

Women in the Blue Economy: An Empirical Analysis

This report was prepared by the NOVA School of Law (NSL) research team in collaboration with Leading Women for the Ocean network (LWO) and the University of Cape Verde (Uni-CV) research team. Contributions were also gathered from Ocean Policy Research Institute (OPRI) at the Sasakawa Peace Foundation (SPF). The research project which led to this report was funded by Oceans 5.

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Notices

This document only reflects the views of the authors, and does not necessarily represent the views of the institutions involved in the project.

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This research stands as a testament to the power of international academic collaboration, and we are profoundly grateful for the privilege of working alongside such distinguished colleagues.

The Portuguese Coordinating Team @ NOVA School of Law







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Acronyms and Abbreviations

CEDAW Convention on the Elimination of All forms of Discrimination Against Women

CFP Common Fisheries Policy

CFR Charter of Fundamental Rights of the European Union

CV Cape Verde or Cape Verdean
CVE Cape Verdean Escudo (Currency)

DGRM Direcão-Geral de Recursos Naturais, Segurança e Serviços Marítimos [Directorate-General for

Maritime Resources, Safety and Maritime Services] (PT)

EMAR Escola do Mar [Sea School] (CV)

EMFAF European Maritime, Fisheries and Aquaculture Fund

EMFF European Maritime and Fisheries Fund

ENAPOR Empresa Nacional de Administração dos Portos [National Port Administration Company] (CV)
ENIDH Escola Superior Náutica Infante Dom Henrique [Infante D. Henrique Nautical College] (PT)
ENIND Estratégia Nacional para a Igualdade e a Não-Discriminação [National Strategy for Equality and

Non-Discrimination] (PT)

ENM Estratégia Nacional para o Mar [National Strategy for the Sea] (CV)

EPSR European Pillar of Social Rights

ETF European Transport Workers' Federation

EU European Union

FAO Food and Agriculture Organisation

GAF Gender and Fisheries **GDP** Gross Domestic Product

ICIEG Cape Verdean Institute for Gender Equality and Equity

ILO International Labour OrganisationIMar Instituto do Mar [Sea Institute] (CV)IMO International Maritime Organisation

IMP Instituto Marítimo Portuário [Port Maritime Institute] (CV)

IMT Instituto da Mobilidade e dos Transportes [Institute of Mobility and Transport] (PT)

INE-CV Instituto Nacional de Estatística [National Institute of Statistics] (CV)
INE-PT Instituto Nacional de Estatística [National Institute of Statistics] (PT)

ISECMAR Instituto de Engenharias e Ciências do Mar [Higher Institute of Engineering and Marine Sciences] (CV)

MLC ILO's Maritime Labour Convention

OECD Organisation for Economic Cooperation and Development

PEDS Plano Estratégico de Desenvolvimento Sustentável [Strategic Plan for Sustainable Development] (CV)
PNIEG Plano Nacional de Igualdade e Equidade de Género [National Plan for Gender Equality and Equity] (CV)

PNIG Plano Nacional de Igualdade de Género [National Gender Equality Plan] (CV)

PNVBG Plano Nacional de Combate à Violência Baseada no Género [National Plan to Combat Gender-

Based Violence] (CV)

PT Portugal or Portuguese

SDGs UN Sustainable Development Goals
 SGBV Sexual and Gender-Based Violence
 SIDS Small Island Developing State

SSF Small-Scale Fisheries

STCW IMO's Convention on Standards of Training, Certification and Watchkeeping for Seafarers

STCW-F IMO's Convention on Training and Certification for Fishing Vessels Personnel

TEU Treaty of the European Union

TFEU Treaty on the Functioning of the European Union

UN United Nations

UNCITRAL UN Commission on International Trade Law UNCTAD UN Conference for Trade and Development

UNGA UN General Assembly

USD US Dollar

UTA Universidade Técnica do Atlântico [Atlantic Technical University] (CV)

WISTA Women's International Shipping & Trading Association

ZEEM-SV Zona Económica Especial Marítima em São Vicente [São Vicente Special Maritime Economic Zone] (CV)

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WBE PROJECT AT A GLANCE

Women in the Blue Economy: an empirical analysis



Promoting Institutions

NOVA School of Law (NSL) and Leading Women for the Ocean (LWO)

General Coordination

Assunção Cristas (NSL) and Maria Damanaki (LWO)

Leading Research Centre

NOVA Ocean Knowledge Centre @ CEDIS – Research Centre on Law and Society (NSL)

Research Partners

Centre for Research and Training on Gender and Family (CIGEF) and Centre for Research on Local Development and Spatial Planning (CIDLOT) @ University of Cape Verde (Uni-CV)

Ocean Policy Research Institute (OPRI) @ Sasakawa Peace Foundation (SPF)

Funding

Oceans 5

Description

The project assessed women's current involvement and influence in traditional domains of the blue economy - small-scale fisheries and cargo shipping - and provides recommendations both on effective gender inclusion strategies in these sectors and for the development of action plans at the level of ocean policy and governance.

Background

There is a growing body of both academic and grey literature signalling the endemic undervaluation of women's roles in ocean-related sectors and their corresponding under-inclusion in maritime policy decision-making and ocean governance structures.

Goals

To provide global maritime policymakers and other relevant stakeholders with actionable data, knowledge, and evidence-based proposals on how the added value of gender inclusivity can help to achieve successful ocean governance.

Target Beneficiaries

Direct beneficiaries: policymakers, technical staff of government agencies, workers and employers' organisations, academic and civil society organisations in ocean policy and gender inclusion.

Ultimate beneficiaries: women and men in the fishing and shipping sectors of the countries studied by the project.

Duration

August 2023 - March 2025

Geographical Focus

Portugal, Cape Verde, and Japan

Main Activities

Empirical assessment based on three geographical case-studies grounded mainly in qualitative research techniques (semi-structured interviews, non-participant observation and documentary analysis) and collaborative and critical discussions with stakeholders.

Foreseen Outputs

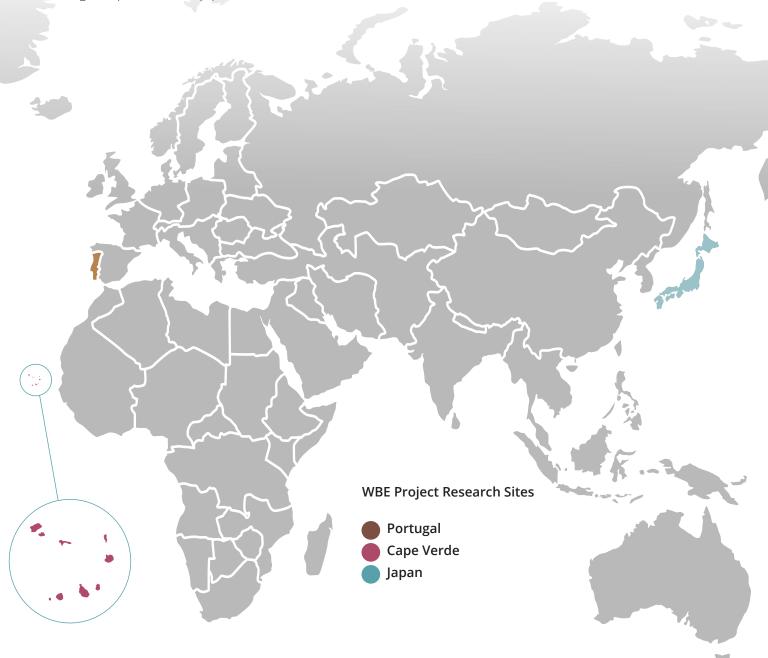
A final report; scientific and policy conference presentations; academic research papers.

Expected Outcomes

Increased women's participation and representation in relevant public and private maritime policies and ocean governance; improved ocean sustainability.

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1. Introduction

1.1. WBE's Project's Research Questions

The Leading Women for the Ocean (LWO) network and the NOVA School of Law (NSL) have partnered to prepare this report which seeks to contribute to the analysis of the current position of women in the blue economy and to the discussion of strategies for improving women's recognition, inclusion, and representation within the ocean governance framework.

The report is based on the empirical findings obtained to assess the main research question of the project: what is the current role and impact of women in ancestral and traditional sectors of the blue economy?

This descriptive and comprehensive assessment has a special focus on gender inclusion perspectives and its analysis contributes to the proposals that are advanced based on two main normative questions: a) What can be done to promote successful gender inclusion in these sectors? and b) what action plans could be adopted to lead to relevant, fruitful changes at the ocean policy and governance level?

1.2. WBE Project's Main Goals

This project was aimed at examining the gender dimension within the blue economy, fostering women's involvement in policymaking and promoting their positive impact in the sector.

To encourage women's participation in relevant public and private maritime policies and ocean governance, it is key to assess and highlight the impact of women in a wide range of socio-economic and cultural roles in the blue economy. Identifying and emphasising the relevance of women in ocean-related socio-economic practices demonstrates - in a merited and substantiated manner - the need to increase representation of women at corresponding levels of policy and decision-making.

Thus, one of the main goals of this project was to **provide** actionable data, knowledge, and evidence-based proposals on the added value of gender inclusion for the success of ocean governance and the just and sustainable transition to global maritime policymakers and other relevant stakeholders in ocean governance.



Laszlo Mate

1.3. Research Findings Preview: Advancing Gender Equality in the Blue Economy

This study builds upon and its results align with existing international research (see literature review ahead), yet it represents the first comprehensive effort specifically devoted to examining the gender dynamics within small-scale fisheries and shipping sectors in Portugal and Cape Verde.

By focusing on these previously underexplored territories, this research enriches the broader body of evidence on gender equality and ocean-related activities. It further innovates by bridging the often-separated streams of Gender and Fisheries (GAF) scholarship and gender-focused shipping research. More importantly, it provides actionable insights and localised recommendations that can directly inform policy agendas tailored specifically for these contexts and, critically, for the women whose lives are most impacted.

Often, meaningful action plans begin simply by listening closely to women's voices on the ground. A powerful example comes from the women fish sellers in Rincão, who, when offered an open-ended opportunity to voice further concerns, repeatedly emphasised a single and urgent request: "we need freezers!" Recognising and responding to such clear and concrete needs would represent a fundamental step towards transformative gender equality in ocean governance.

Our comparative analysis reveals that women's participation in the marine and maritime sectors in both Portugal and Cape Verde is characterised by crossroads between structural marginalisation and personal agency. Through our research questions focused on women's roles, contributions, and the challenges of gender inclusion, we have identified several critical insights:

First, women's economic contributions to maritime sectors remain systematically undervalued despite their essential nature. In fisheries, women's roles in post-harvest activities and market management form the economic backbone of many coastal communities. In shipping, women are gradually expanding their presence beyond traditional service roles into technical and leadership positions, though significant barriers persist.

Second, the intersectionality of gender with other identity markers —such as class, ethnicity, nationality, socioeconomic status —profoundly shapes women's maritime experiences. The gendered division of labour in both sectors is not merely the product of physical differences but rather reflects embedded cultural norms and institutional structures that naturalize women's marginalization while simultaneously depending on their labour.

Third, while legal frameworks for gender equality exist in both countries, implementation gaps remain substantial. Women continue to navigate maritime careers with limited institutional support, relying instead on personal resilience and informal networks. The development of more targeted gendersensitive policies, informed by women's lived experiences, is essential to address these implementation gaps.

Finally, our research highlights the importance of recognising women not merely as passive recipients of change but as active agents in transforming maritime sectors. Women in both countries are developing innovative strategies to assert their presence, from collective organisation in Cape Verde's fisheries to individual career advancement in Portugal's shipping industry.

To bridge these disparities in both countries, it is essential to implement policies that recognize and support women's contributions to maritime economies. This includes collecting gender-disaggregated data, ensuring equitable access to resources and training, addressing gender-based violence and harassment, and promoting women's meaningful participation in decision-making processes at all levels.

Advancing gender equality in maritime sectors is not merely a matter of social justice—it represents a strategic opportunity to enhance the sustainability, resilience, and innovation of blue economies in both Portugal and Cape Verde. By embracing women's full participation, these sectors can better address the complex challenges facing ocean economies in the 21st century.

1.4. Research Team and Partners

NSL Coordinating Team

General coordination and ocean issues coordination:

- Assunção Cristas, Associate Professor at NOVA School of Law, Coordinator of the Master´s Degree in Law and Economics of the Sea – Ocean Governance, Director of the NOVA OCEAN Knowledge Centre.
- Maria Damanaki, Leading Women for the Ocean Network, Guest Professor at NOVA School of Law.

Gender issues coordination:

- Margarida Lima Rego, Full Professor, Dean of NOVA School of Law, Director of the NOVA Knowledge Centre for Data-Driven Law, Coordinator of the research project Multiversity
 White Paper on Multiple and Intersectional Discrimination.
- Nausica Palazzo, Associate Professor at Nova School of Law, Director of the NOVA Centre for the Study of Gender, Family, and the Law.

Researchers:

- Patrícia André, Guest Professor, Researcher and PhD candidate in Law at NOVA School of Law, and researcher at DINÂMIA'CET – Centre for Socioeconomic and Territorial Studies (ISCTE).
- Sara Apresentação, Researcher at NOVA Ocean Knowledge Centre at NOVA School of Law and PhD student at CCMAR
 Centre of Marine Sciences, University of Algarve
- · Tatiana Morais, Ph.D.

Project manager:

 Manuela Bocayuva, Researcher at NOVA Ocean Knowledge Centre and PhD student at NOVA School of Law, NOVA University Lisbon

Partners

The NSL team coordinated with local contacts in Cape Verde and Japan to conduct on-site research while the primary research was coordinated and implemented by NSL.

Cape Verde:

Institution:

 University of Cape Verde: CIGEF (Centro de Investigação e Formação em Género e Família) and CIDLOT (Centro de Investigação em Desenvolvimento Local e Ordenamento do Território).

Coordinators and researchers:

- Clementina Furtado (Assistant Professor at Uni-CV and Director of CIGEF).
- Sónia Silva Victória (Assistant Professor at Uni-CV and Director of CIDLOT).

Researchers:

- · Adilson Semedo (Assistant Professor at Uni-CV).
- · João Carvalho (Professor at Uni-CV).

Japan:

Institution:

 Sasakawa Peace Foundation's Ocean Policy and Research Institute, OPRI.

Coordination:

 Masanori Kobayashi, Senior Research Fellow of the Sasakawa Peace Foundation (SPF)

1.5. A short note on terminology

For the purposes of this project, the abbreviated **designations «marine sector» and «maritime sector»** correspond to the sectoral delimitations set out by European Union policy on the blue economy concerning, respectively, the «marine living resources sector» and the «maritime transport sector» (complete designations).

According to the EU's established sectors (European Commission, 2023), the «marine living resources sector» encompasses: 1) primary sector: capture fisheries (small-scale coastal, large-scale and industrial fleets) and aquaculture (marine, freshwater and shellfish), 2) processing of fish products: processing and preservation of fish, crustaceans and molluscs, meal preparation, manufacture of oils and fats and other food products, 3) distribution of fish products: retail sale of fish, crustaceans and molluscs in specialised stores and wholesale outlets; and the «maritime transport sector» encompasses 1) passenger transport, 2) freight transport, 3) services for transport.

When referred to within the WBE project the scope of these sectors shall be the same as the EU's blue economy systematisation, except as otherwise mentioned; and the abbreviated or complete designations will be used interchangeably, except when stated differently.

It should be noted that in sectoral policies of other organisations the use of similar terms may vary; for instance, the International Labour Organisation's (ILO) definition for the «maritime sector» encompasses 1) shipping, 2) ports, 3) fisheries, 4) and inland waterways (ILO, 2010); whilst the European Transport Workers' Federation (ETF) considers fishing one of the «transport sectors» on which they focus, with shipping a separate sector labelled as the «maritime transport» sector, and «inland waterways» as another (ETF, 2022). One special note on general/sectoral terminology regarding the International Maritime Organisation (IMO): being the United Nations' specialised agency for the maritime sector, one should bear in mind that the main scope of IMO's action is international shipping engaged in international trade, which is the general scope of the «maritime sector» in IMO's policies (as set by the IMO Convention 1948). Nevertheless, IMO occasionally engages with the fishing sector – usually in joint cooperation with the UN's sister agencies ILO and Food and Agriculture Organisation (FAO) - in matters of vessel and personnel security (e.g. STCW-F -Convention on Training and Certification for Fishing Vessels Personnel, ICSFV - International Convention for the Safety of Fishing Vessels and its related Torremolinos Protocol and Cape Town Agreement), and also addresses issues of marine and atmospheric pollution by ships.

The use of **the term «shipping»** is also worth noting in this context to highlight that although the EU systematisation uses the term «maritime transport», the WBE project uses both terms interchangeably to refer to merchant/commercial shipping (deep-sea or coastal) and encompassing both passenger and cargo/freight traffic whenever that distinction is not explicitly made.

Finally, an important clarification on the use of **the term «seafarer»** is also in order. Generally speaking, a seafarer, just as a mariner, refers to anyone who works on a ship or vessel, and it may include such occupations as sailors, fishers and other maritime workers. However, unless otherwise noted, references to «seafarers» in this project shall be restricted to the specific technical sense laid down in ILO's Maritime Labour Convention, 2006, as amended (MLC), according to which "seafarer means any person who is employed or engaged or works in any capacity on board a ship to which this Convention applies" (article II, 1, f), i.e., "all ships1, whether publicly or privately owned, ordinarily engaged in commercial activities, other than ships engaged in fishing or in similar pursuits and ships of traditional build such as dhows and junks [and] warships or naval auxiliaries" (article II, 4). A similar circumscription is made by IMO's International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention) whose application also excludes seafarers on board warships, naval auxiliaries, fishing vessels, pleasure yachts not engaged in trade, and wooden ships of primitive build (article III). These provisions thus restrict the technical sense of seafarer to the shipping industry separating it clearly from all other mariners, especially those within the marine primary sector, i.e., capture fisheries².

^{1 &}quot;other than one[s] which navigates exclusively in inland waters or waters within, or closely adjacent to, sheltered waters or areas where port regulations apply" (article II, 1, i), MLC, 2006)

² It is important to assert that this is a merely terminological option for the sake of clarity within the WBE project, especially in what concerns references to data, but it doesn't purport any substantive alignment with the policy options stemming from the regulation instruments of the aforementioned international bodies, for they are not consensual within the literature as Guelker (2023) reports.

2. Methodology

2.1. Triangulation of Methods of Data Collection

The empirical assessment in the WBE project resorted to interviews, non-participant observation, and documentary data. Collection of relevant documentary data was performed mainly through desk research, including mostly public documents and publicly available ones. A wide range of information sources was consulted, such as international, national, and local organisations, regulators, authorities, observatories, consultants, and corporate companies among others. The focus was to frame profiling and contextual information on the three case-studies, either in the economic sectors-related data, and the gender and sustainability factors. Special attention was given to relevant descriptive data (e.g. territory, socio-economic organisation, populations, demographic structures, cultural context, available statistics, vessels, workers, companies, markets), as well as policy documentation, either reports, recommendations, action plans, and other types of grey literature (from public and private entities).

Non-participant observation played an important role in this project, providing an opportunity to gain valuable insights into the daily activities, interactions, and dynamics within the small-scale fishing communities and the maritime transport sectors in Cape Verde and Portugal. Unlike participant observation, which involves direct engagement in activities, non-participant observation allows the research team to observe naturally occurring behaviours and events without actively participating.

Specific sites to observe were identified within each research location; these included fishing and shipping ports, fishing auction grounds and markets, and relevant gathering facilities (see section 2.2).

The observation process respected the privacy and rights of individuals, and the researchers maintained a non-intrusive presence, seeking permission whenever necessary. During observation, fieldwork notes were meticulously recorded (see Annex 2.1.a.). These notes captured both the observable actions and the contextual details that influenced or explained those actions. Being the source of the observational data, field notes were recorded in accordance with the instructions set in Annex 2.1.a.

While critical to the project, field notes were a supplementary data source to the **semi-structured interviews** which constitute the project's main data source (see Annexes 2.1.b and 2.1.c).

Collection of data through interviews relied on three major instruments: the interview protocol, the interview script, and the informed written consent form, which were all especially designed for the WBE project and included in the project's methodological and ethical procedures guiding the data collection (see Annexes 2.1.b, c, and d and see sections 2.2 and 2.5).

Besides non-participant observation and semi-structured interviews, the comparative study also relies on complementary documentation to ensure a triangulation of methods of data collection.

2.2. Data Collection: Population, Materials, and Methods

Inquiry into the baseline research question of the WBE project followed a socio-legal theoretical framework to address issues related to gender equality and ocean governance & regulation.

The goal was to deliver a **descriptive and comprehensive overview** of the current role and impact of women in ancestral and traditional sectors of the blue economy for which the methodological **case-study approach** was considered most suitable by the team's project. Though it doesn't allow for statistical representativeness, it increases the chances for robust, in-depth social representativeness. Additionally, case-studies provided a detailed account of specific and unique features generally not captured by large-scale techniques. Moreover, the option for a case-study approach enabled supplementary insights downstream via a comparative analytical engagement between different case-studies, as its overall research design requires the adoption of control and scrutiny devices either at the setup and analysis levels.

Case-studies typically rely on qualitative methods to produce in-depth analysis. In the WBE project, the case-studies conducted relied on **qualitative data analysis**, drawing from interviews as the main data collection technique, alongside non-participant in-site observation.

Empirical research was conducted in **sea-side communities** (small-scale fisheries - marine sector); **and shipping ports** (cargo shipping - maritime transport sector) in Cape Verde in Africa and Portugal in Europe. The project's protocol, including interview and ethical protocols, was not applied in the same way by the Japanese team, preventing the validation of the data and thereby making it impossible to consider the Japanese dataset in an equivalent manner and draw comparative, scientific-rooted, conclusions among the three cases. Nevertheless, some relevant insights are shared below in the Supplementary Report: A Glimpse in the Japanese Experience (see Annex 1).

Selection Criteria, Profiling of Interviewees, and Participants' Recruitment

According to our purposive sampling strategy, participants were selected based on different sets of **criteria established for each research sector**, therefore determining the **profiles of interviewees**. The design of these parameters was grounded on the literature review of

the most relevant domains that run across the WBE project (gender / labour / maritime trade and transport / marine fishing) and the socio-economic features of the research sites for the case-studies.

Concerning the **small-scale fisheries sector**, it is essential to clarify that, for this project, we stipulate that this sector encompasses primary production, processing, selling and distribution of fish products, including seafood harvesting. This definition has obvious consequences on the scope of the population of interest.

Additionally, the delimitation and abstract identification of the subjects of interest was based on the notion of «fishing community» including the sector's activities, actors, and dynamics that take place at sea and onshore.



Furthermore, this notion of fishing community fits the project goal to assess the gender divide and women's (in) visibility (in which we ground our normative goal of *making women visible*): there is a clear gender divide structured around *functions, abilities,* and *physical spheres* which corresponds to different levels of *exposure, responsibility,* and *recognition;* despite the essential and structural role that women play in the sector and the community, men are the visible face and women remain mostly unnoticed.

Based on these stipulations and directive groundings, we can therefore identify the following:

Categories of subjects for interviews

general criteria: women and men engaged in the sector either at sea or onshore, such as:

- fishers
- · seafood harvesters
- workers in support activities (selling, management, etc)
- individuals from local sector associations
- · individuals in markets
- individuals in local authorities and sector regulators

Within the **cargo shipping sector**, we decided to focus exclusively on seafarers, thus excluding shipping dimensions onshore (supply chain actors, dockers, administrative workers, etc).

The sea and onshore scope would be theoretically and methodologically problematic due to the specific features of the cargo shipping sector as a) identifying the members of

this «community» would be a very demanding task given the complexity of the sector, its many different types of actors, and their different ways of functioning; and b) given that the shipping chain goes from port-to-port and each port operates differently – while remaining a mere transitory passing place - we would face zigzagging boundaries that would make it hard to delimitate a solid object within the framing of our research which is grounded in geographical case-studies.

Additionally, focusing exclusively on board allows us to keep the «community» analytical lens which is more consistent and soundly articulated around the tight functioning of a cargo ship.

To decide if seafarers should be selected according to their nationality or to the ships' flag and/or ownership, we had to consider the fact that almost all ships have different nationalities aboard and fly a different flag from the owner's state, which would pose practical challenges in our research and could distort the geographically based case-studies. With this in mind, and considering that the ships' flag and/or ownership criteria may enable us to draw more on legislation and jurisdiction matters, and the crews' nationalities criteria may enable us to gather extra insights into the origins, pathways, and socio-cultural constraints of seafarers, we opted to apply the home-state criteria to all variables: seafarer nationality, ship's flag, and ship's ownership.

Since this parameter may considerably restrict the populations of interest, we decided conversely to include all types of transport (domestic / international), all types of cargo (raw materials / manufactured goods), and all types of ships (container ships / tankers / bulk carriers).

Considering that training and recruiting have direct consequences in crews' compositions – which is why IMO has been considering those dimensions as the core of its strategic policies for attracting women to the shipping industry – it was decided to include key informants on these matters, thus increasing the scope of potential subjects of interest as:

Categories of subjects for interviews

- seafarers (women and men) embarked in ships owned and/or flagged the same as their individual nationality
- individuals from companies that play a role in recruiting seafarers
- students & teachers from specialised schools or training facilities

MEN

- big fishing vessels, heavy physical work mainly present at sea
- cal work, mainly present at sea
 at the front with high
 visibility and strong
 perceived work-engagement and
 relevance

WOMEN

- small fishing vessels, hard intellectual work, mainly present on shore
- in the back with low visibility and weak perceived work-engagement and relevance



>> Sampling

Recruiting Participants

As mentioned previously, both the Cape Verdean and Portuguese teams conducted the research grounded on a triangulation of methods to collect data: semi-structured interviews, non-participant observation, and analysis of documentary data.

Considering the nature of the **populations of interest** – which in the fishing sector is highly heterogeneous because is defined by membership of the fishing community (and diverse membership criteria may be applicable), and in the shipping sector is functionally-oriented according to the job tasks performed on board cargo shipping vessels – the WBE project considered that **purposive sampling** was the most suitable approach to adequately pursue the project's inquiry goals. Purposive sampling involved selecting individuals based on specific criteria relevant to the research question; these criteria were identified in the project's research protocol.

To guarantee easier access to participants and key informants in the fisheries sector, the Portuguese and Cape Verdean teams used **convenience sampling** to identify and contact individuals of interest to engage in the research. In the Portuguese case, these participants and key informants were identified in the first phase of non-participant observation in Setúbal (5th February 2024). Aside from being practical and feasible, this approach allowed for the exploration of the roles of women in small-scale fisheries in Setúbal, Gâmbia and Carrasqueira.

Regarding the shipping sector in Portugal, besides purposive sampling, snowball sampling was also used due to the difficulty of recruiting participants. This chain-referral sampling method was pivotal to addressing the

significantly high rate of invited individuals who didn't reply/ accept the invitation to be interviewed for the project or repeatedly postponed the interview due to overlapping professional commitments. Hence, considering that out of 33 individuals invited to participate in the Portuguese shipping interviews, 18 accepted and 15 refused/ did not answer/ repeatedly postponed the interview, it became clear that snowball sampling would be needed to successfully recruit participants. Of these 33 persons, 8 were men and 25 women: 6 men and 9 women declined the invitation.

Similarly, in the Portuguese fisheries sector, a **smaller snowball sampling** was used to diversify the sample, which included participants not only from Setúbal but also from Carrasqueira and Gâmbia. The rejection rate was clearly smaller in the fisheries sector in Portugal - only 3 people refused to participate in the study out of the 20 invited. Hence, chain-referral sampling was used to ensure that the sample from the fisheries sector in Portugal was diversified.



Photograph of fieldwork from Cape Verde team in Rincão

The Cape Verdean team also used a purposive and convenience sampling to identify pivotal individuals to be interviewed both for the fisheries and shipping sector in Cape Verde. To better identify these individuals, the Cape Verde team members (who are based in Praia, in Santiago Island) travelled to Porto Rincão - also in Santiago Island - to contact and interview key informants and participants from the fisheries sector, and to São Vicente Island to conduct interviews from the shipping sector.

2.3. Sample Overview: Demographics and Key Characteristics

The comparative study involved **71 semi-structured interviews**: 27 interviews conducted in Portugal between February and August 2024, and 44 conducted in Cape Verde between February and April 2024, all by national interviewers. participants were recruited until the saturation point was achieved, meaning that no new themes emerged from the interviews. As mentioned previously, it was not possible to validate the Japanese dataset collected between May 2024 and January 2025.

The Cape Verde dataset included 44 in-person interviews which encompassed: 30 interviews in the fisheries sector; 10 interviews in the shipping sector, and 4 transversal interviews which addressed pivotal issues relating to both sectors. In the fisheries sector, the 30 interviewees were: 8 key informants – 2 women and 6 men – and 22 participants 16 women and 6 men. All male participants were fishers, and all female participants were fish sellers. In the shipping sector, the 10 interviewees were: 2 key informants (1 woman and 1 man) and 8 participants (all women). Participants from the shipping sector in Cape Verde included: 6 stewards and 2 officers (1 pilot and 1 immediate assistant). Finally, the 4 transversal interviews included 2 men and 2 women. The average age range of the 30 interviewees from the Cape Verde fisheries sector was between 40 and 55 years old. All 30 interviewees were from Cape Verde, specifically from Porto Rincão. The 10 interviewees from the shipping sector in the Cape Verde dataset, were all from São Vicente, and the average age was 41 years old.

The Portuguese dataset included 27 interviews: 11 in the fisheries sector and 16 in the shipping sector. The 11 inperson interviews in the fisheries sector included: 1 key informant – 1 woman – and 10 participants – 5 women and 5 men. Out of the 11 interviewees, 9 were fishers and 2 collectors. Their average age was 61 years old. They were all from Portugal, specifically from Setúbal, from Gâmbia and from Carrasqueira. The 16 interviews in the shipping sector took place via Zoom and included: 6 key informants (all women) and 10 participants (2 men and 8 women). Of the 16 interviewees from the shipping sector in the Portuguese dataset, the average age was 50 years old,2 were from Brazil (1 key informant and 1 participant, both women) and 14 were Portuguese (12 women and 2 men). Besides the 16 interviews in the shipping sector, the Portuguese team also interviewed 2 women from Cape Verde, who were included in the Cape Verde dataset (to avoid duplication their interviews were identified as part II of the interviews conducted by the Cape Verdean team with the same participants).

Participants from the shipping sector in Portugal included: 2 captains; 2 chief mates; 2 pilots; 2 radio technicians and 2 ship engineers. Key informants from the shipping sector in Portugal included: 1 captain from Brazil; 1 board member from a shipping company; 1 crew manager; 1 professor, 1 engineer, and 1 managing director.

2.4. Study's Limitations

Every study faces practical and theoretical limitations. This study is no exception. Most shortcomings were anticipated by the team during the design phase, hence they were included in the project's protocol (i.e. unintentional bias during data collection and data analysis; time constraints; difficult access to participants), and fewer shortcomings arise unexpectedly during the execution of the project. While some limitations resulted from tangible circumstances such as time constraints or participants' availability, other limitations stemmed from partners' deviation from the protocol causing severe limitations in the data's diversity and applicability of the study. While the latter weakened and limited the generalizability and diversity of the study's conclusions, it also presents a foundation for future research (see section 2.4 and see Annex 1).

Identified key limitations and outlined strategic solutions to address them included the following:

Unintentional bias during data collection

Cross-cultural studies, especially across different continents, require homogenous and comparable data collection methods. To avoid unintentional bias during data collection, the project's – and in particular the interview's protocol, provided the possibility for the Portuguese team to host an Interviewer Training Workshop for the project's partners. Both partners were offered the opportunity to participate in the Interviewer Training Workshop held online, but only the Cape Verdean team participated. The goal of the Interviewer Training Workshop was to ensure that all partners (Portuguese team, Cape Verdean team and Japanese team) and especially their interviewers were aware of the interview protocol, the project protocol (i.e. participants' recruitment), the interview schedule/ script, and ethical issues (i.e. required written consent; anonymity; target population; data storage; participants' rights, among other crucial ethical issues) and, followed the same pattern in the data collection to ensure that the data would be comparable. The Interviewer Training Workshop took place online 19th February 2024, with the Portuguese and Cape Verdean teams. The workshop included: team building; do's and don'ts in an interview (pre-interview; during the interview; post-interview); clarifying ethical matters; interview script/schedule; interview protocols and other complementary protocols to make procedures consistent, and thereby guarantee that the data is comparable.

Unintentional bias during data analysis

Cross-cultural studies, especially across different continents, also require cross-validation to avoid unintentional bias during the data analysis. This study included two levels of cross-validation. The first level involved intra-Portuguese team cross-validation, which entailed the analysis of different segments of the Portuguese and Cape Verdean datasets by different members of the team. The second level involved inter-team cross-validation, where the analysis of the Portuguese team was evaluated/validated/complemented by the Cape Verdean team in the Validation Workshop which took place, 13th February 2025. Only the datasets that were validated — meaning, the data that was collected in strict adherence to the project's protocol and the interview protocol approved through ethical clearance—was included in the comparative study. Consequently, only the valid datasets (i.e. the Portuguese and the Cape Verdean datasets) went through further scrutiny during the Validation Workshop by both teams (Portuguese and Cape Verdean research teams).

Thus, one of the main goals of the *Validation Workshop* was to eliminate unintended bias/colonial approach. Furthermore, the Validation Workshop also intended to be inclusive, hence, ensuring that the voices and experiences of the Cape Verdean researchers were included in the data analysis. It is worth noting that the project protocol included additional opportunities for the voices and experiences of the Cape Verdean researchers to be featured in the project's dissemination, such as peer-reviewed articles, workshops, conferences, and other platforms.

Participants' Availability

One of the sectors that proved most difficult for recruiting participants was the shipping sector in Portugal. To overcome this challenge, the Portuguese researcher responsible for the shipping interviews in this dataset employed snowball sampling, using Zoom, to encourage participation in the study. The participants and key informants from the shipping dataset were located in various remote cities across Portugal (North, South, Islands, and Centre), with three participants based abroad — two in Cape Verde and one in Brazil. Furthermore, a few of them were onboard while being interviewed; hence, Zoom proved to be an asset to collect the data from the shipping sector in Portugal, addressing challenges related to participants' availability, in combination with snowball sampling. Additionally, using Zoom made it easier for female participants and key informants to share both past and ongoing episodes of sexual harassment onboard (see section 5.1.4).

Ultimately, it is noteworthy that most men contacted to participate in the interviews for the shipping sector in Portugal were unavailable, despite the option provided by Zoom to conduct interviews remotely. As a result, the low representation of men in this specific segment of the Portuguese dataset highlights a lack of interest in gender issues, which may stem from the invisibility of gender matters due to male gender privilege.

Limited Diversity of Data

While most limitations mentioned above were factored into the project's protocol, in particular the interview protocol (namely the unintended bias in the data collection and data analysis) the lack of compliance with the project's protocol; the interview protocol and schedule/ script were not expected. As explained earlier, the exclusion of the Japanese dataset meant that the foreseen diversity of the comparative study was now narrowed down to two datasets - Cape Verde and Portugal diminishing the diversity and limiting the representativeness of the data and hence limiting the applicability of the study, which is now focused on two Portuguese-speaking countries whose shores are located in the Atlantic Ocean. Furthermore, Portugal and Cape Verde do share a common historical past, grounded on the colonial ties which make the comparison interesting but not as diverse as if all three datasets would have been validated and included in this study. This limitation affecting the diversity of comparative study also affects the generalization of the findings, which may resonate in a specific context - Lusophone countries - but not necessarily outside this reality/ context. Nonetheless, the findings are interesting and pinpoint relevant pathways to be explored in future research. Therefore, there were points of potential interest and commonality that might be worth exploring in future research, which includes Japan and other Asian countries, and from other continents to ensure greater diversity. Hence, future research could benefit from more diverse data to allow for appropriate generalization of the findings (see Annex 1).

Time Constraints

The limited duration of the study restricts its depth. To address this limitation, a cross-sectional design was implemented to capture data throughout 2024. Additionally, to mitigate this constraint and avoid a linear timeline in the analysis, certain segments of the study—such as the shipping sector in Portugal—included participants who began their careers in the early 1980s, the 1990s, the early 2000s, and more recently. This approach allowed for comparisons across a significant timeline, compensating for the lack of time to conduct a longitudinal study. As mentioned above, these limitations, particularly regarding sample diversity and size (due to difficulties in recruiting participants) and time constraints put a spotlight on opportunities for future research.

2.5. Ethical Review Process and Approval

This study's intention was to hear the voices of men and women working in the fisheries and shipping sectors in the countries under review, prioritising their views and standpoints by conducting semi-structured interviews in which participants and key informants could decide which information to disclose to the researchers' teams.

The research design involved a level of participatory research (Neuman, 2014) with the early draft of the interview schedule being pre-tested in two different waves, with a group of 6 volunteers in each wave.

During the design phase, and in preparation for the submission for the project research ethical clearance, the Portuguese team asked both the Cape Verdean and Japanese team leaders to provide information on whether national level ethical clearance would be required in either country, to which both teams mentioned that there would be

no need to pursue ethical clearance at national level once it was granted by the Portuguese IRB at NOVA University.

The preparation for the submission to the IRB at NOVA University included a draft of the following protocol documents (see Annexes 2.1.a, b, c, and d):

Project Protocol

The Project Protocol was submitted for ethical clearance at NOVA University IRB December 2024, and referred to a set of rules and procedures that would guide the project's execution and management guaranteeing that all team members, partners, and parties involved in the project understood its objectives, scope, goal and procedures from start to finish. Therefore, the Project Protocol included the project's description, goals, research questions, methodology, all team members, partners, timeline, interview protocol, interview schedule/ script, written informed consent form, partners' declaration (ethical declaration) and a list of victim's support structures.

As a result, the project's protocol identified the most relevant features of participants to be included in the study and who were in a better position to provide information that would enable the team to address the research questions, determining their suitability for inclusion or exclusion from the study. Moreover, the protocol also pinpointed the roles and responsibilities of each team member across different milestones within the project's timeline, and identified the resources and budget to illustrate the feasibility of the planned comparative study. Finally, the project protocol devoted significant attention to risk management, with particular focus on participants who might be facing ongoing Sexual and Gender-Based Violence (SGBV), such as Sexual Harassment (see section 5.1.4). The interview protocol details which safety protocols should be triggered if the participant disclosed any information about ongoing SGBV, in particular, Sexual Harassment (see Annexes 2.1.b and 2.1.d). The interview protocol which included specific procedures in its section devoted to safety protocol was provided to both local partners and mentioned in the Interviewers' Training Workshop (see Annexes 2.1.b and 2.1.d).

The project protocol identified ethical concerns, and the proper measures put into place to address them, applying ethical principles and guidelines mentioned in the International, Regional and National ethical standards that stemmed from the Nuremberg Code (1947), the Helsinki Declaration (1964, rev. 2013) and the Belmont Report (1979), including, among others, the main instruments applicable to social-science based research, be they institutional or disciplinary standards, such as: International Sociological Association's Code of Ethics (2001); TRUST's Global Code of Conduct for Equitable Research Partnerships (2018); European Sociological Association's Ethical Guidelines (2015); ALLEA's European Code of Conduct for Research Integrity (2011, rev. 2023); European Ethics in Social Science and Humanities (2018); American Sociological Association's Code of Ethics (1997); American Psychological Association's Ethical Principles of Psychologists and Code of Conduct (2002, rev. 2016); Portuguese Sociological Association's Code of Ethics (1992); NOVA University Lisbon Code of Ethics (2014); Personal

Data Protection Regulation of NOVA University Lisbon (2020); Portuguese Law no. 58/2019, of August 8th (Personal Data Protection Law); Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (GDPR – General Data Protection Regulation); Council of Europe's Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (1981) and its Additional and Amendment Protocols (2001, 2018).

Interview Protocol

The interview protocol provided a detailed, step-by-step guide on how interviewers should prepare for and conduct interviews, including the procedures to follow before, during, and after the interviews (see Annex 2.1.b and 2.1.d). This protocol outlined a set of core principles and behaviours that all researchers across the three national teams were expected to adopt, ensuring consistency in data collection through interviews. Consequently, the Interview Protocol, along with the overall Project Protocol, was sent in advance to all partners (Cape Verde and Japan) to allow ample time for review, with the opportunity to raise any questions. Additionally, it was covered as part of the *Interviewers' Training Workshop*.

Furthermore, the interview protocol placed a strong emphasis on participants' rights, obtaining written informed consent, and ensuring a safe environment for conducting interviews. As mentioned above, a detailed safety protocol was also included, outlining the appropriate actions researchers should take if a participant or key informant disclosed information about ongoing Sexual and Gender-Based Violence (SGBV), specifically sexual harassment. For instance, during the interview with participant PTSH#15 in the Portuguese shipping dataset, the participant revealed instances of workplace violence, namely sexual harassment aboard the vessel. In response, the researcher immediately activated the safety protocol outlined in the Interview Protocol which included a list of Victim's Support Structures which was provided to the SGBV survivor to help her contact and receive professional psychological and legal advice (see Annexes 2.1.b and 2.1.d).

Interview Schedule/ Script

The interview schedule/script was designed and pre-tested in two waves with 6 volunteers in October 2023. This process led to the final version of the questions and probe questions (see Annexes 2.1.b and 2.1.c). It is important to note that there are two versions of the interview schedule/ script each containing different sets of questions tailored to the specific sectors: fisheries and shipping. Those two versions of the interview script underwent two rounds of pretesting taking place in October 2023. The interview schedule/script was designed to give participants and key informants greater control over the information and details they chose to disclose during the interviews. This approach helped to create a more balanced power dynamic between the interviewer/researcher and the participants.

The interview schedule/script was sent in advance to both national teams (Cape Verde and Japan) for feedback and comments. Furthermore, it was analysed during the *Interviewers' Training Workshop*, which, as mentioned above, was only attended by the Cape Verdean team.

Written Informed Consent Form

The Written Informed Consent Form outlined the rights of each participant and key informant before, during, and after the interview. In addition to specifying the study's nature, objectives, and key topics, each researcher/ interviewer verbally explained and clearly conveyed these aspects to each participant or key informant, prior to the interview and prior to the participants' written consent. Researchers/interviewers also communicated the interview protocol, which included details on the interview's duration, structure, topics, goals, anonymity, data storage, and potential emotional impacts from some questions. Participants and key informants were informedadvised of their right to pause, stop, or withdraw from the interview at any time, before, during, or after the interview. These details were clearly conveyed to each participant or key informant prior to the interview and prior to the participants' written consent.

Finally, the principal investigator's contact information and the project's email address were provided for any future contact or to exercise the right to opt-out. Once the written informed consent was obtained, the interview would proceed (see Annexes 2.1.b and 2.1.d).

Partner's Declaration - "Ethical Declaration"

After providing a copy of the project's protocol, interview protocol, interview schedule/ script and the written informed consent form, the leading partner (Portuguese team) asked each local partner (Cape Verdean team and the Japanese team) to provide the Ethical Declaration, in which each local partner declared to be responsible for guaranteeing the country-level ethical clearance (local requirements), whilst complying with the NOVA University ethical standards and regulations laid down in the project's protocol, its annexes (interview protocol, interview schedule/ script, written informed consent form), and in the ethical declaration. The goal was to ensure that each local partner would abide by the ethical clearance approved and granted by the NOVA University IRB, prior to the interview, during the interview and after the interview.

In conclusion

The project protocol included all the above-mentioned annexes, and partners' ethical declarations, where ethical concerns were identified as well as proper measures to address them. As a result, on 10th January 2024, the project's team was notified of the Ethical review board's IHMT - ITQB - NSL - IGC unanimous decision to grant ethical clearance to the Project "Women in the Blue Economy -Roles and Impacts: an empirical-based study". Notably, the project was granted ethical clearance with distinction, being identified at NOVA's University IRB as a model/ a reference of good practices for future project teams submitting protocols for NOVA IRB. Patrícia André and Tatiana Morais, the researchers responsible for the project's ethical clearance, were also identified by the NOVA IRB for potential future contacts. Besides being granted ethical clearance with distinction from NOVA IRB, the project also complied with local ethical requirements. According to both partners, there was no need to pursue further ethical

clearance in Cape Verde and in Japan once NOVA IRB granted ethical clearance to the project.

2.6. Coding the Data

The data analysis began with the anonymization of the data and the labelling of each interview with an alphanumeric code to identify each interview anonymously . For instance, Cape Verde fisheries interviews were identified as CVF#01 and the shipping interviews were identified as CVSH#01. Similarly, the Portuguese fisheries interviews were identified as PTF#01 and the shipping interviews were identified as PTSH#01. Key Informants were identified with the suffix KY at the end of the alphanumeric code.

After anonymizing the interviews, the Portuguese dataset and the Cape Verde dataset were submitted to multimodal analysis separately. The first phase of the analysis included coding line-by-line to identify emerging topics. All three researchers from the Portuguese team went through both datasets to balance the analysis. Each researcher has specific expertise and so would be sensitive to seeing certain patterns in the data. After multiple rounds of line-by-line coding by all three researchers across the Portuguese and the Cape Verde dataset, the second phase focused on the emerging topics identified during the first phase, in which the three researchers continued the systematic analysis. This entailed a constant comparison of both datasets, encompassing intradataset comparison (between the fisheries and the shipping sectors of each country) and inter-dataset comparison. The latter involved two levels of comparison: intra-sector and inter-country (across both sectors). This second phase, later subject to the Validation Workshop (see section 2.4), collected together the emerging themes/ codes to showcase the relationship among them. The final phase of the coding involved identifying key emerging themes pivotal to addressing the Research Questions (see Annexes 2.2.a and 2.2.b), as mentioned in the Findings Section (see section 5.1 and 5.2).

In addition to the coding approach described, the data analysis involved a limited single round of qualitative content analysis performed with the assistance of Computer-Assisted Qualitative Data Analysis Software (CAQDAS). Specifically, MAXQDA was employed to facilitate the development of a comprehensive Analytical Codebook (see Annex 2.2.b).



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3. Theoretical Framework

3.1. The Socio-Legal Theory Lens

A socio-legal lens highlights how law and social norms co-constitute gendered labour roles. Feminist legal theory – which can be considered a branch of socio-legal studies - has long critiqued the ostensibly "neutral" nature of labour laws for embedding masculine assumptions about work. As Conaghan (2018) notes, the field of labour law traditionally equated "labour" with paid employment, placing unpaid domestic or community work (often done by women) outside its scope. This exclusion meant that women's substantial contributions in the home or family businesses were legally invisible and unprotected. Feminist legal scholars argue that such a public/private split in law reinforced a male breadwinner model, with women's work in the private sphere devalued or ignored. Early labour regulations often even barred or limited women's participation "for their protection," reflecting paternalistic norms that kept women from higher-paying industrial jobs and leadership positions. Over time, legal reforms – from anti-discrimination statutes to maternity protections – have challenged some of these biases, but formal equality under the law does not automatically translate to substantive equality in practice. Gender-neutral laws may still yield unequal outcomes if workplaces remain structured around masculine norms. This unintentional legal outcome is captured by feminist legal critiques: when law treats workers abstractly (gender neutral), it fails to accommodate embodied differences like pregnancy or care responsibilities, thereby indirectly upholding male-centric standards.

