

Career Development Plan-Year 1 *(Draft)*

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BRIEF OVERVIEW OF RESEARCH PROJECT AND MAJOR ACCOMPLISHMENTS EXPECTED

Work Package 1 (WP1): Historical wood supply and dynamic trade networks

Early Stage Research 1 (ESR1): Organization, management and supply of forest resources for shipbuilding: Shipbuilding and Trade networks of timber in the Early Modern Spain.

Title of individual project: *Timber supply for shipbuilding in Cadiz in the early Bourbon Period (1717-1759): from regional forestry to importations*

Contents:

Introduction

- 1- Origin and development of the research project
 - 1.1- The ForSEADiscovery project
 - 1.2- Environmental history, forestry, timber supply and shipbuilding: 18th century Cádiz and the state of the art
 - 1.3- Research questions, objectives and methodology

- 2- The rise of Cadiz naval power under the Bourbon Reforms
 - 2.1- Cadiz in the context of the Early Bourbon naval policies
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- 3- Building and maintaining ships in times of war
 - 3.1-The Arsenal of La Carraca and the Cádiz shipyards network
 - 3.2- Shipbuilding practices and production
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- 4- The state control of forest resources under the Bourbon Reforms
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- 5- Forestry and wood supply in the Maritime Department of Cadiz
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 - 5.3- Operative chain: practices from forest to the shipyard
 - 5.3.1- Assessment of woodlands and tree selection
 - 5.3.2- Felling and preparation of timber
 - 5.3.3- Transport and delivery
 - 5.4- Agents network
 - 5.5- Volume, costs and evolution of supply
 - 5.6- Eco-social impact: conflict, resistance and critic

- 6- Wood supply from other Spanish regions
 - 6.1- Organization and management
 - 6.2- Provenance, supplied species and timber features
 - 6.3- Transport
 - 6.4- Volume, costs and evolution of supply

- 7- Wood supply from the Caribbean region
 - 7.1- Organization and management
 - 7.2- Provenance, supplied species and timber features
 - 7.3- Transport
 - 7.4- Volume, costs and evolution of supply

- 8- Imports from the Baltic region and other provenances
 - 8.1- Management
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- 9- Timber supply and consumption in Cadiz: attempt of synthesis
 - 9.1- Shipbuilding, caulking and maintenance of vessels: managing stocks and necessities of timber
 - 9.2- Regional supply and other provenances: proportions and evolution
 - 9.3- Species and features of timber: use in shipbuilding, caulking and maintenance (proportions and evolution)

Conclusions

Objectives:

The presented project structure, such as the title, is programmatic and intended to be a draft of the basic subjects that are to be addressed by this research project, serving as its fundamental guideline. As part of a work in progress, these topics will become more expressive, specific and defined by historical milestones and the refinement of the research questions, resulting from the reflection on the information provided by the analyzed written sources and a more elaborate involvement in a theoretical framework.

Following the objectives of WP1 and the key questions of the project concerning management, trade, provenance, species and sustainability, this dissertation aims to explore it in a further way by the particularization in the case study of Cadiz in the period of 1717 and 1759. This geographical and chronological scope follows methodologic and historic criteria.

Within the goal of distributing the work themes among the ForSEAdiscovery fellows in order to cover its geographical and chronological scope - Iberian Atlantic shipyards in the 1500-1800 period -, the author accepted the ITN Coordinator proposal of studying the Andalusian case in the 18th century.

Due to the great amount of available written sources for the 18th century, the chronological scope was limited to the given period of 1717-1759, in order to work in a feasible time within the project deadline of 2018, without compromising the cohesion and coherence of the archival research.

This period corresponds to the beginning of the Bourbon dynasty, with the reins of Felipe V (1700-1746) and Fernando VI (1746-1759) and is characterized by a deep reorganization at political, military, administrative and economical levels, the so-called *Bourbon Reforms*. These included the naval and maritime sectors, in which process takes part the fostering of a state controlled shipbuilding activity to serve the Navy, with an institutional reformation and creation of infrastructures such as the arsenals.

