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EXECUTIVE SUMMARY

One of the primary objectives of NOVAFOODIES is to strengthen the sustainability of the European aquaculture sector. In this regard, **Deliverable 7.5 – "Social inclusion and gender guidelines"**, aims to analyse the primary challenges that hinder social inclusion and gender equality within the EU aquaculture sector. It also seeks to provide a set of actionable recommendations to help stakeholders mitigate or eliminate disparities and facilitate the integration of disadvantaged groups, including women, into the labour market. The document offers practical, evidence-based guidance tailored to the sector's unique needs, alongside examples of successful practices implemented in the EU aquaculture sector over the past two decades to address these challenges effectively.

The guide is structured as follows. **Chapter 1** highlights the relevance of the analysis and the importance of the sustainable development of the aquaculture sector, with a special focus on issues related to social inclusion and gender equality. It also outlines the objectives of the guide, aiming to foster understanding and action among stakeholders in the sector. **Chapter 2** explains how the guide aligns with the context of the NOVAFOODIES project and describes the various activities carried out in collaboration with project partners to ensure that the project meets established standards for inclusion and equality. **Chapter 3** explains the methodology used to conduct the analysis, including a systematic literature review and the research and identification of good practices.

Chapter 4 introduces the EU aquaculture sector, outlining its legislative framework and detailing its contribution to the Sustainable Development Goals (SDGs), with a particular emphasis on those related to inclusion and gender equality. **Chapters 5 and 6** introduce the concepts of social inclusion and gender equality, respectively, along with relevant terms and definitions. These chapters then examine the current situation of vulnerable groups identified within the sector, discussing the policies and initiatives that have been implemented to address these issues. Following this, the key findings from the literature review will be presented, focusing on the specific challenges faced by the EU aquaculture sector concerning inclusion and gender equality. This is followed by a set of actionable recommendations that stakeholders can implement and support. Some of these recommendations include examples of good practices that illustrate the tangible benefits of fostering inclusion and gender equality within the sector.

Chapter 7 introduces two assessment tools specifically designed for aquaculture stakeholders. These tools take the form of questionnaires that offer a general overview of inclusion and gender standards, while also facilitating a self-evaluation of the position of companies or entities in the sector regarding social inclusion and gender equality. The aim is to assist stakeholders in evaluating these critical aspects within their own organizations and across the aquaculture sector more broadly.

Finally, the deliverable concludes with a summary of the main findings and additional recommendations for future analyses and guides. An annex is also included, featuring an infographic that visually summarizes the key challenges and recommendations for the EU aquaculture sector.

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ABBREVIATIONS AND ACRONYMS

CFP	Common Fisheries Policy
CLLD	Community-Led Local Development
DEI	Diversity, Equity and Inclusion
EALP	European Adult Learning Platform
EEA	European Economic Area
EEAS	European External Action Service
EIGE	European Institute for Gender Equality
EMFAF	European Maritime, Fisheries and Aquaculture Fund
EPRS	European Parliamentary Research Service
EU	European Union
Europêche	Association of National Organizations of Fishing Enterprises in the European Union
GFCM	General Fisheries Commission for the Mediterranean
FAO	Food and Agriculture Organization
FAMENET	Fisheries and Aquaculture Monitoring, Evaluation and Local Support Network
FARNET	European Fisheries Areas Network
PTEPA	Plataforma Tecnológica Española de la Pesca y la Acuicultura
R&D+i	Research, Development, and Innovation
SDGs	Sustainable Development Goals
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel
UN	United Nations
STECF	Scientific, Technical and Economic Committee for Fisheries

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1. INTRODUCTION

One of the primary objectives of NOVAFOODIES is to strengthen the sustainability of the European aquaculture sector, which plays an increasingly crucial role in achieving the Sustainable Development Goals (SDGs) established by the United Nations (UN). Aquaculture holds significant potential to contribute to these goals in the coming decades by addressing critical issues such as eradicating hunger, improving health, reducing poverty, promoting gender equality, enhancing livelihoods, and reducing inequalities. However, progress in this direction is often overlooked or underestimated due to the inherent complexity of fisheries and aquaculture value chains, as well as a resulting lack of knowledge and guidance for stakeholders. This knowledge gap hampers the enforcement of appropriate laws and policies, particularly regarding social issues.