In the context of gender and labour, socio-legal research emphasizes how legal definitions and rights shape women's participation. For example, in many maritime communities, wives of fishermen historically laboured extensively (repairing nets, managing finances, processing catch) yet lacked formal recognition as "workers." Frangoudes & Keromnes (2008) documents how in France such unpaid contributions only recently gained legal acknowledgment. In 1998 the French state created the status of collaborative spouse for fisheries, granting women access to social benefits like pensions. Few initially adopted this status many women preferred more stable outside jobs due to the precarious fishing income – but its existence marked a shift in the legal understanding of family labour. This example underlines the role that legal regimes play in either obscuring or highlighting women's work. By affording women legal status in the enterprise, the law can validate their economic contribution and provide protections. Yet, as seen in Brittany's fisheries, cultural factors (e.g. viewing one's work as a "natural" wifely duty or facing husbands' resistance) influenced whether women claimed that legal status. Thus, a socio-legal approach recognizes both institutional frameworks (laws, policies) and legal consciousness (how people perceive and use law) as crucial to understanding gendered labour. It sets the stage for examining how formal

rules (such as equal employment laws or maritime labour conventions) interact with the on-the-ground realities of women's work in shipping and fisheries.

Historical Transformations and Gendered Divisions of Labor

Broadening beyond law, a sociological and economichistorical perspective reveals that women's roles in work have transformed dramatically over time. Claudia Goldin's seminal research demonstrates that women's integration into labour markets was one of the greatest upheavals of the 20th century (Goldin, 1990, 2021). In pre-industrial agrarian societies, women laboured alongside men "as hard as men, 'for pay or profit'," contributing substantially to family production. The advent of industrial capitalism, however, introduced a sharper divide between public wage labour and the private household. Goldin (2021) notes that with the Industrial Revolution, men took on paid work outside the home while women were largely relegated to unpaid household management. This gave rise to the familiar "separate spheres" ideology of the 19th and early 20th centuries, aligning with what Luhmann (1984, 1997) and others observe about modern differentiation – the differentiation of work and home often mapped onto gender. The result was a gendered division of labour: men as breadwinners in the formal economy, women as caregivers or auxiliary workers. This social arrangement was reflected both in law (e.g. policies barring married women from certain jobs, or lack of rights for women in family enterprises) and in cultural norms (the expectation that a "good" woman would devote herself to home life).

Over the 20th century, these patterns shifted. Goldin's historical account in the United States (Goldin, 1990), for instance, shows female labour force participation rising from negligible levels in 1900 to nearly equal to men's by the 1990s. Critical junctures such as world wars (demanding women's industrial labour), expansion of education, and legal reforms (e.g. the repeal of marriage bars which had previously limited the ability of married women to work; equal pay laws) facilitated women's entry into paid work. Yet, even as women joined the workforce in greater numbers, they often remained concentrated in gender-typed roles or lower positions, reflecting a lag between formal integration and substantive inclusion. Goldin describes the post-1970s period as a "quiet" or "silent" revolution where women began to pursue long-term careers rather than just jobs, aided by changing norms and legal rights (Goldin, 2005, 2006). This historical lens is valuable for the maritime sector: it reminds us that current gender dynamics are products of historical processes. For example, the virtual absence of women as seafarers in the age of sail was not "natural" but a result of social norms and regulations of that era. Nineteenth-century maritime custom strictly limited women's roles on ships -"seagoing careers were closed to women", and those few who did go to sea could only do so disguised as men or in

the unofficial capacity of captain's wife or daughter. Women's work was thus present but largely informal and framed as an extension of family, not as independent labour. In smallscale fisheries around the world, a parallel history unfolded: women traditionally handled onshore tasks (processing catch, mending nets, marketing fish) as part of household production, while men went out to sea. This complementary but unequal division often left women's economic agency unrecognised. Anthropologists such as Davis & Nadel-Klein (1997), for instance, have documented how in fishing communities women's labour, though crucial to family and community survival, was cast as "help" rather than work in its own right (a pattern observed in European and global fisheries alike). Understanding these historical patterns of women's exclusion, informal participation, and gradual entry into formal roles - provides a backdrop for analysing contemporary gender relations in shipping and fisheries.

Luhmann's Systems Theory and Bourdieu's Field Theory: Integrative Theoretical Tools

To connect these socio-legal and socio-cultural threads, our framework employs insights from Niklas Luhmann's systems theory and Pierre Bourdieu's theory of practice (field, habitus, capital). These theoretical tools help explain why gendered patterns in maritime work persist and how change might occur, by viewing society from complementary structural and agent-centred perspectives.

Luhmann (1995, 2013) conceptualises modern society as differentiated into autonomous but interacting subsystems (such as law, economy, family, politics), each operating according to its own binary code and logic. From this viewpoint, one can see maritime industries as part of the economic system (or functional systems of commerce and food production), which are distinct from the legal system and from the social/community system of family life. Gender equality initiatives often emerge in the political-legal system

(e.g. equality laws, labour regulations) and then must "couple" with the economic and social systems of work and family. Luhmann's theory illuminates why well-intentioned laws do not automatically revolutionise gender dynamics at work: each system observes with its own criteria. For example, a shipping company (economic/organisational system) might formally comply with anti-discrimination laws (a legal system output) by hiring women, but its internal communications might still prioritise efficiency and traditional chain-ofcommand structures, inadvertently sidelining women (if, say, networking and informal mentorship opportunities favour men). The mismatch between systems can thus reproduce inequality even as legal equality is proclaimed – a paradox noted by systems-oriented scholars. Indeed, Luhmann (2013, Chapter 4) observed that functional differentiation in society both presupposes equality and produces inequality: it assumes all individuals are equal participants, yet in practice the specialisation of functions and roles creates new forms of inclusion/exclusion. In maritime communities, this is evident: the legal system may now recognise women's rights to work as fishers or seafarers (presupposed equality), but the economic system may still "exclude" women in practice through its binary coding (e.g. defining a "qualified seafarer" in a way that unwittingly aligns with male trajectories, or valuing certain physically demanding tasks over others). Similarly, the familial/social system historically allocated caregiving to women and breadwinning to men, meaning women who try to cross between these function systems (home to economy) face friction (Luhmann, 1986). In short, systems theory provides a macro-sociological explanation for the resilience of gender segregation: multiple social systems must evolve in concert for lasting change, and this evolution is often uneven.

Bourdieu (1977, 1984) offers a meso- and micro-level theoretical framework that complements Luhmann's. He sees social life as constituted by various fields – structured spaces of interaction (such as the maritime industry, or the local fishing economy) – each with its own rules (termed *doxa* when taken-for-granted), forms of capital, and power



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relations (Bourdieu, 1977). Within fields, individuals and groups possess different quantities of capital in varied forms: not only economic capital, but also cultural capital (skills, education, know-how), social capital (connections, relationships), and symbolic capital (status, prestige) (Bourdieu, 1984). These capitals determine one's position in the field and ability to influence outcomes. Bourdieu's concept of habitus (1977) refers to the durable dispositions and embodied understandings that people acquire through socialisation, which guide their behaviour and perceptions "without conscious awareness". Habitus is class- and contextspecific, and crucially, it is gendered - people internalise gender norms as part of their habitus (for instance, what a "woman's role" or a "man's role" is in a given community). Applying these ideas to maritime labour: the shipping sector can be viewed as a field with a dominant masculine habitus. Over centuries, this field has valorised traits traditionally associated with men - physical strength, technical seafaring skills, authoritative leadership – converting them into forms of cultural and symbolic capital. Within the habitus of seafaring, such traits appear "natural" and neutral, making it difficult for women (socialised with a different gender habitus) to gain equal footing. A woman entering this field may lack the taken-for-granted familiarity with its unwritten codes - for example, norms of camaraderie forged in male-only crews or the subtle way authority is asserted – which her male counterparts have been imbued with since youth. This misalignment can lead to what Bourdieu (2001) calls symbolic violence: the process whereby dominated groups (in this case, women in a male field) unconsciously accept and internalise their marginalisation as the natural order.

However, Bourdieu (1977) also notes habitus is not static; it can evolve with new experiences. As women accumulate relevant capital (e.g. nautical education, seafaring experience – forms of cultural capital; support networks in the industry – social capital) and as the field's doxa slowly shifts (for instance, a new generation of male seafarers accustomed to women colleagues), the field itself can change to become more gender-inclusive. In small-scale fisheries, the field logic differs; it is a local field where family and work life intersect. Here, women traditionally held substantial social capital (kin and community ties) and practical cultural capital (knowledge of processing, marketing). Yet men historically controlled most economic capital (ownership of boats, access rights to fish) and enjoyed greater symbolic capital as "the fishermen." Research in Brittany, the UK, and elsewhere (Frangoudes et al., 2019) has shown that women in fishing households deploy their available capitals to negotiate status – for example, a fisher's wife might leverage her social ties and organisational skills to start a cooperative for direct seafood sales, turning her tacit contributions into recognised economic capital. Gustavsson's work explicitly uses Bourdieu's capitals to analyse how women's "everyday, often hidden, activities" facilitate the circulation and development of capital within fishing family businesses (Gustavsson & Riley, 2018; Gustavsson et al., 2017). This means women are not just beneficiaries of the family enterprise but agents who increase its various capitals - whether by expanding markets (economic capital), maintaining community goodwill (social capital), or preserving local fishing heritage (symbolic capital). However, because of habitus, women themselves may downplay these roles as mere duty, and men may unconsciously undervalue the skills involved, thus perpetuating an unequal recognition of contributions. Bourdieu's concept of doxa (the field's implicit common sense) is useful: in many fishing communities the doxa has been that "men fish; women support." Even as women's actual tasks diversify, this *doxa* can lag, meaning women themselves often assert that they are "just helping," which reinforces the status quo. Meaningful change involves making the unconscious norms conscious – a reflexive shift that Bourdieu encourages – so that what was once accepted (women as secondary) can be questioned and redefined.

By integrating Luhmann and Bourdieu, we get a multi-level theoretical foundation, which enables a deeper and holistic comprehension of the socio-ecological model by Bronfenbrenner (1979). Luhmann provides a macro structural view of society's differentiated arenas (showing how law, economy, family systems must all align to enable gender equality), while Bourdieu offers a micro and meso view of how individuals navigate power within specific social fields (showing how gendered dispositions and power resources operate in practice). Together, they help link broad institutional structures and policies with everyday practices and identities across all five levels of the Bronfenbrenner model (1979).

3.2. Blue economy and social equality

It is worth noting the continuous growth and relevance of the economic performance of the ocean (Bennett et al., 2019; Charles, 2017; OECD, 2016; Rayner et al., 2019), which is expected to contribute US\$3 trillion to the world economy by 2030 (OECD, 2016). Yet, despite the economic growth of ocean industries, the ocean economy is fraught with a suite of social inequities and inequalities (Issifu et al., 2023; Silver et al., 2015; Voyer et al., 2018), which further marginalises indigenous peoples, women, small scale fishers and low-income earners. Evidence of such marginalisation is supported by Bennett's et al. (2019) study which found that though small island developing states and coastal developing nations, indigenous groups, small-scale fisheries organisations, and NGOs are actively advocating for inclusive perspectives for the blue economy, they often remain marginalised and sidelined in global ocean's governance.

In fact, various studies have argued that it is urgent to achieve gender equality across all blue economy sectors (Hans, 2001; Issifu et al., 2023; Keen et al., 2018) in order to address sustainability demands while tackling social inequalities (Jouffray et al., 2020; Kleiber et al., 2017; Wuwung et al., 2022).

As highlighted by the United Nations' Sustainable Development Goals (SDGs) (UNGA, 2015), the well-being of human beings is a key goal of global development, as mentioned and purported by SDG 3 (good health and wellbeing), SDG 5 (gender equality), SDG 8 (decent work), and SDG 10 (reduced inequalities). Therefore, a fundamental shift in the current blue economy approach should prioritise social equality among ocean industries.

3.3. The gender gap in the maritime and marine secators

Considering the socially imposed gender roles which influence how, when, and what kind of work women and men engage in (Kleiber et al., 2017), it is fundamental to examine and foster gender balance in various sectors. This is particularly important in the **maritime industry**, where women roughly represent 1%-2% of the worldwide population of seafarers (IMO, 1992; Belcher et al., 2003; IMO/WISTA, 2022). The already "notorious 2%" – due to its widespread quotation in specialised literature over the past 30 years and the overarching policy goal of surpassing it – is based on old, not representative estimations, and hard to probe data sources (Belcher et al., 2003, pp. 3, 9; Stannard et al., 2015, p.125; Ellis et al., 2021).

Should we consider STCW-certified seafarers and the most recent data source, women only account for 1.28% (24.059) of the global workforce of over 1.89 million seafarers (BIMCO/ICS, 2021). In fact, even though the maritime industry has been evolving – the Global Seafarer Report 2021 shows an increase of 45.8% compared with the 2015 report (BIMCO/ICS, 2021) - women's placement in the sector remains evidently residual.

The outlook for the future doesn't seem especially bright: according to projections presented by the World Maritime University, the total of STCW-certified female seafarers may only increase up to 1.49% by 2026, which corresponds to a very slow progress despite all the policy efforts made since the late 1990's (Ölçer et al., 2023, p. 51).

The call – made by many, but explicitly by The Mission to Seafarers (2022) - to go «beyond the 2%» still seems overly optimistic.

While the gender gap in the **marine sector** differs from the maritime sector, it is also intricately woven into the fabric of gender dynamics, influencing norms, opportunities, power relations, and political landscapes. Within this sphere, gender power dynamics manifest prominently in differentiated access, labour divisions, and managerial perceptions of user groups (FAO, 2017). Notably, societal values associated with gender become apparent in how fisheries participation is tracked globally, with a critical gap existing in the collection of gender-disaggregated data, hindering a comprehensive understanding of women's participation in fisheries (Aguilar & Castaneda, 2001; Frangoudès et al., 2008a; Gopal et al., 2014). Because global statistics on fisheries often focus on direct harvesting activities, sidelining the pre- and postharvesting sectors which are predominantly occupied by women, the invisibility of women in the industry persists.

Women, often relegated to the periphery due to familial commitments or stereotypes about their physical capabilities, exhibit a pattern of participation that diverges from that of their male counterparts (Arulnayagam, 2020; Porter, 1985; Nadel-Klein, 2000). This differential engagement, influenced by personal and family conditions, can impact the status and empowerment of women in fisheries, particularly when management programs lack a gender-sensitive approach (Uden, 2009; Britton, 2012; Zhao et al., 2013).



Challenges and inequalities faced by women in the fisheries sector extend beyond mere participation patterns. Exclusion from fishers' organisations, lack of recognition and salary, and absence from fisheries management systems highlight pervasive gender disparities (Alonso-Población & Siar, 2018; World Bank, 2012). Despite women's pervasive presence across all phases of fish production, processing, and distribution, their contributions often go unnoticed in official statistics, sector policies, and development programs (Alonso-Población & Siar, 2018). The limited focus on the primary fish production sector by global institutions such as the FAO, where women constitute only 14% of workers, further obscures the substantial contributions made by women, particularly in the secondary sector where their presence is more

The prevailing "gender blindness" in global and national fisheries policies contributes to inequities in wages and obstructs women's access to productive resources, technology, and markets. Despite decades of research highlighting women's economic contributions and institutional efforts to mainstream gender inclusion, achieving gender equality and women's empowerment in the fisheries sector remains a formidable challenge (Gopal et al., 2017).

pronounced (Alonso-Población & Siar, 2018).

3.4. Women in cargo shipping and small-scale fisheries

Focusing in on one of the specific sub-sectors targeted by the WBE project – **cargo shipping**, it is important to stress that the «notorious 2%» of women seafarers mentioned above is spread across all sub-sectors of the maritime sector. Belcher et al. (2003) - reporting on a 2001 survey – stated that 94% of female seafarers were employed on passenger ships (26% on cruise ships and 68% on ferries) and only 6% were employed on cargo ships. The 2020 Gender Diversity Survey showed a distribution of 90% of women seafarers on cruise ships and 10% on cargo ships (Gupta et al., 2022). Whichever the standard, it clearly leaves the cargo shipping sector with high levels of gender imbalance, thus warranting special attention from researchers and policymakers.

The imperative for gender equality in the maritime sector, particularly in cargo shipping, has gained considerable attention within the framework of the United Nations Sustainable Development Goals (SDGs). The IMO has been

at the forefront of initiatives aimed at fostering women's participation in the shipping industry, aligning its efforts with the UN's broader development goals. As early as 1988, the IMO initiated a program that evolved into the Integration of Women in the Maritime Sector (IWMS) (Kitada & Tansey, 2018). Notably, Resolution 14 of the STCW Manila conference in 2010 underscored the promotion of women's participation, urging Member States to ensure equal access and greater participation in maritime training and industry roles. In 2019, the IMO designated 'Empowering Women in the Maritime Community' as the World Maritime Day theme, emphasising the significance of gender equality in the maritime domain.

The ILO has complemented these efforts by adopting resolutions that specifically target the promotion of opportunities for women seafarers (ILO, 2006). These initiatives are underpinned by evidence suggesting that gender diversity in organisations, including shipping companies, can yield various benefits. Studies indicate that companies with more female board members are associated with better financial returns (Owen & Temesvary, 2018). Furthermore, gender diversity has been linked to improved corporate social performance and innovation outputs in research and development teams (Post & Byron, 2015; Byron & Post, 2016; Díaz-García et al., 2013; Sastre, 2014).

Despite these initiatives, women working in cargo shipping face numerous challenges. Research highlights hurdles such as a lack of employment opportunities, bullying, sexual harassment, resistance from male colleagues, and poor working conditions on board ships (Belcher et al., 2003; Thomas, 2004; Turnbull, 2013; Stannard et al., 2015; Guo, 2019; ILO, 2019; Piñeiro & Kitada, 2020). The maritime industry's historical shortage of trained officers has been addressed, with women recognised as an underutilised resource to help alleviate this global shortfall (IMO, 1992). However, women continue to encounter discriminatory practices ashore and on board, including limitations in accessing education and training, lower pay, and denial of facilities available to male workers.

Efforts to address these challenges have been ongoing for over three decades, yet the persisting underrepresentation of women in the maritime sector underscores the need for more targeted interventions. Discrimination, harassment, and the stereotypical belief that the industry should not employ women remain significant barriers. The slow progress towards achieving the UN SDG5, targeting gender equality by 2030, indicates a need for more comprehensive and effective interventions.

Stannard et al. are peremptory in assuming that "there is the scope and need for further research in this area in order to meet the needs of both individual women seafarers and those of the industry that benefits from their recruitment and retention" (2015, p. 124).

The role of women in **small-scale marine fisheries** is a crucial yet often overlooked aspect of the global seafood production landscape. Harper et al. (2020) estimated that women in small-scale fisheries globally

contribute approximately 2.9 million tons per year of fish and invertebrates. However, despite this significant contribution, the sector has been characterised by gender stereotypes, under-recognition of women, low-paid work, and persistent gender-based challenges (Zhao et al., 2013; Salmi & Sonck-Rautio, 2018).

The importance of the small-scale fisheries sector has garnered international attention with the development of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF Guidelines) (FAO, 2015). Chapter 8 of the SSF Guidelines specifically addresses gender equality, marking a significant step forward in recognising and addressing gender disparities within the sector. Women in small-scale fisheries predominantly play vital roles in the post-harvest sector, engaging in tasks such as drying, salting, smoking, and processing fish products for household consumption or supplemental income (FAO, 2017). However, the stereotypical association of women with post-harvest activities has resulted in targeted interventions that, while aiming to improve women's income, often fall short of challenging deeper power relations within households and communities (Moser, 1989).

While women's contributions to post-harvest and livelihood support are undeniable, critical areas for their empowerment remain under-addressed. Resource management, decision-making, access rights, ownership of gear and boats, and mobility for market access are domains where women are notably absent compared to men. Women in small-scale fishing communities are not confined to post-harvest roles; they also engage in various fishing activities, albeit with limited visibility and recognition.

Efforts to give visibility to women's involvement in small-scale fisheries began with the "women in fisheries" (WIF) approach, acknowledging women's multiple contributions along the entire value chain (Williams et al., 2002). The more recent "gender and fisheries" (GAF) perspective delves into socially constructed gender attributes and their impact on small-scale fisheries. It underscores the importance of incorporating gender perspectives in management processes to achieve both intrinsic and instrumental goals, acknowledging women's contributions at every step of the value chain (Williams, 2010; Lawless et al., 2021).

Despite a growing body of research highlighting women's contributions to the social resilience of fishing economies, there is still a need to explore the impact of changes in the fisheries sector on women's well-being. The existing literature often overlooks the trade-offs between women's contributions to the resilience of households, families, and communities and their own well-being (McCay & Jentoft, 1996).

In conclusion, women in small-scale fisheries play multifaceted roles that extend beyond traditional stereotypes, and acknowledging and addressing the challenges they face is essential for achieving genuine gender equality and sustainable development in the sector.

4. Supranational Legal Framework

4.1. International Legal Framework

Several international treaties regulate the participation of women in the workplace (including the fishing and shipping industries) with the aim of ensuring gender equality and fair working conditions. There is no treaty specifically created to protect the rights of female fishers or women seafarers, however there are treaties that address discrimination in employment, gender discrimination, and maternity rights, as well as work in the fishing and shipping sectors.

Gender equality in the international legal framework

The International Labour Organisation (ILO) Convention No. 111 (1958) on Discrimination in Employment and Occupation, for example, prohibits discrimination in employment based on gender, race, colour, religion, political opinion, national extraction or social origin, and any other distinction, exclusion or preference (Article 1).

Similarly, the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR adopted by the United Nations General Assembly (UNGA) recognises the right to work and the opportunity to earn a living by work freely chosen (Article 6) without being subject to any type of discrimination, including gender-based (Article 2.2).

The Convention on the Elimination of All forms of Discrimination Against Women (CEDAW) adopted by UNGA in 1979 was created to promote and protect women's rights. It is a comprehensive international instrument that addresses 3 dimensions of the situation of women: civil and political rights and legal status, human reproduction, and cultural factors on gender relations. Member States of the Convention have the obligation to ensure the protection of women's rights and gender equality through national public policies and legislation (Article 2). CEDAW defines and prohibits discrimination against women in all forms, including:

- in political and public life ensuring equal access to vote and to be voted to perform all public functions at all levels of government (Article 7);
- in the field of education and career path, guaranteeing equal access and opportunities to education, the same curricula/teaching staff/examinations, continuing education, and active participation in sports and physical education (Article 10);
- in the field of employment and choice of profession, ensuring equal rights in terms of the right to work, to employment opportunities, to choose a profession and employment, to promotion, to job security, to remuneration, benefits, to social security, to protection of health and to safety working conditions (Article 11.1).
- In the field of reproduction and employment introducing maternity leave with pay and prohibiting the dismissal on the grounds of pregnancy (Article 11.2).

Worthy of note, the CEDAW's monitoring body, the Committee on the Elimination of Discrimination Against Women, issued the General Recommendation 19 in 1992 (GR 19, 1992) which recognises Sexual and Gender-Based Violence as a form of discrimination, emphasising the relevance of preventing, investigating, and punishing violence against women. This General Recommendation was later updated by CEDAW Committee General Recommendation 35 in 2017, focusing on Gender-Based Violence against women.

The ILO Convention No. 183 (2000) on Maternity Protection aims to ensure the rights of pregnant and breastfeeding women in the workplace, creating standards for maternity protection, such as a minimum of 14 weeks of maternity leave (article 4), employment protection (article 8) and non-discrimination during pregnancy and maternity leave absence (article 9).

To address violence in the workplace, ILO adopted the Convention No. 190 (2019) on the Elimination of Violence and Harassment in the World of Work with the aim of creating a global framework to prevent and address violence and harassment in the workplace, including gender-based violence. It provides a broad definition of violence and harassment covering physical, psychological, sexual or economic harm (Article 1), applying to all types of workers (Article 2) in any work-related setting (Article 3). Parties to the treaty must adopt national laws to prevent workplace violence and require employers to take appropriate measures to prevent and address it (Articles 6-9).

These treaties combined have created a foundation for the protection of the rights of women and girls. In the case of female fishers and women seafarers, they prohibit gender-based discrimination, harassment, and violence, and ensure women the right to work in the industry with equal conditions to career qualification, access, remuneration, benefits, and safeguarding of the function of reproduction.

Fishers' rights in the international legal framework

In 2007, ILO set international labour standards for fishers through the adoption of Convention No. 188 on Work in the Fishing Sector (Work in Fishing Convention). Although not explicitly mentioning gender-related issues, the treaty establishes a comprehensive set of provisions aiming to ensure decent working and living conditions for all fishers engaged in commercial fishing operations. Some of the rights guaranteed are as listed:

- Right to fair employment with fair wages, reasonable working hours and rest, repatriation, and written work agreements (fisher's work agreement) that clearly stipulates all these terms (Article 16 and Annex II);
- Right to decent working and living conditions ensuring the vessels have sufficient food and drinking water,

adequate accommodation and sanitation (respecting hygienic conditions), and proper protective equipment and safety measures (Articles 25-29);

 Right to medical care at sea and onshore, to social security and protection against work-related issues (Articles 30-38).

As to gender-specific provisions, the sole mention to female fishers is in Annex III on fishing vessel accommodation. Article 50 of Annex III acknowledges that sleeping accommodations must provide appropriate levels of privacy for men and for women where practicable, i.e., when feasible (turning it into a flexible requirement).

Therefore, the Work in Fishing Convention is silent in terms of gender-based discrimination and fails to address critical issues faced by female fishers such as gender-based violence (including domestic violence), harassment, or maternity rights.

The Food and Agriculture Organisation (FAO) has been a key player in terms of gender equality. The FAO Policy on Gender Equality 2020-2030 (FAO, 2020) and the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF Guidelines) (FAO, 2015) are examples of that. Established in 2014 with the aim of eradicating hunger, the SSF Guidelines set principles and guidelines for small-scale fisheries (SSF) governance and sustainable development. It adopts gender equality and equity as one of its guiding principles, recognising the role of women in SSF.

Seafarers' rights in the international legal framework

Similar to the fishing industry, there is a specific regulatory framework governing maritime labour: the Maritime Labour Convention (MLC) adopted by ILO in 2006. The MLC combined with the 1974 International Convention for the Safety of Life at Sea (SOLAS), the 1979 International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW), and the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) are known as the four pillars of international maritime law.

The MLC is a comprehensive text establishing minimum standards regarding the working and living conditions of seafarers. Some of the rights guaranteed by this treaty are:

- fundamental rights for seafarers, such as freedom of association, elimination of forced or compulsory labour, abolition of child labour, and elimination of discrimination regarding employment and occupation (Article 3);
- employment and social rights, including the right to a safe and secure workplace, fair terms of employment, decent working and living conditions on board ship, social and health benefits and protection (Article 4).

The MLC is comprised by the Articles, the Regulations and the Code (Part A and Part B), with the following features:

LEVEL	PURPOSE		LEGALLY BINDING
Articles	General principles and obligations		Yes
Regulations	Specific legal rules		Yes
Code – Part A	Explain how the Regulations must or	Detailed mandatory standards for implementation	Yes
Code – Part B	should be implemented	Detailed guidelines and best practices	No

The Regulations and the Code are organised into five Titles addressing different areas related to provisions set in the Articles:

- Title 1: Minimum requirements for seafarers to work on a ship;
- Title 2: Conditions of employment;
- Title 3: Accommodation, recreational facilities, food and catering;
- **Title 4:** Health protection, medical care, welfare and social security protection; and
- Title 5: Compliance and enforcement.

Although all these provisions (in)directly affect women seafarers, there are only two mandatory provisions in respect to women's rights in the MLC which can be found in the Standards A3.1 and A4.5. While the Standard A3.1 establishes that separate rooms and sanitary facilities for men and women must be provided (Clause 11A), the Standard A4.5 sets that maternity benefit must be included in the social security protection of seafarers (Clause 1). One last mention, but in this case non-mandatory, can be found in the Guideline B2.4.1 which suggests that maternity be considered as part of the period of service, similar to absence due to injury or illness (Clause 2), and that maternity leave should not be considered as part of annual paid leave so there is no reduction of their regular vacation days (Clause 4B).

Thus, there is a clear gap in gender-specific protection as the MLC does not include explicit prohibitions of gender-based discrimination and does not address major issues faced by women at sea such as gender-based violence and harassment. ILO Convention No. 190 (2019) on the Elimination of Violence and Harassment in the World of Work assisted in filling some of these gaps with the establishment of a global framework for prevention of violence and harassment in the workplace, including gender-based violence.

Although it does not have any treaty on the topic, the International Maritime Organisation (IMO) supports gender equality in the shipping sector through initiatives such as "Women in Maritime: IMO's gender programme" initiated in 1988. This gender and capacity-building programme aims to enhance the representation of women in shipping and give them access to maritime training and employment opportunities within this historically male-dominated industry contributing to the fulfilment of UN SDG5 (Gender Equality) and SDG8 (Decent Work and Economic Growth) (IMO, 2024).

International legal framework summary

	GENDER EQUALITY-RELATED			
Year	Treaty	Organisation	Relevance to female fishers/ women seafarers' rights	
1958	ILO Convention No. 111 on Discrimination in Employment and Occupation	International Labour Organisation (ILO)	Prohibits discrimination in employment based on gender.	
1966	International Covenant on Economic, Social and Cultural Rights (ICESCR)	United Nations (UN)	Recognises the right to work and fair and equal pay without being subjected to any form of discrimination, including gender-based discrimination.	
1979	Convention on the Elimination of All forms of Discrimination Against Women	United Nations (UN)	Defines and prohibits discrimination against women in any field, including access and participation in education, employment, economic, and social activities.	
	(CEDAW)		In 1992, CEDAW Committee issued the General Recommendation (GR), 19, which acknowledges SGBV as a form of discrimination. This General Recommendation was later updated by CEDAW Committee General Recommendation 35, 2017.	
2000	ILO Convention No. 183 on Maternity Protection	International Labour Organisation (ILO)	Ensures maternity rights for women in the workplace, preventing employment loss or discrimination during pregnancy or maternity leave absence.	
2019	ILO Convention No. 190 on the Elimination of Violence and Harassment in the World of Work	International Labour Organisation (ILO)	Defines and prohibits violence and harassment in the workplace, including gender-based violence, a common issue faced by women seafarers.	
		FISHERIES-F	RELATED	
Year	Treaty	Organisation	Relevance to female fishers/ women seafarers' rights	
2007	ILO Convention No. 188 on Work in the Fishing Sector	International Labour Organisation (ILO)	Ensures decent working and living conditions for all fishers engaged in commercial fishing operations	
	SHIPPING-RELATED			
Year	Treaty	Organisation	Relevance to female fishers/ women seafarers' rights	
2006	ILO Convention No. 186 – Maritime Labour Convention (MLC)	International Labour Organisation (ILO)	Establishes minimum standards regarding the working and living conditions of seafarers with a few provisions about women seafarers' rights such as the need for separate rooms and sanitary facilities for men and women on board ships and the inclusion of maternity benefit in social security.	

Gender equality in the European legal framework: European Union

Gender equality is a general principle in European Union law and discrimination based on gender is prohibited by the Treaty of the European Union (TEU) and the Treaty on the Functioning of the European Union (TFEU). As a core principle, the EU is committed to tackling discrimination and promoting equality between women and men (Articles 2 and 3, TEU, and Article 8, TFEU). This commitment extends to ensuring equality in the workplace, with the EU supporting Member States in achieving "equality between men and women with regard to labour market opportunities and treatment at work" (Article 153.1, "i", TFEU). For instance, Member States are required to guarantee the right to equal pay for equal work or work of equal value between men and women (Article 157, TFEU).

As a fundamental right, the right to non-discrimination based on gender is also stipulated in the Charter of Fundamental Rights of the European Union (CFR). It prohibits discrimination based on sex (Article 21), ensures gender equality in all areas (Article 23), and protects the right to paid maternity leave (Article 33).

To comprehensively protect women's rights and ensure gender equality, the EU has produced several legislative acts and policies on gender-related matters, such as equal treatment in employment, maternal and parental rights, and gender-based discrimination and violence.

On equal treatment in employment, the EU has adopted several directives, namely:

- Directive 2000/78/EC on Employment Equality;
- Directive 2006/54/EC on Gender Equality in Employment;
- Directive 2010/41/EU on Equal Treatment for Self-Employed Workers;
- Directive 2022/2381/EU on Gender Balance in Leadership; and
- Directive 2023/970/EU on Pay Transparency.

Directive 2000/78/EC on Employment Equality establishes a general framework for equal treatment in employment and occupation and to combat discrimination in hiring, working conditions and career progression based on religion or belief, disability, age or sexual orientation. Gender-based discrimination is addressed separately under Directive 2006/54/EC on Gender Equality in Employment, focusing on equal treatment between men and women in the labour market and the workplace, including provisions on equal pay, promotions, working conditions, and social security schemes. It prohibits any less favourable treatment of a woman related to pregnancy or maternity leave and introduces measures to combat harassment and sexual harassment in the workplace.

Recognising the challenges faced by self-employed women, Directive 2010/41/EU ensures equal treatment between men and women engaged in an activity in a self-employed capacity. This directive covers not only self-employed workers but also their spouses or life partners who contribute to the business. It promotes gender equality in entrepreneurship and ensures better social protection

through provisions that guarantee access to maternity benefits for self-employed women and partners working in family businesses.

Directive 2022/2381/EU on Gender Balance in Leadership aims to improve the gender balance among companies' directors. To overcome the underrepresentation of women in corporate leadership and in decision-making positions, it introduces provisions that ensure fair selection procedures based on merit and transparency and sets a target of at least 40% of non-executive director positions or at least 33% of all director positions that should be held by members of the underrepresented sex.

To tackle the persistent gender pay gap, Directive 2023/970/EU established pay transparency obligations and mechanisms binding to companies in the EU. This directive introduced the right of employees to have access to information about salary levels, including pay progression, and the obligation of pay gap reporting by large companies.

On maternal and parental rights, the EU approved the Directive 92/85/EEC on pregnant workers. This directive aims to better protect the safety, health, and employment rights of pregnant workers and workers who have recently given birth or are breastfeeding. Key provisions include a minimum of 14 weeks of maternity leave, protection against dismissal of workers between the beginning of their pregnancy to the end of the maternity leave (except in exceptional cases unconnected with their condition), the right to health and safety protection, taking into consideration all the risks of the work being performed and adjusting the work conditions as necessary (this includes temporary transfers and prohibition to perform night work if considered a risk to the worker's health).

To strengthen this directive, the EU adopted Directive 2019/1158/EU on Work-Life Balance for Parents and Carers. This broadens family leave rights and promotes equal sharing of care responsibilities between men and women. Core measures include the right of fathers (or equivalent second parents) to 10 working days of paternity leave, the individual right of each parent to 4 months of parental leave (with 2 months being non-transferrable), the right of 5 working days of carers' leave per year for workers providing care to relatives in need, and the right to request for flexible working arrangements for parents or carers, including remote work, flexible working schedules, or reduced working hours.

In order to address gender-based discrimination and violence, Directive 2004/113/EC on Access to Goods and Services, Directive 2012/29/EU on Victims of Crime, and Directive 2024/1385/EU on combating violence against women and domestic violence provide a broad legal framework in the European Union. Directive 2004/113/EC combats gender-based discrimination in access to and supply of goods and services, in both the public and private sectors, expanding gender equality to beyond the domain of employment and work life.

To protect the rights of victims of crimes, Directive 2012/29/ EU set minimum standards to ensure that victims of a crime receive proper information, support and protection, and are able to participate in criminal proceedings. It ensures that victims receive an individual assessment to identify specific protection needs and demands a gender-sensitive approach to victims of gender-based violence such as sexual violence and domestic violence. It also provides free access to victim support services, such as counselling, legal advice, and shelters, and protects victims from intimidation and retaliation.

In turn, Directive 2024/1385/EU is the first EU legal instrument specifically aimed to prevent and combat violence against women and domestic violence. To achieve this objective, it demands that Member States criminalise several practices:

female genital mutilation (FGM)	cyber stalking
forced marriage	cyber harassment
non-consensual sharing of intimate or manipulated material	cyber incitement to violence or hatred

Building upon Directive 2012/29/EU, the 2024 Directive enhances victim support measures and refines the individual assessment to identify victims' protection procedure considering the potential needs and risks specifically involved in this type of criminal conduct.

Additionally, crime reporting channels need to be accessible, easy-to-use, safe and readily available, law enforcement and court staff must undergo specialised training on gender-based violence, and Member States must adopt national plans for preventing and combating gender-based violence by 2029.

Used as one of the international standards to develop the EU's Directive 2024/1385 on combating violence against women and domestic violence, the Convention on Preventing and Combating Violence Against Women and Domestic Violence from the European Council was adopted in 2011. Commonly known as the Istanbul Convention, it entered into force in the EU in 2023, setting a legally binding standard to tackle violence against women based on a four-pillar approach:

- prevention of violence against women: awareness raising, training of professionals, and challenging harmful gender stereotypes.
- protection of victims: ensuring victims have access to support services, such as legal aid, psychological counselling, shelters, helplines, etc.
- prosecution of perpetrators: criminalisation of conducts related to gender-based violence-
- comprehensive and coordinated policies implementation: adoption of integrated policies and cooperation between agencies.

Other measures adopted by the EU in respect to gender equality are the European Pillar of Social Rights (EPSR) and the EU Strategy for Gender Equality 2020–2025. The EPSR is a set of 20 principles aimed at ensuring fair working conditions and broad social protections. Some of the principles include gender equality (principle 2), equal opportunities (principle 3), work-life balance (principle 9), old-age income and pensions (principle 15), and healthcare (principle 16) (European Commission, 2017). The EU Strategy for Gender Equality 2020–2025 is is aimed at guaranteeing equal opportunities to all individuals. It has influenced legislation, gender mainstreaming and specific measures for the empowerment of women (European Commission, 2020). Some of the EU directives influenced by the EPSR and the EU Strategy for Gender Equality were: Directive 2019/1158 on Work-Life Balance, Directive 2022/2381 on Gender Balance in Leadership, Directive 2023/970 on Pay Transparency, and Directive 2024/1385 on Combating Violence Against Women and Domestic Violence.

Gender equality in the European legal framework: Council of Europe

It is not possible to achieve gender equality, without properly tackling Sexual and Gender-Based Violence (SGBV) and Domestic Violence. It is not possible for women to access or remain in the labour market, pursue a professional career, and thereby contribute to the



ey Perezoso/Flic

economy of the country if the State does not properly address violence against women, including violence in the workplace. It is exceedingly difficult for women to excel in a hostile environment that jeopardises women's mental and physical health. Moreover, violence against women in the workplace has a major negative impact in the economy, bearing an economic cost. Estimates indicate that in 2018, workplace sexual harassment resulted in an economic cost of \$2.6 billion in lost productivity, with an additional \$0.9 billion in other related expenses (Australian Human Rights Commission, 2020).

Considering all the implications at multiple levels of SGBV, in particular, sexual harassment in the workplace, the Council of Europe Convention on preventing and combating violence against women and domestic violence known as the Istanbul Convention - sets a core of principles and obligations to the convention parties, to guarantee that the latter develop laws, policies and support services that aim to end Sexual and Gender-Based Violence and Domestic Violence. As a result, the Istanbul Convention sets a legally binding standard to tackle violence against women based on a four-pillar approach: i) prevention of violence against women, ii) protection of victims, iii) prosecution of perpetrators, and iv) comprehensive and coordinated policies implementation.

For this study, the most relevant articles from the Istanbul Convention are articles 4 and 6 which establish a legislative obligation for states to criminalise all forms of discrimination against women and extend this obligation to ensure that state policies are gender-sensitive. To ensure that states fulfil their obligations to criminalise SGBV, the Istanbul Convention provides comprehensive definitions of various forms of SGBV, from Article 33 to Article 40. Among these forms is sexual harassment (Article 40), for which the Convention outlines a specific definition and elements of the crime. Additionally, Article 17 is crucial to this study, as it encourages the private sector and media to participate in the development and implementation of policies aimed at preventing violence against women.

Fishers' rights in the European legal framework

Regulation (EU) 380/2013 on the Common Fisheries Policy (CFP) is the legal framework responsible for governing the management of fisheries in the European Union. It aims to ensure that the fishing and aquaculture sectors contribute to the EU's long-term goals of environmental, economic and social sustainability. Based on the precautionary principle, CFP measures protect marine environments, support fishing communities, provide financial instruments and international agreements, regulate market and trade policies, and include standards for international policies and agreements.

Although fishers' rights and gender equality are not the focus of the CFP, the regulation recognizes the social dimension of fisheries in several provisions. It acknowledges its key role in contributing to a fair standard of living for those who depend on fishing activities, ensuring fair incomes, stable employment, safe working conditions,

social security measures, and participation in decisionmaking.

To achieve these targets, the European Maritime and Fisheries Fund (EMFF) financially supported several initiatives from 2014 until 2020 with the aim of supporting the transition of fisheries and aquaculture into sustainable activities to improve the livelihoods of coastal communities. In terms of promotion of human capital, job creation and social dialogue, Regulation (EU) No 508/2014 - through which the EMFF was implemented - mentions that support may be given to organisations promoting equal opportunities between men and women, and thereby improving the role of women in fishing communities.

The EMFF has since been replaced by the European Maritime, Fisheries and Aquaculture Fund (EMFAF) (Regulation (EU) 2021/1139), the current fund running between 2021 and 2027 that provides support to the EU common fisheries policy (CFP), the EU maritime policy and the EU agenda for international ocean governance. EMFAF's key support areas are initiatives with a focus on climate resilience, protection of biodiversity, and a sustainable blue economy, including initiatives with gender equality and social inclusion dimensions.

Seafarers' rights in the European legal framework

In regard to seafarers' rights, the European Union has incorporated the Maritime Labour Convention into its legal framework, ensuring that EU countries comply and enforce the MLC and its standards, including provisions of non-discrimination and equal opportunities.

Specifically tailored to the shipping sector, Directive 1999/63/EC established standards for the working hours and rest of seafarers. Later amended to be in accordance with the MLC, this directive establishes the following:

- · standard working day: 8 hours.
- maximum working hours: must not exceed 14 hours in any 24-hour period or 72 hours of 7 days.
- rest periods: must be no fewer than 10 hours in any 24-hour period, or 77 hours over 7 days, and may be divided into no more than two periods, one of which must be at least 6 hours.
- annual paid leave: to be based on a minimum of 2.5 days per month worked and in proportion for incomplete months.

Regarding initiatives, in 2017 the European Commission launched the Women in Transport – EU Platform for change with the goal of strengthening women's employment and equal opportunities in the transport sector, including shipping. Recognising the lack of gender balance in the transport sector, it engages in the exchange of best practices and adoption of concrete actions by stakeholders to improve gender balance. As mentioned previously, the EMFAF supports initiatives related to the maritime sector, including gender equality in shipping initiatives.

European legal framework summary

	GEN	IDER EQUALITY-RELATED	
		relevant legal framework	
Year	Legal Instrument	Relevance to female fishers/ women seafarer's rights	
1957 (amended in 2007)	Treaty on European Union (TEU)	Prohibits discrimination based on sex and promotes gender equality as one of the core values.	
1992 (amended in 2007)	Treaty on the Functioning of the European Union	Recognises gender equality with regard to the labour market and workplace, including the right to equal pay for equal work or work of equal value between men and women.	
2000	Charter of Fundamental Rights of the European Union (CFR)	Defines and prohibits discrimination against women in any field, including access to and participation in education, employment, economic, and social activities.	
	Council of	Europe relevant legal framework	
Year	Legal Instrument	Relevance	
2011 (EU's entry into force: 2023)	Council of Europe Convention on preventing and combating violence against women and domestic violence	Sets a legally binding standard to tackle violence against women based on a four-pillar approach: i) prevention of violence against women, ii) protection of victims, iii) prosecution of perpetrators, and iv) comprehensive and coordinated policy implementation.	
	Ke	ey EU directives (binding)	
Topic	Legal Instrument	Relevance to female fishers/ women seafarers' rights	
Equal treatment in employment and workplace	Directive 2000/78/EC on Employment Equality	Aims to ensure equal treatment in employment and occupation and combat discrimination in hiring, working conditions and career progression based on religion or belief, disability, age or sexual orientation.	
	Directive 2006/54/EC on Gender Equality in Employment	Ensures equal treatment between men and women in employment and occupation, including provisions on equal pay, promotions, working conditions, and social security schemes.	
	Directive 2010/41/EU on equal treatment for self-employed workers	Ensures equal treatment between men and women engaged in an activity in a self-employed capacity, covering self-employed women and partners working in family businesses.	
	Directive 2022/2381/EU on Gender Balance in Leadership	Aims to improve the gender balance among companies' directors to overcome the underrepresentation of women in corporate leadership and in decision-making positions.	
	Directive 2023/970/EU on Pay Transparency	Establishes pay transparency obligations and mechanisms binding to companies in the EU to tackle the persistent gender pay gap.	
Maternity and parental rights	Directive 92/85/EEC on pregnant workers	Introduces provisions to better protect the safety, health, and employment rights of pregnant workers and workers who have recently given birth or are breastfeeding, such as maternity leave and protection against dismissal related to the pregnancy.	
	Directive 2019/1158/EU on work-life balance for parents and carers	Broadens family leave rights and promotes equal sharing of care responsibilities between men and women.	
Gender- based discrimination and violence	Directive 2004/113/EC on Access to Goods and Services	Expands gender equality beyond the domain of employment and work life, prohibiting discrimination in the access to and supply of goods and services based on gender.	
	Directive 2012/29/EU on Victims of Crime	Sets minimum standards to ensure that victims of a crime receive appropriate support and protection, including gender-sensitive approach.	
	Directive 2024/1385/EU on combating violence against women and domestic violence	Criminalises several gender-based conducts, implements measures to prevent and combat gender-based violence, and enhances the gender-based violence victim protection framework.	

Fisheries-related		
Legal Instrument	Relevance to female fishers' rights	
Regulation (EU) 1380/2013 – Common Fisheries Policy (CFP)	Recognises the social dimension of fisheries and its role in contributing to a fair standard of living for those who depend on fishing activities, ensuring fair incomes, stable employment, safe working conditions, social security measures, and participation in decision-making	
Shipping-related		
Directive 1999/63/EC — Agreement on the organisation of working time of seafarers	Establishes standards for the working hours and rest of all seafarers.	
Directive 2009/13/EC – Maritime Labour Convention (MLC) Implementation	Incorporates the Maritime Labour Convention into the EU legal framework and ensures that EU countries comply with the MLC provisions, including those regarding non-discrimination and equal opportunities.	
Fisheries and shipping-related		
Regulation (EU) 508/2014 – European Maritime and Fisheries Fund (EMFF)	Provides financial support for the development of initiatives for sustainable fisheries and improve social and economic conditions of coastal communities and workers of the fishing sector	
Regulation (EU) 2021/1139 – European Maritime, Fisheries and Aquaculture Fund (EMFAF)	Provides financial support for initiatives related to the EU common fisheries policy (CFP), the EU maritime policy and the EU agenda for international ocean governance, including initiatives about gender equality.	