The establishment of the *Secretaría de Marina* (Navy Secretariat), in 1714, the subsequent creation of the Maritime Departments of Cadiz, in 1726, (along with Cartagena and Ferrol), and the construction of the Arsenal of La Carraca, in 1717, constitute the major state actions regarding the reformation of the Navy, which determine directly the chronological starting point of this dissertation. In effect, those interdependent state institutions are the producers of the central documental collections used on this individual project.

Although this is a very well know period of Spanish naval history and shipbuilding that has been widely discussed by the historiography, this dissertation intends to reintroduce and develop the subject of timber supply with a renewed approach, by having it as the main focus, following the key questions and methodological framework of the ForSEAdiscovery project.

In general terms, the objectives of this dissertation are: the identification of the provenance, species and quantities of timber used in Cádiz, according to the parts of the vessels and specific necessities of shipbuilding, caulking or maintenance; characterization of the forestry management, organization and trade of this supply; depiction of the operative chain from the woods to shipyards; identification of different types of agents involved in this process; general calculation of costs; assessment of the sustainability of regional resources; evaluation of the

Eco-Social impact of this process in the living of local communities, through episodes of conflict and resistance; diachronic analyses of these aspects.

The main focus of the research questions of this project are the Andalusian forest resources. In the first place, this option is justified by the strong hypothesis that the primary source of timber supply corresponds to the regional woodlands under the jurisdiction of the Cadiz Maritime Department, according to the bibliography and the volume of the documentation already identified. Besides, practical and methodological reasons such as the immediate availability of Andalusia related archival sources, when compared to other provenances such as the Baltic or the Caribbean region, contributed to the same option, in order to accomplish the project goals in a feasible time. Therefore, the other provenances of timber will be object of a less detailed study and its results will serve as support information to understand this reality in a comparative mode.

The set of research questions and hypothesis of this dissertation reflected on the dissertation structure and resumed on the objectives are expected to obtain answers in a further level of detail that can generate deliverable information to the other Work Packages, as well as public dissemination, integrated in platforms such as databases and GIS.

Following the spirit of the ForSEADiscovery project, the following lines present the essential interrogations of this dissertation.

- Knowing that the main origins of timber resources are Andalusia, other Spanish regions, the Caribbean and the Baltic region, what were its specializations in terms of species, types of pieces, and its destination to the different parts of the vessels? Were there other provenances?
- Is the Andalusian region the primary source of timber, especially in what concerns the construction of the hull and its structural elements and planking?
- What was the location of the Andalusian woodlands that served as extraction points and what species and types of pieces did each one provide? Is it possible to identify a field progression? Does it relate to factors such as knowledge of available resources, management of sustainability or even exhaustion?
- How were these woodlands assessed and how were trees selected?
- How was performed the operative chain from forests to shipyards, including felling, preparation of timber and transport?
- What was the role of the State in terms forestry practices and implementation of forestry legislation in this region? What was the structure of State administration of these forest resources?
- How the operative chain and administration constitute a social network of agents? What were their different categories? To what extent can the sources identify individuals other than the top administrative officers and shipbuilders?
- What were the costs associated?
- What was the eco-social impact of this process? Did it generate conflicts and resistance? What were the groups whose interests this process collided with? How were they managed? Do the texts of the administrative documentation reflect any kind of eco-critical thinking?
- What were the other regions of Spain which provided timber to Cadiz? How was this supply organized and managed? How was the transport operated? What were the costs associated?
- Was this acquisition motivated by occasional periods of scarcity of timber locally produced in Andalusia or does it correspond to a preference of timber seen as better suited for some elements due to its superior quality, such as the oak from Cantabria or the pine for planking, masts and spars from the Pyrenees? Was this type of timber preferable to Baltic importations?