This guide will serve as a reference guide for NOVAFOODIES partners, outlining key concepts and principles related to inclusion and gender. Moreover, it will be made accessible to a broader audience, including stakeholders and professionals in the aquaculture sector, as well as public and private actors. Its overarching aim is to equip stakeholders with the tools and knowledge necessary to identify and address inequities, foster more inclusive workplace cultures, implement gender-responsive policies, support capacity-building initiatives, and promote collaboration across sectors.

The ultimate goal is to promote the recognition of social inclusion and gender equality as fundamental strategies for ensuring the sustainable development and long-term resilience of the aquaculture sector. These principles are vital not only for creating equitable opportunities but also for enhancing the social, economic, and environmental performance of the sector, ultimately contributing to its success and sustainability.

2. CONNECTION WITHIN NOVAFOODIES PROJECT

Within the NOVAFOODIES project, this deliverable presents the conclusions and is therefore directly linked to the following subtasks of Work Package 7 (WP7):

- **Subtask 7.3.1. Social Life Cycle Assessment (s-LCA),** with HOLOSS as lead partner, which has performed a s-LCA to estimate gender balance, among other aspects explained in D7.7.
- **Subtask 7.3.2. Gender and inclusiveness analysis and recommendations,** with ACH as lead partner**,** which assesses the social inclusion and gender issues during each phase of the production development (finetuning of processes, scale-up designs, and elaboration of final products) and provides recommendations to each developing and industrial partner to control or eliminate differential impacts for disadvantaged groups, with a dedicated part related to gender.

To that end, and with the aim of incorporating good practices within the NOVAFOODIES project to foster inclusion and equality, a collaborative effort has been undertaken by consortium partners. Together, they have planned and implemented the following activities:

- **Collection of information** from partners, associated partners, and other stakeholders regarding inclusion and gender analysis of job positions within the aquaculture sector.

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- **Identification of key activities and milestones** that need to be analysed and monitored with a focus on social inclusion and/or gender equality approaches.
- **Organization of training and capacity building** for project partners and participants on social inclusion and gender equality, with workshops based on identified best practices.
- **Monitoring inclusivity from the consumer perspective (WP5)** considering their context, challenges, and accessibility issues.
- **Ensuring participation of disadvantaged groups and gender equality** in project activities, processes, and pilot programs. This also included involving consumers in the design and feasibility analysis phases.

To ensure the effective execution of the task, constant communication with the consortium partners has been crucial, which enabled the analysis of social inclusion and gender issues during each phase of the project's development and implementation.

3. METHODOLOGY APPLIED

For the development of this guide, the initial step involved conducting a systematic literature review of studies published between 2010 and 2025, focusing on inclusion and gender equality issues within the EU blue economy. From the initial pool of studies reviewed, a subset was selected for further in-depth analysis. The analytical framework was developed through a thorough examination of peer-reviewed literature, complemented by expert opinions from the authors and NOVAFOODIES partners. These partners include professionals and researchers from the aquaculture sector, as well as technicians from social organizations.

The NOVAFOODIES consortium actively contributed to the research and identification of good practices. The methodology for this process included contacting stakeholders within the partners' respective networks and regions, fostering synergies with other projects and conducting desk research and web searches in research project databases to uncover new and innovative approaches. The geographical scope of this research mainly included EU countries. As a result, project partners compiled over 50 good practices into a consolidated Excel file.

Finally, a group of experts individually evaluated the identified good practices, assessing their alignment with the principles and conclusions derived from the systematic literature review. Experts considered several factors, such as the inclusivity of the practices, their impact on promoting gender equality, and their ability to address barriers faced by disadvantaged groups. In addition to assessing the practices' practical applicability, the experts highlighted examples of particularly innovative or transformative initiatives that could serve as benchmarks for the sector. This rigorous evaluation ensured that the selected practices not only adhered to theoretical frameworks but also demonstrated tangible benefits when implemented in real-world scenarios.

