

Capital, Territory and Water: Infrastructural Politics in Italy's Hydrosocial Landscapes

Theoretical Framework. Contemporary urbanization extends beyond consolidated urban centers, affecting heterogeneous territories shaped by transformations that reflect the contradictions of global capitalism and its environmental crises. In this context, water infrastructures emerge as central devices of the **urban-industrial metabolism**, organizing the extraction, distribution, management and accumulation of water resources. More than technical artifacts, these infrastructures are understood as **socio-material assemblages**, shaped by negotiations among institutional, economic, technical, and social actors. Their presence not only reshapes landscapes but also restructures spatial relations and consolidates territorial hierarchies.

Large-scale water infrastructures express regimes of knowledge and power that steer planning processes and define priorities. Their design often follows extractive and centralizing logics, reinforcing urban and industrial centers while marginalizing rural or peripheral areas. The theoretical framework draws on *Urban Political Ecology*, intersecting with the lens of *Extended Urbanization* and contributions exploring the nexus between **environmental transformations, spatial production, and territorial inequality**. In this direction, territorial planning is also engaged, in an effort of theoretical hybridization that recognizes infrastructure as a key device of territorialization.

Research Objective. This research aims to critically analyze Italian water infrastructures as devices that produce socio-ecological inequalities, within a European context that has been rarely explored by the literature on BWI. Starting from the premise that these infrastructures embody worldviews and political projects, the study investigates how they contribute to the formation of **hydrosocial territories**, to processes of **peripherization**, and to the **selective redistribution of benefits and risks**. The objective is twofold: to understand how processes of territorialization and accumulation are articulated around water, and to explore the transformative potential these infrastructures may open or foreclose, particularly in terms of **rethinking urban policy tools through the lens of political ecology**.

Case Studies. Three Italian case studies - selected for their geographical, infrastructural, and political diversity - form the core of the investigation:

- **Basilicata (Camastra Dam):** marked by inefficiencies, high water loss, and controversial concessions to private actors.
- **Sardinia and Sicily:** contrasting models of water governance, between long-term planning and emergency-led, privatization-prone responses.
- **Lombardy-Switzerland (Val di Lei Dam):** a cross-border dam illustrating asymmetrical energy cooperation and local contestation.

Research Themes and Expected Contribution.

Three main axes:

- The **historical-geographical trajectories and economic-technical regimes** that inform the design and implementation of large-scale water infrastructures, highlighting how the interaction between engineering knowledge, state priorities, and economic interests shapes territorial development strategies and the allocation of investments.
- The **mechanisms of accumulation by dispossession and the production of spatial inequalities**, through which water infrastructures enable the extraction of value from marginalized territories and the concentration of benefits in central or strategic areas, thus redefining center-periphery relations and access to resources.
- The forms of territorial resistance and contestation, which manifest both through overt conflicts and through everyday practices of reappropriation, revealing fractures in economic and hydric governance regimes and challenging the centralized control of resources and the uneven exploitation of territory.

The expected contribution is to offer a critical reading of water infrastructures as devices of territorial production within a Western country, and specifically within the Italian context of polycentricity and institutional fragmentation, capable of structuring inequalities and profoundly shaping **ecological and spatial transformation processes**. In this sense, the research aims to contribute to the debate on **ecological planning**, within a future scenario marked by growing competition over the use of water as a strategic resource.