- How was organized and managed the supply of timber from the Caribbean region? Who was in charge of its transport? What were the costs associated?
- Was Cadiz a centre of redistribution of the Caribbean timber to the other departments?
- Is it possible to locate the forests from which the Baltic timber came from, in general terms, through the Navy sources? What were its shipping ports?
- How did the Navy manage the supply contracts? What were its clauses and conditions? Who were the suppliers and other involved agents? What were the ships that performed its transport? Is this information likely to be linked with Northern Europe databases on trade, such as the Sound Toll registers? Were imports of Baltic timber such as pines for planking, masts and spars, as well as the occasional orders of oak, an alternative to the peninsular product motivated by scarcity or did it actually correspond to quality standards?
- How did these different provenances of timber supply satisfy the specific necessities of shipbuilding, caulking and maintenance of vessels in Cadiz? Did each of these activities correspond to different models of timber supply and different standards of product quality?
- What is the evolution of the volume timber supply, in overall and specific terms? What are the proportions between each of the timber provenances and species?

Methodology:

A research project of this kind always starts with the constitution of a bibliographical working basis, which includes an open and broad list of historical and archaeological works eminently focused on the Early Modern period which includes thematic sections such as “timber, forestry and ecology”, “shipbuilding”, “Naval and maritime History”, “Underwater and Maritime Archaeology”, “historical vessels”, “port history”, “Trade”, “History of Andalusia”, “Early Modern History” or “Methodology”. This set resulted from a first generic approach to the timber and shipbuilding and related themes and is intended to support the research in a broad scope of possible questions. Therefore, it is still a work in progress.

Archival research constitutes the central base of this project. The main documental collections which are currently being analyzed belong to the General Archive of Simancas, Valladolid (*Archivo General de Simancas* - AGS) and General Navy Archive Álvaro de Bazán, Viso del Marqués, Ciudad Real (*Archivo General de Marina Álvaro de Bazán* - AGMAB). This will be furtherly complemented with documents from the Naval Museum Archive, Madrid (*Archivo del Museo Naval*) and, eventually Cadiz Provincial Archive (*Archivo Provincial de Cadiz*), General (*Military Archive Archivo General Militar*).

The section regarding the Navy Secretariat - *Secretaría de Marina* - of the General Archive of Simancas provides the majority of the analyzed documents, which regard to the central state management of a wide range of aspects of the Navy, including shipbuilding and timber supply. Within this section, *Arsenales* (Arsenals) constitutes the central assemblage, not only for its superior quantity, but also for its broader thematic extension, and, most of all, because it contains the most direct information about the timber used in Cadiz. *Montes y sus Incidencias* (Woodlands and its Incidences), other subsection, contains information regarding forestry management and organization for timber supply purposes, as well as the management of imported timber supply, in a secondary level. The subsection *Asientos* (Contracts) is constituted by correspondence about the management of contracts of provision of services and goods for the Navy, such as timber supply. After the processing of the information from these documents, the research will be extended to other subsections, such as *Ministerio de Marina* (officers of the Navy), *Ministerio de Provincias* (officers of the Provinces), *Individuos de Arsenales* (personnel of the arsenals), *Consignaciones* (consignments, related to the economic

management of the Navy) or *Reales Ordenes* (Royal Orders), in a less exhaustive approach. Other important complementary section is *Tribunal Mayor de Cuentas* (Court of Auditors) which contains documents from the former *Contaduría Mayor de Cuentas*. This institution managed, at a central level, the accounts related to state expenditure by institutions such as the Navy.

The General Navy Archive Álvaro de Bazán contains documentation from the same Navy Secretariat and from the Maritime Department of Cadiz. The Navy Secretariat is divided in the same subsections that can be found in AGS, such as *Arsenales*, *Asientos*, *Consignaciones*, *Ministerio Generalidades* and *Reales Ordenes Impresos*, providing similar information, but in a more limited way. The relevant documents from the Maritime Department of Cadiz, which refer to the internal management of its jurisdiction, are comprised in subsections such as *Arsenales*, *Contaduría* (accounting), *Documentación General* (general documentation), *Intendencia* (Intendance), *Maestranza* (Personnel), *Ministerio*, *Reales Ordenes*.

