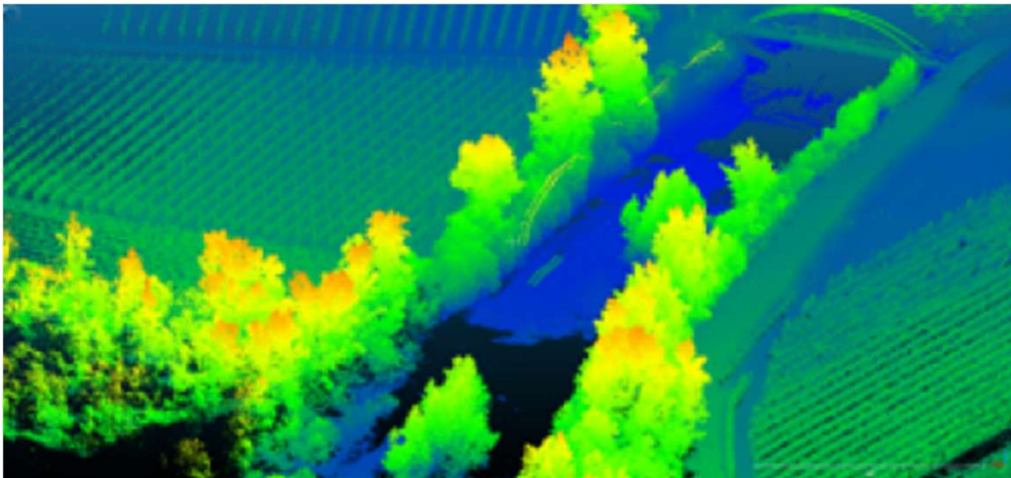
The project will use fast-moving equipment for the automated survey of sites of interest, such as Remote-controlled Aircraft Systems (SAPR) and aquatic drones, equipped with different types of sensors (LiDAR, multispectral sensors, cameras, bathymetric sensors, water quality sensors) .



## RESEARCH ACTIVITIES

In the above framework, the project has set itself the main objective of developing a support system for environmental planning and monitoring for interventions of various types of hydraulic works. All with the intent to overcome some challenges still open on this front through the following implementation strategies:

- design of an information system on a web platform, complete with related algorithms and data structures, capable of managing all the main phases of the assessment of the possible design alternatives of the hydraulic interventions investigated;
- integrate in the information system a set of multidimensional evaluation tools of various nature, being able to choose between multivision analysis and multicriteria analysis, depending on the objectives of the evaluation set by the user
- structuring the libraries of possible indicators according to modular logics, so as to ensure continuous updating of the same through the centralized management of new categories of indicators (such as those linked to the LCA approaches) with related calculation algorithms and application guidelines;





# RESEARCH ACTIVITIES

- implement new environmental monitoring systems able to integrate and support the classical surveys based on direct surveys, with new measures with a high automation rate through the use of physical and / or physical sensors activated by mobile carriers (UAV, Unmanned Air Vehicles) , Or USV, Unmanned Surface Vehicles)
- provide the possibility to consult databases of historical data to be constructed, according to the specific information provided by the Wequal system, according to a shared "community" logic, involving all users of the system who have gained significant experience using the functionality of the system; in the initial phase, the database will consist of case studies referring both to situations investigated during the project, and to previous experiences of the research participants; these data bases will be useful to estimate, in a preliminary phase of the project, the evolutionary dynamics of the impacts of the work to be carried out; moreover, thinking of the system when fully operational, this aspect supported by the medium-term ex-post surveys, referred to in the previous point, should contribute to creating the content of the database also through surveys in which it will be possible to associate ex-ante observations (expected ) and ex-post (found) according to validation approaches of the methodologies in place.

More Info:

[https://www.facebook.com/mavtechsrl/posts/2175369922570437?ref=embed\\_post](https://www.facebook.com/mavtechsrl/posts/2175369922570437?ref=embed_post)

[https://www.facebook.com/mavtechsrl/posts/2153441461429950?ref=embed\\_post](https://www.facebook.com/mavtechsrl/posts/2153441461429950?ref=embed_post)

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PRESENTAZIONE DEL PROGETTO WEQUAL: LA TECNOLOGIA A SERVIZIO DELLO SVILUPPO SOSTENIBILE DEL TERRITORIO  
Maggiori informazioni sul blog nel nostro sito.  
WEQUAL PROJECT PRESENTATION: TECHNOLOGY FOR SUSTAINABLE TERRITORY DEVELOPMENT ... Altro...

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10   Commenta   Condividi

9   Commenta   Condividi