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4. THE SUSTAINABLE DEVELOPMENT OF THE EU AQUACULTURE SECTOR

In the context of sustainable development, integrating socio-labour inclusion and gender equality is essential for fostering resilient economies and communities. These principles contribute to reducing poverty, improving health and education, and creating more equitable opportunities for all. Moreover, ensuring inclusivity helps advance environmental and social goals, as it leads to more holistic and innovative approaches to challenges. Ultimately, the advancement of socio-labour inclusion and gender equality are crucial for building a sustainable, fair, and prosperous future for all.

In this sense, the diverse aquaculture sector makes important contributions toward achieving the Sustainable Development Goals[1] (SDGs)/Agenda 2030 and can increasingly do so in the future. However, its important role in food security, nutrition, livelihoods, economies, and cultures is not clearly visible in the Agenda 21 declaration (Troell et al., 2023). At the European level, aquaculture is an important sector of the EU's blue economy and has the potential to play a more vital role as a sustainable food supplier under the European Green Deal[2]. However, despite the European Commission's efforts to promote the development of aquaculture within the EU, the production rate is stagnating. The constraints and barriers hampering the sector's growth range from high administrative burdens to limited access to space and water, to trade-related aspects and governance issues (EPRS, 2024).

As a cornerstone of sustainable development, aquaculture must overcome its persistent lack of visibility and recognition regarding its potential to promote social inclusion and gender equality within policy frameworks at both regional and global levels. As pointed out by researchers, while technological innovations promoted through policy initiatives aim to advance aquaculture development, they often overlook the inclusion of "people" in the process (Krause et al., 2015), which often results in unintended outcomes that may be detrimental to the very people aquaculture is meant to benefit. Bridging this gap requires coordinated efforts to highlight the sector's potential as a provider of sustainable food, livelihoods, and cultural value, ensuring it is fully integrated into sustainability agendas.

4.1. The contribution of aquaculture to the SDGs

A key framework for sustainable development is established by the United Nations through the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development – adopted by world leaders at a historic United Nations Summit in September 2015, which address a

[1] For more information on the Sustainable Development Goals (SDGs), see: https://sdgs.un.org/goals

[2] For more information on the European Green Deal, see: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

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wide range of global challenges, including poverty, health, education, gender equality, clean water, decent work, and economic growth, among others.

Aquaculture holds huge potential to contribute positively to human and planetary well-being when outcomes are aligned with the Sustainable Development Goals. This sector may contribute to all 17 SDGs but the most obvious are those related to: A) eliminating hunger and improving health (SDGs 2, 3); B) increasing environmental sustainability of oceans, water, climate, and land through responsible production/consumption (SDGs 6, 12, 13, 14, and 15); C) reducing poverty, achieving gender equality, improving livelihoods, and reducing inequalities (SDGs 1, 5, 8, and 10) and D) Not so obvious but also relevant relates to aquaculture's potential for energy production (e.g., algal biomass), adding food production in cities (e.g., vertical farming, aquaponics, community farming), contribution to technology development and development of various partnership (local to global) (SDGs 7, 9, 11, and 17) (Troell et al., 2023).

This guide will focus on the Sustainable Development Goals (SDGs) related to aquaculture that directly contribute to the inclusion of vulnerable groups, and which are:

- **SDG 1**: No Poverty – End poverty in all its forms everywhere.
- **SDG 5**: Gender Equality – Achieve gender equality and empower all women and girls.
- **SDG 8**: Decent Work and Economic Growth – Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
- **SDG 10**: Reduced Inequalities – Reduce inequality within and among countries.

By focusing on these specific goals, the aim is to showcase how aquaculture can serve as a tool for promoting opportunities for vulnerable communities, women, and other vulnerable populations, ultimately fostering a more inclusive and resilient sector. Through the integration of inclusive practices and policies, these SDGs can play a crucial role in reducing disparities and ensuring that all individuals have equal access to the benefits of aquaculture development.