5. Empirical Assessment: Case Studies' Findings and Analysis

5.1. Case-Study 1: Portugal

5.1.1. General Context and Country Profile

Portugal is located in Southern Europe, with a total land area of 92,226 km². The country's Exclusive Economic Zone (EEZ) spans 1,660,456 km², demonstrating its strong maritime influence. Additionally, Portugal has proposed an extension of its continental shelf, which could add approximately 4,000,000 km² to its territorial reach. With a coastline of around 2,601 km, Portugal has an extensive and varied marine environment. The country is home to 25 commercial ports and 38 marinas and recreational harbours on the mainland, further enhancing its maritime infrastructure.

In terms of economic contribution, the Ocean Economy is significant, accounting for 5.1% of GDP, 5.4% of total Gross Value Added (GVA), and 4.0% of Direct GVA in 2018. The Ocean Economy also represented 4.1% of employment in the Ocean Economy in 2017. According to the 2021 report of the National Maritime Strategy 2030, there were 4,186 companies involved in fisheries, employing 12,606 people and generating 522 million euros in revenue. Its maritime domain reflects its historical and ongoing role as a key player in international maritime trade, research, and environmental protection. Early modern Portugal witnessed women actively participating in the fishing industry, especially in cities like Lisbon. Women were engaged not only in selling fish at local markets but also financed fishing voyages, managed administrative aspects of boats, and even owned ships (Abreu-Ferreira, 2000). The partnership between fishers and fish sellers, though sometimes contentious, showcased women's significant role in the retail and wholesale aspects of the fish trade (Abreu-Ferreira, 2000). Abreu-Ferreira (2012) also explores the commercial autonomy of women involved in the fish trade near Porto's harbour during early modern Portugal.

Despite these findings of contemporary research, the maritime history of Portugal has long been intertwined with a masculine conception of the sea and fishing, perpetuated by political discourse over centuries (Amorim, 2022). While artistic representations of fishing communities during the 20th century emphasised women's roles in various activities such as net-making, fish selling, and mariculture, these were often romanticised and failed to acknowledge women as full participants (Amorim, 2022). After the 1974 Revolution that put an end to the almost five-decade long dictatorship, artistic depictions of coastal women diminished due to political changes and the restructuring of the fishing industry, which shifted towards a more corporate model (Amorim, 2022). However, the transformation in the fishing sector also brought about changes in gender roles and women's participation. The restructuring, occurring mainly from the 1980s, led to a decline in women's presence on beaches as they sought alternative employment due to changing market conditions (Amorim, 2022).

The Directorate-General for Maritime Resources (DGRM) in Portugal focuses primarily on resource management, excluding subsidiary activities from official statistics. This limited perspective obscures the diverse roles women hold in the industry, including leadership positions, administrative roles, and other gender-diverse professions (Amorim, 2022). Official statistics, such as those published by the National Institute of Statistics in collaboration with DGRM, lack sociodemographic data and gender-specific information about fishing professionals (Amorim, 2022; Martins et al., 2016). Previous reports estimated that approximately 19.53% of the fishing sector's workforce in Portugal were women in 2002, a figure that increased to 30% a decade later (World Bank, 2012). However, these estimates remain imprecise, with a lack of disaggregated gender data and the neglect of unpaid activities performed by women (Amorim, 2022; Pita & Gaspar, 2020).

Case-Study 1: Portugal (Setúbal)

Portugal has 1,793 km of coastline and one of the largest Exclusive Economic Zones (EEZ) in the European Union (EU), with an area of 1.7 million km².

Despite its decline in the past decades, one of the key sea-related industries of the country is its' fishing sector which is one of the most diversified in the EU either at the fleet level and about captured species (Castro et al., 2021; Pita & Gaspar, 2020; Garrido, 2018). Nevertheless, national production cannot usually keep up with demand, and that's in part due to Portugal's seafood per capita consumption which is the highest consumption per capita in Europe (twice the EU's average per capita consumption), and one of the highest in the world (almost three times the global

average), often competing for the third place with Japan (EU/DGMARE, 2022; FAO, 2022).

Regarding the shipping industry, in 2022, Portugal scored a fleet growth rate of +13.6% with a national flagged fleet of 824 ships with a carrying capacity of 25.972 DWT (dead weight tons), and a fleet ownership of 898 DWT (UNCTAD, 2025a). In 2021, the Seafarer Workforce Report estimated 1.238 SCTW-certified seafarers for the country (BIMCO/ICS, 2021).

According to the last national census, in 2021, Portugal's population stood at 10.3 million people, with roughly 4.9 million men and 5.4 million women (INE, 2022).

The emergence of the Portuguese Women in Fisheries Network, formalised in 2014, aimed to challenge existing categories and broaden the concept of the fishing sector. This network shed light on the diversity of women's work, emphasising the need for collective efforts to bring visibility to women in the industry (Amorim, 2022). Still, gender-specific data remains elusive (Apresentação et al., 2024) and activities like administrative management and care work performed by women are often overlooked in official statistics (Amorim, 2022; Pita & Gaspar, 2020; Harper et al., 2017).

Neilson et al. (2014; 2019) delve into the historical roles of women in fisheries in the Azores Islands, Portugal. This study underscores the invisible contributions of women, their involvement in associations and participatory research, and the challenges they face in governance and policymaking. Pita & Gaspar (2020) highlights how women's participation in small-scale fisheries remains largely invisible in policy frameworks, resulting in limited institutional recognition and support. Despite their essential contributions, women's work is often classified as an extension of household duties rather than formal employment, reinforcing gender disparities in the sector. Many undertake essential tasks such as accounting, vessel cleaning, and baiting fishing gear, yet these activities are not officially classified as labour, further marginalising their economic role (Sempere & Sousa, 2008).

While it is less common for women to engage in direct fishing activities, they play a pivotal role in fisheries enterprises, particularly in northern Portugal, where they handle critical operational tasks, such as hiring crew members, managing finances, maintaining fishing gear, purchasing bait and fuel, organising transportation, and selling the catch (França et al., 1998). Additionally, women are a significant part of the shellfish gathering workforce, particularly in the Ria Formosa (Algarve) and Aveiro lagoons (Central Portugal), where they are responsible for harvesting and processing marine resources. However, a large portion of women's contributions remains unpaid and unrecognised.

The European Union's fisheries framework makes the fishing sector in Portugal a highly regulated and structured industry, operating within a clear hierarchy of rules and guidelines. As a Member State, Portugal must adhere to the comprehensive regulations set by the EU under the Common Fisheries Policy (CFP), which includes not only conservation measures but also management systems that govern fishing quotas, seasonal restrictions, and sustainable practices. These regulations create a tightly controlled environment where every aspect of the fishing sector—from resource allocation to fishing methods—is subject to both EU legislation and national enforcement. This structure ensures a cohesive approach to fisheries management, but also means that the Portuguese fishing industry must navigate a complex system of rules that prioritises sustainability and compliance across multiple levels of governance.

The European Union formally defines small-scale coastal fishing (SSF) in Regulation (EU) 508/2014 on the European Maritime and Fisheries Fund (EMFF). According to Article 3, paragraph 14, SSF refers to fishing activities conducted by vessels with an overall length of less than 12 meters that do not use towed fishing gear. This definition applies across all

EU Member States and serves as the basis for policy and funding decisions related to small-scale fisheries.

The legal framework for national fisheries management in Portugal is primarily established by Decree-Law 73/2020, of September 23. This legislation defines the legal regime for professional commercial maritime fishing, including the authorisation, registration, and licensing of fishing vessels. It also outlines the conditions under which fishing activities can be conducted - Article 19 specifies the permissible fishing methods and gear in Portuguese waters; Article 20 mandates that fishing gear must be marked and identified following the norms set by the EU Implementing Regulation 404/2011; Article 21 prohibits practices that could interfere with fishing activities or harm marine resources and the environment.

Decree-Law 278/87, of July 7, defines conservation measures for fisheries and natural resources in Portugal, aiming to promote sustainable fishing practices and protect marine biodiversity.

The management of ships' ballast water is a matter of critical importance for the protection of the marine environment. Recognising the environmental risks posed by the transfer of harmful aquatic organisms and pathogens between ecosystems, Portugal enacted Decree 23/2017, which approves, for accession, the International Convention for the Control and Management of Ships' Ballast Water and Sediments, adopted by the International Maritime Organisation (IMO). Ballast water, when discharged without proper treatment, can introduce non-native species into marine ecosystems, causing ecological imbalances and potentially severe economic impacts. In response, Decree 23/2017 establishes a set of mandatory rules and technical standards for the control and treatment of ballast water. One of its central provisions is the requirement to treat ballast water prior to discharge, thereby ensuring the removal or neutralisation of harmful organisms and sediments. This legal framework plays a vital role in preventing biological invasions and safeguarding the health and resilience of marine environments.

Resolution of the Council of Ministers 131/2022, of December 21, approves the Strategic Plan for Small-Scale Fisheries 2022-2030, aiming to strengthen the sector's competitiveness and improve working conditions for professionals, and attract younger generations to the fishing sector. This plan seeks to promote sustainable fishing, conserve biodiversity, and enhance the value of fish at first sale, contributing to the country's supply chain and food security. The plan aligns with the National Strategy for the Sea 2021-2030 and its Action Plan, approved by Resolution of the Council of Ministers 120/2021, dated September 1. It also supports the United Nations' 2030 Agenda for Sustainable Development, particularly Goal 8 (Decent Work and Economic Growth) and Goal 14 (Life Below Water). While the plan emphasises sustainable fishing practices, conservation of marine biodiversity, and the enhancement of socio-economic conditions for fishing communities, it does not specifically address gender equality or the role of women in the small-scale fisheries sector.

This omission is particularly surprising given women's historical involvement in the sector and reinforces their continued underrepresentation in national fisheries policies, failing to acknowledge their significant yet often

overlooked contributions to Portugal's fishing industry. Gender equality is reflected in the Portuguese Constitution through the principles of equality and non-discrimination which ensure that all citizens are equal before the law and that no one shall be subjected to discrimination based on gender (Article 13 see also Article 9; Article 59 and Article 68).

In the labour sphere, the Portuguese Labour Code ensures all workers and job candidates the right to equal opportunities and equal treatment regarding access to employment, training, promotion or career and working conditions (Article 24). Additionally, it prohibits any discriminatory acts by the employer, including when based on gender (Article 25), and all harassment acts, including sexual harassment (Article 29).

The national labour legislation includes specific provisions on equality and non-discrimination based on sex, prohibiting gender-based discrimination in terms of access to employment, professional activity or training and establishing equal working conditions (including equal pay for equal work) (Articles 30 and 31). In addition, it sets a comprehensive framework ensuring pregnant workers' rights such as maternity leave.

In the criminal law sphere, the Portuguese criminal code prohibits several conducts related to sexual freedom and discrimination, including:

Article	Criminalised conduct	Penalty
Article 163: Sexual coercion	When someone alone or accompanied by others, forces another person to suffer or perform a significant sexual act.	1-8 years in prison
Article 170: Indecent assault	When someone harasses another person by performing exhibitionist acts towards them, making sexual proposals or forcing them to engage in sexual contact.	Up to 1 year in prison or a fine of up to 120 days
Article 240: Racial, religious or sex discrimination	When someone promotes discrimination, hatred or violence based on race, colour, ethnic or national origin, religion, sex, sexual orientation, or gender identity.	Up to 5 years in prison

Indecent assault, however, differs from sexual harassment, the former is criminalised in the Portuguese Criminal Code (article 170), while only the least severe forms and most severe forms of sexual harassment are specified in the Portuguese Criminal Code (articles 163 and 170 of the Portuguese Criminal Code). Consequently, many behaviours that are socially identified as sexual harassment are not specified by the Portuguese Criminal Code as crime, hence, leaving the victims with no protection. Portugal has also been an active participant in EU initiatives, with the Portuguese Institute of Mobility and Transport (IMT), for example, signing the Declaration on equal opportunities for women and men in the transport sector from the Women in Transport - EU

Platform for change initiative (IMT, 2023). In 2023 Portugal approved the following action plans relating to gender equality in the context of the National Strategy for Equality and Non-Discrimination – Portugal+Igual (ENIND) (Governo da República Portuguesa, 2023):

- Action plan for equality between women and men (PAIMH)
- Action plan for preventing and combating violence against women and domestic violence (PAVMVD)
- Action plan to combat discrimination based on sexual orientation, gender identity and expression, and sexual characteristics (PAOIEC)

The Portuguese Small-Scale Fisheries Sector

In Portugal, the fishing industry is a key component of the economies of coastal communities, particularly in regions with a high concentration of small-scale fisheries (SSFs). Beyond its economic significance, the sector is deeply embedded in the country's heritage and cultural identity, shaping the historical and social fabric of coastal regions. It sustains local businesses by providing a continuous supply of fresh seafood to restaurants and markets, while also driving the local economy through the ongoing demand for fishing gear and materials from regional suppliers. The fishing industry plays a pivotal role in supporting livelihoods and fostering connections between local enterprises and suppliers, all while maintaining its integral place in Portugal's cultural image and coastal traditions.

In 2023, according to national reports, there were 14,125 registered fishers (INE-PT, 2023). In Portugal, the availability of gender-disaggregated data in fisheries remains limited. Official statistics, such as those compiled by the National Institute of Statistics (INE-PT), do not systematically differentiate between male and female fishers, leading to the underrepresentation of women's contributions to the sector. Additionally, there is no distinction between large-scale and SSF in national datasets, further obscuring the specific impact of SSF.

This lack of disaggregated data on both gender dynamics and the role of SSF hampers a comprehensive assessment of their distribution and contributions (Apresentação et al., 2024). These disparities are further intensified by the limited representation of women in academic research, as evidenced by the low number of female interviewees in studies, which silences their voices and diminishes their contributions to the sector.

Research has consistently highlighted the historical marginalisation of women's contributions to the fisheries sector, with their labour frequently excluded from official statistics. This systemic invisibility not only undermines the recognition of their economic and social roles but also hinders the formulation of inclusive policies essential for the long-term sustainability of fishing communities. In Portugal, these challenges persist, as women continue to engage in substantial yet largely unpaid fisheries-related activities, including the preparation and maintenance of fishing gear, baiting equipment, and providing critical support to their spouses (Kleiber et al., 2017). The absence of formal acknowledgment for these roles further reinforces gender disparities within the sector and limits opportunities for equitable policy interventions.

5.1.2. Presentation of Research Sites

In Portugal, the interviews were performed with fishers of the small-scale fishing communities in Setúbal (Setúbal, Morgada, and Gâmbia) and Carrasqueira (see map). Setúbal is a city that lies 32 km southeast of Lisbon, on the northern shore of the Sado River estuary, and is bordered to the west by the Arrábida mountain range. 4.7% of the nationally registered fishers are registered to Setúbal's fishing area, and 51.4% of fishers aged 55 or over, worked mainly in the Setúbal Peninsula.

Porto

Coimbra

PORTUGAL

Estror

Badajoz Me

Map of Continental Portugal with research sites



Map of Setúbal area with research sites

Besides the main fishing port in Setúbal, in this study, we examine the fishing areas of Setúbal's Morgada, Gâmbia, and Carrasqueira ports, which represent smaller-scale fishing zones.

Interviews with participants PTF#11 and PTF#12 were conducted at a fishing association near Setúbal's main port. Interviews with participants PTF#3 and PTF#4 were held with female fishers working at Morgada's fishing harbour, while interviews with participants PTF#1, PTF#7, PTF#10 and PTF#15 took place at Gâmbia fishing harbour. Interviews with participants PTF#5 and PTF#15 were conducted with a female harvester (PTF#5) and a female fisher from Carrasqueira (PTF#15).



Map of Setúbal Peninsula with research sites



Research site - Carrasqueira



Research sites - Gâmbia and Morgada

5.1.3. Research Findings - Fisheries Sector

Introduction to the Findings

This chapter explores the small-scale fisheries sector in Portugal, drawing on key findings from fieldwork conducted in the local fishing communities of Setúbal. It presents the voices and experiences of fishers, shellfish harvesters, and one key informant offering a detailed exploration of their everyday lives, and the significant role women play in this sector. By highlighting the perspectives of community members, this chapter provides a deeper understanding of the social and economic dynamics that define small-scale fishing in Portugal. The insights presented here are drawn from a variety of interviews conducted in different settings, primarily within participants' homes, but also in local fishing associations. This approach provides a rich and nuanced understanding of how participants describe their experiences. The informal nature of these interview settings reflects the family-oriented structure of the Portuguese fishing sector, where close-knit community dynamics and familial ties play a central role in shaping the industry's daily realities.

"It's hard work. It requires a lot of physical effort. You get very cold because we're exposed to bad weather (...) [But] The river nourishes me, the spirit, the soul (...) I think we all have a mission when we're born, right? I think mine is... to protect it" (PTF#003). This woman's quote captures the deep love and dedication Portuguese fishers have for the sea and their craft. It highlights the physical challenges they face, but also the spiritual connection they feel with the ocean. Her belief that each person has a mission, and her desire to protect the river, reflects the sense of responsibility and reverence many fishers have for the environment that sustains them. For them, the relationship with the sea goes beyond work—it's a profound bond rooted in respect and care.

The Portuguese sample from the fishing sector was relatively homogeneous in terms of age, educational background, and family histories, with most participants sharing common experiences as being raised in fishing families. However, despite these similarities, distinct roles emerged between female and male participants, roles that extended beyond fishing and reflected gendered divisions of labour and responsibility within the community. The primary objective of this chapter is to provide a detailed and insightful account of the participant's experiences in the fisheries sector, with a particular focus on how gender influences various aspects of their work. Collectively, these narratives offer a rich and holistic view of Setúbal's fishing community.

Findings in this chapter will be organised thematically according to the main analytical instruments applied to the data, especially the analytic topics that conceptually guided the interviews guide, as well as the codebook and analytic grid elaborated to analyse the results.

Setting the Sample

A total of 11 interviews were conducted, between January and June of 2024, including 10 fishers (five females and five males; eight fishers and two shellfish harvesters)

and one key informant (female), providing a gender-balanced perspective essential for understanding the gender dynamics within the sector. All participants were Portuguese and lived in Setúbal, Portugal. Regarding the fishers, all fished in Sado's Bay.

In terms of family structure, all had children, with a maximum of two children per household, although two reported that their children had left home.. The majority were married and lived with their spouses.

The interviewees' ages ranged from 47 to 77 years, with an average age of 61 for male fishers and approximately 59 for female fishers. The oldest participant, at 77 years, was male. According to the 2021 Census, the average age of the employed population in Portugal was 44.2 years, marking an increase of 2.8 years compared to 2011. In the Portuguese fishing sector, however, the workforce is significantly older, nearing the national retirement age, which in 2025 will be legally set at 66 years and 7 months.

Education and Professional Background

In Setúbal, fishing is deeply embedded in the city's culture and the daily lives of many families. Several participants shared how their involvement in small-scale fisheries was a natural progression from childhood experiences. Joining the sector often followed family traditions, with both men and women recalling their early exposure to fishing practices from a young age. One participant said, "I went into a boat when I was just over two years old, almost three years old. But professionally, (...) I was seven years old when I started pulling 'chicharro3" (PTF#003). Another interviewee also shared that: "Since I was born. (...) I was born at sea. [my parents] say that when I was two years old, I was already following them with a bucket and a little bag, collecting with them" (PTF#005). Their professional profiles reflect a strong multigenerational fishing heritage, with all participants having more than 20 years of experience at sea: "My greatgrandfather was a fisher, my grandfather was a fisher, my father, myself" (PTF#001).

However, during the interviews, it became clear that men seemed more likely to be encouraged or expected to follow family traditions, while women appeared to pursue fishing not out of obligation, but out of a deep love for the sea. As one female participant explained, "(...) it comes from the past. (...) [men] have more practice" (PTF#015).

Both male and female fishers in the community often have limited educational backgrounds, as many choose to forgo further schooling in order to follow family traditions and contribute to the household income. "School? I started going on the boat when I was really young" (PTF#010), shared a retired male fisher, and "I probably went to school for a month. I didn't do anything, I don't have any qualifications" (PTF#015) was the reality of an older female harvester. The majority of the participants had a fourthgrade level education, and only two female fishers (PTF#003 and PTF#014) had been to school until ninth grade.

^{3 &#}x27;Chicharro' is a mackerel-like fish

A Day at Sea: The Daily Routines of Fishers

Daily work routines involve early mornings, starting between 4 and 6 a.m., with no overnight stays, as small-scale fishers in Portugal operate by tidal variations. Many participants shared their early start and the repetitive, hands-on nature of their work at sea: "We leave at dawn, work for six or seven hours, but intensely. Always fast, and when they get home, they have to mend the nets, check if the pots are made. From dawn until almost night" (PTF#001); "We leave here in the morning, at dawn. We go to our port. We get on the boat, go to work, collect the nets, leave the nets in the water, and then we collect the nets" (PTF#003).

When asked about their daily tasks during fishing activities, both men and women provided similar responses, describing the same set of responsibilities. One female fisher shared, "I do a little bit of everything on the boat, from driving the boat, pulling in the buoy, helping to collect the nets, sorting the fish, taking out the trash, straightening the nets, and throwing them back out. I do a bit of everything on the boat" (PTF#003). Another female fisher added: "On the boat, I pass the net, that is, clean the net, take out the cuttlefish, remove the trash, and throw the net out again" (PTF#014). Similarly, a male interviewee described his routine, stating: "I go to the fishing spot, throw out the nets... I wait there for an hour or more, about an hour and a half, depending on the tides. Then, we collect the net, take out the fish, and the net has to be sorted every day, cleaned, which we call 'safar'—it's to get it clean so it's ready to go back out to sea the next day" (PTF#007).

During the interview with a female administrative of the official fish auction site in Setúbal, she described that a fisher's day involved "first, one day to throw the nets, the nets stay overnight, and then they go the next day to capture, that is, to lift the nets and bring in the catch. The schedules vary according to the weather conditions, or probably according to the species" (PTFAD#01). Her insight is positive, as it showcases her awareness of the fisher's daily realities. This understanding helps bridge the gap between stakeholders' perceptions of the lives of fishers, highlighting that those involved in fisheries management and administration can have a realistic grasp of the challenges fishers face. In addition, she also recognised improvements in the industry, while emphasising that fishing remains a challenging and demanding profession, far from being easy or idealised -"We've always heard people say that 'fishing'... that old idea, which is almost romanticised, but now it's nothing like that. No, it still continues to be, obviously with significant improvements, but it's still not a bed of roses, I mean, it's difficult, it's difficult, I think it's tough"(PTFAD#01).

However, she also stated that "The work onboard will be more the responsibility of the men, while the more administrative tasks, such as licences and all that type of paperwork, I think, in the end, tend to fall more on the women's side" (PTFAD#01). This quote highlights an underlying assumption from the administrator that reinforces traditional gender roles. While she demonstrates an understanding of the daily tasks of fishers, she separates the responsibilities based on gender, assigning physical, hands-on work to men and administrative duties to women. This reflects a common societal perception that men are better suited for manual labour, while women take

on more "supportive" roles, such as handling paperwork and administrative tasks. Even though she recognises the complexity of fishing work, her response reflects a conventional view of a gendered division of labour.

Environmental awareness emerged as a significant concern among the fishers during their day at sea, particularly regarding marine litter. Several participants reported actively removing debris from the ocean during their fishing activities, reflecting a growing recognition of the environmental impacts of marine pollution. "We always collected the trash. We even collected the trash that belonged to others" (PTF#015), said one female shellfish harvester. "Take (...) when collecting the nets, the trash that comes with the nets, bring it back (...) and bring it here, to land, for example" (PTF#004). Additionally, fishers expressed frustration regarding harmful fishing practices, such as ghost fishing and bycatch, both of which contribute to ecological degradation and the depletion of marine resources: "I think the pots are a very deadly art" (PTF#014); "Be careful that the nets don't leave them behind. That's also a loss for both sides". The environmental awareness demonstrated by all the interviewed fishers highlights their responsible practices and a clear shift towards more artisanal and sustainable operations. Their deep connection to the sea is evident, reflecting a strong sense of stewardship and a commitment to preserving the marine environment for future generations.

The Struggles of Fishing: Work Conditions and Health Impacts

All participants reported similar challenging working conditions, characterised by harsh weather: "It's very difficult at times, for example, in winter. It's very painful... But when you do it because you love it, you do it well. You do it well. With a lot of clothes on. Health [issues] is more about the bones, the joints. My husband right now has osteoarthritis in his spine... from the cold, the mud, the efforts. It's a very painful job" (PTF#004); "Even today, I don't know how I managed to leave that port with the boat, with the wind and the rain that was there. There was water above and water below. We were really struggling at that moment. Really struggling" (PTF#005); "It's difficult because the physical effort is a lot, and the fatigue, and the hours, because you almost always start at night. It's difficult, it's difficult because it's riskier, I don't know. I think it's more because of the risk, because we're always exposed to... those sudden storms or something else" (PTF#001). While advances in weather forecasting technology have improved accessibility to meteorological information, unpredictable sea conditions and strong waves continue to pose significant risks, leading to work-related injuries and damage to fishing vessels.

These statements also highlight the physically demanding labour, and chronic physical strain, particularly in the back and arms. Despite these difficulties, fishers have little to no flexibility to cease work, as income is directly tied to daily catch, making any interruption a direct financial loss. "Ah, I'm already retired, but then... We try to make it [money] work for everything, but it doesn't. It doesn't, I still have to work" (PTF#005). This quote reflects the reality of many fishers, who, despite being retired, continue to work at sea because their monthly pension is not sufficient to meet their needs,

underscoring the inadequate social security systems that many workers in challenging sectors like fishing, may face. When asked about whether men and women experience the same physical problems during fishing, one male participant who works with his wife, shared that "Yes, of course they do. It's usually very gruelling, right? And sometimes I feel sorry for her because it's very demanding. We're already used to it. It's harder for her, she has less strength, I don't know. I think she suffers a bit more than we [men] do" (PTF#001). This quote reflects the participant's perception that women may experience more physical strain in the demanding work of fishing compared to men, due to differences in strength and endurance. Nonetheless, it also subtly reflects the ingrained notion that women are physically inferior to men. The participant acknowledges that the work is exhausting, and while he expresses empathy for the female fisher, he implies that women, due to having "less strength," are more affected by the physical demands of the job. This reinforces a gendered perspective on physical capabilities, where men are seen as more naturally suited for demanding physical tasks, and women are perceived as struggling more with the same challenges.

Women at Sea: Gender Roles and Work Division Onboard

Some participants shared that, in the past, there were more female fishers and harvesters, thus their impact on society was more prominent.

When asked about women's work at sea in the past, one male participant explained: "(...)they cooked and also worked. They didn't just cook, no. My mother only cooked because she was already older, right? But the others cooked and worked. They pulled the nets, untangled the nets, mended the nets. They did all of that." (PTF#001). This response highlights the dual burden placed on women in the fishing industry. While their presence on board was often justified by their role in preparing meals, they were also engaged in physically demanding fishing tasks alongside the men. The casual phrasing suggests a normalisation of this expectationwomen were not merely there as support but were integral labourers, contributing equally while also fulfilling domestic responsibilities. This reinforces the historical invisibility of women's labour in the sector, as their work was often taken for granted rather than formally recognised.

In Portugal, obtaining official recognition as a fisher requires possession of a maritime document known as the 'cédula marítima' (maritime licence), which is issued by the local fishing port. However, as revealed in several interviews conducted during this study, prior to the 2000s, women were not permitted to hold this official document. "I worked for some time with a licence, which they used to give to women, women didn't get a seafarer's licence, they got a licence to be able to accompany men, and then they started getting seafarer's licences" (PTF#003). Instead, they were granted a distinct form of authorisation, either a "fishing licence" or a "fishing authorisation," specifically designated for women. This historical distinction reflects the gender-based restrictions that have shaped women's participation in the fishing sector, limiting their formal recognition and access to the same professional status as their male counterparts.

A male participant shared his thoughts on how women's access to the fishing profession has evolved: "Before, [women in fisheries] were more important. No, not more important—just easier for them, because it wasn't necessary... In the past, they issued authorisations; the 'cédula marítima' wasn't required. Now, they have to get the 'cédula marítima', and because of that—because of the time it takes to obtain it—it's also a hassle. That's why there aren't more women fishers. So, in the past... the Port Authority of Setúbal would issue an authorization for them to be there. And all the men, instead of hiring crew members from outside, would take their own wives on the boat" (PTF#001). This statement suggests that, historically, the process for women to work in the sector was more accessible, as they only needed an authorisation rather than the more demanding cédula marítima. However, this socalled "facilitation" can also be seen as a way of diminishing women's professional status in the industry. By not requiring them to hold the same official documentation as men, the system effectively positioned them as assistants rather than equal workers. This practice reinforced a perception of women as supplementary labour rather than skilled professionals, reflecting a broader gender imbalance in the fishing sector.

The majority of women are regarded as 'helpers' rather than equal partners to their fishing husbands. This is primarily because most men are both the boat owners and the designated boat masters ("mestre da embarcação") in Portugal. The boat master is the individual who registers the boat in their name and has the authority to make decisions regarding the boat's operations. This dynamic contributes to a power struggle between men and women who work together, as the decision-making power remains firmly in the hands of the male boat owners, reinforcing gendered hierarchies within the fishing industry. One participant described the power dynamics inherent in this situation: "And since he is the master, he is the one... who owns the boat, he is the master, he decides, 'No, we're not going.' And I, well, I have to accept it, and I won't go" (PTF#003).

In addition to obtaining the cédula marítima, fishers in Portugal are required to hold a fishing boat operator's licence, known as 'carta de arraios', to legally navigate a fishing vessel. Among the ten female fishers interviewed in this study, only one possessed this licence. However, as revealed in one of the interviews, despite her qualifications, it was her husband who operated the boat, as he was the officially registered boat driver. Due to this administrative designation, if she were to assume control of the vessel, they would be subject to a fine, as she was not legally recognised as the boat's designated operator. As she stated "No, I have carta de arraios too. I am not registered as a driver on the vessel, I am registered as a fisher only. The arraios is the one who coordinates and who gives the orders (...). The fisher does what the master tells him to do. But if my husband were absent, I can also be a fishing master. I am also a fishing driver. However, I would get a fine" (PTF#014). This situation highlights the deeply entrenched male-dominant hierarchy within the fishing sector, where institutional regulations and social norms continue to reinforce gender disparities. By legally restricting women's ability to operate the boats they work on, these structures not only limit their autonomy but also contribute to power imbalances between fishing husbands and wives. The husband's position as the legally

recognised boat driver further consolidates his authority, reinforcing the existing power struggle within fishing couples and perpetuating male dominance in decision-making.

A male participant expressed an attempt at a gender-inclusive perspective, stating: "Everything a man does, a woman does too. That's my opinion. She might not do it exactly the same way, but she does it" (PTF#007). While this statement suggests an effort to acknowledge gender equality in the fishing sector, it also reflects an underlying bias. The initial assertion that women are equally capable is immediately qualified by the notion that their work might not be identical to that of men. This subtle contradiction reveals the lingering influence of traditional gender perceptions, even among those who strive for a more balanced work environment. It highlights the complexities of gender discourse within the fishing community, where progress toward equality coexists with deeply ingrained biases.

A female participant perfectly summarises female fishers' contributions and character: "In my view, (...) women do just as much as men, right? And the women I know, they are full of drive. They go into the hard work of the sea with a lot of determination, with certainty. They arrive and they will do something. They will earn their bread, let's put it that way. And they are people who have that... confidence. They are fighters, they are fighters" (PTF#005). This statement powerfully captures the strong spirit and resilience of women working in the fishing industry. The emphasis on their "drive" and "determination" reveals a deep sense of commitment and self-reliance, highlighting the way they approach their work with confidence and a steadfast will. Despite the physically demanding and often gruelling nature of the job, the women described are portrayed as fighters who not only face challenges but do so with unwavering resolve. Their strength lies not only in their physical ability but also in their mental fortitude, as they navigate the hardships of the sea with determination and a sense of purpose.

Mental Overload and Family Responsibilities

In addition to their demanding work at sea, women bore the primary responsibility for family and household management.

One male participant recognised that women often bear the primary responsibility of managing their families, frequently prioritising domestic and caregiving roles over their professional activities. As a result, many women delay obtaining their cédula marítima to ensure their presence within the household. He stated, "Women usually have children and families to take care of other responsibilities before obtaining the cédula" (PTF#001). He also shared his perspective on the challenges women face in balancing family responsibilities with their work: "Ah, they have to figure that out, I don't know how, but... Motherhood, when they are younger, is complicated, isn't it? Usually, they have to choose their schedules and the tides to balance their work. And taking care of the children, right? I think..." (PTF#001). This statement reveals an implicit assumption that the responsibility of balancing motherhood and work falls solely on women. The speaker acknowledges the difficulty of managing both roles but does not mention any expectation of shared responsibility within the couple.

The notion that women must independently "figure it out" reflects a societal norm in which childcare and household management are seen as external efforts or personal struggles, rather than collective responsibilities within the family unit. This perspective reinforces the gendered division of labour, where men remain largely detached from the demands of caregiving.

Female interviewees expressed heightened concern for their children's well-being while working, revealing the emotional and mental toll of balancing both roles. Some accounts were particularly striking, such as: "My child always drank my milk. I would pump breast milk at sea and at home" (PTF#014). Women in fisheries often face unique obstacles that their male counterparts do not, including the need to accommodate biological and caregiving needs in an environment designed without them in mind. The act of pumping milk at sea suggests a lack of infrastructure to support maternal needs, as well as the necessity for ingenuity in maintaining lactation under less-than-ideal conditions. The quote also alludes to the persistence of gender norms under which women, even when actively contributing to the workforce, remain primarily responsible for child-rearing.

The same female interviewee also shares: "My luck was that my mother-in-law retired and could stay with my grandson, but for my first child, I had to pay a nanny who would take him... Because daycare was out of the question. Daycares only open at 8 a.m. And at that time, we were already at sea by 4:30 or 5:30 in the morning. So, I had to pay a nanny, and she agreed to take him in the early hours of the morning" (PTF#014). This quote adds a new dimension to the discussion on the challenges faced by women in fisheries, particularly regarding childcare and work schedules. While the earlier statement focused on the physical and emotional toll of balancing breastfeeding and labour at sea, this passage highlights the systemic obstacles that make it difficult for women to reconcile their roles as mothers and fishers. One of the key issues raised in the quote is the misalignment between the standard operation hours of childcare facilities and the early morning demands of fishing work. Fisheries require workers to be at sea long before daycare centres open, making institutional childcare inaccessible. This situation forces women to seek alternative, often costly, childcare arrangements. The fact that the speaker had to rely on a nanny who was willing to care for the child at unconventional hours underscores the lack of systemic support for women in nontraditional work schedules.

Women also described a constant state of mental overload, as they felt responsible for managing household tasks even while engaged in fishing activities. The emotional and cognitive burden of balancing work at sea with family responsibilities was a recurring theme among female interviewees. One participant expressed: "While at work, we were constantly thinking about what needed to be done. (...) I don't think men worry about that. I think men believe they need to stop by a café, have a coffee, meet a friend, or something like that." (PTF#015). Beyond household chores, women were particularly preoccupied with their children's well-being while at sea. One emphasised the importance of ensuring their children were prepared for school before leaving for work in the early hours of the morning. One female participant stated

"I get up around 5:20, 5:30, have breakfast, leave the clothes for the children to wear to go to school" (PTF#014) This often meant waking up even earlier to prepare breakfast, organising school bags, and arrange logistics for getting their children safely to school with everything they needed. The mental strain of coordinating these responsibilities while simultaneously focusing on their demanding fishing work added another layer of overtiredness to their daily routines. In addition to their children, one fisher also expressed concerns for her grandchildren, as she often took on the responsibility of caring for them. One participant admitted "Between grandchildren and great-grandchildren. I have two grandchildren and 3 great-grandchildren under my responsibility... Because they have a father and a mother, right? But I'm the one who does everything for them" (PTF#015). This added yet another dimension to her already heavy workload.

Gender Differences in Rest and Workload

An important distinction that emerged during the interviews was the differing experiences in the ability to rest after work between male and female fishers. All of the male participants described their post-work routines in a relatively calm manner, with some even stating that they were able to take a nap after returning from their work at sea on most days. This suggests that for many male fishers, their workday could end with the physical demands of fishing, allowing them some time for rest or leisure activities.

In contrast, the female fishers expressed a significant divergence in their ability to rest. One interviewee captured this feeling succinctly: "That's a trick question. A woman never gets to rest" (PTF#004). When asked why a woman "never gets to rest", she answered: "Because women, besides working outside the home, also have household chores, right? Like taking care of the laundry, hanging clothes, washing clothes, washing dishes, cleaning the house, vacuuming, and everything else. Being a homemaker, above all" (PTF#004). The quote reflects a traditional and gendered view of the division of labour within a household. It suggests that women are expected to balance both professional work and domestic duties, emphasising tasks such as laundry, cleaning, and general upkeep of the home. The phrase "Being a homemaker, above all" implies that, regardless of their professional careers, the primary role of women in society is still seen as that of caretakers and housekeepers. However, this role is not just imposed by society; it is also internalised by women themselves, often due to deeply ingrained cultural gender norms. These norms shape how women perceive their responsibilities and value in both the domestic and public spheres. Women, over time, have been conditioned to accept the idea that their worth and identity are closely tied to their roles as homemakers and caregivers, even when they engage in professional work. This reinforces a cycle where the expectation to fulfil both domestic and professional duties is not just a societal imposition, but a role that women may adopt voluntarily due to the influence of cultural norms and expectations.

This statement reflects the continuous, never-ending nature of women's labour, where the physical demands of fishing are only one part of a much broader set of responsibilities. Another female fisher shared the same experience on this dual workload, saying: "The only physical

difference between men and women is that some men help with domestic tasks, while others don't help at all. Some help with washing the dishes, loading the dishwasher, hanging laundry, and things like that. Because a woman's work doesn't end when she gets home." (PTF#014). This quote underscores the deep gender divide in how work is understood within the fishing community. For female fishers, the physical labour of fishing does not mark the end of their workday. Instead, they transition immediately into domestic responsibilities, which range from household chores to caregiving duties. This expectation contrasts with many of the male fishers, for whom the workday typically ends after fishing, allowing them time to rest.

The female fishers interviewed emphasised the heavy burden of invisible labour, which extends beyond fishing to include domestic responsibilities and mental load management. Unlike their male counterparts, none of the women reported having time to rest after fishing, as they were immediately expected to continue household duties. This contrast between male and female experiences in the fishing sector is evident when comparing the statements of a male and a female participant regarding their daily routines.

The male participant described his workday as follows: "Normally, I always get some rest. When I can, when I don't have anything else to do. When I don't have nets to mend, or traps to make, or anything else. Like today—when I leave at dawn and get back around noon, I usually rest for an hour or two after lunch." (PTF#001). In contrast, a female participant explained her routine: "So, every day we mend nets, from morning until night, all day long. And now, sometimes, for example... Today, I got home, made lunch, and cleaned the kitchen." (PTF#014). While both men and women perform labour-intensive tasks, the distribution of responsibilities is starkly different. For men, their primary work remains on the boat, and while additional tasks such as mending nets exist, there is still an opportunity for rest. Meanwhile for women, the work is continuous, extending beyond fishing-related activities into household duties. The female participant's statement



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illustrates how women must seamlessly transition from professional to domestic labour, with no clear distinction between the two. This contrast highlights the gendered burden women bear, reinforcing how their labour, both inside and outside the home, is often undervalued and taken for granted.

In response to the question, "Are older female fishers in worse shape than male fishers?", one female participant provided an honest and matter-of-fact reflection on the physical toll of their work: "Of course. Of course, women are more worn out than men. Although men also have illnesses and their own problems, women are still more worn out. And do you think it's because of the work? Because it is because of the work. Because when a woman comes home, she cannot rest. She comes home, and her husband is waiting for her to make lunch—in my case, because I didn't go to sea. So, he's waiting for lunch, waiting for dinner. If he has to work, I have to get up. For example, if he has to wake up at 5 a.m. so he can go to work, I have to wake up at 4 a.m. to prepare his lunch before he leaves. That's how it was. There were times when we started working at home at 3 a.m. When we had to go out for those very early tides, we would be working from 3 a.m. We practically didn't sleep at all." (PTF#015). This statement illustrates the disproportionate burden carried by women in the fishing sector, who, in addition to their physically demanding labour, are also expected to fulfil extensive domestic responsibilities. The interviewee's matter-of-fact tone underscores the normalisation of this gendered workload, highlighting the intersection of labour and household duties that leaves female fishers more physically exhausted than their male counterparts. The statement "women are more worn out than men" points to the cumulative effect of managing both professional and household duties. While the participant acknowledges that men also experience their own set of challenges, the underlying message is that the dual burden of work and home life disproportionately affects women, leaving them more physically fatigued. The reflection also highlights how women in these roles often do not have the opportunity to rest, as domestic tasks, such as meal preparation, are expected to be carried out in addition to their professional responsibilities. The example of waking up at 4 a.m. to prepare lunch for her husband before going to work further illustrates how the division of labour in the household is skewed, often requiring women to prioritise the needs of others over their own rest and well-being.

This reality is not only acknowledged by women, but also recognised by male fishers, as illustrated in the following statement from a male participant: "It's tough, yes... The sea is tough for women. It's even harder for them than it is for men. It's tough. They age faster. And then they have more work... They come home and still have to do housework. While we only have the work at sea. Sure, some men help, but it's not the same. They always work more than we do. They get old faster; they get more tired." (PTF#007). By stating that "they always work more than we do," the male participant acknowledges a disparity in the labour distribution, even though he also mentions that some men help with housework. This suggests that while some men may assist, the cultural norm still leans heavily toward women being the primary homemakers. However, despite this awareness, the deeply ingrained patriarchal structures and rigid gender hierarchies, particularly prevalent in older generations, remain largely unchallenged. The normalisation

of these inequalities reflects the strength of traditional gender roles, which continue to shape labour dynamics both at sea and within the household.

Gender Discrimination

The only participant who responded positively when asked about gender discrimination was the female administrator. Her experience reflects how women in such settings often face challenges not only in assuming leadership or decision-making roles but also in asserting their legitimacy in those positions.

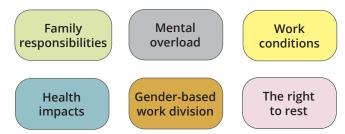
The statement "it wasn't fully taking over, but partly" highlights the nuanced way in which women's authority is often viewed with suspicion or met with resistance, even when they occupy the role in a legitimate capacity. The phrasing implies that her assumption of the position was perceived as temporary or less valid than a male counterpart's.

The participant draws a distinction between the pushback she faced and outright bullying or harassment, referring to the resistance as an attempt to "devalue" her position. This indicates that while overtly aggressive behaviour wasn't directed at her, there was still an underlying challenge to her authority based on gender. The effort to "devalue" her could be seen as a subtle, ongoing undermining of her professional competence, a common experience for women in male-dominated industries. This is often not blatant but manifests in microaggressions and dismissive remarks.

The incident about her pedicure or nail polish provides a clear example of gendered discrimination masked as casual conversation. The comment about her potentially ruining her nail polish trivialises her professional role by implying that the job is unsuitable for women. It suggests that women should be more concerned about maintaining their fragile appearance rather than engaging in physically demanding work, reinforcing the stereotype that women are not suited for such roles and should prioritise their looks over their professional capabilities. Her response, "here we sell fish, we don't do pedicures," is an assertive way of dismissing the irrelevant and dismissive comment, emphasising that her focus is on the job, not on conforming to gendered expectations.

In conclusion, while the participant does not describe overtly hostile discrimination or harassment, her experience reveals how gender-based subtlety and devaluation can still affect women in the workplace. The resistance she faced was not overtly hostile, but it was a form of undermining that sought to question her authority, suggesting that women often have to work harder to assert their positions and demonstrate their capability in environments where gender roles remain entrenched.

Synthesis and Emergent Themes



From a broader perspective, these emerging themes emphasise the deeply entrenched structure of family-owned small-scale fisheries and the ongoing patriarchal views of women within the sector. The interviews highlight not only the persistent challenges faced by fishers in their daily work but also the additional responsibilities shouldered by female fishers.

One persistent pattern that emerged was the significant mental overload experienced by women - a burden shared by all participants. Juggling household responsibilities, childcare, and the physically demanding nature of their work, women in this sector do not have the same 'right to rest' as their male counterparts. They internalise their inability to rest as an intrinsic part of being a woman, accepting it as part of their role. Many wake up earlier than necessary to ensure their children are prepared for the day, with some even taking on the added responsibility of getting their husbands ready as well. While working at sea, their focus remains on the task at hand, but their minds are simultaneously occupied with the domestic chores awaiting them upon their return. They organise and plan their household tasks as they work, aiming to maximise efficiency. In fishers' families, the primary responsibility for childcare and nurturing often falls to the women, positioning them as the main, and at times, sole caregivers. Meanwhile, the husbands' responsibilities tend to be viewed as primarily work-related, creating an unequal division of labour in the household.

In contrast, the men mentioned that after their work at sea, they typically take a nap, seeing it as a natural way to recover and rest. This stark difference in mindset highlights not only the unequal distribution of labour but also the ingrained gender norms that shape the daily lives of these women. While the men seem to experience a clear boundary between work and rest, the women find themselves constantly navigating both, with little time or space to recover, and an internalised sense that this imbalance is simply 'how it is.'

Another pattern that affects both male and female fishers is the demanding work conditions they face. Waking up at dawn is a common part of their daily routine, regardless of the season or weather. Hours at sea, often in challenging conditions such as rough seas, storms, and heavy rain, take a significant toll on their physical well-being. The demanding nature of the work, which requires strenuous physical effort, leads to common health issues like back pain, joint pain, and arm strain. These conditions are often exacerbated by the repetitive motions involved in fishing, whether pulling nets, hauling in catches, or handling heavy equipment, meaning the physical exhaustion of the job becomes chronic. Some participants even shared

that female fishers tend to age faster and face a higher incidence of health problems, due to the overwhelming number of responsibilities they carry, both at sea and at home.

The findings from this study challenge long-standing gender-based assumptions about labour division in Portuguese small-scale fisheries. Despite the traditional perception that fishing is a male-dominated profession — where men are presumed to handle the more physically demanding tasks while women engage in lighter, auxiliary work — our research suggests that, in practice, women perform the same tasks as men at sea. The fact that both male and female fishers provided similar responses regarding their daily responsibilities indicates that gender does not necessarily dictate the nature of the work being done in the fishing sector.

