

Planning and management of the Ridracoli dam



TYPE OF TOOL
Project



MAIN SECTOR
*Water
infrastructure*



THEME
*Green;
Resilience*



INFRASTRUCTURE GOVERNANCE PILLARS
*Evidence-informed decision making;
Asset performance throughout its life*

In a nutshell



OBJECTIVE: The Ridracoli dam reservoir is aimed at supplying freshwater, producing hydroelectric energy, reducing flood risk and groundwater extraction.



Agency in charge
Romagna Acque Società delle Fonti S.p.A; Regional Environmental Protection Agency (ARPAE)



Year of implementation:
1982



Current status:
Operation



Levels of government
Sub-national

Overview

The Ridracoli dam is an artificial dam of the Bidente River and the Celluzze stream in the Emilia-Romagna region. The artificial basin of Ridracoli is located in the municipality of Bagno di Romagna at an altitude of 557 metres above sea level. The project has integrated environmental considerations throughout its lifecycle. During the design and planning phase, an ex-ante assessment of the overall environmental impact of the dam was undertaken, which was subsequently incorporated into the design process. The assessment also included an evaluation of the costs and benefits resulting from the development of the dam. The selection of a suitable location to host the dam took into account environmental considerations, such as the presence of coppice forests near the reservoir (which would reduce erosion), minimal disruption of the Bidente River flow, and absence of industrial settlements leading to pollution risk in the derivable basins, in addition to other technical criteria (e.g., water and soil characteristics). The location of Ridracoli was considered a less environmentally harmful option compared to the other solutions considered, which included groundwater extraction and diversion of the Po River. The monitoring and management of environmental risks and impacts are key elements in the management of Ridracoli dam. Water and environmental quality are monitored in compliance with EU and national legislations, which put particular emphasis on water quality monitoring, as well as on the environmental condition of water bodies, on the basis of ecological and chemical assessments. The impact of the dam on the river flow is also monitored and carefully managed. To reduce the environmental impacts observed in the surrounding area, - most notably, a major problem of soil erosion that was leading to the silting of the reservoir and reduced water quality - a variety of ecosystem conservation, enhancement and restoration interventions have been realised in the area of the Ridracoli hydrographic basin. These include reforestation and renaturation of the hill slopes surrounding the dam, naturalistic engineering interventions including hydrogeological interventions and consolidation of the slopes, recovery of ancient forest paths and trails, and research programmes on environmental protection targeted to the basin area.

REFERENCES:

- OECD (2023), *Developing an Integrated Approach to Green Infrastructure in Italy*, OECD Public Governance Reviews, OECD Publishing, Paris, <https://doi.org/10.1787/d844bb8e4-en>.