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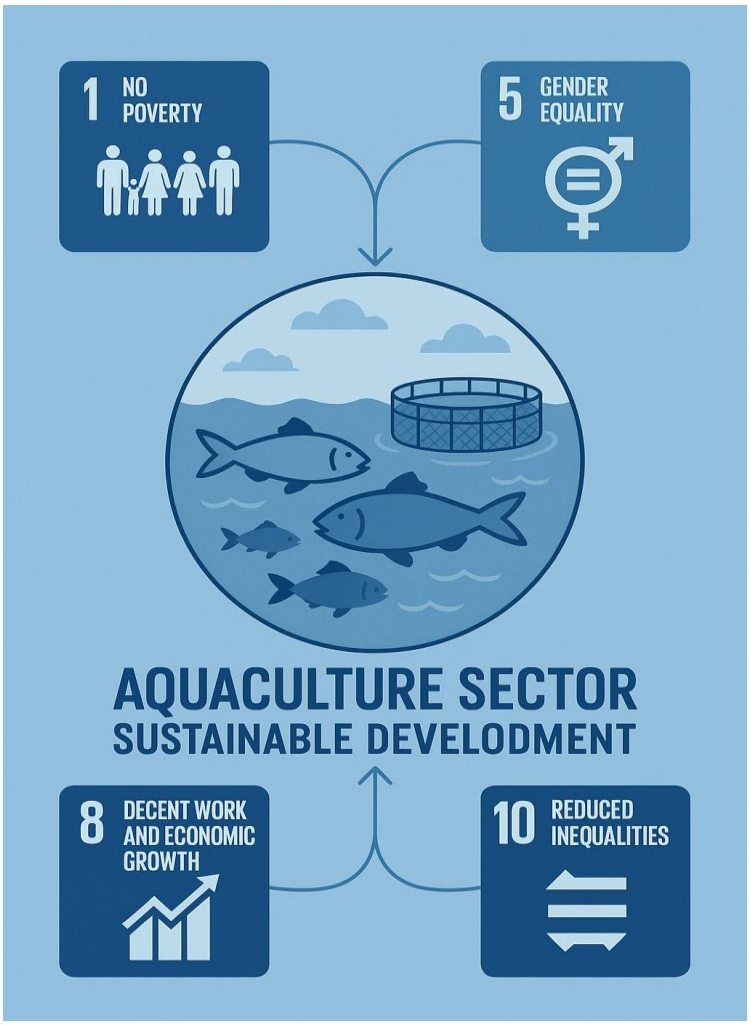

FIGURE 1 AQUACULTURE CONTRIBUTION TO SDGS

4.2. Legislative framework for inclusion and gender equality in the EU Aquaculture Sector

The complexity of aquaculture value chain complicates the enforcement of policies aimed at promoting inclusion and gender equality and the provision of effective oversight, creating barriers to their successful implementation and monitoring. Aquaculture is a complex activity that involves many elements, ranging from the use of space and water, the health and welfare of animals, food safety and environmental protection, to rules for organic production and marketing (EPRS, 2024). Consequently, progress in the critical areas of gender and inclusion has been slow, fragmented, and difficult to sustain, underscoring the need for targeted strategies and enhanced governance to address these systemic issues.

As part of the fisheries sector, aquaculture is covered by the Common Fisheries Policy (CFP)[3], with shared competence between the EU and its Member States. The sustainable development of aquaculture, which includes its social dimensions, is a key objective of the CFP. However, this

[3] For more information on the Common Fisheries Policy (CFP), see: https://oceans-and-fisheries.ec.europa.eu/policy/common-fisheries-policy-cfp_en

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regulation lacks sufficient focus on social and labour inclusion as well as gender equality. Nonetheless, it does underline several important principles that guide the sustainable development of the sector, including the need for more integrated and inclusive policies (European Commission, 2023). Other guidelines promoted by the European Commission in this regard are:

- An integrated **analysis of the social dimension of EU fisheries** is needed, so that data on employment, gender, vocational training or on peoples' dependency on fishing activities can be considered more effectively by policy makers when proposing conservation measures in fisheries management.
- The Enhance and increase **recognition of the important role of women** throughout the EU seafood value chain, from the generation of wealth and employment to the sustainable use and conservation of aquatic resources.
- In the Mediterranean and the Black Sea, the GFCM 2030 strategy aims at **advancing the principle of decent work**, including through fair and safe working conditions and access to social protection.