This reality directly undermines stereotypes that women are less capable of handling the physical demands of fishing. However, while gendered labour divisions may be less rigid in direct fishing activities than often presumed, the broader issue of inequality persists in the additional, often invisible workload borne by women. Previous testimonies reveal that female fishers frequently take on extensive household responsibilities after returning from sea, creating a "double burden" that their male counterparts do not experience to the same extent. This reinforces the notion that gender disparities within fisheries extend beyond labour at sea and into the broader socio-economic structure of these communities.

Participants strongly emphasised the resilience and determination of women in fisheries. One female interviewee described women at sea as hardworking and fearless, stating: "And it's also what we want to show, that women do as much as men, right? And the women I know have a lot of determination ('garra'). They go to the hard work of the sea with a lot of determination, with that certainty, they get there and they'll do anything. They'll earn their bread, let's go. And they are people who have that... Confidence... They are fighters, they are fighters." (PTF#005). This statement underscores the strength and perseverance of female fishers, highlighting how they face the challenges of the maritime industry with confidence and skill. By repeatedly using terms like "determination" and "fighters," she reinforces the idea that women are not merely participating in this profession but are actively proving their worth and resilience in an environment that has historically undervalued them.

A call for greater female empowerment within the industry was also evident in another testimony: "Women should stand up for themselves and say, 'Yes, I am capable too'...

And show that it's not just men who can do it—women can too" (PTF#004). This statement highlights the need for self-advocacy among women in male-dominated fields, emphasising the importance of visibility and breaking down traditional gender barriers. The speaker rejects the notion that women should passively accept societal limitations and instead encourages them to assert their skills and capabilities actively. This perspective aligns with broader gender equality movements that seek to increase women's participation in traditionally male-dominated sectors.

Moreover, women's perspectives on their labour challenge the perception that their work is purely a sacrifice. One fisher stated: "I don't consider it a sacrifice; I consider it a physical effort, yes. But it's a physical effort that feeds me. It's something that recharges my energy" (PTF#003). This perspective suggests that while fishing is undoubtedly physically demanding, it also provides a source of purpose, sustenance, and empowerment. The distinction between sacrifice and effort is particularly significant, as it shifts the narrative from one of suffering to one of agency and fulfilment. Her assertion that work "recharges" her energy contradicts the assumption that hard labour solely depletes workers. Instead, it reveals how certain types of labour particularly those connected to nature, independence, and skill — can serve as a source of motivation and selfactualisation.

These findings reinforce the widespread gender gaps within Portuguese small-scale fisheries, where women's economic impact remains undervalued, and their access to financial, social, and policy support is severely limited. Importantly, research on women in fisheries has predominantly focused on those engaged in direct fishing or shellfish harvesting, leaving a significant knowledge gap regarding female fish workers on land. Women involved in processing, trade, administration, and logistical support remain understudied, despite their critical role in sustaining small-scale fisheries. Future research should focus on these overlooked contributions, ensuring that policies and fisheries governance frameworks comprehensively address gender disparities across all sectors of the industry.

Furthermore, these accounts highlight the unequal distribution of unpaid labour, where women's responsibilities extend far beyond their professional roles, placing them under persistent stress and emotional fatigue. Unlike their male counterparts, who often have time to rest or socialise after work, women face a double burden — navigating both the physical demands of fishing and the invisible pressures of domestic life and caregiving. This mental overload will be further explored in the next section, particularly in relation to the impossibility of women getting adequate mental and physical rest after fishing. These differences illustrate an intrinsically gendered division of labour in the fishing community, where women bear the combined weight of physically demanding work at sea and the unpaid, often invisible domestic labour that continues after they return home. The mental load of managing family responsibilities, particularly for children, is primarily shouldered by women, highlighting a significant imbalance in how work and rest are distributed across genders.

In conclusion, while the presence of women in Portuguese small-scale fisheries challenges traditional gender norms, deep-rooted inequalities persist in how their labour — both professional and domestic — is perceived and valued. The narratives collected in this study highlight not only the endurance and strength of female fishers but also the structural challenges they continue to face. Recognising and addressing these disparities is essential for fostering a more inclusive and equitable fisheries sector, where women's contributions are acknowledged, valued, and supported at all levels.



okon/snuttersto

5.1.4. Research Findings – Shipping Sector

Introduction

This chapter analyses the shipping sector in Portugal, drawing on emerging topics from the interviews conducted online (via Zoom platform) with participants and key informants. As mentioned in sections 2.3 and 2.4, the use of this platform enabled the interviews with multiple and diverse participants based in different cities and locations within and outside Portugal.

The Portuguese shipping sector has gone through profound changes in the last few decades, with a recent survey showing a 92.6% reduction in the number of ships between 1980 and 2025. During this time, cargo capacity also fell by 95.75%, and as a result the shipping sector has lost 94.6% of seafarers. This is a daunting scenario that has had a significative negative impact on the sector (Carvalho, 2025). Against this decline of the Portuguese shipping industry, the number of female maritime officers is on the rise, challenging the odds that face the sector. Thus, to examine the key topics that emerged in the interviews from the Portuguese Shipping dataset, this chapter is organised thematically based on topics which illustrate common and diverse patterns in the data.

A Day at Sea: Daily Routines Onboard

The daily routines onboard follow a common pattern: navigation by four-hour intervals (in Portuguese "quartos de navegação"). All participants and key informants who are/were maritime officers, had a specific schedule, which conformed to this fundamental principle for organising work and life onboard. This principle applied to every life and work routine on board, including checks, adjustments and general positions. This is a standard organisational culture in maritime companies, and therefore a common aspect in the daily routines onboard.

The Impact of Working Conditions on Health

Similar to onboard routines following common organisational pattern work conditions also follow standard rules on board which are common across different shipping companies. In the 1980s it was common to be on board for up to 9 months and to rest a couple of months at home. Nowadays this is not the case; typically, seafarers are on board for around 2 months followed by 1-2 months off, although they can be on board for 4-6 months followed by 2 months off. The main concern nowadays is to ensure that the crew has time to rest and recover mental and physical health, while diminishing the negative impact of being onboard for long periods of time. Furthermore, it is now common to have contracts that provide a certain period of time on board and a mandatory period of time at home while being remunerated, thus eliminating the pressure to be on board. This not only safeguards the physical and mental health of each seafarer but also ensures that the crew on board is able to handle challenges without being at risk of burnout, which could endanger the entire crew.

Women at Sea: Women's presence in the Caravels and Vessels

According to participants PTSH#3, PTSH#6 and PTSH#14 women have always been present aboard the vessels, for instance as nurses or as chambermaids. In fact, participant PTSH#14 mentioned that even during the "Descobertas" (Portuguese Maritime Expansion – XV and XVII centuries) and in the following centuries of the Portuguese Maritime Trade Routes there are reports of women's presence onboard as stated by participants PTSH#3, PTSH#6, and PTSH#14:

"But then I ended up discovering that... through historians, books I read, things I came across, ... that our caravels had women onboard. So, let's stop with this idea/ saying [that everything bad is women's fault]" (participant PTSH#14).

Similarly, Portuguese researchers and key authors have also mentioned the added value of women onboard during this period. Key authors on this subject such as Fina d'Armada (2006) spotlighted the incredible contribution of these pioneering women in the Portuguese Maritime Expansion. The roles they played on board were diverse, ranging from healers, slaves, interpreters to lovers and wives (d'Armada, 2006). Interestingly, Infante D. Henrique brought a Muslim woman on board to act as an interpreter for his multiple maritime routes to Africa (d'Armada, 2006). In some instances, women would travel clandestinely – typically dressed as men – either to perform duties reserved for men or when their male counterparts did not wish the presence of these women to be noticed (d'Armada, 2006). The most well-known case is Antónia Rodrigues de Aveiro (16th century) who joined a Caravela crew (caravel – a small manoeuvrable sailing vessel developed by the Portuguese around the XV and XVI centuries) bound for Mazagão in North Africa, dressed as a man to carry out duties reserved only for knights. Later Antónia was knighted by the King due to her outstanding bravery and military achievements (d'Armada, 2006 and Rocha, 2017). Such actions were not the only way in which women underlined their relevance during this period - as d'Armada mentions in her book (2006), in Aveiro (a coastal city in mainland Portugal) 42 per cent of women were owners of naus (ships) (d'Armada, 2006).

Despite this, maritime careers were still forbidden to women; while it was not new for women to be aboard ships, it was new for them to work in a maritime career. Therefore, since 1978-1979 (after the Portuguese Carnation Revolution, which put an end to 40 years of Portuguese dictatorship) women have been allowed to take up new roles as pilots, captains, radio technicians, and ship engineers. During the Dictatorship many professions were forbidden to women, including in the shipping sector as officers of the Portuguese merchant navy.

As a result, in Portugal, in 1975 for the first time, women were allowed to have access to the Escola Superior Náutica Infante D. Henrique (Portuguese National Maritime College – ENIDH), the only higher educational institution in Portugal that offers higher educational courses for maritime careers

(i.e., pilotage officers, marine engineering officers and maritime electrotechnical officers). Following this, in 1978 the first two women to work onboard as radio technicians were welcomed by the Lobito crew in 1978 – see picture below, courtesy of Participant PTSH#3:

While women's presence on the vessels was not entirely new, the novelty lay in women's new roles as pilots, captains, radio technicians, ship engineers. While most mentioned they were welcomed on board, some did report bullying, discrimination and even sexual harassment across different crews targeting different women (participant PTSH#4, participant PTSH#5, participant PTSH#6 – first-hand experience was reported by participant PTSH#15).



Image of the Lobito vessel courtesy of participant PTSH#3

Interestingly, in Vila Chã between 1928 and 1930 there is evidence of women being registered as captains (for the very first time). It is worthy of note that these were fishing vessels, unlike the Lobito and other vessels which were used for the shipping industry. Therefore, the presence of women was not new, with fishing vessels the first to welcome women as their captains (before vessels in the shipping industry). Nonetheless, 5 decades later, there were still obstacles and discrimination that women faced in accessing jobs in the shipping industry (see below).

The Lobito was the first vessel to feature women in its crew in roles other than nurses or chambermaids - both women were radio technicians. The experience was described as being very positive (Participant PTSH#3). This vessel was used in tramp ship routing. The photo is courtesy of participant PTSH#3.

Women at Sea: Gender Roles and Power Dynamics

Despite historical records shedding light on women's presence in Portuguese caravels and vessels in the 15th century, their roles have largely been confined to healing and servant duties at best—mostly submissive roles, if not clandestine ones. Hence, with the entrance of women into maritime careers there was a shift in their roles onboard leading to change in the power dynamics onboard too. This did not take place without resistance, sometimes from other women the wives of maritime officers as stated by participant PTSH#6:

"Back then, Sacor Marítima (a maritime cargo transport company) didn't accept women officers

onboard (_) because of the officers' wives, who didn't like the idea of having women officers aboard (laughs). They only hired nurses but preferred to hire male nurses" (participant PTSH#6).

Interestingly, women who were indoctrinated to fulfil certain social gender roles ended up also monitoring whether other women were complying with the same expected gender role. Thus, becoming complicit and 'allies' in the gender oppression and discrimination endured by these women who were pioneering maritime officers. This all took place under the attentive gaze of men who witnessed and reinforced this gender dynamic stemming from the shore onto life onboard, as attested to by participant PTSH#6.

Other clashes emerging from this shift still take place onboard, from 1979 until today. For instance, female participants who achieved higher hierarchical positions, such as captains and chief mates, reported male colleagues (all of them maritime officers in the same or lower ranks) challenging their decisions and orders (participant PTSH#11 and participant PTSH#12). As a result, many of them - and other female participants from the Portuguese Shipping Dataset -reported feeling that they had to work harder to prove their knowledge and expertise to their male colleagues and superiors. They did not need more time to learn than their male counterparts, but they needed to invest more time in deconstructing their male counterparts' perception regarding their expertise.

On some occasions these challenges involved physical confrontation towards the then chief mate (participant PTSH#12), a female whose male colleague disrespected her order:

"Yes, it happened once onboard [challenging her orders – she was the chief mate]. We had a situation of physical violence that was resolved internally, and that was it. As soon as we arrived at the next port, this person, this man, this male individual disembarked, in order to ensure my safety onboard" (participant PTSH#12).

Such behaviour is perhaps encouraged by old-fashioned attitudes among seafarers nationwide, reported by participant PTSH#14 who says that usually when something goes wrong onboard they typically blame the women's presence. This is an example of a narrative that devalues the contribution made by women and diminishes their role onboard:

"For them [seafarers], anything that happened onboard that was a mistake was always blamed on the women, no matter what it was. But this saying... I once tried to research where this idea came from, right? Because if we think about the Navy, it's even more ingrained, because there have been women in the Navy for less time, right? Much less time than in the Merchant Navy. But then I ended up discovering that... through historians, books I read, things I came across, ... that our caravels had women onboard. So, let's stop with this idea/ saying [that everything bad is women's fault] ... This might be something imposed by the Estado Novo [dictatorship], a mindset, an attempt to oppress women ... So, I don't have any episode where someone directly

blamed me, like 'oh, the cargo fell, or the machine broke because you're onboard', no. That never happened. Usually, the times when the phrase was used, it was always in a joking manner... I myself say it from time to time, I mean, always in a playful way, because no one ever came up to me like _ 'oh, it's your fault' [laughs]". (participant PTSH#14).

Reports stemming from the Portuguese Shipping Dataset not only pinpoint discrimination in the workplace, in this case onboard, but also shed a light on multiple intersecting forms of violence onboard such as sexual harassment, xenophobia & racism, and workplace bullying (moral harassment) as mentioned in the following subsections.

Intersectionality (gender & social status/class): Female nurses vs Female captains

Participant PTSH#4, participant PTSH#5 and participant PTSH#6 reported cases of discrimination, bullying, and obstacles to career access (until the mid-1980s). Participant PTSH#5 and participant PTSH#6 mentioned that the wives of maritime officers lobbied against women's presence in the vessels as captains, pilots, radio technicians and ship's engineers. The reason was that these wives were afraid that their husbands would be involved in a relationship with these women onboard. This is interesting if we consider that women were already a presence onboard as nurses and as chambermaids. It is likely that an intersectional approach to these narratives will assist in the analysis of the data and identify that these wives considered it unlikely that their husbands would become involved with chambermaids and nurses due to their «lower social status» (or at least they did not see this as problematic, as these women – nurses and chambermaids – were not 'seen/ perceived' as peers by the maritime officers' wives, who perhaps expected such behaviour but did not feel threatened by it). Hence, an intersectional analysis of gender and class/social status will help us to understand these wives' prejudices and stereotypes regarding other women who were pioneers in this area, taking up new roles in the ship's crew. It was interesting (but not surprising) to learn that this backlash came from other women. The pressure was such that some companies did not recruit women as captains, pilots, radio technicians and ship's engineers (until mid-1980s). One specific company embraced this policy and did not recruit women at all. This was a well-known policy by this specific company back in the 1980s, which came to an end in 1984-1985 due to legal reform. Backlash was unsurprisingly also evident from men, whether individually or collectively (through the company's policy of not recruiting women, for instance). Individually, some male members of a ship's crew would engage in bullying activities / discrimination to attack women's reputations onboard. This, of course, led to a hostile environment which was endured by these pioneering women as being 'normal' / 'expectable'. When asked directly if women who were taking up these new roles in the ships' crews (as pilots, captains, ship's engineers, radio technicians) expected to face these obstacles, participant PTSH#5 clearly said yes - with no hesitation. And yet, they faced it with resilience and determination and today the workplace environment is quite different and used to these women's presence onboard.

Sexual Harassment Reports

Despite conducting the interviews online, through Zoom, and despite having no previous contact in the shipping industry, 6 participants out of 16 interviews in the Portuguese dataset regarding the shipping industry **reported ongoing** or past cases of sexual harassment. Of the 6 participants who reported sexual harassment, 4 participants (participant PTSH#5, PTSH#7, PTSH#12, and PTSH#15) reported firsthand experiences of sexual harassment, while 2 participants (PTSH#4 and PTSH#18) described second-hand experiences of SGBV. In total, 13 participants out of the 16 interviews reported experiencing some form of discrimination, including sexual harassment and gender-based discrimination. For instance, other participants shared that their work and decisions were often questioned by male counterparts simply because they were women (participant PTSH#8, PTSH#11, PTSH#12, PTSH#14, PTSH#15, and PTSH#18).

Additionally, some participants faced barriers to accessing the labour market in the shipping industry due to their gender (participant PTSH#6, PTSH#13, and PTSH#16), while others were unfairly perceived as part of the cleaning team rather than maritime officers teams, again due to their gender (participant PTSH#17).

From all 6 cases of sexual harassment reported, only one was ongoing (participant PTSH#15), with all other cases taking place years or decades ago. As soon as the researcher identified the information related to the ongoing sexual harassment (participant PTSH#15 interview) the researcher activated the Safety Protocol and shared pivotal information to participant PTSH#15 to seek further legal and psychological support (as mentioned in section 2.2). In Portugal, sexual harassment is forbidden in the Labour Code (article 29) and only the least severe forms and most severe forms of sexual harassment are specified in the Portuguese Criminal Code (articles 163 and 170 of the Portuguese Criminal Code). As a result, there is a wide range of behaviours that are socially identified as sexual harassment but are not specified by the Portuguese Criminal Code, leaving the victims with no protection. Additionally, the reports of sexual harassment in this study, including the ones reported by participant PTSH#15, are not protected by article 163 nor article 170 from the Portuguese Criminal Code, leaving these victims with no protection, whilst sending out a message of impunity to these perpetrators and others. Moreover, it is worth noting that the crime of sexual harassment is not separately nor autonomously defined in the Portuguese Penal Code. Considering that, in these cases, women are trapped in a vessel 24/7 with the perpetrator, the law needs to provide effective protection for these women whilst sending out a message to society that these behaviours are not admissible and constitute a form of sexual violence. This would meet the international obligations stemming from Portugal's ratification of the Istanbul Convention. In fact, the circumstances of any form of sexual harassment taking place onboard should be considered an aggravation of the sentence, considering that the victims are 'trapped' in the same vessel as the perpetrator, increasing the risk and exposure to this specific violence, and further types of violence, such as rape, sexual torture, physical violence, workplace bullying, among others. It should also be noted that shipboard sexual harassment reports were dealt with extreme care and discretion by each

participant who experienced such behaviour onboard, to avoid jeopardizing these women's career progression.

Below is a selection of the participants' reports of sexual harassment. None of them fall under the spectrum of behaviours forbidden by article 163 nor article 170 of the Portuguese Criminal Code, despite clearly constituting sexual harassment according to the social notion and general perceptions, and according to the Istanbul Convention which Portugal ratified; hence, the need for legal reform.

Ongoing Sexual Harassment Cases (at the time of the interview)

"The chief mate asked the crew: «So, has anyone managed to sleep with the Brazilian woman? Has anyone been lucky with the Brazilian woman?»
(...) In another occasion, I was on the bridge, and he (the chief mate) said, this was a long time ago, he said something about women being wet, he was trying to make a joke about it". (participant PTSH#15).

Participant PTSH#5 was one of the first women to work onboard as a radio technician in Portugal. She reported not only sexual harassment but also bullying at work and invisible barriers to reporting:

"Yes, ves, I was aware of that [sexual harassment cases onboard]. In fact, I, myself, had a little problem, I experienced sexual harassment, but I managed to handle it. I got stuck with an old, annoying radio technician boss who had some attitudes; he always wanted the communications room door to be closed (...) And I told him it was unacceptable, that if he wanted the door closed, I wasn't going to work, and I would raise the issue with the captain. (...) I don't know if he gave bad information about me. I never found out, but I could feel it... (...) Yes, yes. The behaviour of that boss was a bit uncomfortable, and I always had to be on the defensive (...) That was the only time I felt harassed, but there were other colleagues who also complained, and some of them were harmed later in their career advancement" (participant PTSH#5).

Participant PTSH#5's statement not only sheds light on a continuum of sexual harassment followed by workplace harassment, like colleagues spreading rumours about the Sexual Harassment victim. This same statement also mentions invisible barriers to reporting: seeing colleagues who reported sexual harassment cases being harmed in their careers presumably acted as a barrier to reporting any violence at work, in particular, sexual harassment onboard. Another barrier to reporting is the fact that the perpetrator was, on occasion, the very officer to whom these kind situations should be reported – i.e. the chief mate (see participant PTSH#15 statement) or even the captain himself (see participant PTSH#7 statement):

More recently, in early 2000, participant PTSH#7 faced sexual harassment based on a formal power dynamic, in this case the perpetrator was her captain:

"In my first embarkation, I actually had a captain who told me "I am a chauvinistic sexist pig" (...) He, later, also implied that I - the practitioner - and the chief mate could be secretly involved (...) Therefore, he created a very unpleasant situation for me" (participant PTSH#7).

Also recently, in the 2010s, participant PTSH#12 who is now a Captain, faced sexual harassment in the role of Chief Mate. It was a typical case based on an informal power dynamic, meaning that the perpetrator was not her hierarchical superior, Despite not being formally powerful within the crew hierarchy, the perpetrator did feel entitled to harass her and make sexual suggestions about her career advancements:

"When I was a Chief Mate, it happened to me (sexual harassment). In fact, I had a maritime officer in the crew, who once asked me how I became a Chief Mate 'so fast' at such a young age (...) Implying that I slept my way to the top, that it was not 'only' due to my professional skills and expertise that I became Chief Mate. He added that he only knew older Chief Mates.... This maritime officer was my age, he was 28 years old. (...) Later he asked me out... to have a drink together... I said no" (participant PTSH#12).

These statements illustrate why the sexual harassment cases are invisible – the barriers to reporting persist. Furthermore, the circumstance that these interviewees/ victims of sexual harassment were in the same vessel for months with the perpetrator increased their fear of retaliation and vengeance, which also reinforced the barriers against reporting. To a certain extent, this explains why crew managers, including female crew managers, do not hear about sexual harassment cases onboard (see participant PTSH#1 statement below); it is not that such cases do not take place, but that the structural barriers to reporting are too difficult for victims to overcome on their own. An organisational culture that shows zero tolerance towards sexual violence, xenophobia and racism (among other forms of multiple and intersecting violences at workplace) must be put in place to send the message that there is no room in that vessel, in that company for these kind of behaviours (see participant PTSH#1 statement below).

"In terms of treatment onboard and anything related to that, I have no reports of discrimination or anything like that. Also, I think times have changed. As a company, we have a policy that is very much focused on competence. So, it doesn't matter if it's a man or a woman; if they're competent, they're there promoted" (participant PTSH#1).

Statements from other participants contradict participant PTSH#1 optimism, regarding sexual harassment, workplace bullying and even merit, as stated, inter alia by participant PTSH#15 (as mentioned in the following subsections).

Xenophobia and Racism

Among the violent behaviours targeting women onboard reported during the interviews, there were also, admittedly fewer, reports of xenophobia and racism. These were reported by the participant PTSH#15 who experienced both firsthand. Like the ongoing sexual harassment

cases reported by the same participant, Article 240 of the Portuguese Criminal Code lays out very specific and demanding criteria before a behaviour can be qualified as a hate crime. Hence, although socially the violence reported is a hate crime, it is not criminally relevant, which means the victim in the reported case is not protected under the Portuguese Criminal Code. Nevertheless, the Safety Protocol was activated by the researcher and all relevant information was provided to the participant to seek legal and psychological support.

Interestingly, this same participant reported a dichotomy, which could also be perceived as a tension based on an 'us vs them' dynamic. The same participant was perceived as 'other' by male maritime officers who discriminated against her on the grounds of her nationality and race, whereas sailors perceived her as 'one of us', hence, providing her protection against illegitimate orders, such as cleaning the deck - work which was not supposed to be carried out by a pilot practitioner, as illustrated below by participants' statement:

"[Male Maritime Officer being Verbally Abusive towards Participant PTSH#15]: "The fact that you are here, the fact that you are Brazilian, the fact that you are a woman, it irritates me" (...) He carried on saying horrible things like that to me. He said that my voice irritated him and that I irritated people simply by opening my mouth to speak [participant burst into tears]" (participant PTSH#15).

"The rest of them [the sailors] treat me very well, they are respectful, they treat me kindly. In other words, they try to protect me in some way. The sailors, for example, are from Cape Verde, they are not Portuguese (...) And they have a strong protective instinct towards me, even beyond the normal" (participant PTSH#15).

Workplace Bullying (moral harassment)

All the above-mentioned violence at work culminated with bullying in the workplace. Sometimes this was preceded by sexual harassment, sometimes by misogynistic behaviour as shown by both participants PTSH#15 and PTSH#14.

[After repealing the Chief Mate's sexual harassment, participant reported the following]: "My Chief Mate, he says, go there and sweep the deck (...) People say, wow, but if you're a practicing pilot, why are you sweeping the hold? Not even the sailors are sweeping the hold, you know?" (participant PTSH#15).

Similarly, participant PTSH#14 reported bullying by her boss which preceded his misogynistic behaviour towards the same participant:

"I had a chief engineer who asked me, **«Why don't you go home and sew your husband's socks?»** To which I replied, **«The day I become a chief engineer, I'll know more than you. Because I can sew socks, and you can't»** ... [after reporting this incident she added] In short: there are stupid people everywhere! (laughter)" (participant PTSH#14).

All the above statements illustrate how the workplace can be a site of oppression, violence and intimidation for women. This is particularly problematic, considering continued access to the labour market is crucial to secure women's survival and economic independence. It becomes obvious that to thrive in a man's world is particularly difficult for women who challenge the traditional social roles assigned to their gender. But the difficulties do not stop here; even when these obstacles are mitigated or overcome, another one emerges: striving for a work-life balance, as shown in the subsection below.

Women at Sea: Maternity

The main reason women in the blue economy transition from sea to land activities is maternity and the desire to build a family. Although participants mentioned different causes, the main reason for the decision was maternity (for women) and prioritising their family and seeing their children grow (for men).. There were secondary causes emphasised; for instance, the hardship of life onboard (psychological and physical challenges which took a toll on seafarers' physical and psychological health); while onboard many participants reported that they missed many key family and social events and holidays and feel disconnected from their family and friends. Nonetheless, the most common cause was maternity/ prioritising family.

Age Barrier: Moving from Sea to Land Activities

"Make it until retirement or break it" (participant PTSH#1).

Interestingly, participant PTSH#1 emphasised that all seafarers, whether men or women, face a decision between 30-35 years old when they decide whether they would prefer to move to land activities or remain at sea. If they choose the latter, usually, they will work aboard until retirement. For the few women who choose to remain at sea until retirement, this can be a life changing moment, when they decide whether they want to start a family or not. This can be seen as sacrificing having children/family and prioritising their career. As participant PTSH#5 mentioned, she knows only one woman who prioritised her career, chose not to have children and remained at sea until retirement.

Although participants PTSH#1, PTSH#2 and PTSH#3 emphasise this choice represents an equal dilemma for men and women, the burden of this choice weighs heavier on women. It is worth noting, as mentioned above (point 3), that although the most important criterion for this decision is related to family and maternity, there are some aspects which do take a toll and are extremely important in making this decision. These include the hardship of livelihood on board – both physical and psychological. Conditions are exceedingly difficult and challenging on board, not only due to challenges emerging from storms and extreme weather conditions but also due to the work conditions – this is not a 9am-5pm job, there are no weekends off, seafarers must be prepared 24/7 while on board. Each seafarer relies on all other members of the crew for their survival, it is a very

demanding environment and stressful at times. It requires courage, resilience, and perseverance. To display these qualities continuously for over 15 or 20 years is quite an achievement, and illustrates that this is not just a career but a lifestyle as all participants mentioned.

Grains of hope or glimmers of hope: How do these preliminary results support the project's goal of fostering women's participation in decision-making?

Navigating the Sameness v Uniqueness Tension

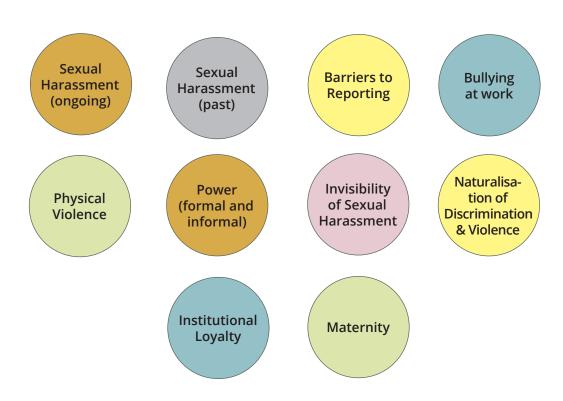
The experiences shared in these interviews highlight the unique challenges and obstacles experienced and overcome by women onboard. They have proven they can do the same job as men, under the same harsh conditions, facing the same extreme weather conditions/ storms. There are no doubts that women do contribute to the blue economy with a positive impact. And yet, they do it while facing particular challenges that only women are aware of, because they are the only ones who experience them. Hence, women are in a unique position to identify these obstacles and offer advice for facing and overcoming such difficulties. Furthermore, the high rate of men who did not wish to participate in this study, showing a lack of interest in these matters, and the fact that the two men who engaged in this study did not 'see' nor seemed to comprehend the particular, multiple and intersecting forms of discrimination and violence

endured by women onboard, highlights how women may contribute uniquely to decision-making in the shipping sector. If privilege is invisible, as is marginalization, it is crucial to put women in strategic, key positions of decision-making to have a positive impact on the lives of other women working onboard. Otherwise, the key issues that affect women will remain invisible. Women in decision-making roles will be able to highlight these difficulties while advocating for women's rights to access and remain in the profession on equal terms and with equal opportunities to men.

Achieving equality is an ongoing process which requires the ongoing contribution of women to the sector across all levels: both on board and in decision-making positions. Based on these women's unique experience while doing the same job as men, it is crucial to have women representing them and voicing their experiences in the decision-making process while fostering gender-sensitive recommendations.

Validation workshop and Key Takeaways

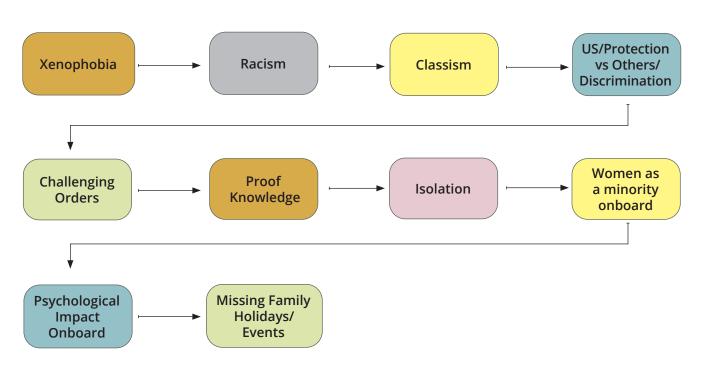
In the validation workshop, which took place on 13th February 2025 (see section 2.4), the Portuguese team shared the key themes emerging from the Portuguese shipping Dataset and how each theme was interconnected, showcasing a constellation of multiple and intersecting oppressions expressed as violence and discrimination (see the two tables below).



Emerging Topics from the Portuguese Shipping dataset

Therefore, the Validation Workshop highlighted the reporting of ongoing and past sexual harassment cases, increasing their visibility in the shipping industry. Furthermore, it emphasised the major barriers to reporting this violence, which allows it to remain invisible.. Additionally, it was noted that typically sexual harassment perpetrators who are rejected will almost instantly engage in behaviour that qualifies as bullying towards their victim by creating a hostile environment, usually involving a character assassination of the victim, leading her/him to quit the job. These bullying cases at work may also involve physical violence; there may also be occasions in which physical violence is not directly related to sexual harassment. Nevertheless, all of these cases are related to formal and informal power dynamics, intertwined with the feeling of entitlement shared among different perpetrators' profiles. The fear of retaliation and vengeance is one of many causes for barriers to reporting, causing such abuses to remain invisible, which is reinforced by the naturalisation of these forms of violence (i.e. one participant mentioned they expected this type of 'resistance'/ backlash to their presence onboard as maritime officers). While some female officers may prioritise their loyalty towards the shipping company they work for over their gender group, some other female officers may choose to prioritise their personal desires, such as starting a family, and hence shift from sea activity towards land activity (see the table below).

Other prejudices reported on board and shared during the Validation Workshop include xenophobia, racism and classism. To examine these prejudices and how they are intertwined with sexual violence and bullying at work, the concept of intersectionality coined by Kimberlé Crenshaw (1989) is useful in exploring the tension Us (who provide protection to 'our group') vs Others (who are discriminated against based on their axes of identity being devalued). These multiple and intersecting forms of discrimination resulted in the challenging of orders made by female maritime officers, who felt that they needed to prove their knowledge and expertise many times more than their male counterparts. Moreover, isolation took a toll on these women, who were often a minority onboard if not the only women onboard. This obviously had an impact on their mental and psychological health, if other factors are considered, such as missing their homes, families and friends or spending holidays and weekends aboard. The job is not just physically demanding, it is also mentally and psychologically demanding, and when considering multiple and intersecting forms of discrimination and violence it is challenging for women to find positive coping mechanisms to address these inequalities, as shown in the table below.



Emerging Topics from the Portuguese Shipping dataset

5.2. Case-Study 2: Cape Verde

Case-Study 2: Cape Verde (Porto Rincão, Santiago Island, and Mindelo, S. Vicente Island)

Cape Verde is a volcanic archipelago of ten small islands and fifteen islets in the Atlantic Ocean off the west coast of Africa with an EEZ of approximately 740,000 km² and a terrestrial area of 4.033 km².

Although fisheries are a vital social and economic national component, contributing to employment and food security - and especially being a SIDS (Ferreira et al., 2021) - the narrowness of the continental shelf limits the exploitable fishing potential (between 33,473 and 46,585 tons), despite the importance of its EEZ. Fishing - essentially artisanal (1363 units against 91 industrial units) and operating in national waters close to the shore - represents between 2 and 3% of GDP for capture

activities and between 7 and 10% of GDP for downstream sectors. The fish processing sector employs around 2,000 workers, more than half of whom are women.

Regarding the shipping industry, in 2022, Cape Verde scored a fleet growth rate of +1.5% with a national flagged fleet of 46 ships with a carrying capacity of 45 thousands DWT, and a fleet ownership of 10 thousands DWT (UNCTAD, 2025b). In 2021, the Seafarer Workforce Report estimated 709 SCTW-certified seafarers for the country (BIMCO/ICS, 2021).

According to the last national census, in 2021, Cape Verde's population stood at 491.233 inhabitants, with 246.363 men and 244.870 women (INE-CV, 2022a).

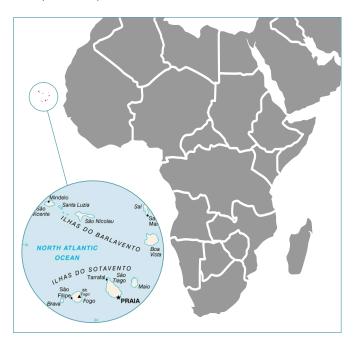
5.2.1. General Context and Country's Profile

Cape Verde represents a compelling geographical and socioeconomic context for examining gender dynamics within marine and maritime labour sectors. This archipelagic nation, first documented by Europeans in 14604, comprises ten volcanic islands situated in the central Atlantic Ocean, between 500 and 850 kilometres west of continental Africa's westernmost point (coast of Senegal) and occupies a strategic position along major north-south Atlantic shipping routes (GlobalEDGE, n.d.). With a land area of approximately 4,033 square kilometres and a resident population of around 491.233, its terrain is mostly rugged and arid, which limits agriculture and freshwater resources throughout its 22 municipalities⁵. Despite these constraints, Cape Verde has achieved relative prosperity and political stability, establishing itself as one of West Africa's most stable democracies since gaining independence from Portugal in 1975 (CIA, 2025). In the aftermath of the independence, Cape Verde established a single-party system, but in 1991 entered a democratic regime which paved the way for growth, development, and stability.

Economic and Maritime Significance

Cape Verde stands among the world's eleven most endangered hubs of marine biodiversity — a fragile jewel in the vast Atlantic. As a Small Island Developing State (SIDS) born of volcanic activity, the country's delicate environmental balance is persistently tested by nature's forces, including extreme weather events, flooding, landslides, earthquakes, and volcanic eruptions. Climate change further deepens this vulnerability, as shifting rainfall patterns, persistent droughts, and soil degradation erode biodiversity, water resources, agriculture, food security, and nutrition. This harsh reality compels Cape Verde to import more than 80% of its food. Meanwhile, limited availability, affordability, and sustainability of water and energy continue to challenge the nation's journey toward socio-economic progress.

Notwithstanding its limited natural resources, Cape Verde has achieved notable economic growth, graduating from Low-Income to Middle-Income status in 2008 (Banque Africaine de Développement, 2010). In 2023, Cape Verde's GDP reached USD 2.53 billion, continuing a positive upward trend observed since the early 2000s. GDP per capita similarly increased to USD 4,851, reflecting steady economic improvement over recent years. The annual GDP growth rate in 2023 was recorded at 5.5% and projected to have risen to 6.1% in 2024, indicating a robust recovery after fluctuations, notably a sharp decline during recent global economic disruptions (World Bank, n.d.). The nation's economy is predominantly service-oriented, with a heavy reliance on tourism, commerce, transport, and public services (about 75% of GDP) (CIA,



⁴ Documented by navigators in the service of the Portuguese crown, the archipelago was under the sovereignty of Portugal for a period of 513 years (1462-1975).

⁵ Data according to the last national census undertaken in 2021 (INE-CV, 2022a, p. 7).

⁶ In 2020, Cape Verde's GDP experienced a significant contraction of 19.3%, primarily due to the COVID-19 pandemic's severe impact on its tourism-dependent economy. This downturn followed three consecutive years of drought, which had already strained the nation's economic resilience. In 2021, the economy began a gradual recovery, achieving a growth rate of 6.8% and 17.7% in 2022 (International Monetary Fund/African Dept., 2023).

2025) and with maritime activities playing a crucial role in its development strategy. Tourism has become the mainstay sector, fuelled by the islands' beaches and culture, while agriculture and fishing constitute a small share of GDP due to the dry climate.

The country annually runs a large trade deficit financed by foreign aid and remittances, as it must import most of its food and consumer goods (national exports in 2024 sat at CVE 7,936 million and imports at CVE 190,434 million)⁷ (INE-CV, 2025, p. 11). Indeed, repeated droughts and poor soil have historically driven emigration and made the nation dependent on external supplies.

This import dependence underscores the critical role of maritime trade and ports for Cape Verde's food security and economic activity. The archipelago's strategic location had long-term economic significance: during the 19th century it was an important coaling and resupply stop for whaling ships and transatlantic shipping lines, which established a foundation for the maritime orientation of its economy. This strategic location has prompted governmental initiatives to transform the archipelago into a maritime and logistics hub in the Atlantic, exemplified by the creation of a Maritime Special Economic Zone centred around São Vicente island (*ZEEM-SV – Zona Económica Especial Marítima de São Vicente*), home to Porto Grande, the country's largest port (International Trade Administration, 2022).

But the country's ambition to draw on the sea to anchor its development isn't limited to these initiatives. Indeed, Cape Verde has been working for at least a decade now to establish the legal, institutional, financial, and business framework necessary to a full transition to a Blue Economy. The implementation of a national strategy for sustainable economic and social development, anchored in the sea and coastal areas, began taking shape in at least in 2015 with the approval of the Charter for the Promotion of Blue Growth in Cape Verde (Carta a favor da promoção do Crescimento Azul em Cabo Verde) (Resolution of the Council of Ministers 112/2015). This process continued in 2020 with the adoption of the Blue Economy Policy Charter (Carta de Política para a Economia Azul em Cabo Verde) (Resolution of the Council of Ministers 172/2020). More recently, in 2021, the Strategic Council for the Sea and the National Strategy for the Sea (ENM - Estratégia Nacional para o Mar 2021-2030) were established.

In 2024, the ENM was updated for the period 2023-2033 and is now the main policy framework for Cape Verde's goal of transitioning to a Blue Economy: "The National Strategy for the Sea for the period 2023–2033 incorporates a strategic vision for developing a sea-based economy. It adopts an ambitious, holistic, and sustainable approach aligned with Cape Verde's key development policy instruments. Anchored in scientific knowledge, the strategy aims to protect the ocean and its resources while promoting and enhancing their sustainable economic use across all dimensions of the Blue Economy" (Resolution of the Council of Ministers 36/2024, preamble).

"The importance of the sea can be measured by its size compared to the land surface. Cape Verde has a coastline of 1,020 kilometres (km), and its Exclusive Economic Zone (EEZ) covers an area of 734,265 km², representing more than 99% of the total territory. In contrast, the land surface covers only 4,033 km²." ENM 2023-2033

Small-Scale Fisheries Sector Profile

With roughly 73 landing sites across the country, fishing activities constitute a primary sector of substantial socioeconomic importance for Cape Verde. They are the basis for most of the country's exports. Indeed, among the products exported in 2024, prepared and preserved fish lead the ranking with 79%, garments occupied second place with 7%, and footwear is third with 3.5%. If we consider other fishing-related categories with residual weight in exports (fishing supplies – 1.5% and fishmeal – 1.1%), the fisheries sector accounted for 81.6% of all national exports in 2024 (INE-CV, 2025, p. 13).

If we focus only on small-scale fishing, though its direct contribution to the country's GDP is usually quite modest8, the truth is that it plays a vital role in strengthening food security, reducing poverty, and creating employment opportunities (González et al, 2020). Fresh fish is a key part of the local diet (about 11.2 kg per capita per year, supplying roughly 12% of animal protein) (Grupo Multissetorial Nacional FiTI de Cabo Verde, 2025) and most of this catch comes from artisanal fishing conducted from small boats in coastal waters. Artisanal fishers, using small vessels and traditional techniques, landed around 3,564 tons of fish in 2023, while a semi-industrial/industrial fleet landed around 4,105 tons (Grupo Multissetorial Nacional FiTI de Cabo Verde, 2025, p. 41). The primary resources harvested through artisanal fishing in 2023 included tuna (1,425 tons), small pelagic species (813 tons), and demersal fish (1,150 tons) (Grupo Multissetorial Nacional FiTI de Cabo Verde, 2025, p. 41). These small-scale fisheries provide significant income to numerous families in fishing communities, particularly in São Vicente-Santo Antão (representing 26.6% of the national population) and Santiago (54%) (González et al, 2020). This makes the sustainable management of marine resources a priority for economic development and food security.

According to the general regime for the management and planning of fishing activities in national maritime waters and high seas (Legislative-Decree 2/2020, article 3°/rr)), in Cape Verde, small-scale fisheries encompass subsistence fishing, artisanal fishing and semi-industrial fishing. Based on the legal definition, subsistence fishing mainly corresponds to harvesting coastal shellfish (González et al, 2020). Artisanal fishing is predominantly a coastal activity carried out by small vessels ranging from 3.5 to 8 metres in length, which may or may not be motorised. Semi-industrial/industrial fishing involves larger vessels measuring between 9 and 26 metres in length⁹, equipped with internal engines and typically using various fishing methods.

⁷ Using the exchange rate 1 EUR~110.265 CVE, exports were approximately €72 million and imports around €1,727 million.

⁸ But this may be underestimated due to the informality of the sector.

⁹ Semi-industrial vessels are set around 11 meters and industrial boats at about +/- 20 meters. Nevertheless, the distinction between semi-industrial and industrial fishing has not yet been clearly established within Cape Verde's official statistical system, meaning data for these categories are not separately reported. Additionally, the fleet classified as industrial in Cape Verde is not usually considered large-scale fishing in other settings, so it might be considered aggregated within small-scale fisheries in several instances here.

According to the 5th General Fisheries Census 2021, the small-scale fisheries sector has a total of 1.590 vessels. While the semi-industrial/industrial fleets (127 vessels) are numerically smaller than the artisanal fleet (1.463), they account for more than 50% of national catches (Grupo Multissetorial Nacional FiTI de Cabo Verde, 2025, p. 38). This distribution reflects both the development of the semi-industrial fleet and increased market demand, particularly as local canneries have expanded production capacity for small pelagic fish and tunas (González et al, 2020).

Shipping Sector Profile

As an island nation, Cape Verde is heavily dependent on shipping for trade, inter-island transportation, and connectivity to the world. Maritime transport is the lifeline that connects the nine inhabited islands via ferry services and connects the country internationally for both imports and exports. Given the limited domestic production, Cape Verde relies on imports for fuel, food staples, and manufactured goods. These goods arrive almost entirely by sea. Efficient port infrastructure and shipping services, therefore, are crucial for market stability, price management, and socio-economic advancement.

Historically, since the arrival of the Portuguese, Cape Verde's strategic geographic position along Atlantic shipping routes has significantly shaped its settlement and development. Nevertheless, despite this strong maritime tradition and strategic potential, maritime transportation remains a considerable obstacle to development due to persistent infrastructural and operational limitations (Almeida, 2018).

The national port infrastructure encompasses nine ports located on all inhabited islands. Porto Grande in Mindelo

(São Vicente), Porto da Praia (Santiago), and Porto da Palmeira (Sal) handle the highest volumes of goods traffic (UNESCO-IOC, 2021). Porto Grande and Porto da Praia, specifically, are capable—albeit with certain operational constraints—of accommodating large vessels and managing containerised cargo operations. However, Cape Verde still lacks deep-water port facilities, limiting its capacity to receive the largest international shipping vessels (Almeida, 2018).

Inter-island shipping, facilitated through ferries and small cargo vessels, is crucial for internal market integration, enabling the flow of passengers and goods, including vital supplies like agricultural products from Santo Antão island to São Vicente. The highest passenger traffic occurs between Porto Grande (São Vicente) and Porto Novo (Santo Antão), reflecting significant economic exchanges and the absence of alternative means of transportation (Almeida, 2018).

As of 2021, Cape Verde's ports handled approximately 6801 ships, of which 1119 were long-haul vessels, while 5682 operated as domestic cabotage vessels. Additionally, around 1,088,882 passengers travelled through the country's ports. From 2019 to 2021, Cape Verde's main shipyard carried out repairs on 183 vessels, averaging about 61 ships annually.

Currently, the maritime sector is supported by 24 registered vessel owners operating a total of 31 commercial vessels. Of these, only eight companies actively provide inter-island (cabotage) services¹⁰. Most vessels are significantly aged, with an average age of 35.6 years, rising to 43.6 years if the two newer ships, Kriola and Liberdadi (each four years old), are excluded (Almeida, 2018).



¹⁰ Including Naviera Armas Cabo Verde, Cabo Verde Fast Ferry, Sociedade de Transportes Marítimo, Tuninha – Transporte Marítimo, Polar Lda., Abílio Francisco Silva Lda., Cabo Verde Marítima Lda., and Sociedade Bini Line Lda.

