

Improve the conservation and requalification of the Ticino river by knowing and mitigating the warming of the waters

The **T°CINO** project aims to evaluate the **spatial and temporal variations of the temperature of the waters of the sub-lake Ticino river**, in particular during the summer period and in relation to the morphological characteristics of the different river stretches and their relationship with the aquifer.

It also aims to confirm some initial experimental evidence, still fragmentary, on the **effects of progressive warming of the river waters** on the presence and distribution of communities of fish, lampreys and macroinvertebrates, **highlighting the presence of possible refuge areas**, characterized by cooler waters, for some species and the possible positive role, thanks to the increase of sub-surface infiltration, of areas where greater diversity and morphological dynamics are preserved.

The practical implications of the research include **operational guidance on the conservation priorities of specific sites** and support for morphological restoration and continuity of solid transport; in addition, together with ongoing and planned research into the relationship between irrigation methods and water table feeding, they allow a wider assessment of the expected effects of changes in ecological runoff in sub-lake Ticino.

The overall objective of the project is to **provide useful knowledge and tools to the authorities with responsibility for planning and management of the River Ticino to define actions to adapt to climate change**, in particular the mitigation of impacts related to hydrological alteration and the conservation and upgrading of the river corridor in relation to the increase in water temperature.

PROJECT DURATION

22 months
(from 01/03/2022 to 31/12/2023)

PARTNERS

- Centro Italiano per la Riquilificazione Fluviale - CIRF
- Parco Lombardo della Valle del Ticino - Settore Territorio
- Politecnico di Torino - DIATI

BUDGET

Total funding: **29,855 €**
Funding from fondazione Cariplo: **20,750 €**

POLITO and DIATI's role:

Politecnico di Torino – DIATI is partner of the Consortium.

Scientific manager for DIATI:

Prof. **Paolo Vezza**