

L'acqua, la risorsa che ci connette

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Restoration of the Sarca River (Trentino), a mesohabitat-based assessment approach

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Restoration of selected reaches of the Sarca River was implemented/planned by the local management entity (the Sarca Fluvial Park) in 2024-2026, and the outcomes of the restoration were assessed with an eco-hydraulic approach. One reach was restored with a very simple framework, i.e., the deposition of about 200 massive boulders in the riverbed, to improve the morphological heterogeneity, thus creating habitat for fish fauna. However, the environmental amelioration, quantified by the macroinvertebrate communities, was less than expected. A second, morphologically-complex reach, was therefore extensively surveyed to propose a more effective approach. We surveyed the reach twice in 2025, with drone imaging, hydrological surveys and modelling, mesohabitat surveys, and application of the mesoHABSIM methods to the macroinvertebrate communities, which represents a novel methodological approach. As a result of such multi-disciplinary survey, sediment injection rather than physical restructuring was recommended as the restoration method to apply in the reach.