As of 2023, the national flagged merchant fleet included 43 ships (40 thousand DWT) while national fleet ownership sat at 10 thousand DWT. General cargo and other types of ships made the majority of the carrying capacity of the fleet (36.1 thousand DWT) with oil tankers meeting the remaining 4.3 thousand DWT of the national fleet (no bulk carriers or container ships). As for seafarers, the total sat at 709, corresponding to 0.03% of the world share of officers' supply and 0.04% of ratings (UNCTAD, 2025b).

Cape Verde's ports stimulate related maritime sectors, including bunkering (ship refuelling services), logistics, fisheries, marine insurance, and ship repairs, highlighting the sector's broader economic significance (UNESCO-IOC, 2021).

To support its maritime activities, Cape Verde has developed inland transportation systems that connect key service points with major container ports. The country's inland services facilitate the movement of goods through barge and truck transportation modes (Maersk, n.d.).

The maritime transport and shipping sector in Cape Verde is regulated through a structured legislative framework intended to align domestic maritime operations with international standards and best practices. At the core of this regulatory structure is the Maritime Code of Cape Verde (CMCV-Código Marítimo de Cabo Verde), first established by Legislative Decree 14/2010, 15.11.2010, which integrated principles drawn from several international maritime conventions and maritime codes of other countries, including Spain, Sweden, Croatia, and the Community Code of Merchant Shipping (CEMAC-2001). The development of the 2010 Maritime Code was influenced significantly by organisations such as the International Maritime Organisation (IMO), the United Nations Conference for Trade and Development (UNCTAD), and the United Nations Commission on International Trade Law (UNCITRAL). In 2023, a major revision to the Code was executed, with a new code approved by Law 24/X/2023, 05.05.2023, incorporating the results of the evaluation made to more than 10 years of enforcement of the previous code. As stated in its preamble, "several aspects needed to be revised in order to better adapt to the regime of the United Nations Convention on the Law of the Sea, of 1982 (UNCLOS) (...). Others, such as maritime administration, also lacked a modernizing overhaul. (...) It was time (...) to draw up a new Code that would also modernise many other aspects of great relevance to the economic activity linked to the sea".

Additional key legal instruments governing the maritime sector include:

- Ordinance 21/2020, 28.05.2020, regulating the issuance of maritime identity documents (cédula marítima).
- Ordinance 7/2018, 01.03.2018, defining procedures for medical examination and certification for seafarers.
- Ordinance 2/2017, 10.01.2017, regulating training, certification, and watchkeeping requirements, implementing the Manila amendments to the STCW Convention.
- Ordinance 41/2016, 23.12.2016, outlining the regulations on categories and duties of maritime workers.

- Decree of the Council of Ministers 2/2013, 11.10.2013, ratifying the 2010 amendments to the STCW Convention (Manila amendments).
- Ordinance 34/2001, 09.07.2001, establishing physical fitness requirements for maritime workers.
- Ordinance 25/2001, 02.07.2001, approving regulations on maritime training courses, examinations, internships, and certification.

A special professional legal regime for seafarers has been a long-discussed demand by workers and sector labour unions, especially concerning retirement, social security protection, wage status and precariousness. Nevertheless, the government, while promising to send the proposed statute to parliament soon, has not yet reached a deal with the main stakeholders who claim to have been waiting for more than 30 years now (Africa-Press, 2025; RTC - Rádio Televisão Caboverdiana, 2024a; RTC - Rádio Televisão Cabo-verdiana, 2025).

Being a member of the International Labour Organisation (ILO) since 1979, Cape Verde has ratified, in 2015, ILO's Maritime Labour Convention (MLC, 2006) and has accepted 3 of its 4 posterior amendments.

Cape Verde has also been a member of the International Maritime Organisation since 1976, and has ratified several of its conventions, including the SCTW Convention 78 (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers) and the Manila Amendments, but not the SCTW-F Convention 95 (International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel) applicable to fisheries.

Institutional Ecosystem

The current institutional ecosystem governing the maritime and marine sectors in Cape Verde includes several key entities.

The Ministry of the Sea (Ministério do Mar) oversees central services for policy formulation, execution, and inspection, including the National Directorate for Ocean Policy (Direção Nacional de Política do Mar), the National Directorate for Fisheries and Aquaculture (Direção Nacional de Pesca e Aquacultura), and the General Inspectorate of Fisheries (Inspeção Geral das Pescas). Complementing these bodies, advisory roles on maritime and fisheries policies are performed by the Strategic Council for the Sea (Conselho Estratégico do Mar) and the National Fisheries Council (Conselho Nacional das Pescas).

The Port Maritime Institute (*IMP – Instituto Marítimo Portuário*), created by Decree-Law 38/2018, as heir to the former Port and Maritime Agency (*AMP – Agência Marítima e Portuária*), is responsible for implementing and executing maritime and port sector policies.

All ports in Cape Verde are state-owned and managed by the national port authority ENAPOR (*Empresa Nacional de Administração dos Portos*).

Shipbuilding and repair services are provided by CABNAVE (*Estaleiros Navais de Cabo Verde*), Cape Verde's principal shipyard.

The creation of the Maritime Special Economic Zone centred around São Vicente island (ZEEM-SV) has significantly changed the institutional landscape of the marine and maritime public sector (even headquartering the Ministry of the Sea in São Vicente since 2018). As a major part of this strategy, a Sea Campus (*Campus do Mar*) (Resolution 73/2018; Decree-Law 1/2020) was established in São Vicente encompassing the *Universidade Técnica do Atlântico, Escola do Mar* and the *Instituto do Mar*.

The Sea School (EMAR - Escola do Mar) was created (Decree-Law 2/2020) as one of the means of implementing the Cape Verdean government's strategy to capitalise on the country's Atlantic centrality in the implementation of the ZEEM-SV. Its main objective is to develop and implement modular basic training and professional technical courses in the fields of the sea, maritime economy and related areas. Being a public entity within the perimeter of the State's Corporate Sector, it is supervised by the Ministry of the Sea and the Ministry of Finance. Although it was created in 2020, it holds some history (Escola do Mar, 2024, pp. 15-16) since its origins may be traced to the creation in 1984 of the Nautical Training Center (CFN - Centro de Formação Náutica) also known as Mindelo's Nautical School (Escola Náutica do Mindelo) which initiated the certified training of seafarers according to the STCW Convention. In 1996, the CFN was transformed into the Institute of Engineering and Marine Sciences (ISECMAR – Instituto Superior de Engenharias e Ciências do Mar) and maritime training transitioned to the new educational entity up until its closure in 2008. Following this, maritime training was taken over by the newly inaugurated Cape Verde University (Uni-CV - Universidade de Cabo Verde) until the creation of the Atlantic's Technical University (*Universidade Técnica do Atlântico*) (Decree-Law 53/2019) with its Institute of Engineering and Marine Sciences (new ISECMAR-UTA) and EMAR itself. Currently, EMAR oversees modular and professional maritime courses, while ISECMAR-UTA is responsible for maritime higher education¹¹. Drawing on the severe global shortage of seafarers, these training institutions explicitly position themselves in order to contribute to this well-known problem in the sector, offering certification in accordance with the STCW Convention.¹²

While EMAR¹³ is in charge of technical and professional education and ISECMAR-UTA is in charge of higher education, the triple structure of the Campus do Mar is completed by the scientific research mission pursued by the Sea Institute (*IMar - Instituto do Mar*), which focuses on oceanography, water resources, marine biology, climate and atmospheric studies. It hosts, among other infrastructures¹⁴, the Ocean Science Centre Mindelo (*OSCM - Centro Oceanográfico do Mindelo*) in partnership with GEOMAR – Helmholtz Centre for Ocean Research Kiel.

IMar is a public institute which stemmed from the reorganisation, in 2019, by Decree-Law 40/2019, of the National Institute for the Development of Fisheries (INDP – Instituto Nacional de Desenvolvimento das Pescas)¹⁵, and in addition to the aforementioned research attributions it also focuses on the development of fishing technologies and fisheries statistics, being a Delegated Entity to the National Statistical Institute (ODINE – Órgão Delegado do Instituto Nacional de Estatística).

Civil society also plays a vital role in governing Cape Verde's maritime and fisheries sector, notably through organisations such as the Cape Verdean Association of Fishing Vessel Owners (Associação Cabo-verdiana dos Armadores da Pesca), various fishermen and fishmongers' associations and cooperatives, and the Maritime Workers' Association of Cape Verde (Associação dos Marítimos de Cabo Verde), which collectively ensure representation, stakeholder engagement, and advocacy within the sector.

Population, Gender and Labour Market

Cape Verde has a very young population: the median age of the resident population is 27 at national level, a little higher for women (28 compared to 27 for men) (INE-CV, 2022a, p. 10).

If we take a look at the general population structure, the urban population is 346.106 (74.1% of the total population), with the percentage of women living in urban areas higher than that of men (50.2% for women and 49.8% for men). In rural areas, the resident population is 127.127 (25.9% of the total population), and the percentage of men is higher than that of women (51.1% for men and 48.9% for women) (INE-CV, 2022a, p. 9).

The femininity ratio (FR) at the national level is 99 women per 100 men. In urban areas, this ratio rises to 101 women per 100 men, while in rural areas, it drops to 96 women per 100 men. This indicator further reveals that women outnumber men in all municipalities on Santiago Island, whereas in the other municipalities, men outnumber women (INE-CV, 2022a, p. 10).

A very important set of indicators to contextualise our research pertains to family and civil status. Considering the resident population over 12 years old, most are single (44.5%) while only 12.5% are married, and 29.4% are living in *união de facto* (cohabitation). The remainder are separated (10.2%) and divorced or widowed (3.4%) (INE-CV, 2022a, p. 11). It is thus clear that formalised civil marriages are not the norm in Cape Verde when it comes to starting a family. Interestingly, there are relevant differences regarding gender: among women, the percentages corresponding to living in *união de facto* and separated are higher compared to men (30.3% versus 28.5% for cohabitation, and 11.3% versus 9.1% for separation,

¹¹ Offering relevant degrees to the development of the maritime sector, such as the 4-year Degrees in Nautical Sciences and in Marine Machinery Engineering.

¹² See, e.g., the Curriculum Plan for the Degree Course in Marine Machinery Engineering - Study Cycle Accreditation and Registration Process, and the Curriculum Plan for the Degree Course in Nautical Sciences - Study Cycle Accreditation and Registration Process, UTA/ISECMAR

¹³ Which also has a delegation in Santiago Island.

¹⁴ As the Center for Marine Biology and Environment (*Centro de Biologia Marinha e Ambiente*) and the Aquaculture and Fisheries Center (Centro de Aquacultura e Pescas)

¹⁵ Which was itself the result of a previous reorganisation of the research sector, in 1992, by merging the former National Institute of Fishing Research (INIP – Instituto Nacional de Investigação Pesqueira) and the Institute for the Promotion of the Development of Artisanal Fishing (IDEPE – Instituto de Promoção do Desenvolvimento da Pesca Artesanal). These two institutions, created in 1986, were heirs to the first entity with specific goals of scientific research in the country's public sector, the Maritime Biology Directorate (Direcção de Biologia Marítima) created within the Fisheries State Secretary (SEP – Secretaria de Estado das Pescas), in 1983.

respectively). Regarding widowhood, the percentage is 4.5% among women, compared to less than 1% among men (INE-CV, 2022a, p. 12). Thus, while more women than men live in *união de facto*, women also outnumber men among those who are separated and widowed.

Turning our attention to data and indicators pertaining to gender equality, it is important to note that Cape Verde currently sits at 6th (out of 35 countries) in the Sub-Saharan Africa region and at 41st globally (out of 146 countries) of the 2024 Global Gender Gap ranking by the World Economic Forum (World Economic Forum, 2024, pp. 12, 26).

Indeed, this is an honourable position region-wise, and Cape Verde has achieved substantial progress in gender equality over recent decades. Illiteracy is nearly eliminated, access to prenatal care is almost universal, and maternal mortality has notably decreased from 125 deaths per 100,000 live births in 2000 to 42 in 2020, significantly below regional averages¹⁶. The fertility rate also sharply declined from around 7.0 in 1973 to 1.9 in 2021. Additionally, intimate partner violence against women (ages 15–49) decreased from 22% in 2005 to 11% in 2018 (Magalhães et al., 2024, p. 7).

Despite these advancements, several challenges remain. Teenage pregnancy is still significant, affecting 16% of adolescents (ages 15–19) in 2018 (INE-CV et al., 2020). Women disproportionately face mental health issues and barriers accessing healthcare, particularly financial limitations (reported by 73% of the poorest women) (INE-CV et al., 2020).

Life expectancy for women surpasses men's by 8 years, one of the largest gaps in the region. Women's longer lifespan contrasts with their lower retirement age (60 years vs. men's 65 years), leading to lower pensions.

Nearly half (49%) of Cape Verdean households are femaleheaded, the highest proportion among Sub-Saharan African countries. Female-headed households, often single mothers living with children and extended family (INE-CV, 2018), are linked to persistent informal polygamy practices and male emigration.

National poverty rates decreased from 35.2% in 2015 to 28.1% in 2022 (Magalhães et al., 2024, p. 7), though women and rural households remain particularly vulnerable.

Female labour force participation is lower (50.4%) compared to men (65.5%), dropping significantly in rural areas (33.8%) (INE-CV, 2023a).

The labour market in Cape Verde is largely characterised by informality, with 53.8% of jobs in the informal sector (57.2% male, 49.6% female) (INE-CV, 2023a). Informality is especially prevalent in rural areas, employing 73.3% of the workforce (67.6% female, 76.8% male), while urban areas employ 48.7% informally (45.9% female, 51.3% male). Women in informal activities typically work independently without employees, making them highly vulnerable due to lack of social security registration or higher self-employed contributions (19.5%) (Republic of Cabo Verde et al., 2024).

Employment sectors differ by gender: men predominantly work in construction (22%) and agriculture (15%), while women mainly engage in trade, hotels, restaurants, public administration, defence, social security, education, and domestic employment (together representing 69.3% of female employment), reflecting occupational gender stereotypes.

Nevertheless, most Cape Verdeans (81,5%) reject prioritising men for employment in times of job scarcity (Afrobarometer, 2025, p. 75).

The women's unemployment (14.0%) rate exceed the men's (10.3%) (INE-CV, 2023a), and for income, 49% of women rely primarily on their own work, compared to 70% of men. Women also significantly depend on family support (27%), pensions (8%), retirement (8%), and remittances (4%). Property ownership rates are similar for both genders: approximately 81.5% of women and 83.6% of men (ages 15–49) do not own a house, while 91.8% of women and 86.3% of men do not own land (INE-CV, 2020).

Women spend nearly three times more hours on household care tasks and twice as much on household chores as men. Girls ages 5–14 already dedicate 40% more time to caregiving compared to boys. Conversely, men spend about 35% more time in paid work (INE-CV, 2023a).

Most Cape Verdeans (92%) agree women should have equal political opportunities (Afrobarometer, 2025, p. 75) and indeed, thanks to investments in education and health, Cape Verde has made progress on gender equality in white-collar professions and public service – for example, women hold 38.9% of seats in the national parliament (as of 2024) and enjoy near parity in education enrolment (AfDB & UN Women, 2018). In managerial roles, women's participation (around 45–51%) varies across sectors but significantly decreases in rural areas (14.8%) (INE-CV, 2023b).

However, as we already seen, traditional gender segmentation of the labour market is still evident, and sectors such as agriculture and fishing remain male-dominated (roughly 65% of workers in agriculture/fisheries are men, 35% women) (AfDB & UN Women, 2018), and an even smaller share of women (under 7%) are found in transport and maritime-related occupations (AfDB & UN Women, 2018). This indicates that while women are active in the economy, they are underrepresented in the maritime industries of interest in this study – namely, shipping and fisheries.

Small-scale fisheries: According to the 5th General Fisheries Census 2021, the total number of fishers in small-scale fisheries was 5097 for both artisanal and semi-industrial/industrial. From this cohort, only 6 individuals were women, working in artisanal fishing. Most fishermen work in artisanal fishing (4056) while 1035 work in semi-industrial/industrial settings.

Shifting our attention to the broader labour ecosystem, data reveals that there are 55 women who own boats (armadoras), but the vast majority are men (1395). In contrast, only 263 men are fish sellers while there are 1686 women marketing the catch from small-scale fisheries.

¹⁶ West Africa: 733: Sub-Saharan Africa: 536: lower-middle-income countries: 255.

Finally, fish processors are accounted for with 128 men and 7 women. Most probably, due to the strong presence of informality in the sector, these figures fall short of reality, but nevertheless they depict a solid pattern of gender distribution corroborated all across the literature.

Shipping: The shipping industry – including seafaring crews, port workers, and maritime administration – has historically been a male preserve in Cape Verde. Well into the late 20th century, it was virtually unheard of for a Cape Verdean woman to serve as a ship's officer or sailor. Women's participation in the general transport sector (which encompasses shipping) has been extremely low (only about 6.8% female) (AfDB & UN Women, 2018). Jobs such as ship captain, engineer, dockworker, or navy coast guard were traditionally filled by men. However, this gender landscape has started to change in recent years.

The development of training and certification for seafarers (currently, EMAR and ISECMAR-UTA) has been a relevant enabler to supply needed workers with 700 individuals trained by EMAR in 2024 and 900 expected for 2025 (Africa-Press, 2025).

Gender Equality and the Legal and Policy Frameworks

Cape Verde's legal and policy landscape has progressively evolved to promote gender inclusion, including in the marine and maritime domains.

The country's Constitution¹⁷ and laws uphold the principle of gender equality, and the Constitution includes several specific provisions about women's protection and anti-discrimination, attributing to the State the task of "progressively removing the economic, social, cultural and political obstacles that prevent real equality of opportunities between citizens, especially the factors that discriminate against women in the family and in society" (article 7(e)). It also states that "for equal work, men and women receive equal pay" (article 61), and, interestingly, it introduces a specific limitation on the right of freedom of expression by "the duty to: not advocate violence, racism, xenophobia or any form of discrimination, particularly against women" (article 47(5)), introducing as well the mandate for legal assurance of working conditions that facilitate the exercise of women's maternal and familiar function (article 62(5)).

Cape Verde has ratified international conventions such as the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)¹⁸ and it has been reporting periodically under Article 18 of the Convention to the CEDAW Committee since 2005, currently waiting for the Committee's concluding observations to its Tenth Periodic Report submitted in 2023 (UN Treaty Body Database, n.d.). The adoption of the 1995 Beijing Declaration and Platform for Action, at the UN 4th World Conference on Women,

with its national-level 5 yearly implementation reviews and follow-up has also been an important enabler to Cape Verde's gender equality public policies (Republic of Cabo Verde et al., 2024; Republic of Cabo Verde & Cape Verdean Institute for Gender Equality and Equity, 2019; Republic of Cabo Verde & Cape Verdean Institute for Gender Equality and Equity, 2014). The ratification, in 1993, of the UN International Covenant on Economic, Social and Cultural Rights has also been a driver to the enhancement of the country's international commitment to fight discrimination against women as procedures on national reports are assessed and implementation reviewed (initial report presented in 2017 and second periodic report presented in 2023) (UN Treaty Body Database, n.d.). The country also ratified, in 2005, the 2003 Protocol to the African Charter on Human and Peoples' Rights (also known as Banjul Charter) on the Rights of Women in Africa.

Domestically, the Cape Verdean Institute for Gender Equality and Equity (ICIEG - Instituto Cabo-Verdiano da Igualdade e Equidade de Género) was established in 1994 to advance gender equality policies. This institutional achievement allowed the country to be present at the 1995 Beijing World Conference which indeed contributed to the elaboration of the first National Action Plan for Women (1996-2000). Since then, there have been updated editions of what is now called the National Gender Equality Plan (PNIG – Plano Nacional de Igualdade de Género)¹⁹ which have been operationalised by the Strategic Plans for Sustainable Development (PEDS - Plano Estratégico de Desenvolvimento Sustentável)²⁰. There is currently also a Gender Equality and Equity Program (Programa de Igualdade e Equidade de Género) enshrined in PEDS II. In 2018, an Interministerial Commission for Gender Mainstreaming (Comissão Interministerial para a Transversalização da Abordagem de Género - Comissão de Género) was established to support the intersectoral coordination work pursued by ICIEG.

The National Statistical Institute (INE-CV – Instituto Nacional de Estatística) has also been an enabler for gender equality policies since it produces gender-disaggregated statistical information. In collaboration with the UN Women of Cape Verde²¹ and the ICIEG, in 2012 the INE-CV created the Gender Observatory of Cape Verde (Observatório de Género de Cabo Verde) to help disseminate data and information connected with gender equality based on a National System of Gender Indicators (Sistema Nacional de Indicadores de Género).

Although the Observatory now seems to have paused its activities, INE-CV still continues to produce its reports on Gender Statistics in collaboration with the ICIEG, an exercise that began in 2003 and contributed to the elaboration of the National Plan for Gender Equality and Equity (PNIEG – Plano Nacional de Igualdade e Equidade de Género)²², in 2005. The latest report was published in 2024 under the general theme Women and Men in Cape Verde, Facts and Numbers, 2024 (Mulheres e Homens em Cabo Verde, Factos e Números, 2024), which was also the 30th anniversary of ICIEG.

¹⁷ Approved by Constitutional Law 1/IV/92, 25/09/1992.

¹⁸ Ratified by Cape Verde in 1980.

¹⁹ Currently in force is the PNIG 2021-2025 approved by Resolution 1/2022, 05/01/2022.

²⁰ PEDS I (2017-2021) and PEDS II (2022-2026).

²¹ Which functioned as a resident UN agency in the country up until 2020 (Ribeiro, 2020).

²² PNIEG (2005-2011).

Under the PNIEG 2005-2011, a National Plan to Combat Gender-Based Violence (*PNVBG – Plano Nacional de Combate à Violência Baseada no Género*) was approved in 2007 and implemented in the period 2007-2009, culminating in the publication of a Law on Gender-Based Violence in 2011 which establishes measures to prevent and repress the crime of gender-based violence (Law 84/VII/11).

As provided for in the National Gender Equality Plan, gender mainstreaming is encouraged across all sectors of government. To complement and ensure the effective implementation of gender mainstreaming, gendersensitive budgeting was approved in 2019, enshrined in the law which establishes the Bases of the State Budget and determines the use of public goods and resources in an equitable manner for both sexes, by making it compulsory to draw up and implement gender-sensitive budgets (Law 55/IX/2019).

2019 was also the year in which the so-called Parity Law (*Lei da Paridade*) was approved (Law 68/IX/2019). The law covers both parity in political representation in eligible positions and leadership positions in the Public Administration, establishing a minimum representation of 40% for each of the sexes on the lists of candidates for the collegiate bodies of political power (article 4). According to article 7, Boards of Directors and other appointed positions in Public Administration, Public Enterprises, State-owned Enterprises, and Public Institutes must have equal representation.

Regarding gender and labour law, is important to note that Cape Verde has ratified the ILO's (International Labour Organisation) Equal Remuneration Convention 100 of 1951 (ILO, n.d.-a) and the Discrimination (Employment and Occupation) Convention 111 of 1958 (ILO, n.d.-b). At the national level, the Labour Code (Código Laboral Cabo-verdiano) contains provisions to protect women workers, including guaranteeing equal pay for equal work and mandating 90 days of maternity leave for working mothers²³, although enforcement in informal sectors remains a challenge. It is precisely due to difficulties in enforcement that ILO's Supervisory Committee on Convention no 100 stated, in an Observation procedure adopted in 2023, that "article 62 of the Constitution and section 16 of the Labour Code are not sufficient to ensure the full application of the principle enshrined in the Convention which is fundamental to tackling occupational gender segregation in the labour market, as it permits a broad scope of comparison, including, but going beyond equal remuneration for "equal", "the same" or "similar" work, and also encompassing work of an entirely different nature which is nevertheless of equal value" (ILO, 2024).

While these frameworks are not specific to fisheries or shipping, they provide an enabling environment for sector-specific measures.

In the fisheries sector, recognising the marginalisation of women in small-scale fisheries, the government—in partnership with the Food and Agriculture Organisation of the United Nations (FAO)—formulated a National Gender Strategy for Fisheries (Estratégia de Género para o Sector das Pescas 2022-2026), launched in 2022 (one of the first of its kind in Africa) (FAO, 2024). This strategy aims to empower women in fisheries by formalising their rights and improving working conditions. It was developed through a participatory process involving female fish workers and has been endorsed at the highest levels (Ministry of the Sea and Ministry of Family, Inclusion and Social Development) (FAO, 2024). The strategy addresses issues such as access to credit for women fish vendors, training and capacity building, inclusion of women in fisheries cooperatives and decision-making bodies, and reforms to labour regulations to extend social protection to informal fish processors and traders.

For the shipping sector, there is no targeted gender-specific policy so far, but of course general labour laws and gender equality policies apply. Women seafarers and port workers are protected by the same labour regulations as men, and any discrimination in hiring or pay is legally prohibited (though data on enforcement is scarce). Repercussions of the gender equality programs and campaigns to attract women into seafarer crews promoted by international organisations of the maritime sector are, nevertheless, slowly being echoed by some public interventions (Presidência da República de Cabo Verde, 2022a; Presidência da República de Cabo Verde, 2022b), but it is fair to say that the specific discussion of the participation of women in shipping is not yet underway.



²³ The initial 60 days of maternity leave was extended by a revision to the Labour Code (Law 32/X/2023, 04/08/2023) in order to harmonize it with the public sector (Law 20/X/2023, 24.03.2023). The 2023 changes to the Labour Code also introduced a paternity leave of 10 days and the right of the woman worker to breastfeed for 2 hours a day during the first six months after the child's birth.

5.2.2. Presentation of Research Sites

Porto Rincão: a Coastal Community on Santiago Island, Cape Verde

The research into the small-scale fisheries sector in Cape Verde, which, as in Portugal, was conceptually and methodologically centred around the notion of «community», was carried out in Porto Rincão, also known simply as Rincão.

This section aims to present a characterisation of Porto Rincão to provide adequate context to the report on the fieldwork and its research findings.



Santiago Island

Rincão is a small settlement located on the western coast of Santiago Island, positioned approximately 70 kilometres northwest of Praia, the capital city of Cape Verde. This relative isolation has contributed to preserving the community's traditional character while simultaneously presenting challenges for economic development and service provision.



Northwest part of Santiago Island (Assomada area)

Situated approximately 6 kilometres southwest of Assomada, the village occupies a very isolated position near the westernmost point of the island.

The history of Porto Rincão is inextricably linked to the broader narrative of Santiago Island and the Cape Verde archipelago. Portuguese explorers arrived at the uninhabited island of Santiago in 1460, and by 1462, it became the site of the first permanent European settlement in sub-Saharan Africa. This initial settlement, known as Ribeira Grande (now Cidade Velha), quickly rose to prominence as the first European city established in the tropics. Santiago's early significance laid the foundation for the development of communities across the island, shaping their trajectories through centuries of colonial influence up until the country's independence from Portugal in 1975.



Coastal area of Porto Rincão

A defining aspect of Santiago's history is its central role in the transatlantic slave trade. Ribeira Grande served as a major hub for the trade of enslaved Africans, profoundly impacting the demographic and economic landscape of the island. The forced migration of people from West Africa led to a unique cultural fusion with the European settlers, the echoes of which continue to resonate in the traditions and social structures of communities throughout Santiago, including Porto Rincão.



Porto Rincão

The landscape surrounding Porto Rincão is characterised by a rugged coastline featuring spectacular cliffs. Notably, Porto Rincão boasts a beautiful black sand beach, a distinctive feature likely formed by the volcanic origins of the island. The area near Porto Rincão includes endemic Cabo Verdean acacia trees and a relatively flat plateau extending along the coastline. The presence of canyons in the vicinity further highlights the dramatic geological formations.



Porto Rincão - settlement and anchorage areas

Coastal settlements on Santiago have long been associated with maritime activities, providing livelihoods and shaping the social fabric of these communities, just as is the case of Porto Rincão. The name "Porto Rincão" is in itself a description of the cornered shape of its anchorage and it also underscores the fundamental relationship between the community and the sea. The community celebrates the feast of São Pedro, who is traditionally considered the patron saint of fishermen, highlighting, once again, the importance of fishing to the local identity and way of life (RTC - Rádio Televisão Cabo-verdiana, 2023).

Porto Rincão is part of the administrative municipality of Santa Catarina which is the third most populated in the country with 7.5% of the total resident population, right after Praia (29.6%) and S. Vicente (15.4%). As of 2023, Santa Catarina had 38,369 individuals, 52.7% being women and 47.3% being men. This corresponded to 13.5% of the total resident population in Santiago. The average age of the population is of 29.3 years old, and the most represented age group was that of 0-14 years. The unemployment rate in Santa Catarina was 17.5% (15.8% for women and 19% for men), already one of the highest in the country, but the population between 15-24 years had a much higher unemployment rate of 37.8%. In 2021, there were 16,320 living in rural areas of the municipality. In Santa Catarina, the percentage of jobs classified as informal is as high as 64.8%.

Focusing on the available data specifically about Rincão, it has a total resident population of 1210 people, distributed across 279 households. Among these households, a significant majority (174) are headed by women, compared to 105 headed by men. Nevertheless, and interestingly, the gender distribution of the total resident population indicates a balance with 615 men and 595 women. The demographic breakdown indicates a relatively young population, with 418 individuals aged 0-14, 741 aged between 15-64, and only 51 aged 65 or older.

The settlement of Rincão encompasses several smaller locations ('lugares'): Baixo La, Riba Chã, Chão di Tamarino, Sobrado, Selada, and Achada Baixo. Among these, Riba Chã is predominant, containing a population of 1,052 people with 243 households, accounting for the vast majority of Rincão's overall population. The other locations have much smaller populations, ranging from just 5 to 128 inhabitants, clearly positioning Riba Chã as the central and most densely populated area within the settlement of Rincão.²⁴ These figures demonstrate that Porto Rincão is a relatively small settlement when compared to the island and even its encompassing municipality.

Recent reports indicate that locals in Porto Rincão have expressed concerns about limited employment opportunities in the community. They have specifically requested more job opportunities and the installation of a police station, and also better sanitation and waste collection, suggesting that both economic development and security are significant concerns for the local population (RTC - Rádio Televisão Cabo-verdiana, 2023; RTC - Rádio Televisão Cabo-verdiana, 2021).

Notwithstanding these pronounced difficulties, a major transformation has occurred in Porto Rincão with the redevelopment of its coastal area. This project, which began in 2020 and was completed in August 2024, has modernised the waterfront area (T. Ribeiro, 2024). It was a redevelopment project which introduced several amenities and infrastructure improvements that are likely to help revitalise the village, giving it a touristic outlook (RTC - Rádio Televisão Cabo-verdiana, 2024b). Indeed, Porto Rincão, with its black sand beach and volcanic cliffs, possesses natural attractions that could draw both local and potentially foreign visitors. The presence of at least a restaurant in the village and some investment in accommodation to rent indicates nascent tourism-related economic activity (Paulo Cacela, 2022).

A notable aspect of the coastal redevelopment project was the inclusion of two monuments that honour important aspects of local history. One was a memorial to the victims of a tragedy in 1986 that shocked the community. The other was an evocation of Mamazinha Ferreira, the woman who dared to go out into the ocean to fish by herself to provide for her family.

"Mamazinha Ferreira, a native of Rincão, dedicated her life to fishing and became known for her courage and bravery" ²⁵

²⁴ All data according to INE Census 2021 (INE-CV, 2022b) and IMC 2023 (INE-CV, 2024).

²⁵ Original: "Mamazinha Ferreira, natural de Rincão, dedicou a sua vida à pesca e ficou reconhecida pela sua coragem e bravura" (Expresso das Ilhas, 2019).

Mindelo: A Hub at the Forefront of the Sea and Blue Economy



São Vicente Island

Fieldwork research on the shipping sector in Cape Verde was, except for one interview, conducted in Mindelo. Although this site doesn't itself constitute an analytic unit such as the Rincão community, the fact that the dataset stemmed from this specific location speaks to its own relevance to the shipping industry. Indeed, women seafarers and key informants from the public sector, academy, and corporate settings were all «found» in the capital of the island of São Vicente; this alone justifies a very brief characterisation of the site which simultaneously may help explain why this circumscription occurred.

Mindelo stands as a testament to the profound connection between a city and the sea. Often referred to as the cultural capital of Cape Verde (CapeVerdelslands, n.d.), Mindelo boasts a rich heritage influenced by its history as a crucial port city. Founded by the Portuguese in 1793, Mindelo is the second-largest city in Cape Verde, after the nation's capital, Praia (Delgado, 2016, pp. 25, 35).

Mindelo is strategically located on the northern part of the island of São Vicente, within the Barlavento (windward) group of islands in the Cape Verde archipelago. The city's defining geographical feature is the Porto Grande Bay, a vast natural harbour that has been pivotal to its development.



Mindelo area and Porto Grande Bay

This bay, surrounded by low mountains such as Monte Cara to the west and Monte Verde to the east, provides a sheltered anchorage, making Mindelo an ideal location for maritime activities.

Porto Grande Bay is not merely a geographical feature; it is the historical and economic engine of Mindelo (Delgado,

2016, pp. 39, 71). Its significance grew substantially in the 19th century, particularly in 1838 when it became a crucial coaling station for ships of the British East India Company (Pires, 2015, p. 19), followed by the Royal Mail Steam Packet Company in 1850 (CapeVerdelslands, n.d.; Delgado, 2016, p. 55).

This era marked a period of economic flourishing for Mindelo, as it became a vital hub for international shipping and communication, further solidified in 1885 with the laying of a submarine communications cable connecting Europe, Africa, India, and North America (Glover, 2014). Although the port experienced a decline in transatlantic navigation in the early 20th century due to the shift from coal to oil and the rise of competing ports (Delgado, 2016, p. 55; Pires, 2015, pp. 66-75), Porto Grande remains a cornerstone of Mindelo's economy, supporting business, fishing, shipping, boating, and a growing tourism sector.



Porto Grande

The infrastructure of Porto Grande has evolved over time to meet the demands of modern maritime activities. Built in 1962, the port has undergone expansions, including quay extensions in the 1990s and an embankment expansion in 2014. Key facilities include a 1-hectare refrigerated warehouse with a 6000-ton capacity for preserving fish, 7000m² of covered warehouses for general goods, and two bascule bridges for container weight control. The port also features a 315-metre-long pier with an 11.5-metre depth for bulk cargo and two 350-metre-long docks, 50 meters wide, with a depth of 10 to 12 metres for container unloading. Additionally, a coastline terminal with a 1000 m² covered area serves freight and passenger cargo, equipped with berths for cabotage vessels and roll-on/roll-off ramps (ENAPOR, n.d.).

Beyond the commercial port, Mindelo also boasts the *Marina* do *Mindelo*, constructed in front of the old town.

As we have already seen in the previous chapter (5.2.1), Mindelo holds a pivotal position in Cape Verde's national blue economy development plans. The city is increasingly viewed as a key location for fulfilling the vision of a business hub within the maritime sector (Governo de Cabo Verde, 2022). Notably, the island of São Vicente, where Mindelo is situated, is considered the centre of the blue economy in Cape Verde, hosting a diverse range of activities and initiatives aimed at harnessing the potential of the ocean (Fonseca, 2023). As part of the national strategy to expand the country's economy and unify its scattered market, significant investments are being directed

towards the development of ports and related blue economy infrastructure on São Vicente, with Mindelo at the forefront of these efforts (EIB - European Investment Bank, 2024).

The centrality of Mindelo in the country's blue economy strategy, as well as its sectoral institutional importance, is clearly manifested by the concentration of sea-related government offices, maritime authorities, active shipping and logistics companies, research institutions like IMar and OSCM, and training facilities such as EMAR and Uni-CV/ ISECMAR-UTA in Mindelo.

5.2.3. Research Findings - Fisheries Sector

Introduction to the Findings

Focusing on the fisheries sector in Cape Verde, this chapter describes the main findings brought by the empirical fieldwork developed in the small fishing community of Porto Rincão in Santiago Island. It presents the voices, experiences, and observations of fishers, sellers, and key informants operating in Rincão, offering a detailed look at their daily realities and the ways in which women's roles and activities shape and sustain coastal livelihoods. By focusing on the accounts of local community members, this chapter sheds light on the distinctive social and economic fabrics of smallscale fishing in Cape Verde. The material presented here builds on a series of interviews that took place in various settings—ranging from quiet corners of the local school to the workplaces of key informants providing insight from within institutional settings—and captures the immediacy of how participants characterise their experiences, as the researchers themselves were able to stroll in observation through the shores of small-coastal Rincão.

A fisher in her early fifties illustrated the blend of personal history and professional identity that is so common across these communities when she remarked, "from the age of 12, I would accompany my mother. I would go with her, and if her basin filled up, she would pass the rest to my 'little basin,' and we would go together" (CVF#15). Her words evoke the generational continuity that defines much of the fishing culture in Rincão and serve as an entry point to the broader themes this chapter examines. The accounts that follow reveal occupational structures, social and



Photograph of fieldwork from Cape Verde team in Rincão

economic pressures, family-based work arrangements, and the persistent ways in which gender colours every aspect of life around the sea. While the details of data collection and recruitment have been explained in the previous methodological chapter, it is worth noting briefly that the interviews analysed here reflect diverse perspectives from women and men of different age groups, educational backgrounds, and roles, including artisanal fishers, small-scale boat owners, and fish sellers. The central aim of this chapter is to describe, in a focused and nuanced manner, what these participants say about their experiences in the fisheries sector and, more particularly, how gender shapes everything from the physical demands of their labour to their strategic efforts at making a living in an often-unpredictable environment.

Findings in this chapter will be organised thematically according to the main analytical instruments applied to the data, especially the analytic topics that guided the interviews conceptually, as well as the codebook and analytic grid elaborated to analyse the results.

As the subsequent sections will demonstrate, the language and tone of each interviewee is as important as the content of their words, since informal work settings and deeply rooted traditions merge to create a context where day-to-day routines and sociocultural norms are rarely separated. Some participants share stories of financial uncertainty alongside a desire to preserve local practices for future generations, whereas others point to the enduring gaps between men's and women's access to equipment, credit, and formal recognition. Taken together, these testimonies form a comprehensive portrait of the fishing community operating in Rincão as it is lived and perceived by those who sustain it.

Setting the Sample

A broad mix of community members and industry figures contributed their stories and perspectives to this subset of the case-study. Although the rigorous details of how participants were chosen and how ethical safeguards were ensured have already been laid out in the methodological chapter, it is useful here to set the context by outlining the main contours of the sample whose voices animate the sections that follow.

Interviews were conducted with a total of 30²⁶ individuals directly involved in fishing activities, representing various roles within this economic sector. The sample included 18 women and 12 men, offering a relatively balanced gender perspective necessary for understanding gendered dynamics in the fishing economy.

Of these subjects, 22 of them were direct participants (16 female and 6 male), and 8 were key informants (2 female and 6 male).²⁷

Participants ranged in age from 22 to 70 years, with the majority falling between 35-55 years old, reflecting a population with substantial experience in the sector. This age distribution allowed for insights into both historical

²⁶ It should be noted, for the sake of clarity, that the ID codes for the interviews goes up to 31 but the number of subjects is actually 30, as one interview didn't make it into the sample due to technical issues regarding audio and transcription.

²⁷ Additionally, a small sample of 4 cross-sectoral key informants (2 female and 2 male) were also considered both to the fishing and the shipping sectors in Cape Verde.



Photograph of fieldwork from Cape Verde team in Rincão

developments in Rincão's fisheries and contemporary challenges facing different generations, as this recollective quote illustrates: "I remember years when we sold all our fish before noon, but also hard years when there was barely enough food, let alone money to buy fish" (CVF#26). Day-to-day difficulties were just as much of a concern in this past: "I remember at the time she [her mother] was selling there was no transportation; my mother would go to sell fish in Palha Carga on foot, rarely finding transportation and when she did she would get off at Achada Grande and it would be another 3 hours on foot." (CVF#11)

Educational backgrounds varied among participants, with the majority having only attended primary school or no school at all; although some of them advanced through secondary school and one participant possessed higher education qualifications. This educational profile reflects both generational differences and the historical limitations to educational access in fishing communities. As one participant explained: "The kids from there went to school until the fourth grade and then moved on to life at sea. Others from my generation started emigrating to other countries. Rincão, at that time, was an isolated area; there was no transportation to connect it to the Santa Catarina council, so many of us only studied up to the fourth grade and then started fishing." (CVF#26).

The participant sample captured different occupational categories, distributed as follows: 16 fish sellers (all female), and 6 fishers (all male). As this represents the categories used in the project to distinguish between participants, it is important to add that among the sellers a diverse range of additional occupational activities were also present, such as farmers, sand pickers, hairdressers, and even boat owners; as for the fishers, some of them also worked in the educational system. This distribution allowed greater comprehension of the gender-segregated nature of roles within the sector while also providing insights into task allocation and economic relationships between different professional categories.

Family involvement in fisheries emerged as a significant characteristic, with almost 91% of participants reporting multi-generational family participation in fishing activities. As recalled by a participant: "my grandfather and father were fishermen, and I ended up following the same path...My grandfather worked at sea until he passed away and my father is now 64. And my father and I work together" (CVF#27). Experience levels varied substantially, ranging from 7 to 41 years of work in the sector, with most participants having around 30 years of experience.

The sample also captured various marital and family arrangements, with 58% of participants reporting being single (though many in long-term partnerships), 37% married, and 5% widowed. Importantly, 89% of participants had children, with childcare responsibilities emerging - as we will see - as a significant theme, particularly among female participants.

Although men—particularly in the roles of boat owners and active fishers—were regularly present in the sample, women made up a large share of the participants in key onshore functions such as fish sorting, selling, and daily market operations.

Alongside these core participants were a handful of informants from public administration and sector associations who provided perspective on local governance structures, policy constraints, and shifting market trends. Their vantage point, though often more formal, dovetailed with the day-to-day accounts of fishers and sellers. One key informant (CVF#30_KI) gives a glimpse into the historical presence of women in fishing activities in Rincão, by remembering a very special figure to the community: "The lady over there, for example [points to a female portrayed in a street mural], used to go fishing and rowing." "Is there a tradition here of women going fishing?" "Yes, like Mamazinha Ferreira,

Demographic Profile

Average age: 33-35 Nationality: CV

Primary location: Port Rincão **Family situation:** most have children; many single

mothers; multi-generational families are common

Professional Profile

Sellers: years of experiece varying from 3-40 years; many started in childhood, most in their early 20s; often combined with other activities; some own boats and/or fishers
Fishers: long-term involvement in the sector; many started in their teens; often from fishing families; some combine fishing with other jobs

Additional Information

Educational background: formal education generally limited; many have only primary education; some with no formal schooling; few with secondary education

Work patterns: daily fishig trips for fishers; regular trips to the market for sellers; seasonal adaptations (e.g. sand picking, pastel)

Participants sample - brief characterisation

who rowed alone to Porto Mosquito with two oars alone, without a motor. All their children followed suit. But not today. The fishermen won't let them" – this informant lamented.

Professional Trajectories and Identity

Within the coastal community of Rincão, fishing stands at the heart of many families' histories and daily routines. Several participants described their paths into small-scale artisanal fisheries as arising naturally from childhood experiences, where watching a parent mend nets on the beach or witnessing the early-morning bustle of women preparing fish to sell became the simplest way to pick up a trade. Entry into the sector typically followed family tradition, with both men and women often describing early childhood exposure to fishing activities. However, the nature of this entry showed clear gender differentiation, with men typically entering as active fishers and women as fish sellers.

For men, professional trajectory often began with apprenticeship-like experiences alongside male relatives. As a participant recounted: "My father took me fishing with him from when I was in 6th grade in this room [where the interview was taking place]. Initially, he took me to fish on the rocks, and one day when we were fishing for moray eel, the waves came and took away the catch we had already gotten. I jumped into the sea, even without knowing how to swim, and recovered some of them. From that moment, my father saw that I had aptitude, and from then on, he always took me with him to fish" (CVF#26). This handson mentorship established not only technical skills, but also professional identity firmly rooted in active fishing.

For women, the paths often took a similar familial route, though typically oriented around the onshore side of the sector. One participant vividly recalled: "I started selling fish at 12 years old along with my grandmother who was a fisherwoman and fish seller... We prepared the fish barefoot and got wet with fish water, we had to count them, pull up the fishing net at night, and the fish were distributed equally. We dried the fish with salt and slept there, to prevent the pigs from eating it and waited for the sun to dry it out" (CVF#1). It emerged that informal training—from how to manage ice for storage to how to anticipate a good catch—frequently occurred through observation and shadowing, rather than any formal apprenticeship. This intergenerational continuation through family legacy is clearly evoked by memories like this: "from the age of 12, I accompanied my mother. I would go with her, and if the basin filled up, I would pass the rest to my «little basin» and we would go together" (CVF#15). This continuing tradition created a strong sense of inherited occupational identity, with many participants viewing their work as a birthright carrying cultural significance along with economic necessity.

But educational limitations also shaped many professional trajectories, with participants explaining how limited access to education channelled them toward fisheries. As explained by one participant: "I went to school for 4 or 5 days and then left and went to sell my fish" (CVF#24). Economic necessity often accelerated this trajectory, as a female seller humbly described: "I studied very little because neither my mother nor my father had the conditions to put me in school... I know it's little, but at least I can write my name."
But even more starkly: "I was brought up by my maternal

grandparents. We always had a hard time, we were a very poor family. I studied until 4th grade, but I was an excellent student, and I liked going to school, but my mother couldn't afford to keep me in school; at that time, transportation to school was limited and expensive, because from the 1st to the 4th grade, we went to school in Assomada, and she couldn't afford it. I cried a lot because, in fact, I didn't want to leave school, but my mother asked me to settle because she really couldn't. Over time I got used to it and accepted the idea of leaving school. Then I started selling fish and helping out on construction sites, to help my mother raise my younger siblings, as there were eight of us and I am the eldest daughter. So, I started pretty young in this job" (CVF#17).

Professional identity formation revealed important distinctions in how participants conceptualised their work. Men frequently described fishing as "a profession" or "a career," indicating stronger identification with fishing as a skilled occupation. Women, conversely, more often described their fish selling as "a way of life" or "what we have to do," suggesting a more pragmatic and necessity-driven relationship to their work. This perspective often emerged: "I don't have another option, so this is our life" (CVF#8); or "It's a way of life! It's very tiring work, and nowadays the disposition is not the same... the body is really worn out after so many years of working in this area, but, well, I don't have any other alternatives, and I need to raise my children" (CVF#17).

Despite these differences, both men and women in fisheries developed strong occupational identities over time. CVF#26 expressed this depth of identity despite having another profession: "Today I am a teacher, but I don't put any other profession ahead of fishing. We are seven siblings, and our father supported us all thanks to work at sea. I remember that during the holidays, we all went to sea, but even so, our father wanted us to study. We all have completed the 12th grade. It was the sea that gave us everything."

