

[Inici](#) > OverTheWaters: Reconstructing Roman inland waterways and sea movement with advanced computational techniques

[OverTheWaters: Reconstructing Roman inland waterways and sea movement with advanced computational techniques](#)

Description

The Roman conquest, occupation and dominion over a large part of current Europe and beyond marked a strong change in social, cultural and economic patterns in the area. Two of the most important and lasting changes were the establishment of a new transport network and the large-scale development of cities. Connectivity continues to be seen as an essential factor in the analysis of the spread of urbanisation, migration, the ancient economy, and the transmission of ideas.

In Antiquity connectivity could only be achieved via movement by land, river and sea, and had to rely on the available transport network. While roads have been extensively investigated and they have been reconstructed in detail in provinces such as Hispania, Galia and Britannia, to date, no analysis of Roman movement and communication has incorporated navigable rivers, lakes, canals and sea transport. Orbis, the only open geospatial tool for the analysis of Roman transport, only incorporates a few major rivers and a very simple network of sea routes, which pales in comparison with the number of sea and river quays, harbours and ports archaeologically documented. Both epigraphy and classical reliefs and texts indicate Romans developed, maintained and extended the network of inland waterways. Water transport was the preferred mode of transport for goods in bulk whenever possible as it was much cheaper than road transport and constituted the basis of international commerce. OverTheWaters will reconstruct waterways and sea routes of the Western Roman Empire using big data and advanced computational methods in order to understand the importance of water movement, transport and shipbuilding technology and how it influenced the development of urban centres acting as commercial hubs and consumption and redistribution foci.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

Source URL (retrieved on 11 Mar 2025 - 04:31): <https://www.bsc.es/ca/research-and-development/projects/overthewaters-reconstructing-roman-inland-waterways-and-sea>