As mentioned above, both the EU and its Member States share responsibility for aquaculture. The Regulation mandates that Member States develop multiannual national strategic plans to promote sustainable aquaculture, in line with the European Commission's 2021 strategic guidelines. Although these guidelines are non-binding, they provide a framework that Member States are encouraged to consider when preparing their national plans for aquaculture (EPRS, 2024). Consequently, addressing the challenges related to inclusion and gender equality in the sector requires a collaborative effort between European and national institutions.

In European social policy, initially the focus was primarily on getting people out of poverty, but over time a more multidimensional approach has developed, addressing various forms of discrimination and focusing on such issues as disability, ageing, youth, and more recently, migrants and refugees (Budzich-Tabor et al., 2017). In this regard, the European Parliament has consistently highlighted the need for a stronger aquaculture sector through resolutions and discussions, emphasizing the challenges facing the industry and advocating for a more competitive and sustainable EU aquaculture system. Recent resolutions provide important guidelines (European Parliament, 2021, 2022) that should be take into account by Member States and that are important for our analysis:

- **Data Collection and Analysis:** The EU calls for improved data collection on the fisheries and aquaculture workforce across the entire value chain, including trends in job numbers, training, gender, and age. Eurostat and Member States are encouraged to analyse employment patterns and extend this analysis to the broader sector. Despite the progress with analysis and a time series of ten years since the first report in 2012, the EWG continues to experience issues with data submission by Member States (STECF, 2023).
- **Women's Role and Recognition:** The EU emphasizes the need for better qualification opportunities for women in the blue economy, particularly in fisheries, aquaculture, and related industries. There is also a call for official recognition of their contributions, and support for women's associations in the fisheries sector, to enhance visibility and assistance.

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78% of those employed in aquaculture are male, highlighting the clear gender imbalance in European aquaculture (STECF, 2023).

- **Skills Development in Aquaculture**: The EU calls for specialized curriculums and training to foster innovation in the aquaculture sector, including training in fish health and veterinary studies, as well as lifelong learning opportunities for farmers to adopt new approaches in aquaculture. 41% of workers in the EU aquaculture sector have a low level of education, 36% have a medium level of education, and only 8% have a higher level of education (STECF, 2023).

While promoting aquaculture's potential for sustainability, the sector must also proactively address social and labour inclusion. This includes ensuring equitable opportunities for marginalized communities, advancing gender equality across the workforce, and supporting the development and implementation of national or regional policies and regulations that respond to the needs of vulnerable groups, in line with the recommendations of the European Parliament.

5. SOCIAL AND LABOUR INCLUSION IN THE EU AQUACULTURE SECTOR

5.1. What do we mean by social and labour inclusion?

Social inclusion is the process by which efforts are made to ensure equal opportunities – that everyone, regardless of their background, can achieve their full potential in life. Such efforts include policies and actions that promote equal access to (public) services as well as enable citizen's participation in the decision-making processes that affect their lives (UN Department of Economic and Social Affairs, n.d.). Those that require equal opportunities are normally groups of persons, referred to as vulnerable or disadvantaged, that experience a higher risk of poverty, discrimination and violence than the general population. They may have less capacity, understood as the resources available to individuals, families and communities to confront a threat or resist the effects of a danger. The vulnerability to discrimination and marginalisation is a consequence of social, cultural, economic and political conditions and not a quality inherent to certain groups of persons.

Bringing a certain group out of exclusion does not necessarily mean redistributing money: sometimes it is more important to give people a voice, a chance to contribute to decision-making, or to create an opportunity for them to serve the local community. Helping vulnerable groups to become active members of society through employment or other forms of work can be a powerful tool for social inclusion (Budzich-Tabor et al., 2017).