Evolution of professional identity over time revealed adaptation to changing conditions. Older participants described significant shifts in their working methods and economic conditions: "in the old days, fishing used to be different. Before, we didn't have cars or means of preservation" (CVF#20), recognising that there was a lot of food waste and that one had to be brave to walk the harsh distances on a dangerous road. This adaptability formed a core component of professional identity in a sector characterised by environmental and economic variability.

The very few women who broke gender norms by engaging in fishing directly developed particularly complex professional identities. The only one who, in our sample, had this experience first-hand, reflected on her circumstance of fishing at age 19, in quite blunt terms: "I didn't have much fish to sell, and sales weren't going well either. So I decided to go out to sea... It's not difficult because we have no choice. If I had a husband who supported me, I wouldn't go to sea."

Work Structures and Conditions

Discourse about everyday work conditions revealed a world of meshed family roles, improvised infrastructures, and considerable physical demands.



school...If I start to sell early, I return at 6:00 in the evening, if I'm delayed I return at 8:00 at night, and then I return to make dinner" (CVF#16). Another account was provided by a fellow seller: "I get up very early, go down to the river to collect the sand, then come back to the house, do the cleaning work... then I go to meet my husband by the sea, coming back from fishing. I take the catch, go out to sell it and then return home in the afternoon, prepare dinner, look after the children... that's it" (CVF#17).

Work schedules reveal the all-consuming nature of fishing livelihoods, with most participants reporting six or sevenday work weeks. CVF#27 stated: "We fishermen don't have rest days; rest is when there's a storm or the sea is angry." In a similar tone, a seller explained: "I go out to get the fish from Monday to Saturday, but sometimes we go out for a whole week and find nothing" (CVF#8).

Working conditions across the sector are characterised by physical hardship, environmental exposure, and significant safety risks. For fishers, primary hazards include maritime accidents, drowning risks, and physical injuries, as vividly described by a fisher: "There is a lot of sacrifice, risk, and danger at sea, and we have to be very careful not to have accidents." The precarious nature of fishing vessels magnifies these risks, as he further explained: "The very stability of a 70-metre boat is not the same as a boat of 4 metres, which is like a coconut shell in the middle of the sea" (CVF#27).

Meanwhile, women who manage the immediate post-landing process commonly described labour that was simultaneously urgent and mundane—removing fish from nets, haggling over prices with prospective buyers, or bracing themselves for the physical strain of lifting heavy buckets. For women fish sellers, working conditions involve carrying heavy loads, extensive walking, and prolonged exposure to sun and outdoor elements: "I get up at seven o'clock, if I can, because there are days I feel very tired because I sell with the basin on my head" (CVF#19). The physical toll is significant, as CVF#21 explained: "my body couldn't bear the weight of the basin on my head, it damaged my health. I went to the doctor and he said it was because of the weight and that it caused the nerve in my spine to move, so they said not to carry even 5kg, I've gone to the medical appointments, I found a remedy and now I don't feel this pain. Now I don't exaggerate the weight, instead of buying a basin of fish, I only buy half of it, so it's easier to put it on the floor and put it up on my head again, because if I carry it and pass the limits, I feel the pain again."

Multi-occupation was a predominant pattern amongst the women fish sellers in Rincão, and the main activity reported was sand picking. Whether at sea (generally now forbidden) or in streams, it represents an additional physical hardship for these women: "Very difficult! You can't call this work difficult, you have to say that it is a work that «kills life». Because in order to survive, in order to build a house for my children, I had to «kill myself» in the work of collecting sand. I wasn't like this, you see, I was strong...But with so much sand collecting, to build a roof for my children, because at that time I already had a son who wasn't my husband's, so I was ashamed of my family... having to take two more children with me to go and live with them, because I'm not from Rincão, I'm from [XXX]. So I sacrificed myself, I was sick, I suffered insults, I worked during my pregnancy until it was almost time to give birth. During my

The basic unit of fishing labour organisation centres around small crews operating wooden boats known locally as 'botes' which are "suitable for 3 people, because it's for line fishing" (CVF#27). These crews, today, are exclusively male, with clearly defined roles based on experience and boat ownership. Boat owners typically serve as captains with decision-making authority, while crew members receive shares of the catch rather than fixed wages. Labor arrangements are predominantly informal, with strong adherence to traditional norms of catch distribution. The work structure for women centres primarily around fish marketing and sales, characterised by networks of relationships with both fishers and customers.

Sellers who don't «have fishers» need to buy fish to sell, whether from fishers or from other female sellers, usually through arrangements like this: "I go and buy fish down there, and sometimes I sell it, sometimes I don't. The fisherman, when I come back, he asks for his money, if I don't bring it he fights, but I go another day anyway, because that's life. And when we don't have any fish here, we go to Assomada. We buy from the women [there] and if the sale isn't good we take it on credit" (CVF#8). The expression «to have a fisher» (ter um pescador) refers to having an informal partnership with a fisher who might be a husband, a son, a brother, or another type of family member; besides these family-like types of partnerships, in a few cases, female sellers might also «have fishers» due to their status as boat-owners and employers. In both cases, sellers with fishers don't usually need to go and buy fish from others, as they directly sell the catch from their economic unit; nevertheless, these sellers operate with a high level of autonomy from «their fishers» and arrangements with them often vary in financial terms, showing a significant degree of differentiation in their respective professional spheres.

Working hours follow specific rhythms tied to fishing and market schedules. As a fisher CVF#27 explained: "We normally leave at eight in the morning, but that depends on the months because there are months when we need to get up at two in the morning and only arrive at six in the evening." As for women's working days, one participant described this pattern: "If I'm going to Assomada, I get up at 5 a.m., do housework because my children are all men and they go to

second pregnancy, I had a miscarriage in the sea of Águas Belas, when I fell into the sea... with a bucket of sand on top of my head, while the waves came and pulled me up and threw me down into the sea and I lost my son" (CVF#18).

Economic Relations, Security and Survival Strategies

The research revealed distinct economic positions for men and women, with corresponding differences in security and vulnerability.

Ownership patterns showed clear gender disparities regarding productive assets like boats and fishing gear. While men predominate as vessel owners, women occasionally own boats, but often perform at the economic level indirectly through financial investment. As a fisher observed: "In reality, the true owner is the woman [in many cases]" (CVF#26), explaining that women often finance boat purchases while men maintain operational control and public recognition as owners. This complex ownership arrangement was confirmed by another participant: "Several men have their boats thanks to women who finance everything, and then they go to sea. Underneath it all, the real owners are the women" (CVF#23).

Direct female boat ownership exists but is not predominant. As one male fisher noted: "There are women who are shipowners, like me. [name], [name], [name], there are many women here who are shipowners," (CVF#27) but he clarified that these women typically do not fish themselves. This pattern maintains gender division while allowing women some access to primary productive assets.

Income generation exhibits significant variability and gender-specific patterns. For fishers, income depends directly on catch volumes, which fluctuate seasonally and with changing environmental conditions. Fishers typically receive payment immediately upon landing their catch in communities like Porto Mosquito and Gouveia. However, in Rincão, many fishers must wait for payment until after fish sellers have completed their sales. As CVF#26 observed: "Sometimes, the fisherman goes 4 to 5 months without receiving the money for his catch. Here it's not like Calheta, Porto Mosquito or Gouveia, where the fisherman, when he returns from the sea, receives his money immediately from the fishmongers who buy it."

For women fish sellers, income generation usually involves purchasing fish (often on credit) and selling at a markup. When asked who earns more—fishers or sellers—CVF#26 was unequivocal: "The fish sellers earn more than the fishermen". Other participants stated similar perceptions, although the issue remained controversial throughout the dataset.

Income distribution between fishers and sellers follows established but contentious patterns. When fishers and sellers are family members, income is typically pooled for household expenses. One fisher described this arrangement: "I usually say that my wife and I are a partnership, I fish and she sells. What I get is for our partnership, she sells it and we pay our expenses and what's left over we put in our emergency fund" (CVF#27). In non-family transactions, sellers typically purchase

fish directly from fishers or other female sellers, though credit arrangements are very common, creating complex economic dependencies.

The question of income and survival in Rincão is tightly entwined with the artisanal scale of fishing. Most participants admitted that they rarely knew exactly how much money they would have by the end of a week. One older seller (CVF#15) explained "there are days when the boat is out at sea from morning until late and doesn't come back with any fish, or even at night till dawn they don't catch anything. But this varies, it wasn't always like this, but nowadays it's becoming more and more complicated. For example, the boat hasn't been out to sea for two weeks now because of wind." In each scenario, she stressed, women rely on a web of informal deals—borrowing fish on credit, trading small amounts of money among trusted neighbours, or staggering payments to local suppliers.

This communal mesh of unofficial financial practices often transcends family boundaries and solidarity helps to fill the gaps of shared hurdles. Indeed, participants described different types of cooperative efforts: "Yes, we get along very well, even if we don't have any sales, we often sell on credit because we are older in the business, have our customers «greased» and we sell them, even if it's on a smaller scale, and we get the money together and pay our suppliers, so that we don't get into debt, so that tomorrow we can go on credit again without getting into debt" (CVF#21). Another prominent mechanism of financial solidarity is the «game» known as totocaixa (or the box's game): "We get about 20 to 40 people together every week, we give 1,000 escudos each to one person and they mark who has paid; every week one person gets the money, if there are 40 of us, they get 40,000, and so on until we finish and start the cycle all over again. That way we can raise money and do a bigger job, for example in the home or at work" (CVF#21).

These informal safety nets highlight that, while Rincão's small-scale fisheries culture can be harsh, it also fosters everyday acts of collaboration that ease the strain of an unpredictable environment.

Social protection mechanisms remain largely absent, with most participants reporting no access to formal benefits like unemployment insurance, retirement pensions, or health coverage. One participant highlighted this gap: "My father is 64 years old, he no longer has the disposition to work, but he has no retirement pension, and if this had been required in the past, he would have had a minimum wage so that he and my mother could survive now" (CVF#27). Another one confirmed it: "We have no security. It is we ourselves who seek it and guarantee. For example, we don't have insurance in case of accidents at work, we 're not secured with the INPS (National Institute for Social Protection), these things..." (CVF#17). Thus, this lack of formal protection clearly increases dependence on informal support networks and alternative income sources.

Additionally, fishers sometimes describe survival strategies anchored in diversifying their activities. Several men also engaged in periodic construction work, small-scale farming, or other side jobs. A young teacher-fisher (CVF#7) recounted: "I go fishing every Saturday... I do it to get some extra money, and I give it to my wife [a seller] to go sell it".

It was on the side of women sellers that these survival strategies really stood out, by taking a significant extra load off multiple activities to juggle with economic and financial scarcity. These overlapping roles underscore that, although fishing is an economic backbone for many families, few rely on it as their single line of income. One participant admitted that, in lean months, she sells vegetables purchased in bulk from a cousin's farm just to meet the shortfall. Another recounted: "My mother and I, along with two other women, have already been pulling sand from the streams at 4 a.m. to sell a **galucho**²⁸ for 140 escudos. I got a boat but it broke down and I couldn't afford to buy another one. We were left with just the engine without a boat, the kids were already at school and my mother couldn't pick anymore sand from the streams...I sold animals like goats and pigs... My first daughter too started selling and picking sand". Another said: "I do a lot of jobs, such as collecting sand; when there's no fish, I make my living from collecting sand. Other times, I work in the vegetable gardens of a friend of mine, from 6 in the morning until 10 at night, for 500 escudos! But I have to go because there are no other means and I have to survive and support my children" (CVF#18). The need to diversify activities to face financial hardship and insecurity is so pronounced that it was not surprising to find a striking rationalisation of these economic strategies: "When you have a professional activity, there have to be difficulties. Fishermen, for example, their job is just to fish, and when the sea is rough, there's no way of making an income without going to sea, so they have difficulties. A fishmonger, too, if she only sells fish, when it's low season and there are no fish, they will also have a hard time because they have no fish to sell. But if, at the same time, we pick sand, when there are no fish, we already have another occupation. Otherwise, when sand sales are very low, we store the sand and go to sell our fish. When we have a good fish season and we manage to sell sand, we make two incomes at the same time. For example, we got 20 contos²⁹ by filling 4 cars with sand, and, let's say, we also have our income from selling fish, we can leave that income from harvesting sand as savings, precisely to help us in situations where there are no fish and the boats don't go out to sea, so that we don't have to live on the edge with the family. Also, if you have money saved, you can put it into another investment. For example, you could invest in vegetables and resell them; you could invest in baking and sell them; produce donuts and pastries and sell them..." (CVF#17).

Family and Community Interface

The intersection between fishing livelihoods and family responsibilities emerged as a central theme, with distinct gendered patterns shaping work-life balance, childcare arrangements, and community engagement.

Care responsibilities revealed stark gender differences, with women bearing primary responsibility for childcare despite their active economic roles. Women consistently reported adjusting their work patterns around childcare needs, while men rarely mentioned childcare as affecting their fishing activities. One participant recalled: "I already took my child on my back with my 6-month-old baby in the early morning picking sand" (CVF#24). And another seller (CVF#16) also described how childcare directly affected her economic

activities: "It's more difficult, because when I had children I had no one, my mother lived in the interior of Palha Carga and my husband's mother doesn't have time to help me all the time. When I had my last child, she went away and hasn't been back since. I either had to take the child with me or stay at home with the child and do nothing". This caregiving role creates significant additional labour for female participants while constraining their economic mobility and opportunities.

The gendering of household tasks creates an additional burden for women beyond their commercial activities. The unequal distribution of domestic labour creates a «double day» for many women, managing both commercial fish selling and household responsibilities. Sometimes their description even sounds more like a «triple journey»: "We women stay on the land, cook, wash clothes, take care of the house, so that when the husband comes home, he can find that hot meal... we have to meet them at the shore, help pull the boat, help clean the boats...we help to dry the boat, we help to carry all the material that they take in the boat to the engines room... we take the fish and sell it too" (CVF#17).

Strategies to balance these competing demands include waking extremely early to complete household tasks before commercial activities begin, enlisting children's help with domestic work, and carefully scheduling commercial activities around family responsibilities.

Community status and social networks also differ significantly by gender. Men's status derives primarily from their fishing prowess and equipment ownership, while women's status connects more to their economic success, family management, and community engagement. One male participant even stated that women are "the foundation of the economy here in Rincão. If today we have good cars, good houses, it's all thanks to the work of the fish sellers" (CVF#26).

Professional networks show distinct gender patterns, with men forming bonds through shared fishing activities and women developing networks through selling relationships. These gender-specific networks provide different types of social capital and support. For fishers, networks provide access to fishing grounds, technical knowledge, and crew opportunities. For women, networks facilitate market access, credit arrangements, and mutual support during economic hardships.

Decision-making participation in community matters shows mixed patterns. While traditional leadership roles remain predominantly male, women's economic significance grants them substantial informal influence. One seller described her community leadership: "when they realised that it was through me that the boats were fiberglassed in Rincão, they started to respect me more" (CVF#23). This suggests that women's economic contributions can translate into community recognition and decision-making power, albeit through different pathways than men's authority. One such pathway emerged through the establishing of an association to address common challenges in Rincão: "To avoid this type of embarrassment, we decided to create an association to solve these and other difficulties" (CVF#23).

²⁸ In this context and Cape Verdean colloquial speech, galucho refers to a unit of measure, corresponding to the load capacity of a truck — typically a Toyota Dyna 250.
²⁹ In Cape Verdean colloquial usage, contos refers to amounts of currency, with one conto equivalent to one thousand Cape Verdean escudos (CVE).

Gender Dynamics: Women's Roles, Gender Stereotypes, and Discrimination

In the small-scale fishing activities of Rincão, the relationship of gender roles surfaces with clarity in nearly every stage of production, exchange, and community life. Gender serves as a fundamental organising principle, structuring task allocation, spatial arrangements, decision-making, and knowledge transmission. The research revealed both persistent traditional gender divisions and emerging challenges to these patterns.

As we already saw, the gender division of tasks follows clearly delineated boundaries, with men almost exclusively responsible for fish capture and women dominating post-harvest activities. Participant CVF#26 articulated this division: "The role of the woman was to take the fish after it was brought by the husband. She took it to do the distribution, sale... the man has this task of going to get the fish, but then, all the rest of the work is with the women." This division seems deeply normalised, with participants of both genders describing it as natural and traditional: "Their [women's] function is to buy our fish, sometimes with or without money in hand; they go to sell so that another day they can take the fish again" (CVF#25).

Gendered spatial divisions were equally pronounced, with the sea itself constructed as masculine territory and markets and communities as feminine domains. This spatial separation reinforced task divisions while creating distinct gendered identities and experiences. CVF#26 noted: "It's not the fisherman who goes out with the fish in the basin to sell; he doesn't go zone to zone to take the fish by car." Multiple female participants explained that men simply would not engage in selling activities, considering them inappropriate for their gender.

Women, meanwhile, exercise significant decision-making power in marketing, pricing, and financial management. And they themselves assert this control: "When he distributes the fish, I am the one who sets the prices" (CVF#16).

When asked about who ultimately steers major choices in the household—like how to invest the little extra income that might arise in a good season—a male fisher (CVF#26) responded "As I said, in the case of credit, for example, many of the men who took out credit and didn't pay it back, it was their wives who took on the entire debt. This was so that the husband wouldn't have a bad image in society. In most cases, this is how it happens. Even when their boats break down, it's the women who pay for the repairs". His commentary underscored a recurrent theme: although men's work at sea is frequently perceived as the core activity, many women hold a pivotal position in financing, marketing strategies, and everyday negotiations that keep artisanal fishing afloat. The same participant continued: "I tell you one thing: here in Rincão, if it weren't for the women, many of the fishermen wouldn't be and wouldn't have anything."

So, a compelling narrative seems to emerge of women as the quietly decisive force bridging sea and shore, managing finances, and shouldering the less glamorous tasks that ensure fish is promptly circulated. While men gain local prestige as the ones "risking themselves" on the water, the interviews suggest that it is women's often-overlooked labour that transforms an unpredictable day's haul into household income and communal sustenance.

Nonetheless, and while the indispensable role women play in day-to-day life is commonly acknowledged in the interviews, a pattern of informal prejudice and discrimination was described: the *fish stigma*.

Female participants reported being disparaged for their occupation and associated odours. As one recalled: "We go to sell fish, and people say that we smell like fish, that we shouldn't put our hands on them. And we feel sad" (CVF#8). Women also described being denied basic services and hospitality on selling trips: "In the past, people wouldn't even give us water because we would put the ladle smelling like fish." And a striking example: "In the old days, people wouldn't even give us water because we'd put the smell of fish in the cup.... I had to go behind some place and I peed and drank it" (CVF#24), indicating the extreme discrimination faced by fish sellers in accessing basic necessities while traveling. Another recounted: "We went to people's doors asking for shelter when it was too late or raining, they wouldn't take us in because we were fishmongers, I would be very sad and cried several times" (CVF#1).

Yet, women really seem to be leading in fishing-related activities and investment in Rincão. A 44-year-old female participant (CVF#23) expressed a spirited determination: "Being a woman is not an obstacle; I managed to invest in the sea and was the first woman in Santa Catarina to get a mechanical licence in 2006". The same woman is one of the small cohort of female boat owners in Rincão: "Since 2019 with my own boat, previously I had a boat owned by my parents that my older sister was in charge of; I started selling when I got my own boat... I received a fund ... as part of [a] project, I had several problems with my brothers because of my father's boat, who believe that it shouldn't stay with me because I'm a woman, so I decided to buy my own boat". Being a boat owner also allowed her to set up and direct the whole business, hiring men to work on her boat: "Yes, have three fishermen—[name], [name], and another colleague who works with me... I have several employees and we have good relations... it's worth noting that treating employees well is very important, because they become more engaged and committed to their work" (CVF#23).



alvador Aznar/Shuttersto

However, what seems to be considered by most as the major act of challenging traditional gender roles – women going to sea and fishing themselves – still mostly falls within the realm of storytelling when recollecting Mamazinha Ferreira or the early years of a now established seller. "I don't know any women who go fishing" (CVF#17) was widely reported, and although it is clear from the interviews that many women wouldn't want to do it, one should also mention the normative assumption conveyed by one participant: "They [men] usually say that fishing should be done by men" (CVF#23).

Synthesis and Emergent Themes

Viewed broadly, the themes that run through each account in the preceding sections display a certain narrative unity in how Rincão's small-scale fisheries operate and how women's roles in them are perceived and enacted. Although it is a tight-knit community in which nearly everyone knows one another, the testimonies bring to light persistent tensions, precarities, and evolving aspirations.

One of the most prominent patterns is the collective reliance on informal structures. This informality stretches across all spheres, from the way a fisher negotiates supplies of ice or fuel to the way sellers handle credit with local market-goers. Individuals in different roles — fishers, sellers — repeatedly emphasised the everyday negotiations that hold their world together. Subtle cues, gestures, and longstanding personal ties shape who gets which share of fish, who extends or withholds payment, and who bears the brunt if a day's catch fails to meet expectations. Such interpersonal bargains sometimes go awry, but more often than not they ensure at least minimal resilience. For instance, a seller (CVF#17) recounted that "We really wanted [the nets], but we couldn't get them, nevertheless, we managed to get by, borrowing, working together with what we had, and we were able to fish... but when the sea was rough, we couldn't even afford to buy gasoline. As a solution, sometimes, some fishmongers who have money, finance the fuel for the boat to go out to sea and, and when it returns with the catch, we sell it and pay for the fuel"- encapsulating a reliance on long-established bonds rather than formal contracts or institutionalised safety nets.

In tandem with informality is an equally persistent gender-based division of labour. Men's activities centre on the ocean: steering the boat, casting nets, braving changing tides. Women's work is typically less public and more diffused across multiple tasks — from deciding the timing of onshore sales, to preparing fish for preservation, to organising household affairs. Men receive overt social recognition, but women often become the strategic planners, especially around finances and logistical matters - a subtle but vital role.

A third pattern concerns the ambiguity between independence and economic vulnerability. Many participants spoke of fisheries as the only domain where they feel free from hierarchical bosses or rigid timetables. Yet they also frequently experience an uneasy dependence on volatile factors: weather conditions, the health of nearshore fish populations, and buyers' fickle demands. This tension plays out viscerally in the harsh daily routines of fishers and sellers alike.

Financial insecurity & labour precarity Economic informality & lack of social protection

Prices, debt & deferment («fiado») Fish preservation & working conditions

The fish stigma

Power (formal and informal)

Caretaking

Single parenthood & extended families

5.2.4. Research Findings - Shipping Sector

Introduction to the Findings

This chapter presents findings on women's participation in the shipping sector in Cape Verde, drawing on the qualitative research conducted through interviews with women seafarers, key informants, and stakeholders.

The shipping sector, as described by our interviewees, occupies a prominent role in the archipelago by connecting islands through both freight and passenger transport. Several participants noted that ferry lines, cargo vessels, and support crafts are essential for moving goods — most notably food staples and consumer products — across the islands and for enabling regional trade. This constant inter-island flow creates a distinctive work context for seafarers, many of whom may sleep ashore most nights when operating on short routes. Others, however, remain on board for days at a time, travelling between distant islands or beyond national waters. Regardless of a vessel's schedule or size, those interviewed emphasised that seafaring in Cape Verde is marked by a strong sense of community, shaped in part by the relatively small pool of maritime professionals.

Within this setting, women's presence and influence have become more visible in recent years. Yet interviewees' accounts also reveal barriers — some cultural, others practical — to the full realisation of their roles. As the subsequent sections will show, it was through describing their day-to-day work and recalling personal experiences that participants illuminated the particular challenges, opportunities, and turning points they have encountered. The main aim here is to convey what these women said about their working conditions, their professional identities, and the ways gender may intersect with one's trajectory in a field that, despite slowly changing, has long been regarded as predominantly male.

The findings presented herein are organised thematically, following the analytical framework developed for the study, focusing on professional trajectories, working conditions, economic relations, family-work interface, and gender dynamics.

Setting the Sample

In Cape Verde, the interviews were collected from individuals positioned in a range of seafaring and ship-related roles. Those interviewed mostly worked on interisland vessels, although a few had experience on longer voyages outside national waters.

The seafaring participants comprised eight women³⁰ employed in different capacities aboard vessels operating in Cape Verde: six stewards (including chambers stewards, galley assistants, galley chief, cook, bar assistant), one 2nd officer, and one 2nd pilot. Age-wise, the participants ranged from 27 to 53 years old, representing different generations of maritime workers. All participants were Cape Verdean nationals, with all but one residing in São Vicente, which hosts the main port and maritime activities in the archipelago. Regarding marital status, most participants were single, though their family situations varied considerably — some had dependent children while others did not.

Educational backgrounds among the participants showed significant variation, reflecting the diversity of positions within the maritime sector. Some participants held bachelor's degrees in maritime sciences or related fields, particularly those working as officers. Others, particularly those working in service positions aboard vessels, had completed secondary education or technical maritime training.

The years of experience in the maritime sector ranged widely from recent entrants with just over a year of experience to veterans with over 25 years in the industry.

Key informants in the sample included a maritime university professor and a recruiter³¹. Their perspectives complement those of active seafarers by providing institutional and educational contexts for women's participation in the sector.

Although the total number of participants and key informants remains modest (10 in total), the diversity of interviewees helped build a multifaceted picture of shipping in Cape Verde. They represented inter-island ferries, smaller cargo vessels, and, in a few cases, local support crafts handling port logistics. Their narratives overlap in many respects—particularly concerning the challenges of scheduling, fatigue, and the interplay between crew

Demographic Profile	Professional Profile	Additional Information
Average age: 41 Nationality: CV Primary location: São Vicente Family situation: mixed single and married, some with children	Job distribution: • 1 immediate assistant (2 nd officer) • 1 pilot (2 nd pilot) • 6 stewards Academic background: officers usually have a degree in nautical sciences; stewards usually have secondary education with specialised maritime training	Career entry: officers represent the most recent generation (post-2012 training); stewards often have longer careers (more than 10 years' experience); mix of family maritime tradition and first-generation seafarers Work patterns: the majority work on ro-ro passenger ships; rotating schedules between three main routes: daily São Vicente-Santo Antão rouute, fortnightly inter-island routes, three-month routes

Participants sample - brief characterisation

³⁰ Although only eight women were interviewed, we registered 10 different interviews because it turned out that both the Cape Verdean team and the Portuguese team had interviewed the same two individuals; this way we shifted the two interviews made by the Portuguese team to the Cape Verde shipping dataset, as complement to the interviews performed by the Cape Verdean team to those same individuals.

³¹ As previously mentioned, data was also collected from a sample of 4 cross-sectoral key informants, who provided information regarding both the fisheries and the shipping sector. These included three informants from an academic or technical formation setting, and one public officer from the maritime public administration.

members—yet each has distinct nuances shaped by individuals' backgrounds, ranks, or personal ambitions. Where relevant, these differences will be highlighted in the chapters that follow, though many of the overarching issues they raised are outlined here as we turn to the findings.

Professional Trajectories and Identity

When asked how they first joined the shipping sector, many participants spoke of a mix of formal training opportunities and informal pathways shaped by family networks or local connections. Some enrolled directly in maritime schools in Cape Verde, while others found themselves "stepping onto vessels" as teenagers in search of work.

For women, entering the sector often required a deliberate push, sometimes fuelled by academic achievements or a family's belief in the value of specialised certification. A female officer in her late twenties—one of only two women on her vessel—said that her father, also a seafarer, had been supportive from the start: "When I decided I wanted to go to sea, my father said he knew I was passionate about it and would support me in everything, and so did my husband" (CVSH#1).

Many of these professional trajectories intertwined personal passion with necessity. Several participants viewed maritime work as one of the few stable, relatively well-paying industries in the islands, especially for those without advanced university degrees. Yet these motivations did not preclude them from developing some sense of calling.

A striking aspect of many participants' narratives was the relatively recent historical context of women's entry into Cape Verde's maritime officer corps. According to one participant, the first women maritime officers were trained "about 35 years ago... When they started to form the first classes for Merchant Marine officers, three women were trained" (CVSH#3). However, none of these women continued in active maritime careers. There was then a significant gap until around 2012 when women began to enter officer training again and subsequently pursue active careers at sea. As the same participant noted: "In 2012, 2014 and now, in recent years... at least one girl graduated in Nautical Sciences for sure. On average, one girl" per cohort (CVSH#3).

Professional identity among women in Cape Verde's shipping sector is shaped by their navigation of a traditionally masculine space. Many participants emphasised the importance of strength and resilience in their professional self-conception. As one participant put it: "I always say that working at sea is not for everyone... Working on board, I always say, we already come completely out of our comfort zone" (CVSH#3). Another noted: "We feel like men. That in the absence of another person you can help in other things, we feel really strong" (CVSH#6).

This emphasis on strength extends beyond physical capabilities to encompass mental resilience and technical competence. Women officers particularly emphasised the need to demonstrate technical expertise as a means of validating their professional identity: "And acceptance comes from demonstrating your technical capabilities, your knowledge, your know-how, showing that you know and that you're there on your own merit and that you can do everything that is asked" (CVSH#3).



nter Sturm/Flid

The intersection of gender and professional identity created notable dilemmas for many participants. Women sometimes reported adopting specific strategies to establish professional legitimacy in male-dominated environments. One officer explained: "You have to have a firmer stance. It's cutting conversations right at the beginning... showing that you're not for playing around... that in the same way that they're there to work, you're also there, you deserve total respect, acceptance, and you have the capacity for that" (CVSH#3).

For some participants, particularly officers, being among the few women in their positions created a sense of pioneering identity. This pioneering status contributed to a sense of responsibility not only for their own professional conduct but for paving the way for future women in the sector.

The professional identity of women in Cape Verde's shipping sector thus appears to be characterised by adaptability, resilience, technical competence, and for many, a sense of breaking new ground for gender equality in a traditionally male domain. As one participant summarised: "I usually say there is no profession only for men or women. And as a popular phrase 'A woman's place is where she wants to be' and I defend that a lot" (CVSH#1).

Work Structures and Conditions

The work structure and conditions experienced by women in Cape Verde's shipping sector vary significantly based on the type of vessel, routes travelled, and positions held. These operational contexts fundamentally shape daily routines, physical environments, health and safety considerations, and work-life balance challenges.

Vessel types and routes emerged as primary determinants of work organisation and conditions. Participants described working on passenger ferries, cargo vessels, and roll-on/roll-off (RoRo) ships that transport both passengers and vehicles. The routes these vessels travel range from short inter-island journeys to longer voyages connecting multiple islands across the archipelago. One participant explained: "In this moment, I only go to one island, only Santo Antão, I live in São Vicente, I only go to Santo Antão, I sleep at home every day, at the moment. On ships that go to all Cape Verde islands, they usually spend a week away from home" (CVSH#2).

The short-haul ferry operations between São Vicente and Santo Antão, with journey times of approximately one hour, allow crew members to return home daily: "It's one hour of travel, we make two trips a day" (CVSH#3). In contrast, vessels serving multiple islands across the archipelago require extended periods away from home: "When I was on [name of ship], we went to various islands — Sal, Praia, São Vicente, São Nicolau, Boa Vista. And we slept in the cabin, but it wasn't really sleeping because when we arrived at a port, they always contacted us" (CVSH#5). This variety in operational patterns creates distinctly different working environments and lifestyles for maritime workers.

Daily work routines reflect the hierarchical and specialised organisation of maritime labour. Officers described structured watchkeeping and operational responsibilities: "We start at 10 to 6 in the morning, we do the safety round to see if everything is operational if there is no problem, then we

start the cargo operations where we have 1 hour available, half an hour of cargo and half an hour of passengers and I am responsible for the cargo, I am responsible for loading the ship and the passengers before the trip. During the trip I'm responsible for navigation, I'll always coordinate the equipment until we reach the port, and the captain will do the manoeuvres" (CVSH#3). Service staff detailed routines centred around passenger care, cleaning, and food service: "I care for passengers, work at the bar too" (CVSH#7).

The formal employment structure in the shipping sector follows both international maritime conventions and local regulatory frameworks. Most participants were employed by shipping companies with contracts specifying duties, schedules, and benefits. Typical work patterns involve extended periods on duty followed by leave periods: "We work for 3 months and rest for 1 month" (CVSH#7). This rotation system appears standard across Cape Verde's maritime sector, though schedules vary by route and company.

A number of interviewees underscored that older ships had cramped conditions, especially for those working in engine rooms or galleys. When asked about security measures, one participant ironically declined to answer: "Better not to talk about it" (CVSH#5), Ventilation might be poor or the bunk compartments could be small and ill-equipped for privacy. Women specifically point out situations in which they lacked a separate bunk area or had to share limited facilities with male colleagues. Over time, many shipping operators have upgraded or replaced vessels, and some participants said they now had decent separation of sleeping quarters by gender: "In the ships, in the lower part we have some compartments only for sailors, only for women. We have compartments for cleaning staff; they have bathtubs, bathrooms suitable for taking their bath, doing their needs, changing clothes; they have beds" (CVSH#10_KI).

Participants consistently highlighted the challenge of fatigue. Several factors contributed: unpredictable weather, sudden changes in docking schedules, and the tight timelines to offload cargo and board new passengers. Those with children mentioned emotional stress from being away for multiple days, not always able to communicate. Indeed, work-life balance challenges were prominently featured in women's narratives, particularly for those with childcare responsibilities. One participant explained: "Being a maritime is good, but at the same time there are controversies. Like my case, I am a mother and I leave very early and leave my children, and the sea is not like a job on land where we have time off and we are closer to our child and see their growth" (CVSH#1). Another shared: "I feel [that working at sea affected my life] because due to the lack of a day off, I can't pay attention to my daughter" (CVSH#7).

The absence of regular days off during embarkation periods appeared particularly stressful for mothers: "When you have been 2 months in the same routine, you feel your body getting tired, you can't give your children attention, but as we have no other option..." (CVSH#7). Some participants had made significant career decisions based on these challenges: "When I was in the other company we went to islands spending a week to 15 days away. And I left that company and came to this one where we don't spend a day away" (CVSH#7).

Economic Relations, Security and Career Opportunities

The economic dimensions of women's participation in Cape Verde's shipping sector encompass patterns of income generation, access to benefits, financial security, and broader economic contributions to households and communities. These economic relations are shaped by formal employment structures while simultaneously influencing women's autonomy and social positioning.

Income generation for women in the shipping sector follows structured patterns based on hierarchical position and type of employment. Most participants were formally employed by shipping companies with standardised salary scales based on rank rather than gender. As one participant stated: "The colleagues who perform the same function as me, we have the same salary" (CVSH#2). This suggests formal wage equality within similar positions, though actual earnings vary considerably between occupational categories.

Officers receive higher compensation than service personnel, reflecting maritime traditions of pay scales based on rank and responsibility. However, several participants, particularly those in service positions, expressed dissatisfaction with compensation levels: "Now, we are fighting to improve our salary condition since we earn very little" (CVSH#6). Another noted: "The conditions are good, but the salary is so-so" (CVSH#8). This suggests that while gender-based pay discrimination may not be explicit, the concentration of women in lower-paid service roles contributes to gendered patterns in overall earnings.

Employment stability varies by position and company. Most participants described working on renewable contracts: "It is automatically renewable" (CVSH#3), typically with a structure of "5 in 5 years" (CVSH#3) for renewal periods. This provides a degree of employment security, though several participants noted concerns about job security during pregnancy and maternity leave periods: "We would have to abandon our career, even if temporarily, but we already run the risk, when pregnant, of losing your job" (CVSH#3).

Nonetheless, nearly all participants expressed appreciation for at least some security that maritime work afforded. Even with irregular schedules, they identified the pay as dependable compared to local alternatives.

The relationship between economic independence and autonomy emerged as a significant theme. Maritime employment provides women with economic self-sufficiency that enhances their decision-making power in households and communities: "A woman who is the head of a family and who has a job linked to the sea. For example, fishmongers, ship owners of fishing vessels and so on. Society is made... If we have structured families, we have a structured society and when a woman has economic power, has effective power... That improves not only the organisation, but society" (CVSH#3).

Social benefits access appears formalised through employment contracts, though with limitations compared to public sector employment. Maternity benefits were mentioned specifically: "We do everything legally as the labour

code determines. When they get pregnant, they come to work until the date that the doctor stipulates that they should go on leave and go home. In the private sector, they have two months of leave, because the law that determined maternity leave in three months, as in the public sector, is not yet in force" (CVSH#10_KI).

The gendered implications of these benefit structures emerged in discussions of pregnancy and childcare. The two-month maternity leave in the private shipping sector appears inadequate for many mothers, especially considering the rotation system of maritime work. As one recruiter explained: "After these two months at home, they do their work, they have the determined breastfeeding period and then they return home" (CVSH#10_KI). Companies make some accommodations through flexible scheduling: "We also elaborate a flexible schedule. For example, in ticket sales, they work six hours, and they can enter at the time we open and three hours later leave to breastfeed the baby and then return" (CVSH#10_KI).

Family Life Interface

The intersection between maritime employment and family life encompasses care responsibilities, work-life balance strategies, support systems, and the influence of maritime careers on family dynamics and social status.

Care responsibilities, particularly childcare, create significant challenges for women seafarers. The rotation system of maritime work, with extended periods away from home, fundamentally shapes how women manage family obligations. As one participant explained: "Being a maritime is good, but at the same time there are controversies. Like my case, I am a mother and I leave very early and leave my children, and the sea is not like a job on land where we have time off and we are closer to our child and see their growth" (CVSH#1). This separation from children represents an emotional burden distinct from the technical challenges of maritime work.

The impact of maritime schedules on childcare varies significantly based on vessel routes and rotation patterns. Women working on short-haul ferries between islands who return home daily face different challenges than those on longer inter-island voyages: "When I was in the other company we went to islands spending one week to 15 days away. And I left that company and came to this one where we don't spend a day away" (CVSH#7). This participant explicitly linked her employment decisions to childcare needs: "It affected a lot my daughter's school performance, she stayed with her brother" (CVSH#7).

For women with young children, maritime employment often necessitates complex childcare arrangements involving extended family members, particularly grandmothers and partners. As one participant described: "Not easy. Taking care of children and working at sea is not easy" (CVSH#2). When asked why, she explained: "Because you go to sea and have no one to take care of the child. Or a pregnant woman. For example, a woman will not work at sea pregnant" (CVSH#2).

Several participants described interrupting their maritime careers during early motherhood: "Because I was young at the time of the internship, I got pregnant and then I stopped because of motherhood" (CVSH#1). Another shared:

"The second affected. Because I didn't want to abandon my daughter because she was very little" (CVSH#4). These interruptions have implications for career progression and economic security, highlighting how gendered care responsibilities shape professional trajectories.

The companies' approaches to maternity represent a crucial factor in women's ability to balance care responsibilities with maritime careers. Some accommodation appears common, though not formalised as policy: "During pregnancy. After you go on leave and during breastfeeding you are also always on a ship where you sleep at home every day" (CVSH#3).

However, these accommodations depend on company discretion rather than established rights, creating uncertainty: "What's missing, in my view, are policies that safeguard, that safeguard us, safeguard our job post" (CVSH#3). The limited maternity leave in the private sector exacerbates these challenges: "In the private sector, they have two months of leave, because the law that determined maternity leave in three months, as in the public sector, is not yet in force" (CVSH"10_KI).

The choice between career advancement and family formation emerged as a significant dilemma for many participants, particularly officers with career ambitions: "We have two options, either we are going to abandon the maritime career to maintain the concept of the traditional family or we are going to leave aside the concept of the traditional family and follow the maritime career" (CVSH#3). This framing reveals how maritime careers can require renegotiation of traditional gender norms around family.

For women officers in particular, the timing of family formation involves strategic career planning: "I've already done my calculations, to get pregnant. From second pilot after 2 years on board I have to do training to be able to go to first pilot in Portugal, to be able to be the first pilot" (CVSH#3). This demonstrates how women must consciously integrate potential motherhood into their career progression plans, a requirement not generally faced by their male colleagues.

Support systems play a crucial role in enabling women's maritime careers, particularly for those with children. Partners who share childcare responsibilities emerged as especially important enablers: "He always supported me, it was even he who encouraged me to come back" (CVSH#1). When asked how household tasks are divided, this participant indicated an equitable arrangement with her partner. Similarly, another participant noted: "I never had any problems with this because my children's father always stays with them and there is no problem" (CVSH#2).

The social status of women in maritime professions appears complex and evolving. Some participants described their maritime careers as sources of community respect and admiration: "They say we are courageous, even knowing that working at sea is hard. But for us it's peaceful" (CVSH#6). Others noted family pride in their pioneering roles: "[to] my father obviously... is a huge pride" (CVSH#3). However, this positive reception coexists with persistent questioning of women's place in maritime spaces: "Society until today didn't accept, in my case my mother and my

godfather didn't want to. The only ones who supported me were my father and my husband" (CVSH#1).

Community perceptions appear influenced by both traditional gender norms and changing attitudes toward women's economic participation. As one participant explained: "I think that the government and entities related to the sea should give more opportunities to women, for them to be able to make a career" (CVSH#1). This suggests that institutional recognition legitimises women's presence in maritime spaces, potentially shifting community perceptions.

The social voice and decision-making participation of women seafarers extend beyond vessels to community contexts. Some participants described how their maritime knowledge and economic independence enhanced their social influence: "I have a lot of pride in my work. ... people end up worrying if we arrive well from the voyage and we end up feeling less tired and valued" (PTSH#9_CVSH#2). This suggests that maritime employment can enhance women's social positioning despite challenges.

Generational changes in attitudes toward maritime employment for women were noted by several participants: "Before we were few, but now we are more because there are other ships" (CVSH#6). This gradual normalisation of women's presence in maritime spaces may facilitate greater acceptance over time, though barriers persist: "What can be done to improve? Giving women more attention... Think of women in a different way, and stop thinking that there are professions for women" (CVSH#7).

The interface between maritime careers and family life thus reveals significant dilemmas that disproportionately affect women in Cape Verde's shipping sector. While formal employment equality exists in theory, gendered care responsibilities create practical barriers to women's full participation and advancement. Support systems—both familial and institutional—emerge as crucial factors enabling women to navigate these challenges. Despite these difficulties, maritime employment provides many women with enhanced social status and influence, probably contributing to gradual shifts in gender norms within their communities.

Gender Dynamics: Women's Roles, Gender Stereotypes, and Discrimination

Gender dynamics in Cape Verde's shipping sector manifest across multiple dimensions, including the division of labour, spatial arrangements, authority structures, and experiences of discrimination and harassment. These dynamics reflect both broader societal gender norms and sector-specific traditions and practices.

Participants' accounts frequently circled back to how tasks and responsibilities on Cape Verdean vessels tend to follow long-standing, often unspoken traditions. Through second-hand accounts, we observe that many male crew members consider deck operations—such as handling ropes, mooring, and navigation duties—as "naturally a man's job," while women are typically assigned roles involving passenger service, cabin upkeep, or meal preparation.

The gender division of labour aboard vessels follows patterns that align with both maritime hierarchy and gendered assumptions about appropriate roles. As we already seen, women are predominantly concentrated in service positions (chamber stewards, galley assistants, cleaning staff) and, just more recently, in deck officer positions. Engine room positions remain almost exclusively male: "We had one who was doing an internship as a sailor, but at the moment she's in the Copa [service area]" (CVSH#8).

This division appears partly rooted in historical associations between caring work and femininity. As one key informant observed: "In our ship,... most of the workers, connected to work with passengers, are women. We have women at the bar, those who assist passengers; women who assist customers. We also have women who work with ticket sales, women in the cleaning area" (CVSH#10_KI). The concentration of women in customer-facing roles reflects gendered assumptions about women's supposedly natural aptitudes for care and service.

Despite these ingrained patterns, there were some signs of transition. For women officers, breaking into traditionally male domains represents a significant departure from established patterns. One participant noted the evolving gender composition in officer roles: "Now we already have women in the bridge, we have mariner women, official women, machine engineers" (CVSH#7).

Gendered spaces aboard vessels reflect both practical accommodations and symbolic boundaries. Separate accommodations for male and female crew members represent a fundamental adaptation to mixed-gender crews. Workspaces reflect hierarchical as well as gender divisions. Bridge areas, traditionally male domains, now include women officers, though they remain minority presences. Service areas feature more mixed-gender staffing, though with gendered expectations about appropriate roles. Engine rooms remain highly masculinised spaces with minimal female presence.

Authority structures aboard vessels follow maritime hierarchical traditions but are slowly accommodating some female leadership. Women officers reported both challenges and successes in exercising authority, particularly when commanding older male subordinates. As one participant explained: "Most difficult is to give a man an order and being obeyed. I think our society still has a backward mentality, and still many men do not accept receiving orders from women. Even worse when you are new in a company" (CVSH#1).

Women officers develop specific strategies to establish and maintain authority in these contexts. One described her approach: "I normally gather everyone, and call attention to the fact that I am the second officer and must be respected" (CVSH#1). Another elaborated on the need for a carefully calibrated demeanour: "Keeping a posture not very closed, not very open, but a respectful posture from me to them and them to me... You have to have a firmer stance... showing that you're not for playing around" (CVSH#3).

Access to resources and knowledge presents both formal equality and informal barriers. Training and certification processes appear formally gender-neutral, though historical patterns limited women's participation: "When

maritime education for women began in '85, we already had women, but few continued" (CVSH#9_KI). This key informant also noted: "As a trainer how do you appreciate the inclusion of women in the nautical sector? Normally in training we don't notice big differences".

However, informal knowledge transmission may be influenced by gender dynamics. Some women reported needing to prove themselves repeatedly to gain full acceptance into maritime knowledge communities: "Always. I'm the second officer, but at the moment I exercise the function of immediate... and I feel the need every day to prove that I deserve to be in the position that I am. More than male colleagues" (CVSH#3).

Experiences of gender discrimination varied considerably among participants. While some reported no significant discrimination—"I don't see any obstacles" (CVSH#2)— others described subtle but persistent questioning of their capabilities: "For minds that are very macho, this is very difficult to accept" (CVSH#3). One participant described how gender discrimination manifests in daily work: "We must have more awareness that in this case men doubt that you can do your job correctly in case of accidents" (CVSH#7).

An especially revealing example came from a participant who described how performance standards differ by gender: "If I have a colleague of mine, a male... if he does 5, I have to do 5 times more... We always feel the need to do more and do more... To demonstrate that we deserve to be in the place where we are" (CVSH#3). This need to constantly prove one's capabilities represents a form of discrimination that creates additional psychological burdens for women in the sector.

Harassment experiences were generally not explicitly reported, though participants described developing preventative strategies. One participant explained: "We have to know how to impose respect at work, I never had any of these kinds of problems on board" (CVSH#7). And she added: "When we spend a month on board with the same people, if you don't care...", suggesting that maintaining professional boundaries requires conscious effort to avoid inappropriate behaviour or disrespect from her colleagues.

One gender-related incident was described by a key informant involving discrimination against a lesbian employee: "A woman who is lesbian and in that case, there was a situation of discrimination, specifically having to carry heavy things... then there was this situation where two employees of the copa, a man who wanted this lesbian woman to carry the weights, because she was lesbian and by the way she dressed" (CVSH#10_Kl). This intersection of gender and sexual orientation discrimination highlights how multiple aspects of identity can influence workplace experiences.

