

# Research Work Package (WPs)

N	Work Package	Lead Participant	Other Participants Involved
1	Historical wood supply and dynamic trade networks	Ana Crespo	Catia Antunes Jan Willem Veluvenkamp Filipe Castro Malcolm Dixelius
2	Nautical archaeology and shipbuilding	Nigel Nayling	Garry Momber Rosa Varela Filipe Castro Miguel San Claudio Malcolm Dixelius
3	Wood provenancing	Antonio Martinez Cortizas	Ignacio García Ute Sass-Klassen Aoife Daly Tomasz Waszny Malcolm Dixelius

# Scientific and Technological objectives

1. To create an inventory based on archival information of the sources of oak and pine used for shipbuilding in Atlantic Iberia (16<sup>th</sup> to 18<sup>th</sup> centuries)
  2. Collation of historical and archaeological information regarding construction features of specific ships in Atlantic Iberian shipyards and contemporary timber usage at a time of significant technological developments (16<sup>th</sup> and 18<sup>th</sup> centuries)
- WP3: sources of oak and pine=  
Dendrochronology  
WP1 + WP2:
    - Repository in web page
    - Looking for information DATA SHARING:
    - CrespoDynCoopNet Data collection
    - Sound Toll Register DDBB
    - Information provided by Filipe Castro
  - WP1:
    - List of sources (historical archives)
    - Literature

# Scientific and Technological objectives

3. To characterise the wood from those sources (Archives and Literature) in terms of:

a) tree-ring patterns (ring width, pointer years)

b) wood anatomy (specie level)

c) geo/dendrochemistry (isotopes)

- WP3
- + WP1 +WP2 (?)

# Scientific and Tecnological objectives

4. To investigate how the supply of timber (both local supplies and imported timber) and its dynamic trade networks were organized

- WP1 + WP3

# Scientific and Tecnological objectives

5. To synthesize results from STO1 to STO4 to produce guidance on best practice for multi-proxy methods for the analysis and provenance of timber employed in 16<sup>th</sup> to 18<sup>th</sup> centuries wooden ships

- WP1 + WP3
  - ❖ - political context of shipbuilding practices and policies generated in each period.
- WP2

# Scientific and Technological objectives

- To develop a GIS-based model combining information from the different disciplines involved in the project:
  - History,
  - Archaeology,
  - Wood provenancing
    - to provide a tool to study of the use of European forest resources for world exploration and European expansion between the 16<sup>th</sup> and 18<sup>th</sup> centuries
- WP1: GIS based model (Prototype in a local interface)
- WP2: Data on shipwrecks
- WP3:
  - \* What kind of data?

# WP1: History

- Historical information:
  - Timber supply (Spanish, Portuguese, North European timber supply)
  - Shipbuilding
  - Mercantile networks
  - Policies
  - BBDD and GIS
- Who is working on what?
- 2 things:
  - To divide the respective subjects of research
  - To specify individual projects.
  - Visiting researcher (History of Shipbuilding) →
  - Courses
  - Dissemination
- ESR1
- ESR2
- ESR3
- ESR4

❖ ER: BBDD and HGIS

- to divide the analysis of the subject matter between:

a) the Northern and Baltic sphere

b) Southern sphere: Spain and Portugal

- ✓ - Amsterdam connection: nodal point/ routes/ merchant networks/ goods, shipping.
- ✓ Articulation of markets = production and demand market: cooperation, political framework



ESR	Individual projects	Cooperation between WPs
ESR1	Organisation, management and supply of forest resources for shipbuilding in Spain	WP1+WP2+WP3
ESR2	Portuguese forest resources and timber supply	WP1+WP2+WP3
ESR3	The North European timber trade to Spain and Portugal: volumes and transport.	WP1+WP2+WP3
ESR4	Trading Networks involved in Timber Trade: mechanisms and routes.	WP1+WP2+WP3
ESR5	Reconstructing timber in Spanish-Atlantic shipbuilding - treatise and archaeology.	WP1+WP2+WP3
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.	WP1+WP2+WP3
ESR7	16th century shipbuilding in Portuguese dockyards: a historical and archaeological perspective.	WP1+WP2+WP3
ESR8	The Dendro-Archaeology of Portuguese ships of the Early Modern Period.	WP1+WP2+WP3
ESR9	Development and implementation of a tree-ring data network for the assessment of the date and provenance of Iberian ship-timbers.	WP1+WP2+WP3
ESR10	Application of ecological wood anatomy for species determination and wood provenancing of oak and pine from Atlantic Iberia.	WP1+WP2+WP3
ESR11	Identification of potential biomarkers of wood for provenancing	WP1+WP2+WP3
ESR12	Geochemical fingerprinting of potential source areas of the wood	WP1+WP2+WP3

ERs	Individual Projects	Cooperation between WPs
ER1	Development and implementation of a GIS-based model for timber provenance and mercantile wood-trade routes. (WP1)	WP1+WP2+WP3 Supervision of ESRs
ER2	Research protocols for interrogation of shipwreck assemblages: recovery, documentation and analyses of structural ship timbers from in situ shipwrecks. (WP2)	WP1+WP2+WP3 Supervision of ESRs
ER3	Provenancing timber from a multidisciplinary approach: dendrochronology, wood anatomy and geo/dendrochemistry (WP3)	WP1+WP2+WP3 Supervision of ESRs