Processing this great amount of information will involve the creation of compiling and query platforms, such an *Access* data base and *ArcGIS* models, in order to summarize it and address the research questions as well as generate deliverable platforms of data.

The creation of the *Access* data base model of this project is the next step and is a complex task which details are have not been defined at this moment. In general terms, this data base should express in its multiple interrelated tables information such as:

- ships constructed, caulked and repaired in Cadiz, shipyard where the work was performed, chronology, specific timber necessities, according to types of pieces and species, based on what is expressed in the documents and not on generic calculations from treatises or *reglamentos*;
- general timber necessities, according to types of pieces, species, chronology, as expressed in existing general accounts, not referring to specific necessities of a given vessel ;
- timber supply, according to provenance, quantities, species, types of pieces, chronology, contractors, means of transport, agents of transport, chronology, specific necessities;
- assessment of Andalusian forests and quantities of identified trees, species and pieces
- timber stocks, according to types of pieces, species, chronology, based on the accounts
- agents of the administration and operative chain within the Andalusian supply, according to category location, chronology.

Geographical information of this database, especially in what concerns timber provenance, must be integrated in a GIS model, generating two great levels of representation: a global perspective, incorporating the main regions of provenance from the Caribbean region to the Baltic, and a view on the Andalusian forests, with the identification, as specific as possible of the points of assessment and extraction.

Apart from the primary manuscript and printed archival sources, other written sources will contribute to this dissertation, according to the different topics of the chapters. It is the case of legislation on forestry, chorographical works, treatises and legislation of shipbuilding, literature or any other genre likely to be relevant to the characterization of this process.

One of the research questions deals with the potential relation of the information on Baltic importations in the studied sources to data bases compiling information of foreign sources on Baltic trade and navigation, such as the Sound Toll Registers. Although this data base will not be analyzed directly by the author, an articulated exchange of information with other members of the project working with this platform, such as ESR4, might produce interesting results to be presented and discussed in this dissertation.

The written sources must be complemented with the graphic information given by historical cartography, which will be an important base to GIS, such as the collections of the Map Library of the Naval Museum and National Library (Madrid), as well as iconography such as the Maps, plans and drawings from the Archivo General de Simancas, and Naval Museum, and even the illustrations of treatises, paintings and other categories of visual representations. In the case of the depiction of the operative chain from forests to shipyard, ethnographical and photography and drawings will be used, in order to illustrate parallels found between the information of the coeval written sources and ethnographic studies.

LONG-TERM CAREER OBJECTIVES (over 5 years):

1. Goals:

Conclusion of a PhD degree with the dissertation above presented at the Facultad de Humanidades of the Universidad Pablo Olavide of Seville.

Preparation of the dissertation for monographic publication.

Participation in publications and conference papers along with other ITN fellows about common interdisciplinary case studies, such as *the Santa Maria Magdalena Shipwreck*, contributing with historical data collected from archival sources.

Preparation of a new research program, within the framework of a Postdoctoral program and application for funding.

2. What further research activity or other training is needed to attain these goals?

Courses and seminars included in the PhD program.

Training in research management.

SHORT-TERM OBJECTIVES (1-2 years):

1. Research results

- Anticipated publications:

Publication of articles focused on the preliminary innovative results of the research on scientific journals with impact factor, such as *Revista de Historia Económica Journal of Economic History*, *Journal of Social History*, *Journal of Social Archaeology* *Tiempos*

Modernos, Revista online de Historia Moderna, Environmental History, International Journal of Maritime History, for example, and proceedings of scientific conferences.