Violence and threats from passengers were reported by some female staff in customer-facing roles: "Bullying and abuse I have suffered a lot. There were passengers who threatened to beat me... there was a case where we had difficulty docking, and it happened almost the same thing and they started to panic. And there were passengers who threatened to set me on fire with a cigarette and stayed on top of me, and I had to push" (CVSH#5).

Gender stereotypes influence perceptions of women's capabilities and appropriate roles in the maritime sector. One participant described how passengers assume women perform only certain roles: "Yes, when they see women on board, they automatically think it's for cleaning" (CVSH#1). These stereotypes extend to assumptions about women's physical and psychological capabilities: "Because they still have a mentality that the woman should stay at home and satisfy their wishes" (CVSH#1).

Women officers particularly noted the weight of gender stereotypes regarding leadership capabilities: "If you are young, if you are a woman and you are embarked at a very high age level and you give them orders, you show that you know... the first thing they will say, hey, but who does this woman think she is?" (CVSH#3). Combating these stereotypes requires consistent demonstration of competence: "You, only by being a woman? Hey, the first thing they'll say, hey, but who does this woman think she is? Don't mess with my work... so young and already thinks she knows more than me" (CVSH#3).

Synthesis and Emergent Themes

Power Genderstruggles on Motherhood based hierarchy, stereotypes acceptance & family commands Gender-Low Caretaking based bullying reflexivity & harassment preventive stewardship deflecting strategies

The voices presented in these interviews highlight both the concrete and the nuanced realities of Cape Verde's shipping sector. On the one hand, the economic stability afforded by maritime work makes it appealing. Steady salaries—especially with established ferry operations—offer a path toward modest but reliable livelihoods. On the other hand, those same structures can perpetuate subtle inequities: women typically find themselves directed to service roles on board, with fewer opportunities to undertake the deck or technical tasks that open avenues to higher pay or faster promotion.

Still, individual determination and external support—from family members, mentors, or forward-thinking captains—have created gradual openings for women to transcend traditional expectations. Many shared stories of proving their competencies in roles once deemed "too heavy" or "too rigorous" for them. Others simply found themselves taking on extra responsibilities and, in so doing, reshaping crew members' assumptions about who can do what on board.

Altogether, the findings paint a portrait of a sector at the beginning of a transition, where established norms still hold sway, but new perspectives are slowly being voiced. Women officers and stewards are steadily affirming their right to be at sea, challenging the notion that maritime labour is inherently male. Their journeys reveal both the barriers and the possibilities for transformation, with many participants underlining the importance of open-minded leadership and concrete policy measures that can better integrate women into deck and technical roles.

Women's participation in Cape Verde's maritime sector presents a discontinuous historical trajectory, with early pioneers in the 1970s and 1980s followed by a significant gap until the recent resurgence beginning around 2012. The current cohort of female maritime professionals, particularly officers, represents a new wave of participation that is gradually transforming gender dynamics in the sector. As one participant proudly stated: "If I'm not mistaken, I was the first woman here in Cape Verde to hold this position" (CVSH#3). In total, this participant shared, there should now be up to eight female officers embarked in Cape Verde.

5.2.5. Comprehensive Analysis and Discussion

To conclude the chapters dedicated to the Cape Verde case study, we now proceed to discuss the results in an integrated manner, hoping to cross-reference the two sectors, fishing and shipping, in order to provide a more comprehensive view of gender dynamics and the role of women in the Atlantic archipelago.

I. An Identity Paradox

As an island nation with a strong maritime identity, Cape Verde's economy and culture are naturally closely linked to the sea.

However, there is a certain maritime-terrestrial paradox between Cape Verde's insular identity and its population's relationship with the sea.

There is strong emphasis on Cape Verde's identity as an archipelagic nation, with references to the sea as a primary resource: "we are an island country - our greatest wealth is certainly the sea". Cape Verde is even described as "practically a liquid country", but the relationship with the sea is complex: "we're from an island country, but surely half the population can't swim" or "we don't even know 1 or 2% of our sea" or yet "here we have no resources except the sea... we should pay more attention".

This paradox is thus expressed by the prevalence of traditionally land-based vocations despite the maritime potential.

As far as gender roles are concerned, the maritime connection manifests itself differently across sectors. In the shipping sector, we observe formal institutional structures that have both facilitated and hindered the integration of women, especially after a marked change in 2012. In contrast, the fisheries sector presents a more traditional but dynamic environment, where women's economic contributions are vital but often informal and undervalued. As we move forward, we will see how these two sectors tell distinct yet interconnected stories about gender, power and economic participation in Cape Verde's maritime economy.

II. Gender Dynamics in Cape Verde's Maritime Economy

Shipping Sector: A Path of Limited Formal Integration

In the shipping sector, gender integration tells a story of formal progress intertwined with persistent personal challenges. The turning point seems to have occurred in 2012, when institutional efforts to promote gender equality began to gain momentum with the training of the first women at UTA. On paper, these developments marked significant strides towards equality. However, the reality for many women stepping into this traditionally maledominated space tells a more complex story.

For many female seafarers, gaining access to the profession was only the first hurdle. Professional identity formation became an ongoing challenge, as women found themselves constantly needing to prove their competence in environments that were not designed with them in mind, leading to their professional identity often being framed around competence and neutrality, rather than an open defence of gender.

Many female officers emphasise their roles as professional seafarers and not as professional *women* seafarers, stressing their desire to be judged on merit and not on gender. One officer captured this sentiment poignantly: "on board we don't have women, we don't have men, we have seafarers".

However, this strategic neutrality brings with it its own set of challenges, often having to face the pressure to perform at a higher level in order to gain recognition and respect. One participant summed up this struggle perfectly when she said: "If he does 5, I have to do 5 times as much."

The social stigma surrounding women in maritime roles has also evolved but not disappeared. Historically, the maritime profession in Cape Verde – and globally – has been viewed as a male domain, with deep-rooted cultural norms reinforcing this perception. Although formal policies have begun to challenge these norms, many women still face resistance from colleagues, subtle forms of exclusion and the burden of having to navigate these unexplained barriers daily.

Despite these obstacles, women in the shipping sector have shown remarkable resilience and adaptability. Over time, many have sought collective organisation as a way of supporting each other and advocating for structural change.

However, it is crucial to recognise that while these individual efforts are powerful, institutional support remains inconsistent. Formal policies may exist, but their implementation is often slow, leaving women to bridge the gap between policy and practice on their own.

In short, the shipping sector's journey towards gender inclusion is a story of formal openings met with informal barriers. While institutions have laid the foundations, it is individual women - their strategies, networks and personal determination - who seem to be able to drive some change on the ground.

Fisheries sector: Informal but central roles

In contrast to the formal structures of the shipping sector, the fisheries sector in Cape Verde presents a story of deeprooted, informal integration, in which women have long been essential to the functioning of the sector, even if their roles are often unrecognised or undervalued.

Women in fisheries occupy a central role in the economic value chain, particularly in the processing, distribution and sale of fish. While men dominate the actual fishing activities - operating the boats and catching the fish - women control the market dynamics, from pricing to credit systems. An interesting statement in the interviews was that, in many cases, "fish sellers earn more than fishermen".

However, this economic power does not translate into operational control over fisheries, highlighting a paradox in which women's financial contributions are vital, but their influence remains constrained by traditional gender roles.

The professional identity of these women has also undergone significant transformation. Historically, selling fish was a stigmatised occupation, associated with a lower social status and devalued manual labour. One elderly seller recounted: "in the old days, people wouldn't even give us water because we'd put the smell of fish in the mug." Today, however, there is a growing sense of pride in this work. As one participant put it, "now fish sellers are people who live a dignified life". This shift seems to reflect both economic necessity and some change in social perceptions, with younger generations of women embracing their roles as essential contributors to household and community resilience: "I'm not ashamed of my profession".

But this kind of testimony should be read cautiously. One key informant stated: "It is an economic activity that is not very visible, accounted for or valued, not only by outsiders, but also by themselves". Another fish seller seems to confirm this: "I don't have any other choice, because if I had something else to do, I'd do it for sure."

Despite some progress, structural vulnerabilities persist. Most women in the fisheries sector work in highly informal settings, with limited access to credit, health support and legal protection. The physical demands of their work - carrying heavy loads, enduring long hours standing in the water and facing health risks due to exposure to the environment - are compounded by precarious working conditions and job insecurity. Safety concerns, particularly during early morning trips to the markets, were frequently mentioned, though often described as a routine part of the job rather than exceptional risks.

Interestingly, the financial sophistication within these communities is remarkable. Women manage complex informal credit systems, based on 'fiado³²²' relationships, and participate in community-based savings groups, such as 'totocaixa'. These systems not only facilitate commercial transactions, but also function as risk management mechanisms, ensuring that even when individual sales falter, there is a collective safety net. This speaks to the adaptive strategies these women use to maintain both economic stability and social cohesion within their communities.

Moreover, there is a growing trend towards collective organisation among women in fisheries. Associations have emerged to support professional development, advocate for better working conditions and provide a platform for women to share their experiences and strategies. These networks are not only economic in nature; they are also spaces for political engagement and social support, fostering a sense of empowerment and collective identity. As one participant reflected, "the association of women fish sellers was born about four years ago and quickly won a project with a lot of battle".

In conclusion, although the fisheries sector remains deeply rooted in traditional gender roles, women seem to have carved out spaces of economic power and social influence through informal networks, adaptive strategies and collective action. Their contributions, although often invisible in formal statistics, appear indispensable to the sustainability of the sector and to the wider resilience of coastal communities like Porto Rincão.

III. Power Dynamics and Economic Control

Shipping: Formal Authority Challenges

In the Cape Verdean shipping sector, as seen in the interviews, authority and power dynamics reveal an interaction between formal structures and deeply ingrained cultural expectations. Although, as already mentioned, institutional pathways have opened doors for women in maritime careers, their day-to-day experiences navigating command structures tell a more nuanced story.

One of the most persistent challenges facing female officers is navigating the hierarchy of command in a traditionally male-dominated environment. For younger female officers, asserting authority over senior male crew members often requires more than just technical competence - it demands constant performance of leadership under scrutiny: "the main difficulty is certainly adapting. Adapting to the male environment. Then it's accepting others. It's the crew accepting and respecting you. And then following your orders, in this case as an officer, you have subordinates, often men, who are already of a certain age, and it's much more difficult for a man of a certain age to accept orders from a young person, let alone a young woman." (...) Because when you're in a certain officer position, commanding, people will often doubt your ability because you're a woman. And acceptance comes from demonstrating your technical skills, your wisdom, your knowhow, from showing that you know and that you're there on your own merits and that you can do everything that's asked of you."

It is interesting to note that the formation of these women's professional identities reflects a sophisticated understanding of their roles. Many describe their maritime careers not just as jobs, but as a way of life. One female officer shared a powerful axiom, saying: "Sometimes I say that if you don't choose the sea, the sea chooses you." This deep personal connection to the maritime profession might play a significant role in shaping these women's commitment to breaking down barriers and redefining leadership in the sector.

However, even when women take on these leadership roles, structural barriers persist, particularly around maternity and work-life balance. The absence of comprehensive maternity policies creates a constant dilemma between career progression and family planning. One participant explained quite frankly: "When we decide to have children, we would obviously have to give up our careers, even if temporarily, but you already run the risk,

³² In Cape Verdean colloquial and commercial practice, fiado refers to a system of deferred payment based on personal trust, whereby goods are provided to the buyer with the understanding that payment will be made at a later date.

when you're pregnant, of losing your job." And another one: "We have two options, either we abandon the maritime career to maintain the concept of the traditional family, or we abandon the concept of the traditional family and follow the maritime career." This stark choice highlights the institutional gaps that continue to shape women's long-term participation in the sector.

Despite these challenges, only minimal direct discrimination is reported by participants in their day-to-day interactions. This apparent absence of overt harassment may reflect a combination of successful cultural shifts in the industry and self-regulatory strategies adopted by women to manage potential conflicts. However, as we will highlight once again later, this may also suggest a tendency to downplay difficulties to protect their hard-earned professional standing.

From an institutional point of view, companies have shown adaptability in supporting women's roles, albeit informally. For instance, some shipping companies have introduced practices such as assigning shorter routes to new mothers, allowing them to return home every day. These informal adaptations reflect a delicate balance between operational requirements and cultural expectations regarding motherhood and family roles. Yet, these adaptations remain inconsistent across the sector, highlighting the need for formal policies that support gender inclusion across the board.

On a broader level, institutional representatives acknowledge gender inclusion as an objective but often frame it as a transversal issue rather than a specific policy focus. As one key informant succinctly put it, "not specifically, but it's a transversal issue in the plan". This reveals a gap between formal commitments to gender equality and the practical realities that women face in their maritime careers.

While women in Cape Verde's shipping sector have made some progress in breaking into formal leadership roles, the challenges of authority, recognition and work-life balance remain deeply embedded in both cultural and institutional frameworks. The story here is one of progress mixed with persistent barriers, in which women continue to navigate a delicate balance between proving their competence and quietly pushing for systemic change.

Fisheries: Informal Power Structures

In the fisheries sector, power does not stem from formal titles or structured hierarchies. Instead, it emerges through informal networks, economic interdependencies and deep-rooted cultural practices. Women, despite being largely absent from the physical act of fishing (with very interesting exceptions that the interviews also describe), wield considerable control over the economic flow of the sector - a dynamic that complicates traditional narratives of gender and power.

At the heart of this dynamic is control over fish distribution and price-setting mechanisms. As fish sellers, women manage not only the sale of fish but also the credit systems that underpin the entire supply chain. The traditional

"fiado" system, in which fish is sold on credit, places women at the centre of complex financial networks.

However, this control comes with its own set of challenges. While the women manage the distribution networks, they bear the brunt of financial risk. When fish don't sell, or when buyers delay payments, it is fish sellers who absorb the losses: "There are many fishermen who demand payment on the spot, so those who have the money buy and those who don't are left without. Sometimes, when sales are slow, there is a lot of leftover fish that can even spoil because we don't have proper cooling boxes. To avoid waste, we sell at lower prices, give to neighbours and family, and as a result, we may not even recover the money we spent to buy the fish. We often end up in debt and loss."

However, rather than undermining their position, this risk has fostered a culture of financial sophistication and resilience. Women have developed informal savings systems such as totocaixa and maintain complex credit networks based on trust and reputation: "when we can't sell everything today, we sell it tomorrow... If I can pay beforehand, I'll pay, if not, when the person pays me, I'll pay the person I took the fish from."

Beyond economics, women's power is reflected in the community's resilience mechanisms. The fishing sector operates within what legal anthropologists might call a semi-autonomous social field, where informal norms and community-enforced rules govern behaviour alongside formal legal systems. Disputes are often resolved through community-based conflict resolution, privileging trust, reputation and negotiation over formal legal interventions. This was evident in the way many participants described their business transactions: reputation is everything. A breach of trust is not just a personal failure - it has consequences for the whole community.

It is interesting to note that although women have gained economic power, they often strategically maintain traditional gender roles to navigate the social dynamics of the sector. For instance, some women have become boat owners, but refrain from getting directly involved in fishing, respecting the gendered division of labour in which men work at sea and women on land. One participant framed this balance as a partnership, saying: "My wife and I are a partnership: I fish, and she sells". This reflects the negotiations between tradition and necessity, in which economic roles evolve without completely disrupting established social norms.

It seems, then, that women's roles are both central and limited, empowered but vulnerable. Their ability to navigate economic risks, maintain social cohesion and adapt traditional roles to modern challenges underlines an umbilical relationship between gender, culture and economic control.

IV. Institutional Responses and Gaps

When analysing gender dynamics in these two sectors in Cape Verde, it seems that institutional responses are often symbolic rather than substantive. As already alluded to, although there is recognition of the importance of gender inclusion at a political level, the gaps in implementation reveal a scenario that seems marked by what some authors of sociological thought describe as "myth and ceremony" - formal commitments that are not fully incorporated into practice.

Formal Sector (Shipping)

In the shipping sector, institutions have taken formal steps towards gender inclusion, but these efforts often lack depth and sustainability. One example already mentioned is its positioning in public policies and strategic planning as a rhetorical "transversal issue".

In addition, cultural and socio-normative conditioning persists. For example, although some places on courses in the area are reserved for women, cultural barriers remain: "when they go, they say that these trainings 'are for men'". This indicates that although some doors may be open, entrenched gender norms still discourage women from going through them.

At the governance level, institutions often point to symbolic achievements - such as the fact that there are a few women in leadership positions - as proof of progress. However, this tokenism masks the lack of systematic support for career progression. The assumption seems to be that entry-level access will naturally lead to career progression, a belief that the data does not support.

Informal Sector (Fisheries)

In contrast, the fisheries sector operates largely outside formal institutional frameworks, relying instead, as we have seen, on community-based solutions. Here, the economic power of women, through fish distribution networks and informal credit systems, positions them as key players in the functioning of the sector. However, this informal authority is not matched by institutional recognition or support.

One of the most pressing challenges in the fisheries sector is the lack of infrastructure, particularly around the conservation and processing of fish: "the main problem is the conservation of the fish" or "Access to the thermal bag is good because it preserves the fish so that it doesn't go to waste for several days. I.: What about the ice? R.: We don't have any here. We keep in chests or, as some people do, buy ice in Assomada. But at peak times, the ice often fails."

This infrastructural gap disproportionately affects women, who are primarily responsible for selling and processing fish. Without adequate cold storage facilities and transportation systems, women's economic activities remain precarious and high-risk.

Although women control the distribution networks, they have no decision-making power in the management of resources and the formulation of policies.

Both sectors seem to show some disconnect between institutional rhetoric and practical support for gender inclusion. In other words, although gender inclusion is a prominent feature of institutional discourse – as seen in the description of the main policies adopted, it remains more ceremonial than substantive; an instrument of legitimacy rather than a driver of systemic change (Meyer & Rowan, 1977).

V. (Almost) Transversal Patterns

Women Are and "Should Be" Caregivers

In fisheries, women are the caretakers of everyone, their children, their husbands, their grandchildren, their parents. They are the housewives, the heads of family life whether or not they have a fisherman - and many have neither a fisherman nor a husband.

There is a matrifocal social structure with a strong role for women in the domestic economy as the main financial managers, and we see multiple references to single mothers and complex family structures with needs across extended families: "A house with only a woman as head of the family is very difficult" or "The women here are incredibly strong, we raise our children in the midst of difficulties so that each one can have something to eat when we're no longer here" or "My performance is good, I think. There are many men who work with inferior results compared to women. Many of them work and spend on futility, without remembering to invest or have savings. I've always worked to support myself and my children. Now they're all grown up, I've done a good job for them."

In shipping, most of the women interviewed are not officers, but occupy positions such as cooks or stewards; in other words, they occupy positions as caretakers and this predominant function in the sample seems to indicate a distribution of roles based on gender stereotypes and a specific normativity about the place and role of women: "When they see women on board, they automatically think it's for cleaning".

Discrimination, Harassment and Adaptation Strategies

As instances of reported discrimination - the "fish stigma" in the fisheries sector and cases of social stigma and sexism in the shipping sector - were already mentioned, and we will conclude with a few other instances below.

However, it should first be pointed out that there is a significant trend towards denying, deflecting or transferring instances of abuse, discrimination or harassment. This may indicate some minimisation of these issues in an attempt to normalise or rationalise them, or a fear of disclosing these cases for various reasons (fear of professional consequences or moral and reputational judgment), but in any case, it reveals a significant difficulty in addressing these issues. Sometimes in the midst of deflective discourse, relevant experiences that "after all" turned out to have happened end up being conveyed. Harassment

prevention strategies are also revealed wrapped in sometimes zigzagging speech, which in itself denotes the centrality of abuse dynamics, especially in shipping:

"At least to me, **I've never had any cases** of sexism, harassment or anything like that.

(...) nowadays, having women interested in living and having a maritime profession, sailing, commanding ships... For very macho minds, this is very difficult to accept.

I: Do you still feel it today? This prejudice?

R: A lot less. But you can still board ships with older people, can't you? People in their 50s, 60s. It's a huge challenge. If you're young, if you're a woman and you're on board in a very old age group and you give them orders, you show them that you know how to do some kind of job and you say no, that's not how it's done or it should be done differently.

I- How do they react?

R: You, just because you're a woman? Well, the first thing they'll say is, «hey, who does that broad think she is?»

I: Is that so?

R: «Don't mess with my job,.... so young and you already think you know more than me». It's **these kinds of comments, these kinds of barriers that we have to overcome every day when you're a woman on board.**

I: And do you hear? Do they say it directly to you? Do you hear it directly?

R: No, no, no."

One of the most explicit cases of abuse was paradoxically reported in a downplaying way by a woman:

"There has been one case. Just one, in the pantry. A woman who is a lesbian, and in that case, there was a situation of discrimination, something small, namely having to carry heavy things... so there was this situation in which two employees from the pantry, a man who wanted this lesbian woman to carry the weights, because she was a lesbian and because of the way she dressed. But it was only once, we managed to resolve it and the whole situation returned to normal."

In the shipping sector, self-regulation to deter potential aggression is a significant strategy for harassment prevention. It reveals a cultural environment of insecurity:

"And maintain a posture that's not too shut, not too open, but a respectful posture from me to them and them to me.

(...) You have to **be aware of the environment you're going to be in and that's why you have to adopt certain strategies**, you have to take a firmer stance. It's cutting off conversations right from the start.

(...) It's showing that you're not to be trifled with. You're not to be trifled with."

A similar attitude is founded in the fisheries sector, simultaneously deflective and strategically preventive: "harassment has never happened, because I've always had my posture and respect."

Finally, gender stereotypes in the fisheries sector are poignantly described by one analytical participant: "They are often afraid of losing their place to women. My brother, who lived in Cidade Velha when my father died, came to take over the boat and the net because he thought this was a man's job. He even made a profit and I didn't see a penny. I complained and he was forced to give me back what was rightfully mine, what my father gave me. They want women to cook, wash and serve them. They don't want women to do anything that could generate income."

The patterns observed in our data must be understood within Cape Verde's broader socio-historical context. As Celeste Fortes (2015) notes in her work on female vendors, the project of building Cape Verdean society was historically marked by "misalignments between the status quo of a colonial and post-colonial, patriarchal society-building project and everyday practices of being in conjugal relationships and making and belonging to a family." This context helps interpret what we have termed "strategic traditionalism" – women's ability to accumulate economic power without directly challenging traditional gender roles, but also the preventive strategies found in shipping to help women navigate their own professional and personal paths.



6. A Comparative Analysis of the Two Case Studies

As part of our research methodology, we conducted a collective **validation workshop** on February 13, 2025, bringing together researchers from both Portugal and Cape Verde. This workshop served as a critical step in validating our findings and ensuring rigorous comparative analysis across both case studies.

To foster engagement, we introduced an interactive exercise asking participants to share what had surprised them most during the interviews. The most frequently reported reflections were:

- "Honesty" The remarkable openness with which interviewees shared their experiences;
- "Transparency" The candid discussions about the realities of the maritime sectors, including its hardships and opportunities;
- "Women's resilience" The strength demonstrated by women in navigating challenging environments;
- "Normalisation of discrimination" The concerning entrenchment of gender biases and inequalities as unquestioned aspects of daily life.

This workshop provided a critical opportunity to validate our research findings and ensure that the voices of those interviewed were accurately represented. Both research teams systematically debated common patterns and differences across sectors and countries, carefully examining the nuances in each dataset. This collaborative analysis enabled us to identify key patterns of convergence and divergence between the case studies, leading to more robust comparative insights that inform the findings presented below.

Common Patterns in the Fisheries Sector

The fisheries sectors in the Portuguese and Cape Verdean case studies share several structural and social similarities, particularly regarding the roles of women and the challenges faced by those involved in maritime activities. However, notable differences exist between the two countries, shaped by historical, cultural, and economic contexts.

In both Portugal and Cape Verde, women carry a significant burden of responsibility, not only in the fishing sector but also within their households and communities. Their role extends beyond the labour itself, encompassing financial support and domestic management. Due to these dual responsibilities, women in both countries experience a relentless workload, often with little to no rest. Family responsibilities predominantly fall on women in both contexts; managing the household is considered both a point of honour and an expression of femininity.

The tradition of working at sea is deeply embedded in family histories, with skills and knowledge passed down through generations. Both Portuguese and Cape Verdean fisheries operate under extremely demanding schedules,

requiring early morning starts to ensure the best market conditions for selling fresh fish.

Furthermore, the working conditions in these sectors remain precarious, with limited safety measures, economic instability, and physically demanding labour. This precariousness manifests in the double or triple work shifts for women, as men typically rest after fishing while women continue with household and other responsibilities. This precariousness is even more pronounced in Cape Verde, where informal work structures dominate.

In both countries, women experience significant health consequences from their work, yet they often downplay their physical limitations and difficulties, expressing them as normal—"it has to be this way" — showing a resignation and naturalisation of women's social roles.

The inherent instability of maritime labour is another shared reality, as fishers in both countries face unpredictable weather conditions, including strong tides and storms, making the profession highly risky. Many older generations express a strong desire for their children to seek alternative professions, hoping to spare them from the hardships of life at sea.

Beyond their direct involvement in fishing, women in both countries manage the logistics of their trade, ensuring the necessary materials for their work while simultaneously overseeing household affairs. This mental load adds another layer of strain to their already demanding lives. The lack of social support for families, particularly regarding "adaptation to motherhood and tides," is a common challenge in both countries.

Additionally, a common characteristic among women in these sectors is their low level of education, with most having only completed primary education. Another shared concern among fishers in both Portugal and Cape Verde is the declining availability of fish, with many expressing frustration over diminishing fish stocks due to environmental and economic pressures.

The internalisation of gender-based prejudice is evident in both contexts, with many women adopting and perpetuating traditional gender norms despite their restrictive nature. Paradoxically, there is also an expression of pride in the idea of freedom that sea life permits, despite its constraints.

Contrasting Features in the Fisheries Sector

Despite these similarities, there are notable differences between the two fisheries sectors.

In Cape Verde, a significantly higher number of women are involved in maritime-related jobs compared to Portugal, where female participation remains relatively low. While the women interviewed in Portugal were primarily fishers or shellfish harvesters; in Cape Verde, they were exclusively

fish sellers. Additionally, Cape Verde has more women boat owners compared to Portugal.

Portugal's fisheries sector tends toward formality, with structured systems for fish auctions (Docapesca), licenses, structured remuneration, and fishing quotas. In contrast, Cape Verde's sector leans heavily toward informality.

A striking contrast lies in the recognition of women's work: in Cape Verde, men acknowledge the considerable efforts of female fish sellers, whereas in Portugal, women's contributions are often perceived as supplementary rather than essential. The invisible labour of women in the Portuguese fishing sector remains largely unrecognised. While this observation holds true, it is important to note that this study did not include interviews with female fish sellers in Portugal. Their roles and potential impact within coastal communities warrant further investigation.

Social perceptions also differ significantly. While in Portugal there are no significant reports of discrimination or prejudice associated with being part of the fishing industry, in Cape Verde, such discrimination is prevalent, particularly the *fish stigma* affecting women's social standing and professional opportunities.

A notable difference is the presence of local collective agency through the fish sellers women's association in Rincão, which is absent from the community studied in the Portuguese case study.

Furthermore, the structure of the fishing economy varies between the two countries. In Cape Verde, a substantial portion of the fish trade takes place within an informal market, influencing social and economic dynamics in fishing communities. The informal nature of the fish trade in Cape Verde creates economic vulnerabilities for vendors. As one interviewee explained, fishers often demand immediate payment for their catch: "There are many fishermen who demand payment upfront, so those who have the money buy, and those who don't, are left without." This practice makes it difficult for vendors to secure fish if they lack immediate funds.

Another vendor elaborated on the financial risks involved: "Sometimes, when sales are slow, there is a lot of leftover fish that can even spoil because we don't have proper cooling boxes. To avoid waste, we sell at lower prices, give to neighbours and family, and as a result, we may not even recover the money we spent to buy the fish. We often end up in debt and loss."

In contrast, Portugal operates under a regulated system where all captured fish must be recorded and quantified by the national fisheries auction site - DOCAPESCA. This step is compulsory to ensure compliance with catch reporting requirements, as current regulations prohibit fishers from conducting direct, in-person sales to consumers. Although it's possible that some fishers may still engage in informal sales, no information regarding this practice was disclosed during the interviews conducted.

Common Patterns in the Shipping Sector

Regarding the shipping sector, common patterns among both countries included the concern for family responsibility and

the difficulty of achieving a work-life balance. Women seafarers consistently reported challenges in balancing maritime careers with family roles, particularly regarding motherhood.

Both countries exhibit unbalanced power dynamics that affect women's experience onboard as their human rights weren't always protected. Women face similar challenges related to formal hierarchies and command structures, particularly when they occupy leadership positions. The normalisation of discrimination is evident in both contexts.

While there are relevant differences in how it is reported - and varying degrees of visibility - sexual harassment occurs in both contexts. Women in both countries have developed similar strategies to navigate and survive maledominated environments, including carefully managing their professional demeanour and establishing boundaries.

Interestingly, both countries show a similar pattern across three generations of women in maritime careers: pioneers, a middle generation (around 2010-2015 in Portugal and around 2012 in Cape Verde), and the current new wave.

Contrasting Features in the Shipping Sector

Different patterns emerging from both countries under review include one related to collective agency. While Portugal has a national branch of the Women's International Shipping & Trading Association (WISTA), no equivalent gender-focused association was identified in Cape Verde's shipping sector. This represents an important distinction in institutional support mechanisms available to women navigating maritime careers. Interestingly, the collective agency in Rincao's fisheries sector represents the strength of grassroot movements, (hence, bottom-up), whereas the international collective agency in the shipping sector in Portugal represents a top-down approach, highlighting the lack of grassroot movements. This might also be intertwined with the perception of social and economic status in both sectors. Finally, this also represents a difference at intra-sector level but a similarity at inter-sector level in both countries.

Another aspect that differs between the two countries under review is the reporting of sexual harassment which was greater in Portugal then in Cape Verde. This might be explained, to a certain extent, by the social image that each participant wants to project. In Cape Verde perhaps participants were more conscious of this and did not wish to taint their projected social image.

Additionally, both countries registered a pivotal difference regarding the participants' maritime routes. While in Portugal many participants were taking part in tramp maritime routes, and other long routes, in Cape Verde, on the contrary, almost every participant was part of a crew running daily maritime routes, which meant they would return home every single day. On average, in Cape Verde, the maritime routes inter-islands would last for a few hours. This obviously had an impact on women's experience onboard.

Also, most women interviewed in Portugal were officers, while in Cape Verde, the majority were chamber employees. This difference in professional roles reflects different experiences in the sector as well as distinct pathways to sector integration.

7. WBE's Proposals for Change

7.1. Guidelines for Action

7.1.1. Gender Equality in Fisheries: Visibility, Dignity, and Decent Work for Women

Despite their essential contributions to both the fishing industry and household management, women's labour in small-scale fisheries remains largely invisible in fisheries governance and academic literature. This underscores the urgent need for more research on gender dynamics within Portugal's and Cape Verde's small-scale fisheries to properly identify and address existing gender gaps. Expanding studies across diverse regions and fishing communities is crucial for developing a more equitable and comprehensive understanding of labour roles in the sector.

While Portugal has made progress in recognising the role of women in small-scale fisheries, significant challenges remain in ensuring gender equity within the sector. These challenges include increasing visibility for women's contributions, improving working conditions, attracting younger generations, fostering inclusivity in fisheries governance, and addressing the unique struggles faced by female fishers who are also new mothers.

Increasing Visibility and Recognition of Women's Contributions

Women play essential but often overlooked roles across Portugal's fisheries sector. They are involved in fishing itself, selling fish, and working in the post-harvest industry (such as seafood processing and packaging). Despite their contributions, these roles remain largely invisible in official statistics, fisheries governance, and public perception.

One major challenge is the lack of gender-disaggregated data, which makes it difficult to fully understand women's participation and influence in the sector. Without this data, policymakers struggle to develop targeted initiatives that address gender disparities. Additionally, cultural perceptions of fishing as a male-dominated industry continue to overshadow the vital roles that women play. Addressing this challenge requires collecting, analysing and disseminating more information.

WBE therefore recommends:

 documenting and reporting women's contributions at all levels of the industry, which includes (i) disaggregating the gender information concerning the different functions connected to the fisheries sectors both on board and on land / ashore (i.e. fishing, repairing fisheries tools, sea food processing, sea food selling); (ii) conducting studies that highlight the economic and social impact of female fishers, fish

- sellers, and post-harvest workers;
- disseminating the data and the results of studies in an accessible way, in language suited to the identified audiences;
- encouraging media and educational campaigns that challenge traditional gender norms and promote women's roles in fisheries.

Supporting New Mothers in the Fisheries Sector

One of the most overlooked challenges in the fisheries sector is the lack of policy and economic protections for female fishers who have recently become mothers. Many of these women face difficult choices between maintaining their livelihoods and caring for their newborns. Unlike other professions, fishing does not follow a typical work schedule, making it difficult for new mothers to access standard daycare services.

With limited childcare options, some women are forced to leave the industry temporarily or rely on informal care arrangements, which may not always be ideal. This lack of support can contribute to economic insecurity and discourage young women from pursuing careers in fisheries.

Possible solutions include:

- expanding maternity protections and financial support for female fishers during the postpartum period;
- promoting leave and financial support for grandparents that wish to take care of grandchildren at the end of the parental leave period;
- creating flexible childcare solutions, such as community-run daycare centres that operate outside of standard hours to accommodate the unique schedules of fishing families.

Attracting Younger Generations to Sustain the Sector

The fisheries sector in Portugal face a generational crisis. With an aging workforce, there is a growing concern abo play a crucial role in the distribution and sale of seafood, yet they often face social stigma and economic marginalization. marginalisation. This stigma is partly due to the perception of fish selling as low-status, informal work, despite its essential contribution to local economies and food security. In addition, many peixeiras handle fish daily, often in markets or open-air conditions without proper facilities, leading to an unavoidable lingering smell of fish on their clothes, hands, and personal belongings. This association with the smell of fish has led to social discrimination. ut who will carry forward small-scale fishing traditions. Young people, especially women, often view fisheries as an unattractive career due to the perception of low wages, difficult working conditions, and a lack of career progression.

For women, in particular, the challenge is even greater due to the traditional gender roles that have historically excluded them from leadership positions and decision-making in fisheries. Without clear pathways for young women to enter and succeed in the sector, gender disparities will persist, and the workforce will continue to shrink.

To make fisheries more attractive to younger generations, it is recommended to:

- promote vocational training programs that highlight the potential career paths in the industry;
- improve working conditions, wages, and social protections to make fisheries a more stable and appealing profession;
- provide financial support to acquire new vessels or refurbish old vessels to improve labour conditions on board as well as guarantee improvements in safety, navigation and sustainability through modernising instruments and motors;
- develop awareness campaigns that challenge the stigma around fisheries work and showcase its economic and cultural importance;
- create awareness of the valuable contribution of smallscale fisheries to sustainability concerns by (i) gathering information (ii) conducting studies and disseminating the results, particularly among young people.

In Cape Verde, in particular, addressing gender disparities in small-scale fisheries requires tackling deeply rooted challenges that affect women's participation and economic security in the sector. Finding community leaders capable of disseminating a new vision and working with them is critical. Supporting the creation and development of local associations with strong participation and leadership by women is another promising route to empowering young women.

Breaking the Stigma Around Female Fish Sellers

In many fishing communities, female fish sellers (known as "peixeiras") play a crucial role in the distribution and sale of seafood, yet they often face social stigma and economic marginalisation. This stigma is partly due to the perception of fish selling as low-status, informal work, despite its essential contribution to local economies and food security. In addition, many peixeiras handle fish daily, often in markets or open-air conditions without proper facilities, leading to an unavoidable lingering smell of fish on their clothes, hands, and personal belongings. This association with the smell of fish has led to social discrimination.

Overcoming these biases requires a combination of awareness campaigns, education, and improved working conditions.

Therefore, WBE recommends:

- · providing access to better sanitation facilities;
- designating fish handling areas and invest in these spaces to change their appearance and conditions to reduce the physical challenges that contribute to the stigma;

 after improving these conditions, disseminate information to highlight the changes within and outside the fishing communities

This is especially relevant in the case of Cape Verde. By addressing both societal attitudes and practical workplace challenges, Cape Verde can create a more inclusive and equitable fisheries sector that empowers women and enhances economic opportunities.

Improving Fish Preservation Techniques and Technologies

One of the biggest challenges for *peixeiras* and small-scale fishers in Cape Verde is the rapid spoilage of fish due to inadequate refrigeration and preservation methods. Limited access to ice, cold storage, and modern preservation techniques significantly shorten the lifespan of fish products, leading to economic losses and increased food waste.

To address this, it is recommended to:

- support investments in affordable and accessible fish preservation technologies—such as solar-powered cold storage, improved drying and smoking techniques, and community-run ice production facilities;
- train women in these improved methods to enhance product quality, reduce waste, and increase profitability for those working in post-harvest activities;
- improve women's financial literacy via programs such as microcredit, which provides a way of empowering women while creating conditions to preserve the fish and consequently improve the revenues.

Engaging Stakeholders for Sustainable Development

Effective gender-inclusive fisheries management depends on the active involvement of key stakeholders, including government agencies, fishing cooperatives, community leaders, and NGOs. However, challenges arise when decision-making processes exclude women, limiting their ability to advocate for better working conditions and fair economic opportunities. Strengthening collaboration between these stakeholders is essential to creating policies that protect and promote women's roles in the sector. Community-based participatory approaches, such as workshops and policy dialogues, can help ensure that women's voices are heard and considered in fisheries governance.

Reforming National Policies to Improve the Informal Fish Market System

The informal nature of Cape Verde's fish market poses significant challenges for economic stability and fair compensation. Many transactions between fishers and peixeiras occur without formal agreements, leading to a cycle of delayed payments and debt accumulation. This "snowball effect" results in fishers and sellers being trapped in a system where payments are inconsistent, causing financial insecurity for everyone involved.

WBE recommends:

- the design and implementation of policies that regulate and formalise these transactions—such as transparent pricing structures, digital payment systems, and access to microfinance—to ensure that both fishers and sellers are paid fairly and on time;
- to guarantee, as part of these policies, adequate training for women and continuous education as well as the dissemination of good examples

Strengthening these market systems will not only provide financial stability for women in the industry but also contribute to a more sustainable and resilient fisheries economy.

7.1.2. Gender Equality in Shipping: Towards Inclusive Maritime Careers

Despite growing international attention and more than three decades of policy efforts to "go beyond the 2%" of women seafarers globally, structural barriers still hinder women's full inclusion in the shipping sector, which is particularly evident in Portugal and Cape Verde. The Portuguese shipping industry has experienced dramatic losses, with a 92.6% reduction in ships and a 94.6% decline in seafarers since 1980 (Carvalho, 2025). Amidst this sectoral downturn, the rise of women maritime officers is noteworthy but remains fraught with considerable challenges.

In both Portugal and Cape Verde, structural barriers are deeply embedded, manifesting as workplace discrimination, bullying, sexual harassment, xenophobia, and racism, compounded by the psychological demands of prolonged time at sea. Women seafarers from these countries consistently report heightened expectations to demonstrate their professional competence, often confronting persistent double standards. A Cape Verdean participant expressed the sentiment clearly: "If he does 5, I have to do 5 times as much." Similarly, Portuguese women maritime officers frequently find their authority questioned, sometimes resulting in serious confrontations.

The research identifies maternity protection and work-life balance as critical concerns. As a Cape Verdean participant revealed, women often face stark choices: "We have two options, either we abandon the maritime career to maintain the concept of the traditional family, or we abandon the concept of the traditional family and follow the maritime career" (CVSH#3). This points to the urgent need for comprehensive maternity policies that protect women's employment rights while accommodating family responsibilities.

The research in Portugal's shipping sector particularly highlights the impact of sexual harassment and workplace bullying as significant barriers to women's participation. Several Portuguese participants reported experiences of sexual harassment, with 6 out of 16 interviews mentioning either first-hand or second-hand experiences. Notably, barriers to reporting these incidents persist, with many women choosing silence to protect their career advancement prospects.

Breaking the Cycle of Harassment and Gendered Violence: Strengthening Institutional Support for Women Seafarers

The maritime sector requires robust institutional frameworks supporting women's participation and advancement. This should include establishing clear policies against harassment and discrimination, as evidenced by research participants' experiences of having to develop preventive strategies against potential misconduct. A Cape Verdean participant's statement that "You have to be aware of the environment you're going to be in and that's why you have to adopt certain strategies" (CVSH#3) underscores the need for institutional rather than individual solutions to these challenges.

The research reveals that, in Portugal, institutions and companies have mechanisms to report sexual harassment; however structural barriers prevent some women from reporting their cases through these existing mechanisms. The key factor identified by participants in the shipping sector in Portugal which deterred women from reporting sexual harassment was fear of reprisals - this could be a more general toxic workplace environment, or more specific reprisals such as mobbing, being fired, or having one's personal or professional reputation ruined.

Given the structural invisibility of harassment and gendered violence at sea—often silenced by fear of retaliation or disbelief—there is an urgent need to strengthen protections for women seafarers. Our research finds that:

- In Portugal, victims of harassment are often trapped onboard with perpetrators for extended periods, lacking adequate support and facing structural barriers that prevent them from using reporting mechanisms safely;
- Harassment is commonly followed by bullying, mobbing and both formal and informal professional retaliation, causing professional and personal damage to the victim's reputation, especially when perpetrators hold higher ranks.

Additionally, barriers to reporting such incidents are exacerbated by gaps in national legal frameworks, weak enforcement of protective labour legislation on board, and the pervasive fear of retaliation. Regarding sexual harassment, Portuguese law, for instance, leaves many forms of abuse outside the scope of criminal scrutiny. Similarly, the Cape Verdean law does not provide specific mandatory mechanisms to report these cases.

One possible counter to these issues would be the establishment of specific provisions to address sexual harassment at sea within national criminal codes, aligning legislation with the Istanbul Convention.

To build a safer and more inclusive maritime environment the WBE suggests enforcing:

- mandatory confidential reporting mechanisms and shipboard safety protocols on all vessels flying the Portuguese and Cape Verdean flags;
- mandatory annual anti-harassment and anti-discrimination training for all crew members, specifically focusing on the responsibilities of captains and senior officers.

Transforming Workplace Culture

The research reveals persistent cultural barriers that must be addressed through systematic interventions. This includes challenging gender stereotypes about women's capabilities in maritime roles. As one Cape Verdean participant noted: "When they see women on board, they automatically think it's for cleaning" (CVSH#1).

The Portuguese case study reveals particular challenges regarding power dynamics aboard vessels. Women officers reported having their decisions and orders challenged by male colleagues, requiring them to prove their competence constantly. In some cases, these challenges escalated to physical confrontation, as reported by one participant who experienced a situation requiring the disembarkation of a male crew member at the next port to ensure her safety (PTSH#12).

This highlights the need for more vigorous enforcement of professional conduct standards and clear consequences for discriminatory behaviour.

Enhancing Career Access and Stability for Women Seafarers

Ensuring career access, retention, progression, and stability remains another critical challenge. Despite historical milestones, such as the admission of women to Portugal's Maritime Academy in 1975 or the Cape Verdean New Generation milestone in 2012, career advancement continues to be impeded by persistent structural barriers.

Maternity protection and achieving work-life balance are particularly pressing concerns for women. Women in Cape Verde describe a stark choice between family responsibilities and continuing their maritime careers, while in Portugal, similar conflicts often push women out of maritime roles by their mid-30s.

Additionally, their careers are often hindered by having to work harder than men to prove expertise. They often see their authority questioned by male colleagues, even when holding superior ranks. Facing these kinds of informal barriers indicates the need for programs that address not just technical skills but also the informal aspects of maritime culture that can impede women's advancement.

Evidence from both countries thus suggests the need for structured career development programs specifically designed for women in maritime professions.

Addressing these concerns could involve:

- establishing gender quotas for maritime training programs and enforcing EU Directive 2023/970/EU on pay transparency—or establishing similar rights and information mechanisms as those of the Directive to overcome the gender pay gap and promote solid career progression;
- implementing regular audits to monitor and address gender disparities in promotion rates, salary levels and career trajectories of male and female officers;

- creating flexible re-entry pathways post-maternity, including tailored training and mentorship programs connecting experienced female maritime professionals with newcomers to support women returning to maritime careers;
- prioritising comprehensive maternity policies that provide extended leave, flexible scheduling, temporary shore-based assignments, and appropriate childcare support systems;
- developing national programs to track and support women alumni of maritime training institutions throughout their careers, ensuring retention while providing a nurturing ecosystem embedded in the shipping industry encompassing educational actors, employers, crews, owners, and intermediaries.

Integrating Work-Life Balance and Mental Health Protections

Work-life balance and mental health protections are equally important. The maritime sector's demanding rotations, high isolation, and constant mobility compound the challenges of caregiving and mental health, especially for women and mothers.

It is recommended to:

- align national maritime policies with EU Directive 2019/1158/EU to promote family-friendly working conditions, including, e.g. paid shore leave for family care, and tele-counselling services;
- revise the maternity provisions within the Maritime Labour Convention to better align with the realities faced by the maritime workers to offer targeted support for mothers at sea, coupled with improved coordination with national social security systems;
- incorporate women's reproductive and caregiving needs into occupational health frameworks, including ship design and staffing policies.

Data Collection and Sectoral Visibility

As the report highlights, the "notorious 2%" figure is outdated and methodologically opaque. Better data is an indispensable prerequisite for effective policy. Improved data collection methods are thus essential and increased visibility of women's roles in maritime sectors is both an outcome of better data and a crucial precondition for promoting gender equality in the industry.

It is therefore recommended to:

- establish comprehensive gender-disaggregated databases to track participation, career progression, and specific challenges women face to support targeted interventions;
- integrate gender impact assessments (inspired by the instruments developed by FAO) into maritime training program evaluations alongside qualitative research that highlights women's experiences onboard.

7.1.3. Transversal Recommendations for Fisheries and Shipping

While shipping and fisheries differ in scale and regulation, both sectors share structural features of gendered exclusion, lack of recognition, and uneven policy implementation. Therefore, a transversal strategy is needed to address systemic issues.

Gender Mainstreaming and Intersectionality

As our data show, women face discrimination not only based on gender but also due to other intersecting identity factors, such as: race, class/ social status, nationality, motherhood, and sexual orientation. These multiple and intersecting forms of discrimination require deliberate action, ensuring that policy principles are turned effectively into operationalised instruments with concrete applications and communicated throughout the administrative and hierarchical structures. This in turn assures that they do not just become another instance of rhetorical and symbolic discourse. As highlighted in the report, symbolic rather than substantive institutional responses are precisely one of the gaps that should be overcome.

