# Forest Resources for Iberian Empires: Ecology and Globalization in the Age of Discovery (16th-18th centuries)

1st Network Meeting and Intensive Training Workshop

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### ForSEAdiscovery Work Packages (WPs)

- WP1. Historical wood supply and dynamic trade networks
- WP2. Nautical archaeology and shipbuilding
- WP3. Wood provenancing
- WP4. Training
- WP5. Management
- WP6. Dissemination and outreach

### General Key Questions

- Could Iberian forest resources sustain this increasing demand for timber?
- Or was wood imported from elsewhere?
- How were trade networks organized?
- Did a scarcity of raw materials encourage the technological changes which occurred in shipbuilding in the 16<sup>th</sup> century, or were they a result of socio-technological exchange between Mediterranean and Atlantic shipbuilding traditions?
- Did demand for timber lead to sustainable changes in forestry practice in the Iberian Peninsula or to deforestation and increased dependence on imported material?

ESR	Individual projects
ESR1	Organisation, management and supply of forest resources for shipbuilding in Spain
ESR2	Portuguese forest resources and timber supply
ESR3	The North European timber trade to Spain and Portugal: volumes and transport.
ESR4	Trading networks involved in timber trade: mechanisms and routes.
ESR5	Reconstructing timber in Spanish-Atlantic shipbuilding - treatise and archaeology.
ESR6	Developing dendro-archaeological approaches in Nautical Archaeology: integration of ring studies, dendrochronology and timber morphology (3D CAD) for the reconstruction of past forestry practice and exploitation.
ESR7	16 <sup>th</sup> century shipbuilding in Portuguese dockyards: a historical and archaeological perspective.
ESR8	The Dendro-Archaeology of Portuguese ships of the Early Modern Period.
ESR9	Development and implementation of a tree-ring data network for the assessment of the date and provenance of Iberian ship-timbers.
ESR10	Application of ecological wood anatomy for species determination and wood provenancing of oak and pine from Atlantic Iberia.
ESR11	Identification of potential biomarkers of wood for provenancing
ESR12	Geochemical fingerprinting of potential source areas of the wood
ER1	Development and implementation of a GIS-based model for timber provenance and mercantile wood-trade routes
ER2	Research protocols for interrogation of shipwreck assemblages: recovery, documentation and analyses of structural ship timbers from in situ shipwrecks
ER3	Provenancing timber from a multidisciplinary approach: dendrochronology, wood anatomy and geo/dendrochemistry

### The aim of this Network Meeting:

- Marie Curie Programme (EU): emphasis on multidisciplinary investigation.
- Historiography and Studies of the cultural and ecological heritage.

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- Involvement of the fellows in courses and workshops.
- To combine methodological techniques used in History, Archaeology and dendrochronological studies.
- Use of the GISs -Geographic Information Systems - as an integration and visualization tool for all the different layers of information which will be collected from the various disciplines involved.

## WP1: History Historical wood supply and dynamic trade networks OBJECTIVES

#### Historical information:

- Timber supply (Spanish, Portuguese, North European timber supply)
- Shipbuilding
- Mercantile networks
- Policies

Historical information about timber supply for shipbuilding in Atlantic Iberian dockyards between about 1500 and 1800, including research of, respectively, the Spanish, Portuguese and North European timber supply.

 Identifying the sources of the timber supply for the main Iberian dockyards

 Studying the process of timber acquisition, selection, trade and transport,

 Study of mercantile networks in this trade

 Shipbuilding policies, management practices legislation and related forest resources policies of the Iberian Empires (Spain and Portugal)

BBDD and GIS

### Individual Projects

- ESR1. Organisation, management and supply of forest resources for shipbuilding in Spain (Andalucia, 18th century).
- ESR2. Portuguese forest resources and timber supply.
- ESR3. The North European timber trade to Spain and Portugal: volumes and transport.
- ▶ ESR4. Trading Networks involved in Timber Trade: mechanisms and routes.
- ER1. Development and implementation of a GISbased model for timber provenance and mercantile wood-trade routes.

### Methodology

- To identify through literature and archival research with high resolution geographic areas in Atlantic Iberia and Northern Europe supplying timber for shipbuilding in Atlantic Iberia in the 16th, 17th and 18th centuries.
- To compile information from written sources (archives and literature) about the demand for timber, as well as wood and forest management practices for nautical uses in Atlantic Iberia in the 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup> centuries.
- To compile information from archives, literature and existing databases about navigation, commercial networks and timber export from Northern Europe to Iberia during the 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup> centuries.
- To insert the compiled information in a GIS model using an already existing prototype created by the Network Coordinator and located at the Digital Repository of the CSIC.

### **Analysis**

- a) The Northern and Baltic sphere
- Southern sphere: Spain and Portugal

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- Amsterdam connection: nodal point/ routes/ merchant networks/ goods, shipping.
- Articulation of markets = production and demand market: cooperation, political framework
- Social and Economic Framework/ Relations between Dockyards and Forestry