This mechanism, also known as active inclusion, encompasses efforts to enable all citizens, particularly the most disadvantaged, to fully participate in society, which includes securing employment. In practical terms, this means providing adequate income support to ensure a dignified life at all stages and establishing and promoting inclusive labour markets that facilitate access to the workforce. Labour markets are inclusive, when everyone of working age, in particular

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vulnerable and disadvantaged people, can participate in quality, paid work. Promoting inclusive labour markets enables people to join (or re-join) the workforce and concretely means:

- **Supporting job creation**, promoting the social economy and inclusive entrepreneurship as well as removing obstacles to work helps people integrate in the labour market.
- **Preventing in-work poverty**, quality jobs are essential and policies focusing on adequate pay and benefits, rights at work, sufficient working conditions, including health and safety are key.
- **Promoting skills and qualifications** and ensuring access to adult learning improves stay in work and helps people advance in their careers.

Research indicates that diverse and inclusive teams consistently perform better than homogeneous teams. Diversity, if harnessed effectively, increases not only staff well-being, but also productivity, creativity and awareness, thanks to staff collectively having a broader range of skills, experiences and perspectives (EEAS, 2023). Additionally, promoting Diversity, Equity and Inclusion (DEI) can broaden talent attraction and retention, increase employee engagement and enhance reputation (U.N. Global Compact, n.d.) Inclusive labour markets and workforce not only improve business performance but are also crucial in addressing inequality and eradicating global discrimination. For a better understanding of the inclusive approach, below are the descriptions of DEI according to the United Nations:

- **Diversity** means the representation of different groups in an enterprise. Business efforts to drive diversity aim to ensure that people from a range of groups experience equality of opportunity and treatment in access to employment, development, promotion and pay.
- **Equity** recognises that each person has different circumstances, that historically, some groups of people have experienced discrimination and that reaching equal outcomes will not be achieved by treating everyone the same. Equity and reaching equal outcomes require the allocation of resources and opportunities according to circumstance and need.
- **Inclusion** focuses on the experience of individuals and groups in the workplace. A person's feeling of inclusion at work is related to their personal characteristics, their own behaviour and that of others and the environment they are in. Full inclusion happens when individuals experience a balance between belonging with others at work - feeling they are part of the whole enterprise – as well as being seen, understood, and valued as an individual, with a unique identity, skills, and experience.

5.2. The current situation of social and labour inclusion in the EU aquaculture sector

In 2023, there were around 94.6 million people in the EU at risk of poverty or social exclusion, which was equivalent to 21.4 % of the total population. The risk of poverty or social exclusion was greater across the EU for women (rather than men), young adults (rather than middle-aged or elderly individuals), people with a low level of educational attainment (rather than those with a medium or tertiary level of educational attainment) and, in particular, for unemployed people (Eurostat, 2024).

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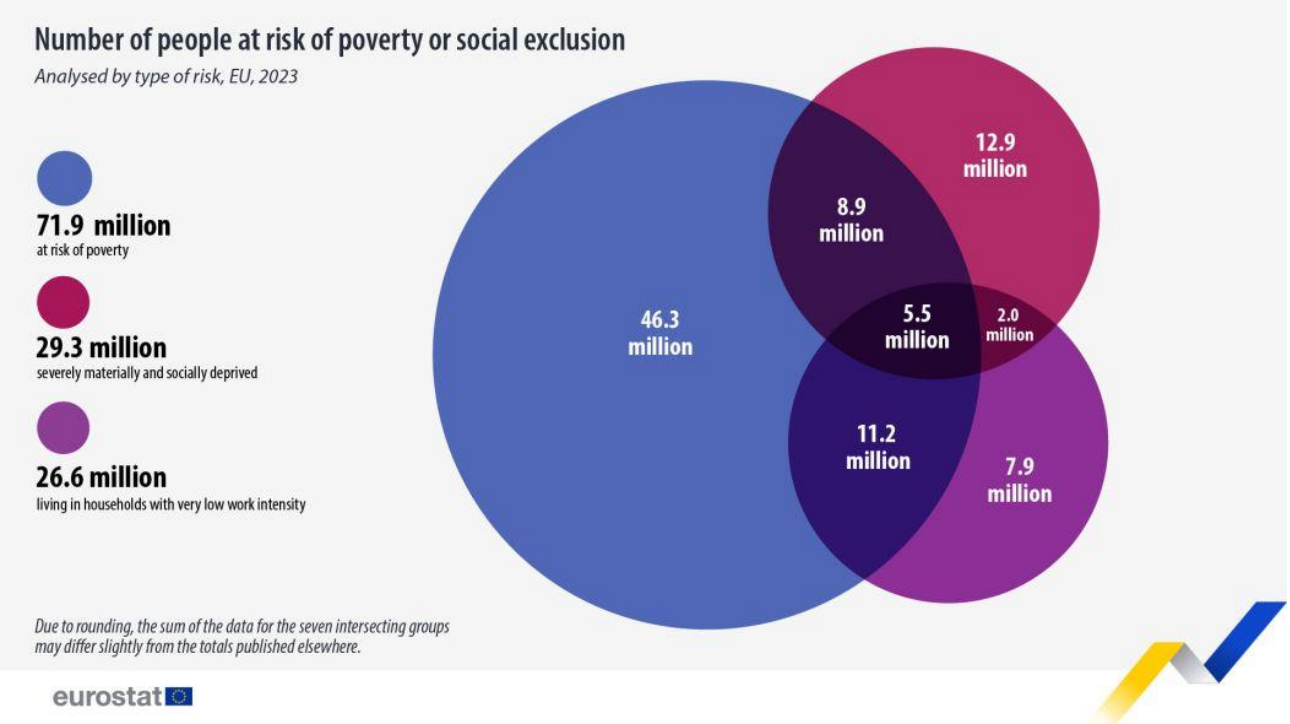