2015 papers submitted for publication:

- TRINDADE, Ana Rita, “Wood supply for the Andalusian shipbuilding during the reigns of Felipe V and Fernando VI: brief introductory notes” (proceedings of the conference *A gestão dos recursos florestais ibéricos na construção naval da Idade Moderna: História e Arqueologia*, organized by the Instituto de Arqueologia e Paleociências da Universidade Nova de Lisboa, (Lisboa, Portugal), in November 26th, 2014)
- GASCH TOMÁS, José Luís; TRAPAGA MONCHET, Koldo, TRINDADE, Ana Rita, *Shipbuilding in times of war and change*, *International Journal of Maritime History*, Maritime Economic History Association, Sage Publications
 - o Anticipated conference, workshop attendance, courses, and /or seminar presentations:

Presentations focused on the preliminary innovative results of the research within the Network, the institutions involved in this ESR and PhD program and international conferences, such as the following

2015 :

Presentation of paper “Timber Supply for Andalusian Shipbuilding in the 18th century: brief research notes” in the conference *A gestão dos recursos florestais ibéricos na construção naval da Idade Moderna: História e Arqueologia*, organized by the Instituto de Arqueologia e Paleociências da Universidade Nova de Lisboa, (Lisboa, Portugal), 26th November, 2014.

Presentation of papers in the network meetings and training courses included in the plan of activities of this ITN: 12th-13th January 2015, Network Meeting (Centro de Ciencias Humanas y Sociales-Consejo Superior de Investigaciones Cientificas - Madrid, Spain); 6th-8th May 2015, *Historiography and Archive Research* training course (Rijksuniversiteit Groningen (Groningen, The Netherlands).

Presentation of paper “The ForSEAdiscovery project” with José Luis Gasch Tomás and Koldo Trapaga Monchet in the conference *Connected Oceans - New Avenues of Research in Oceans and Maritime History*, University of Porto, Portugal, 8th-12th July 2015

Presentation of poster “Written sources in the study of wood supply for shipbuilding: the Andalusian 18th century case” in the conference *ISBSA 14, International Symposium of Boat and Ship Archaeology, Baltic and beyond. Change and continuity in shipbuilding*. National Maritime Museum, Gdansk, Poland, 21st-25th September 2015

2016:

Presentation of paper about timber imports from the Caribbean región, with Ana Crespo Solana, at *XX Congreso Internacional de la Asociación Mexicana de Estudios del Caribe A.C., "El Caribe en el mundo: Dinámicas y reconfiguraciones"*, IVEC-Exconvento Betlemita, Veracruz (Mexico) 12th – 15th de April 2016

Presentation of a paper with other Fellow ITN researchers about the case study of the *Santa Maria Magdalena* shipwreck at *IKUWA 6, International Congress on Underwater Archaeology*, Western Australian Museum, Fremantle (Australia), 28th November – 2nd December, 2016

Presentation in local seminars at the Instituto de Historia of the Centro de Ciencias Humanas y Sociales, CSIC and in at the Facultad de Humanidades of the Universidad Pablo Olavide.

2. Research Skills and techniques:

- Training in specific new areas, or technical expertise etc:

Intensive Training courses and workshops integrated in the Network program: History of Wooden Shipbuilding and Books and Treatises on Shipbuilding at CCHS-CSIC, 14th – 16th January 2015; Historiography and archive research (Rijksuniversiteit Groningen, RUG), 6th-8th May 2015; Geographic Information Systems (CCHS-CSIC), 13th-17th October, 2015; Dendrochronology and wood anatomy (WU, USC), 9th-11th December, 2015; Communication and Presentation Skills (CCHS-CSIC); Scientific communication and multidisciplinary team-work (WU).

Secondment in Leiden University (UL), integrated in the Network program, focused on subjects as international bibliography on global history, environment and forestry history, as well as training on article preparation for international publications.

Secondment in the University of Wales Trinity Saint David (UWTSD) on “Comparative study of contemporary forestry practice and timber supply in British Isles: historical, archaeological and structural approaches based in commercial sector Archaeological Services”, nautical archaeology and shipbuilding in order to contextualize the case study of Andalusia within a global perspective, and understand the British shipbuilding tradition influence.

3. Research management:

Application for a Postdoctoral program.

4. Communication skills:

Ability to present a scientific discourse to a scientific international audience, through different means such as articles, books, websites, presentations at conferences, posters, for instance.

