GIS application for an interdisciplinary project in History, Maritime Archaeology and Wood Provenance (ForSEAdiscovery)

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http://forseadiscovery.eu

ForSEAdiscovery is an interdisciplinary project (Marie Curie Actions PITN-GA-2013-607545) which includes the research areas including GIS, databases, historical cartography, history, dendroprovenance, and maritime archaeology. Research conducted by a team of international scholars in these diverse areas is geared toward answering questions about networks of timber trade, Iberian forestry, the nature of Iberian shipbuilding, and more.

Historical wood supply and dynamic trade networks

We have collected and analysed literature about shipbuilding, raw materials, timber trade, and merchant networks during the First Global Age (16th-18th centuries) in different Historical Archives and on the PARES Website, with the objective of finding trade routes and shipwrecks, and the relationships between deforestation processes and the use of resources for shipbuilding in Iberian Empires

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Forest Campaigns

In May and October 2015, members of the wood science work-package roamed the north of Spain (Basque Country, Cantabria), Central area (Segovia) and South of Spain (Andalucia) in search of some of Spain´s oldest oak trees. Sampling took place in the provinces of Álava and Guipúzcoa, and focused on the four main species of deciduous oaks: *Quercus robur*, *Q. petraea*, *Q. pyrenaica*, and *Q. faginea*.

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Maritime Campaigns in Spain, Portugal and United Kingdom

The team's nautical archaeologists have worked on shipwrecks in the coast of Galicia (Northern Spain): *Bayonnaise* (18th c.), *La Magdalena* (18th c.) and the galleon Ribadeo I (16th c.); *Belinho*, a 16th century shipwrecks from the age of Phillip II (Portugal); and the *Yarmouth Road Wreck* (Isle of Wight, UK). Wood from these and from other shipwrecks (in collaboration with other projects and excavations) have been provided to partner laboratories, whose fellows have furnished the first result of dendroprovenance data.

La Bayonnaise

Yarmouth Road

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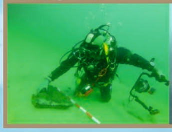
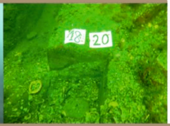
La Magdalena

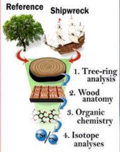




Iberian Shipwrecks

Many shipwrecks occurred in the transatlantic voyages from the 16th to 19th centuries. They were due to different causes: climatic, attacks of enemies or battles, problems structures in shipbuilding and/or repair of ships. We have represented shipwrecks from archaeology and history, and also the maritime campaigns in a map from database and GIS developed in the ForSEAdiscovery Project.

Wood provenance



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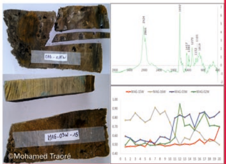
Samples of pine hull boards from La Magdalena, 18th c. Spanish frigate, Viveiro, Galicia.



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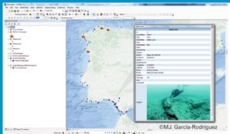
Resins in pine archeological woods from La Magdalena.

Database and Geographic Information System (GIS)



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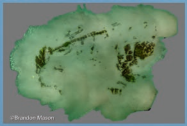
The database developed covers three work packages: history, maritime archaeology and the study of the provenance of wood which includes dendrochronology consisting of the study of the rings of the trees and different types of analysis of organic, inorganic chemistry and DNA from timber. For its creation, we have developed a conceptual GIS model and subsequent, creation of a GIS platform for the integration and data sharing of the ForSEAdiscovery databases. GIS application pretends to have a publication in open access as Web Map Server.

Ribadeo Galleon: 3D Cartographic Representation



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