To create unified, supportive frameworks, it is recommended to:

- institutionalize gender impact assessments in all blue economy policies (e.g. building on the Cape Verdean "Estratégia de Género para o Sector das Pescas 2022– 2026" as a good practice model);
- promote inter-ministerial gender-focused task forces centred on fisheries and shipping,;
- harmonise labour and criminal laws addressing maritime violence, harassment, and discrimination.

Investment in Community-Based Infrastructure

The lack of gender-responsive infrastructure—such as flexible childcare for fishers or safe accommodations for women seafarers—continues to push women out of maritime work or into informal roles.

So, to further support women's sustained participation in the maritime work, it is recommended to:

- invest in community-based infrastructures, such as community-run daycare centres aligned with maritime schedules;
- improve port facilities and fish markets to ensure safe, clean, and dignified working conditions;
- encourage and fund port-based safe spaces and women's associations providing legal advice, peer support, and essential services.

Enhancing Female Leadership and Visibility

Finally, as already stated, women's underrepresentation in decision-making positions is both a cause and a consequence of their invisibility in the blue economy. Hence, enhancing female leadership and visibility in maritime sectors is critical. As evidenced in the case of Rincão's fish sellers' association, support to existing community organisations also requires prioritisation. While our fieldwork revealed that this association demonstrates active engagement in advancing members' interests, it faces significant challenges: limited infrastructure and resources constrain its ability to attract new members, and some community members expressed scepticism about its effectiveness and/or a lack of awareness about its potential. As evidenced in participant narratives, this ambivalence toward formal organising reflects broader patterns in how informal economic actors navigate institutional structures. Thus, these specific community profiles must be known, understood and integrated into any policy action.

To help shift perceptions and increase women's representation, it is recommended to:

- establish national gender balance targets in maritime governance (e.g. aligned with Directive 2022/2381/EU on Gender Balance in Leadership or the Portuguese Pink Quota Law for the Public Sector – Law 62/2017, 1st of August - or the Cape Verdean Parity Law);
- provide leadership training for women in unions and cooperatives;
- collaborate with media, educational institutions, and trade unions to challenge stereotypes and highlight female maritime leaders.



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7.2. Implementation and Monitoring Indicators

Implementing the recommendations mentioned above will require identifying the appropriate policy level, designing an action plan for policy changes in the public and private sectors, an including indicators to monitor prospective developments.

The policy level at which action is required – national, regional, local, other – depends on the effective ambition and the specific circumstances of the countries and communities. Most likely, there is a need for consistent action at all levels of political decision, as effective measures rely on legislation that must be approved at different levels, leadership, and adequate resources that may come from diverse sources. As a first step, it is possible to consider pilot projects developed at the municipality level that might scale up once their positive impact has been assessed. This is a decision that must be taken by political actors considering the different realities.

In any case, it is recommended to design specific programs aimed at empowering women in the fisheries and shipping sectors, along with corresponding action plans.

The transversal and sector-specific recommendations set out in this report must be implemented through inclusive planning and clear, context-sensitive indicators.

The **fishing-specific indicators** address crucial structural and socio-cultural barriers identified in the small-scale fisheries sector, drawing explicitly from empirical findings of fieldwork conducted in Portugal and Cape Verde. Emphasising women's diverse contributions—from direct harvesting and shellfish gathering to post-harvest processing and fish selling—these indicators tackle both visibility and substantive recognition gaps. The focus on gender-disaggregated data availability and targeted documentation is in response to the historically documented invisibility of women's labour in official statistics and governance structures. Indicators relating to infrastructure improvements, technological adoption in fish preservation, and access to financial resources explicitly address structural inequities and economic vulnerabilities highlighted in the research. The inclusion of maternity protection and caregiving support indicators recognises specific genderbased challenges faced by female fishers, particularly mothers, identified during fieldwork. The leadership and cooperative participation indicators respond directly to the documented marginalisation of women from fisheries governance, while qualitative measures ensure that cultural shifts, stakeholder responsiveness, and improvements in lived experiences are effectively monitored.

This context-sensitive set of indicators would enable a comprehensive assessment of gender equality in small-scale fisheries:

- % of women's participation in fisheries by type of activity;
- Existence and availability of gender-disaggregated data within national and regional fisheries statistics;

- Number of documented studies and reports specifically addressing the economic and social contributions of women in small-scale fisheries;
- Number of female fishers benefiting from maternity leave and financial support programs;
- Number of female fishers using flexible childcare services (e.g., community-run daycare centers);
- Number of female-led or gender-balanced fisheries cooperatives and associations;
- Number and scale of infrastructural projects providing sanitation, refrigeration, and improved market spaces for fish sellers;
- Number of women trained in advanced fish preservation methods (solar-powered cold storage, drying, smoking techniques);
- Number of fish preservation facilities established and actively managed by women or women's cooperatives;
- Number of women accessing microcredit programs for fisheries-related business activities.

The **shipping-specific indicators** directly address the key structural barriers and challenges identified through fieldwork.

The focus on rank distribution and contract types responds to the documented pattern of occupational segregation, where women are often concentrated in service roles or face precarious employment conditions. Pay gap measurements and leadership position tracking are crucial to identify whether formal equality in maritime employment masks or not persistent inequalities in career progression. The emphasis on harassment reporting and anti-harassment protocols directly addresses the patterns of concern revealed in the interviews. The 5-year retention metric is critical given the evidence that many women face workplace challenges (e.g. sexual harassment) or career interruptions due to family responsibilities, especially during the crucial early career phase.

These indicators would help track both formal integration and substantive equality in the shipping sector:

These indicators would help track both formal integration and substantive equality in the shipping sector:

- % of women seafarers by rank, vessel type, contract type and duration;
- Gender pay gap measurements;
- Uptake of maternity benefits;
- · Number of women in leadership positions;
- Incident reports of sexual harassment and bullying onboard (anonymised);
- Retention rates of women maritime officers 5 years postcertification;
- Number of ships with implemented anti-harassment protocols and gender-sensitive accommodations.

The **cross-cutting indicators** reflect the research's finding that gender inequality in maritime sectors is deeply embedded in broader institutional and social structures.

The focus on governance representation responds to the documented disconnect between women's economic contributions and their formal decision-making power, particularly in the fisheries. The emphasis on childcare initiatives directly addresses a critical barrier identified across both sectors - the challenge of balancing maritime work with care responsibilities. The legal instrument tracking acknowledges the research finding that while general equality frameworks exist, sector-specific protections are often lacking. Budget allocation monitoring is crucial given the evidence that gender initiatives are typically discussed rhetorically without corresponding resource commitment.

These indicators would help assess systemic change beyond individual sectors:

- % of maritime governance bodies with gender-balanced representation;
- Number of community childcare projects implemented in fishing communities;
- Number of new or revised national legal instruments that explicitly address sexual harassment in fisheries and shipping;
- Level of budget allocated to gender equality programs in the fisheries and shipping sectors.

Additional **qualitative indicators** capture the nuanced experiences and cultural shifts that quantitative metrics might miss.

The emphasis on satisfaction with career progression is in response to the research finding that formal access doesn't necessarily translate to meaningful career development

opportunities. Workplace culture monitoring is crucial given the evidence that institutional changes often lag behind formal policy reforms. The focus on support systems' effectiveness addresses the finding that informal networks and coping strategies play a crucial role in women's professional survival and success. Work-life balance impact assessment responds to the consistent theme across both sectors of women bearing disproportionate domestic responsibilities alongside their maritime work. Mentorship quality tracking acknowledges the importance of role models and professional guidance in breaking down traditional gender barriers, particularly in the shipping sector interviews.

These indicators would help capture the lived experience of policy changes and institutional reforms:

- Women's satisfaction with career progression opportunities and working conditions;
- Changes in workplace culture, attitudes and community perceptions;
- Effectiveness of childcare solutions and family support systems;
- · Impact of policy changes on work-life balance;
- Perceived quality of vocational and skill-development training, and mentorship relationships;
- Quality and effectiveness of stakeholder dialogues and policy interventions on gender equality.

This multi-layered approach to monitoring ensures attention to structural changes and experiential impacts, reflecting the research finding that gender equality in maritime sectors requires institutional reform and cultural transformation.



7.3. Normative Anchoring of Recommendations and Monitoring Indicators

This section links the proposed guidelines for action and indicators to international obligations and national strategies in Portugal and Cape Verde, reinforcing their coherence and legitimacy within broader legal and policy frameworks.

Linking Guidelines for Action to International and National Commitments

Thematic Area	Recommendation	Relevant Frameworks
Gender-Specific Anti-Harassment Protections	Specific legal provisions to address sexual harassment, including at sea within national criminal codes in both countries and within the Cape Verdean labour code aligning it clearly with Law 84/VII/2011, 10/01. CEDAW GR19 (1992) Convention Art. 40; IEU Directive 2024/13 PAVMVD	
Confidential Reporting & Safety Protocols on Ships	Establish internal reporting systems for harassment in the Cape Verdean labour code and mandatory training for captains in both countries	SDG 5.2; ILO C190; MLC 2006; CEDAW
Access to Maritime Careers	Improve retention and advance-ment of women in shipping via audits, upskilling, and maternity-responsive pathways SDG 5.4 & 8.5; ILO C183; EU Di-rectives 2006/54/EC, 2019/1158; CEDAW Art. 10–17 ENIND – PAIMH	
Work-Life Balance & Mental Health	0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	
Gender- Disaggregated Data	Establish mandatory reporting on female participation across maritime sectors SDG 17.18; FAO SSF GC Ch. 8; CEDAW Art. 11.1 2030; Cape Verde PNIE	
Recognition of Women's Unpaid/ Informal Labour in Fisheries	Legal status and social protections for women in onshore fisheries work	CEDAW Art. 11; ILO C111 & C183; FAO SSF Guidelines Principle 8; CV Fisheries Gender Strategy
Female Leadership in Maritime Governance	Gender quotas in fisheries cooperatives and maritime boards	SDG 5.5; EU Directive 2022/2381; CEDAW Art. 7; ENIND – PAIMH; CV Parity Law
Community Infrastructure for Caregiving	Fund daycare systems aligned with fishing and shipping schedules SDG 5.4; CEDAW Art. 11.2c; C156; Cape Verde PNIEG & PEDS II	
Improved Facilities for Fish Sellers	Sanitation and infrastructure upgrades to reduce stigma	SDG 6.2, 5 & 8; FAO SSF Guidelines Ch. 6 & 7; CV Fisheries Gender Strategy; ENM 2030

Linking Indicators for Monitoring to SDGs and Legal Standards

Indicator	Corresponding Frameworks
% of women's participation in fisheries by activity type	SDG 5.5; FAO SSF Guidelines (Principle 8); CEDAW Art. 11; ILO C111
Availability of gender-disaggregated fisheries data	SDG 17.18; FAO SSF Guidelines Chapter 8; Cape Verde PNIEG; EU Gender Equality Strategy 2020–2025
Documented studies highlighting women's contributions in fisheries	FAO SSF Guidelines; SDG 5; CEDAW Art. 11
Uptake of maternity and caregiving protections	ILO C183; Directive 2019/1158/EU; Cape Verde PNI-EG & PEDS II
Female leadership in fisheries governance	SDG 5.5; Directive 2022/2381/EU; CEDAW Art. 7; CV Parity Law
Infrastructure improvements for fish sellers	FAO SSF Guidelines Ch. 6 & 7; SDG 5 & 8; CV Fisheries Gender Strategy; ENM 2030
Adoption of improved fish preservation technologies	FAO SSF Guidelines Ch. 6 & 7; SDG 8; Cape Verde PNIEG
Formalised financial resource access	SDG 8.10; ILO C111; FAO SSF Guidelines Principle 8
% of women in different seafarer ranks, tenure, and vessel type	SDG 5.5; IMO/WISTA Data Strategy; MLC 2006; Directive 2006/54/EC
Number of ships with implemented anti-harassment protocols	ILO C190; MLC 2006; Directive 2024/1385/EU; CE-DAW GR35
Gender-disaggregated data reporting in national maritime statistics	SDG 17.18; CEDAW; EU Gender Equality Strategy 2020–2025; Cape Verde Gender Observatory
Number of women in maritime boards and cooperatives	Directive 2022/2381/EU; SDG 5.5; ENIND; PNIEG; CEDAW Art. 7
Number of pilot community child- care programs for fisher families	SDG 5.4; ILO C183; CEDAW Art. 11.2c; Directive 2019/1158/EU
Existence of legal provisions that encompass all forms of sexual harassment onboard	CEDAW GR19 & GR35; ILO C190; Istanbul Convention; Portuguese Penal Code reform
Number of formal programs recognizing women's unpaid work in fisheries	FAO SSF Guidelines; SDG 8.5; CEDAW; ILO C111; CV Fisheries Gender Strategy



While the dataset from Japan provided valuable insights, it did not fully align with the established methodology, which impacted its ability to meet the required validation standards and hence, its ability to be directly comparable with the data from the other countries under review. Nonetheless, there remains great potential in studying and analysing the Japanese case in future research as examined below.

1. Introduction

Japan is an archipelago situated in the Northwest Pacific, comprising four major islands and more than 6,800 smaller islands, 400 of which are inhabited. Japan boasts the sixth largest EEZ in the world, with its territorial waters and EEZ covering an area of approximately 44,470,000 km². The country's long, indented coastline spans approximately 35,000 km. The percentage of protected coastal and marine areas—which was previously 8.3%—rose to 13.3% in 2021. (Kobayashi et al., 2022)

Domestic fisheries and aquaculture production provide about half of the seafood supply in Japan while the other half is supplied by imports (Kobayashi, 2022). Thus, a strong demand for fish is particularly pronounced in Japan. While small fishing vessels from coastal villages still fish the rich inshore waters, larger vessels travel ever increasing distances across the world's ocean to satisfy the massive demand of the Tokyo and Osaka markets (Sajima & Tachikawa, 2009).

Ranking among the top nations in terms of fleet ownership and shipbuilding, Japan is a key global player in the shipping industry. In 2024, it accounted for 10.4% of the global deadweight tonnage (DWT), with the total fleet ownership corresponding to 242.4 million DWT. Despite being the third-largest ship-owning country in the world after Greece and China, over 80% of Japan's fleet capacity is registered under a foreign flag. Currently, 959 vessels are registered under the Japanese flag, representing a total carrying capacity of 38.7 million DWT. Besides its dominant position in global maritime trade, Japan also has a relevant shipbuilding industry, representing 14.9% of the global ship output in 2023 (UNCTAD, 2025c).

2. An overview: Women in the blue economy

In Japan, efforts to promote women's participation in various economic sectors, including fisheries, gained momentum following the fourth world conference on women in Beijing in 1995. As part of this initiative, women's fisheries groups were established, operating under the authority of the Fisheries Cooperative Association (FCA), a key organisation representing the interests of small-scale fisheries. Initially, these groups, comprising mainly wives of small-scale fishermen, aimed to augment family income through fish processing, marketing, and supplying restaurants and households. However, they encountered challenges in marketing their new fish products.

To address these challenges, women in these groups collaborated with academic researchers in 2003, leading to the establishment of the Japanese forum of fisherwomen groups known as UMI HITO KURACHI (Sea People Life). This network significantly enhanced women's capacities for entrepreneurship and marketing. Over time, some women's groups opted to disassociate from the FCA, perceiving it as an obstacle to innovation and the development of new markets. The decision to separate allowed women to operate more effectively and escape the paternalistic influence of maledominated organisations. Currently, there is a growing desire among women to establish their own entities independently of the FCA due to the existing limitation that only men representing fishing enterprises can be full individual members of cooperatives (Soejima & Frangoudes, 2019).

Recent developments, such as the Fisheries Basic Plan of 2017, tasked FCAs with "promoting women's participation in the fisheries sector," reflecting an increased recognition of women's roles in economic development. This has led to the establishment of entrepreneurial activities specifically tailored for women within the fisheries sector (Cabinet Office, 2015; Fisheries Agency, 2017).

Research on gender and the cargo shipping sector in Japan is limited, but there are some notable findings. According to Ishida (2020), the number of women seafarers in Japan is very small, both in domestic and international shipping industries; only five out of over three thousand domestic shipping companies in Japan employ women as seafarers, and even among those, there are restrictions on the positions they can hold; many shipping companies in Japan do not have specific policies relating to women seafarers, and some shipowners have negative attitudes towards employing women at sea; most cargo companies in Japan do not have sexual harassment policies in place, and pregnancy and maternity leave are generally non-existent. The lack of female seafarers in Japan is attributed to various factors, including gender stereotypes, limited opportunities for advancement, and the absence of supportive policies and practices within the shipping industry (Ishida, 2020).

3. Initial thoughts on roles and impacts of women in the Japanese Blue Economy

3.1. Fisheries

3.1.1. Overview

The Japanese team chose the Sagami Bay area for the project. Sagami Bay, located along the Pacific coast, borders Kanagawa Prefecture and lies approximately 70 km west of Tokyo. It extends from Miura City in the east to Yugawara in the west, with a coastline stretching 141 km and a total sea area of 2,450 km². The bay is adjacent to eight cities and five towns within Kanagawa Prefecture. In Kamakura, Zushi and Hayama cities, in the Eastern part of Sagami Bay, there are local fishery cooperatives with about 20 members each. As for active female fishers, there is just one in Kamakura and 3 in Zushi and Hayama.

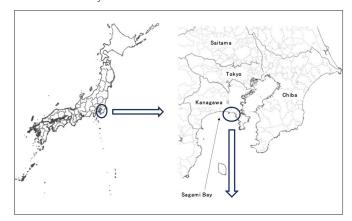


Figure 1. Location of Kamakura, Zushi and Hayama adjacent to Sagami Bay



Figure 2. Location of Kamakura, Zushi and Hayama adjacent to Sagami Bay

3.1.2. Main perceptions

Below is a summary of some of the main perceptions shared by the Japanese team regarding the roles and impacts of women in fisheries in Japan.

As identified by the Japanese team, it seems the fishers tend to lessen relevance of some of the gender-related challenges faced by them, as there are claims that their main obstacles were largely the same as those faced by male fishers. For

example, physical limitations, given the need to handle boats and heavy equipment during work, and the lack of toilet facilities on fishing boats were mentioned as possible disadvantages and minor inconveniences. According to the Japanese team, most female fishers said they were able to manage this issue without difficulty.

Another issue raised was the unpleasant treatment from senior male fishermen at the beginning of their careers. Nevertheless, once again, it seems they attributed this to their inexperience rather than gender-based discrimination. The Japanese team perceived that, in general, female fishers do not feel that they faced systemic disadvantages or discrimination in their work due to being women.

One of the issues that seems to underline the different roles between male and female fishers is the additional burden of household responsibilities managed by women alongside their fishing activities. The extra workload that was not necessarily mentioned by male fishers is acknowledged by the female fishers, but it seems once again there is a disregard to its relevance.

Fishers appear to express interest in obtaining better access to information and being more involved in cooperative management. However, it seems participation in decision-making remains limited to an extremely small group of members, affecting both male and female fishers.

In addition to gender-related challenges, fishers expressed concerns about economic and environmental challenges. As reported by the Japanese team, the rapid decline in fish stocks, directly affecting their livelihoods, seems to be the most pressing economic and environmental challenge raised by the fishers. Factors such as seawater warming, overfishing, pollution from agricultural runoff, changes in species balance, and reduced freshwater inflow were identified as some possible causes. Aquaculture was raised as an option to address the challenge of declining fish stocks, but it is considered inaccessible to them, as it demands high initial costs. Another economic issue mentioned appears to be the rise in fuel costs and stagnant fish prices hindering their capability to sustain their income.

Fishers seemed to be eager to address the decline in fish stocks, but they lack access to scientific data on the root causes and solutions, to collaboration with researchers, and to financial incentives for the development of effective countermeasures.

Table 1 - Gender Related Matters

GENDER-RELATED MATTERS

Workplace conditions, social interactions and inclusion

 Apparent tendency to lessen the relevance of gender-related challenges, such as physical limitations, lack of toilet facilities and unpleasant treatment

Work-life balance

 Household responsibilities are placed on the female fishers. It is acknowledged as an additional burden, but its impact is disregarded.

Participation in decision-making

• There is interest in participation in decision-making, but it appears to still be limited to a small group of members.

Table 2 - Economic and Environmental Matters

ECONOMIC AND ENVIRONMENTAL MATTERS

Declining fish stocks and financial stability

- Identified as an economic and environmental challenge.
- On the economic side, the decline in fish stocks, rising fuel costs and stagnant fish prices are identified as challenges that directly impact their capabilities of sustaining an income.

Alternative livelihoods and future prospects

 The lack of successors in the fishing sector is considered a concern that discourages their interest in investing in boats and equipment.

3.2. Shipping

3.2.1. Overview

The Japanese team chose the National Institute of Technology – Toba College, located in Toba City, Mie Prefecture, in Japan for the project. Toba College has a history spanning 149 years. It specializes in professional and human resource development for the maritime sector, training navigators and maritime engineers. It is one of five institutions of such nature across different municipalities in Japan, established under national legislation for professional education and training. These colleges complement two universities that also provide maritime professional education and training.



Figure 3. Toba City - Japan Map

3.2.2. Main perceptions

Below, there is a summary of the main perceptions reported by the Japanese team regarding the roles and impact of women in the shipping sector in Japan.

Despite the existence of legislative efforts promoting gender equality, Japanese female navigators appear to face structural barriers. Some domestic vessels lack separate facilities for men and women such as toilets, showers, and laundry rooms. This infrastructure gap discourages companies from hiring women, resulting in fewer job opportunities for female seafarers.

Regarding pregnancy and maternity, women in the maritime sector are entitled to maternity and childcare leave.

However, the nature of the work seems to hamper the balance of family and childcare responsibilities with long periods at sea. This results in many women choosing to leave their jobs upon marriage or childbirth, with very few returning to work at sea as it becomes even more difficult to re-enter the profession after time away. The creation of government incentives, such as fiscal and tax incentives, could encourage companies to rehire women who wish to return after long-term childcare. Another suggestion involved reintegrating women into the workforce through on-land positions as an intermediary step before they return to the sea.

Harassment and violence against women in the workplace remain a concern in the maritime sector. The Japanese team reported that women have had to leave their positions at sea due to harassment. The implementation of stronger corporate-level protections was mentioned, such as awareness training, stricter enforcement of workplace harassment policies, and effective countermeasures (since at sea there may be extra challenges to properly address the situation, for example, difficulty in relocating the victim of the perpetrator).

The need to raise awareness about the importance of the shipping sector was repeatedly mentioned as increasing recognition of the industry's relevance can attract and retain more professionals and create more social support for seafarers.

Table 3 - Gender Related Matters in the shipping sector

GENDER-RELATED MATTERS

Job opportunities

• Infrastructure gap in vessels lacking separate sanitary facilities for men and women discourages companies in hiring female seafarers.

Maternity and childcare

- Difficulties in balancing family and childcare responsibilities with long periods at sea result in many women choosing to leave their jobs upon marriage or childbirth.
- Possible solutions could be the introduction of fiscal or tax incentives, or the reintegration of women into the workforce through on-land positions as an intermediary step before returning to the sea.

Harassment and workplace protections

- Harassment remains a real concern within shipping, even causing victims to resign their positions.
- Awareness training, stricter enforcement of workplace harassment policies, and effective countermeasures are necessary to guarantee female seafarers' safety.

Table 4 - Social Matters

SOCIAL MATTERS

Public awareness

 Need to raise awareness on the importance of the shipping sector as a way to attract and retain professionals and increase the social support of the profession.

2.1. Data Collection Instruments

a. Field notes observation sheet - guidelines

Date and Time: record the date and time of each observation session.

Setting and Context: describe the physical setting, activities taking place, and any relevant contextual factors that may impact the observations.

Participants: note the demographic details and roles of individuals involved in the observed activities.

Behaviours and Interactions: document specific

behaviours, interactions, and patterns observed during the session. This may include communication styles, social dynamics, and any notable events.

Environmental Factors: capture aspects of the environment that may influence the observed activities, such as weather conditions, infrastructure, or equipment used.

Personal Reflections: include any personal reflections or thoughts that may provide context for the observations.

b. Interview protocol in English

The project Women in Blue Economy: an empirical analysis results from a collaboration between the Leading Women for the Ocean (LWO) network and NOVA School of Law (NSL) who will prepare a report focusing on women's participation and impact in the blue economy. The report will draw from fieldwork in Portugal, Cape Verde, and Japan to address the following research questions:

- 1. What is the current role and impact of women in ancestral and traditional sectors of the blue economy?
- 2. What can be done to promote successful gender inclusion in these sectors?
- 3. What action plans could be adopted to lead to relevant, fruitful changes at the ocean policy and governance level?

Bearing this in mind, fieldwork will include non-participant observations and semi-structured interviews.

Interviews must abide by the interview protocol, the interview script approved by the NOVA School of Law Ethics Committee and, if applicable, any Japanese ethical committee board that requires local approval.

If necessary, the NOVA School of Law team may provide training to the national teams through an Interviewer Training Workshop held online.

INTERVIEW PROTOCOL

I. PRIOR TO THE INTERVIEW

I.A - Prior to the day of the Interview

Before contacting participants to conduct the interviews, it is fundamental that each national team identifies a safe, relaxed, and private space to conduct the interviews. This space should guarantee the participant's anonymity, safety, and comfort. Furthermore, this space should guarantee that no one/ no event will stop, interfere with the interview, the recording of the interview, nor interfere with the dynamic between interviewer and participant or jeopardise the participant's feeling of security and willingness to take part in this study.

Interviewers will be trained by a supervisor who is part of each national team (Portugal, Cape Verde, and Japan). Training will be focused on ethical clearance, the interview protocol, and the interview script. Furthermore, training will clarify any details related to the interview script and will also focus on how to recruit and interact with

participants, how to ask questions and probe further, and the best icebreaking techniques to begin and end the interview. If required, the NOVA School of Law team may provide support to Cape Verde and/or Japan team's training sessions by developing an online Interviewer Training Workshop.

To recruit participants, the interviewer should disclose information about the study relating to its purpose, goals, and objectives. If necessary, a letter should be sent with a flyer describing the project and its purpose, goals, objectives, and timeline.

Although the interview script does not include direct questions of a sensitive nature, the interviewer may provide the name of an institution that provides psychological support and counselling, in case any participant feels triggered by any memory emerging from any question. This is especially important if a participant reveals any case of abuse, violence, harassment, discrimination, or bullying, gender-based or not, ongoing or not, but still harming and being /providing a source of distress for the participant.

Thus, it is mandatory to identify key national institutions that provide psychological support and victim counselling beforehand. In the case of Portugal, the NSL team compiled a list of victim support structures working in the municipality of Setúbal. The interviewer shall have this list to hand in all interviews to disclose to the participant if desired. Teams in Cape Verde and Japan are bound to follow the same procedure. Decision on whether or not to report misconduct to authorities in case of potential public or semi-public crimes (or foreign equivalents) should be thoughtfully discussed within the project's coordination (NSL team) and a request to the NSL Ethics Committee shall be made prior to any decision; consultation of NOVA University Ethics Council shall also be addressed to the NSL's Dean (according to article 6%1 c) of the Regulation of the Ethics Council of NOVA University Lisbon – Regulation 638/2018 of the Rectorship).

The interviewer should also assess each participant's suitability to take part in the study.

I.B - On the day of the Interview

On the day of the Interview *before starting the interview* the interviewer must introduce himself/ herself and explain the purpose of the interview, clarifying the study's goal, objective, Personal Data Protection Details (anonymity, storage, analysis, and dissemination policy of the data); and emphasise that the interview generally takes no longer than 45-60 minutes.

The interviewer must also explain that the participant was selected because of his/her professional experience which will contribute greatly to fostering our understanding of women's participation and impact in the blue economy. The interviewer must reassure the participant that the study does not aim to evaluate nor judge the participants' experience / techniques / professional choices. Rather, the study is trying to learn from the participant's professional experience to make a difference in women's participation and impact in the blue economy.

Furthermore, before starting the interview, the interviewer must explain to the participant his/her fundamental rights: the right to stop/ pause/ quit the interview, the right to withdraw from the study even after concluding the interview by sending an email to the project's email address wbe.project@novalaw.unl.pt. This includes explaining to the participant that, although the interview script does not include direct questions of a sensitive nature, the interviewer may provide the name of an institution that provides psychological support and counselling.

Furthermore, before starting the interview and after providing the above-mentioned details, the interviewer must confirm that the participant is taking part in the study voluntarily; ask for his/her consent and collect the participant's informed written consent in the form approved by the NOVA School of Law Ethics Committee and, if applicable, any Japanese ethical committee board that requires local approval.

Finally, the interviewer must provide the participant with a copy of the consent form which indicates the project's official email address in case the participant would like to contact the team after the interview.

Before starting the interview, allow the participant to ask any questions.

Thank the participant for agreeing to participate.

II. DURING THE INTERVIEW

Avoid a confrontational / judgemental style during the interview.

- · Start recording the audio.
- Ask the exact questions in the interview script and follow the interview protocol in every interview, to guarantee comparison across different datasets. Nonetheless, bear in mind that we opted for a semi-structured type of interview which means that the script should be followed but its application can be flexible and additional questions can be asked if the sought information as outlined in the interview schedule is not disclosed in responses to the core questions of the script.
- Take notes during the interview, focusing on what the participant is mentioning but also any remarks regarding his/ her body language and silences regarding any topic.

III. AFTER THE INTERVIEW

Debriefing

- · Allow the participant to ask any questions.
- Remind the participant of the subject and goals of the study and share specific working hypotheses.
- Kindly remind the participant of his/ her right to withdraw at any time.
- Thank him/ her for their time and participation while emphasising the importance of his/her testimony.
- · Stop recording the audio.
- · Accompany the participant on his/ her way out.
- After the participant leaves, written down any additional notes and remarks resulting from the interview.
- The interviewer must also sign the consent form.
- In the office, transcribe and translate the interview (to Portuguese in the case of Cape Verde, and to English in the case of Japan).
- Please send the digital written consent form, the interview audio, the transcription, and the translation to the NOVA School of Law team.
- After conducting all interviews and non-participant observation, and after the first round of data analysis done by the NOVA School of Law team, it is important for all interviewers to participate in the validation workshop and debate the results across all three datasets.

c. Interview scripts in English

Interview Script for the Fishing and Seafood Harvesting Sector

Title of the study: Women in the Blue Economy: an empirical analysis

Interviewer:

Date:

Age group: 18-20 [] 21-30 [] 31-40 [] 41-50 [] 51-60 []

61-70 [] 71+ []

Gender: Female [] Male [] Non-Binary []
Nationality: Residence:
Marital status: Children:

Household: Schooling/education (highest):

Profession: Years in profession/sector:

I. Professional / Occupational Overview

Q.1. – Could you tell me a little bit about your work/ occupation?

Probe questions:

- How is a normal day in your job/work?
- For how long have you been doing this work? Where?
- Do you consider it a job, a professional activity, a career, or a way of living? Why?
- Do you work with relatives, do you work for a company or are you self-employed?

Q.2. - Are you a first-generation sea worker?

Probe questions:

- If not, for how many generations has your family been involved?
- · What was their job?
- At what age did you start working as a sea worker?

FISHING:

Q.3. - What kind of boat do you work on?

Probe question:

- How many crew members are on board?
- Any women? How many? What do they do?

Q.4. - What are your target species?

Probe questions:

- Is that coastal, or at large fishing?
- What type of fishing gear do you use?

HARVESTING:

Q.3. - What are your target species and what types of harvesting techniques do you use?

Probe questions:

- Do you usually work alone or in a group?
- · How many people?
- Any women? How many? What do they do?

Q.4. – How many days/months do you spend harvesting? Probe question:

- When you are not harvesting do you have any other professional or occupational activity?
- · Is it related to the sea?

II. Work Conditions

FISHING:

Q.5. - How difficult is life on board?

Probe questions:

- How long do you usually go without returning to land?
- · Do you feel that your health/ safety is at risk because of

your work?

• How would you evaluate your workplace conditions?

HARVESTING:

Q.5. - How difficult is harvesting?

Probe questions:

- What are the most difficult things about this activity?
- Do you feel that your health/safety is at risk because of your work?

Q.6. – What are the biggest challenges/difficulties of sea-related activities?

III. Gender Dimension

Q.7. – How many women do you know who are involved in sea-related activities (fishing and/or harvesting and/or onshore activities, among others)? Probe questions:

- · What is their role/job/function?
- What are women's strengths and what are the main challenges/obstacles that they face while performing their duties?
- In which ways does women's performance impact the community/field activities?
- Do you think it's relevant or important?

Q.8. – Have you ever experienced any form of discrimination at work?

Checklist: harassment, violence, bullying, receiving less salary than men for the same job, among others.

Probe questions:

- Do you feel having children affected your job? How?
- How would you describe your professional career development in comparison to a man/woman with the same job?
- Do you feel that being a woman was an obstacle to the advancement of your career?
- Do you feel that being a woman is/was an obstacle to do what you like in this sector? In which way?
- How do men in your family react to your job?

Q.9. – Are there any habits, traditions, or social events/ activities exclusively reserved for men?

Q.10. – Do women own boats or other essential equipment and gear?

Q.11 – How would you describe the fishermen's women? Including spouses, life partners, daughters, mothers, grandmothers.

IV. Eco Dimension

Q.12. – Do you worry about taking care of the sea, including issues such as pollution, harm and endangering species and marine resources? Do you take any action?

<u>V. Finale</u>

- Would you like to share your views on the best way to improve women's participation in the sector?
- Is there anything that you feel is important and that was not addressed by this interview that you would like to add?

Thank you very much for sharing your experience with us and for your time!

Greatly Appreciated!! The Project Team.

Interview Script for the Shipping Sector

Title of the study: Women in the Blue Economy: an empirical analysis

Interviewer:

Date:

Age group: 18-20 [] 21-30 [] 31-40 [] 41-50 [] 51-60 []

61-70 [] 71+ []

Gender: Female [] Male [] Non-Binary []

Nationality: Residence: Marital status: Children: Household:

Schooling/education (highest):

Profession:

Years in profession/sector:

I. Professional Overview

Q.1. – Could you tell me a little bit about your work/ occupation?

Probe questions:

- How is a normal day in your job/work?
- For how long have you been doing this work? Where?
- Do you work for a company? How big is the company?
- Is it outsourcing? Do you have a temporary contract?

Q.2. – Are you a first-generation shipping worker?

Probe questions:

- If not, for how many generations has your family been involved?
- · What was their job?
- At what age did you start working?

Q.3. - What kind of boat do you work on?

Probe questions:

- · How many crew members are there on board?
- And how many women? What do they do?

Q.4. - What kind of cargo is transported by the vessel?

Probe questions:

- · Is that containerised cargo and ocean freight shipping?
- Is it long or short distance?
- What are its usual routes and transit days at sea?

Q.5. – How many days do you usually spend docked at ports?

Probe question:

· When do you get to go home? For how long?

II. Work Conditions

Q.6. – What are the most difficult things about your profession?

Probe questions:

- · Do you experience those difficulties in your daily work?
- Do you feel that your health/ safety is at risk because of your work?
- · How would you evaluate your workplace conditions?

Q.7. - How difficult is life on board?

Probe questions:

- How long do you usually go without returning to land?
- In what way has being a woman affected your life on board?

III. Gender Dimension

Q.8. – How many women do you know who are involved in shipping?

Probe questions:

- What is their role/job/function?
- What are women's strengths and what are the main challenges/obstacles that they face while performing their duties?
- In which ways does women's performance impact field activities?
- Do you think this is relevant or important?

Q.9. – Have you ever experienced any form of discrimination at work?

Checklist: harassment, violence, bullying, receiving less salary than men for the same job, among other forms of discrimination.

Probe questions:

- Do you feel that having children affected your job? How?
- How would you describe your professional career development in comparison to a man/woman with the same job?
- Do you feel that being a woman was an obstacle to the advancement of your career?
- Do you feel that being a woman is an obstacle to do what you like in this field/sector? In which way?
- How do men in your family react to your job?

Q.10. – Are there any habits, traditions, or social events/activities exclusively reserved for men?

IV. Eco Dimension

Q.11. – Do you worry about taking care of the sea, as for pollution, harm and endangering species and marine resources? Do you take any action?

V. Finale

- Would you like to share your views on the best way to improve women's participation in the sector?
- Is there anything that you feel is important that was not addressed by this interview that you would like to add?

Thank you very much for sharing your experience with us and for your time!

Greatly Appreciated! The Project Team.

d. Informed consent form

Title of the study: Women in the Blue Economy: an empirical analysis

Interviewer: Institution:

Introduction

Thank you for your time and for taking part in this study as a participant.

The project *Women in Blue Economy: an empirical analysis* is the result of from a collaboration between the Leading Women for the Ocean (LWO) network and **NOVA School of Law** (NSL) who will prepare a report focusing on women's participation and impact in the blue economy with funding from Oceans 5 and coordination by principal researchers Assunção Cristas and Maria Damanaki. The report will draw from fieldwork in Portugal, Cape Verde, and Japan to address the following research questions:

- 1. What is the current role and impact of women in ancestral and traditional sectors of the blue economy?
- 2. What can be done to promote successful gender inclusion in these sectors?
- 3. What action plans could be adopted to lead to relevant, fruitful changes at the ocean policy and governance level? To learn about the activities and significance of women in [your fishing community/or/the shipping sector] we would like to interview you, that is, ask you some questions that you can answer based solely on your experience and/or opinions; these questions are by no means knowledge tests, there are no right or wrong answers, and we would very much like you to feel comfortable and at ease; we are the ones who are going to learn from you and we thank you in advance for sharing your thoughts with us.

The interview should take approximately 45-60 minutes.

Your participation in this interview is **voluntary**.

You may, of course, refuse to take part in the research or decide not to participate further in the interview at any time. If you don't want to answer a particular question you do not have to, and if you wish you may pause the interview, and / or quit.

NSL is responsible for processing your personal data, which is collected and processed exclusively for the purposes of this study and legally based on your consent (as provided for in article 6°, no. 1, a) of the General Data Protection Regulation).

Your answers will be completely confidential, which means that you will never be identifiable in any part of our work, and we will not store your name along with your answers or collect any other information that could potentially identify you, such as: address; ID; IP address. No one will be able to identify you or your answers, and no one will ever know that you participated in this study because we will anonymise all your answers.

All data will be stored anonymously in a password protected electronic web-based format with restricted access, and will be used for academic, advocacy and statistical purposes only. Your personal data will always be processed by authorised personnel bound by the duty of secrecy and confidentiality. NSL guarantees the use of appropriate techniques (data encryption and access protection), organisational and security measures to protect personal information. All researchers are required to keep personal data confidential.

The data will be stored for 5 years.

This study has been approved by NSL's Ethics Committee (commissaodeetica@ihmt.unl.pt) and we feel confident that there are no foreseeable significant risks associated with your participation in the study because the interview script does not include direct questions of a sensitive nature. However, if you feel any discomfort or stress when addressing a subject, you don't need to talk about it, and if you wish the interviewer may give you the name of an institution that provides counselling and support.

If you have any questions at any stage of this study, or if you want to remove or change any information you provided, please contact us by email: wbe.project@novalaw.unl.pt. You can use this email to request access, rectification, elimination or limitation of the processing of your personal data. Since your participation in this study is strictly voluntary, you may, at any time and with no explanations needed, withdraw your consent to participate and for the processing of your personal data. Withdrawal of consent does not affect the lawfulness of previous processing carried out on the basis of the given consent.

NSL does not disclose or share information about your personal data with third parties.

NSL has a Data Protection Officer, who can be contacted at dpo@unl.pt. If necessary, you also have the right to file a complaint with the competent supervisory authority - the National Data Protection Commission (CNPD).

After the study has been explained to you, after any of your questions have been answered, and after deciding to participate in this study, you will be asked to sign the consent form, of which you will be given a copy to keep.

Many thanks for your time and for your participation!

Statement of Consent:

I understand that by signing this form I am:

- · Declaring that I am over 18 years old;
- Declaring that the interviewer has explained to me the study's goals, purposes, objectives, and Personal Data Protection Details (anonymity, storage, analysis, and dissemination policy of the data).
- Declaring that the interviewer has also described to me my fundamental rights before, during and after the interview (i.e. access to information, informed written consent, right to stop/ pause/ quit the interview, the right to withdraw from the study, even after concluding the interview by sending an email to the project's email address wbe.project@novalaw.unl.pt).
- Declaring that I am voluntarily agreeing to take part in this study;
- Declaring that I am consenting to the recording of the audio of this interview;
- Declaring that a copy of this form was provided to me.

Name: Signature of Participant: Date and location:

Name of the Interviewer: Signature of the Interviewer:

2.2 Analytical Instruments

a. Interviews' Analytical Schedule

Interview Schedule - Summary		
Questions and promts topics	Analytic targets	
Sociographic characterization	• ID variables	
Professional/occupational background	General work occupation profiling	
Profiling work in sea-related activities	 Detailed work occupation profiling Workflows and organization Working conditions Safety, health, and well-being Work functions, schedules, routines Challenges, obstacles, and hardships perceptions Female involvement and contributions Work and parenthood Gender divide and gender correlations w/above 	
Socio-legal and economic work structuring	 Legal and contractual framing Ownership and management of production factors Distribution and handling of income/financial resources Administrative obligations and compliance Formal and informal labor and economic organization social benefits and precariousness Female responsibilities and direction Gender divide and gender correlations w/above 	
Women's roles and impacts	 Functional structure of women's role Executive Operational Normative Cultural Supportive Women's spheres of influence Relevance 	
Gender stereotypes and discrimination	 Gender gap Gender stereotypes Gender discrimination Gender (in)equality Harassment, bullying, and violence 	
Sustainability and conservation	Behavior inclinations Rule-following	
General follow-up closing		

b. Analytical Codebook

Code List	Description			
Unsure	when the quote doesn't fit exactly a pre-determined code			
Good quotes	quotes selected for final report			
Analytical Code System - Analytical Categories:				
1.1. Professional Trajectory & Identity				
1.1.1. Work History				
HIST_Entry	entry into sector			
HIST_Path	career progression			
HIST Breaks	career interruptions			
HIST_Changes	sector / role changes			
HIST_Training	professional development			
HIST_Legacy	family tradition / heritage			
1.1.2. Professional Identity				
ID Self	self-perception as worker			
ID_Community	community recognition			
ID_Sector	sector identification			
ID Gender	gender role identity			
ID_Evolution	identity changes over time			
ID_Conflict	identity tensions / conflicts			
1.2. Work Structure & Conditions				
1.2.1. Labor Organization				
ORG_Formal	formal employment arrangements			
ORG_Informal	informal work structures			
ORG_Family	family-based organization			
ORG_Schedule	working hours / patterns			
ORG_Tasks 1.2.2. Working Conditions	task distribution & specialization			
COND_Physical	physical environment			
COND_Safety	safety measures / concers			
COND_Health	health impacts / risks			
COND_Equipment	access to tools / equipment			
COND_Space	spatial arrangements / territory			
1.2.3. Work Challenges	- spatial arrangements removed			
CHAL_Personal	individual obstacles			
CHAL_Technical	skills / expertise barriers			
CHAL_Social	social / cultural challenges			
CHAL_Structural	institutional barriers			
CHAL_Economic	financial challenges			
CHAL_Balance	work-life challenges			
CHAL_Adaptation	coping strategies			
1.3. Gender Dynamics				
1.3.1. Gender Division				
GEN Tasks	gender-based task allocation			
GEN_Spaces	gendered spaces / territories			
GEN_Authority	decision-making power			
GEN Resources	access to resources			
GEN_Knowledge	knowledge transfer / barriers			

Code List	Description			
1.3.2. Gender Discrimination				
DISC_Direct	direct discrimination incidents			
 DISC_Indirect	structural barriers			
DISC Harassment	sexual / moral harassment			
DISC_Violence	physical / verbal violence			
DISC_ Stereotypes	gender stereotyping			
1.4. Economic Relations	71 0			
1.4.1. Resources & Assets				
ECON_Owner	ownership patterns			
ECON_Control	control over resources			
ECON_Income	income generation / distribution			
ECON_ Investment	investment capacity			
ECON_Market	market access / position			
1.4.2. Economic Security	'			
SEC_Stability	income stability			
SEC_Benefits	social benefits access			
SEC_Protection	labor protection			
SEC Networks	support networks			
SEC_Alternatives	alternative income sources			
1.5. Social-Family Interface				
1.5.1. Care Responsabilities				
CARE_Children	childcare arrangements			
CARE_Family	extended family care			
CARE_Community	community care roles			
CARE_Balance	work-life balance strategies			
CARE_ Support	support systems			
1.5.2. Social Position				
SOC Status	community status			
SOC_Network	professional networks			
SOC_Voice	decision-making participation			
SOC_Culture	cultural roles / expectations			
SOC_Change	generational changes			
1.6. Women's Participation & Impa	ct			
1.6.1. Female Involvement Patt	ems			
FEM_Presence	areas of participation			
FEM_Absence	areas of exclusion			
FEM_Evolution	changes over time			
FEM Barriers	access obstacles			
FEM_Enablers	supporting factors			
FEM Innovation	new roles / spaces			
1.6.2. Women's Contributions	· (Policies)			
CONT_Economic	economic value			
CONT_Knowledge	knowledge / skills			
CONT_Innovation	new practices			
CONT_Social	community building			
CONT_Cultural	cultural preservation			
CONT_Environmental	sustainability practices			
	. At			

Code List	Description		
1.6.3. Women's Roles			
ROLE_Formal	official positions		
ROLE_Informal	unofficial duties		
ROLE_Direct	primary activities		
ROLE_Support	supporting activities		
ROLE_Hidden	invisible labor		
ROLE_Leadership	management positions		
ROLE_Bridge	connecting functions		
1.6.4. Spheres of Influence			
INF_Economic	financial decisions		
INF_Technical	operational choices		
INF_Social	community relations		
INF_Policy	governance input		
INF_Knowledge	expertise sharing		
INF Network	relationship building		
INF_ Innovation	change initiatives		
1.7. Gender Gap Analysis			
1.7.1. Structural Gaps			
GAP_Access	resource-access		
GAP_Power	decision-making		
GAP_Pay	compensation		
GAP_Promotion	career advancement		
GAP_Training	skill development		
GAP_Benefits	social protection		
1.7.2. Performance Assessmer	nt		
PERF_Standards	evaluation criteria		
PERF_Expectations	gender expectations		
PERF_Recognition	achievement acknowledgment		
PERF_Barriers	performance obstacles		
PERF_Support	enabling factors		
PERF_Impact	outcome differences		
1.7.3. Relevance Recognition			
REL Economic	financial value		
REL_Technical	operational importance		
REL_Social	community impact		
REL_Cultural	traditional value		
REL Innovation	change contribution		
REL_Sustainability	long-term impact		
1.8. Environmental Awareness			
ENV_Knowledge	environmental understanding		
ENV_Practices	conservation practices		
ENV_Attitudes	environmental attitudes		
ENV_Rules	compliance with regulations		
ENV_Innovation	sustainable innovations		

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