Ability to debate scientific questions within a scientific international community.

Dissemination of scientific discourse to the non specialized public in the media, workshops, for instance.

5. Other professional training (course work, teaching activity):

To be determined.

6. Anticipated networking opportunities

Work within a vast and interdisciplinary team with common scientific issues, exchanging information, methods and debating ideas.

Collaboration with other fellows in particular case studies, such as the *Santa Maria Magdalena Shipwreck*, contributing with data from archival sources, within the framework of interdisciplinary work.

Establish a network of different professional and academic contacts.

7. Other activities (community, etc) with professional relevance:

Scientific Fair at the CSIC, Madrid, in 2016.

Date & Signature of fellow:

Date & Signature of supervisor

**Career Development Plan-Final year
(Draft)**

BRIEF OVERVIEW OF PROGRESS, ACHIEVEMENT AND PERFORMANCE (half page should be sufficient):

LONG-TERM CAREER OBJECTIVES (over 5 years):

If relevant, mention any adjustments to your long-term career objectives as a result of the training received.

SHORT-TERM OBJECTIVES ACHIEVED DURING THE TRAINING PERIOD:

1. Research results
 - Publications (incl. in press):

 - Conference, workshop attendance, courses, and /or seminar presentations:
2. Research Skills and techniques acquired:
 - Training in specific new areas, or technical expertise etc:
3. Research management:
 - Fellowship or other funding applications achieved (indicate name of award if known; include fellowships with entire funding periods, grants written/applied for/received, professional society presentation awards or travel awards, etc.)
4. Communication skills:
5. Other professional training (course work, teaching activity):
6. Anticipated networking opportunities
7. Other activities (community, etc) with professional relevance:

Date & Signature of fellow:

Date & Signature of supervisor

Career Development Plan

Guidance on some of the competencies expected

The following points are a non-exhaustive series of aspects that could be covered by the career development plan, and it is relevant to the short-term objectives that will be set by the researcher and the reviewer at the beginning of the fellowship period. The objectives should be set with respect to the skills and experience that each researcher should acquire at a given time of his/her career. A postgraduate researcher at PhD level will have very different needs compared to a post-doctoral researcher at an advanced stage of his/her professional development. These objectives should be revised at the end of the fellowship and should be used as a pro-active monitoring of progress in the researcher's career.

1. Research results.

These should give an overview of the main direct results obtained as a consequence of the research carried out during the training period. It may include publications, conference, workshop attendance, courses, and /or seminar presentations, patents etc. This will vary according to the area of research and the type of results most common to each field. The information at this level should be relatively general since the career development plan does not strictly constitute a report on the scientific results achieved.

2. Research Skills and techniques acquired.

Competence in experimental design, quantitative and qualitative methods, relevant research methodologies, data capture, statistics, analytical skills.

Original, independent and critical thinking.

Critical analysis and evaluation of one's findings and those of others

Acquisition of new expertise in areas and techniques related to the researcher's field and adequate understanding their appropriate application

Foresight and technology transfer, grasp of ethics and appreciation of IPPR.

3. Research management.

Ability to successfully identify and secure possible sources of funding for personal and team research as appropriate.

Project management skills relating to proposals and tenders work programming, supervision, deadlines and delivery, negotiation with funders, financial planning, and resource management.

Skills appropriate to working with others and in teams and in teambuilding.

4. Communication skills.

Personal presentation skills, poster presentations, skills in report writing and preparing academic papers and books.

To be able to defend research outcomes at seminars, conferences, etc.

Contribute to promote public understanding of one's own field

5. Other professional training (course work, teaching activity):

Involvement in teaching, supervision or mentoring

6. Anticipated networking opportunities.

Develop/maintain co-operative networks and working relationships as appropriate with supervisor/peers/colleagues within the institution and the wider research community

7. Other activities (community, etc) with professional relevance.

Issues related with career management, including transferable skills, management of own career progression, ways to develop employability, awareness of what potential employers are looking for when considering CV applications etc.