FIGURE 2 NUMBER OF PEOPLE AT RISK OF POVERTY OR SOCIAL EXCLUSION, BY TYPE OF RISK, EU, 2023 (MILLION) / *SOURCE: EUROSTAT*

Within the aquaculture sector, it is difficult to identify populations at risk of exclusion due to the lack of statistically disaggregated data and the complexity of the fisheries and aquaculture value chain. The demographic analysis conducted by the Scientific, Technical and Economic Committee for Fisheries (STECF) (2023) reveals that the 40-64 age class made up the largest proportion (46%) of people employed in the EU aquaculture sector, followed by the 25-39 age class (27%); and that the majority (82%) of people employed in the EU aquaculture sector were nationals of their own country, followed 5% from EU, 3% from non-EU/EEA nations, 2% from EEA and 8% of the employees were with unknown nationality.

In this context, the European Fisheries Areas' Network (FARNET)[4] seminar "Social inclusion for vibrant fisheries communities", held in Jūrmala in March 2017 (Budzich-Tabor et al., 2017), identified the following groups of people[5] that are at risk of being excluded within the fisheries communities:

- **Long-term unemployed**, who have particular difficulties in entering or re-entering the labour market. They often appear unattractive to employers given their lack of track record and experience and may find it difficult to adapt to working life after long unemployment periods.

[4] FARNET is the community of people implementing Community-Led Local Development (CLLD) under the European Maritime and Fisheries Fund (EMFF). From 2022, FAMENET merges the support previously provided by FAME and FARNET. For more information, see: https://oceans-and-fisheries.ec.europa.eu/funding/famenet_en

[5] Women are also included in this list, but they have not been included here as the next chapter of this guide will focus specifically on gender equality in the aquaculture sector.

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- **People with physical or mental disabilities** (including disabled or injured fishermen), whose skills may be undervalued or who may face physical or mental constraints to undertaking regular jobs.
- **Young people**, whose ideas are sometimes disregarded or criticised as not sufficiently mature, but with whom the community must engage if they are going to live locally (instead of moving out) and contribute economically to the area.
- **Elderly**, an increasingly large section of society, who can be a source of knowledge that should be capitalised on but are often perceived as less dynamic and more expensive than younger people.
- **Minorities** (ethnic, religious, linguistic, etc.), who account for an increasing section of Europe's workforce, but who may face cultural and language barriers, poor recognition of qualifications, as well as racial discrimination.

From an EU legislative and political perspective, significant efforts have been made to promote more inclusive societies and labour markets. In this context, it is necessary to highlight some key initiatives and policies aimed at fostering equality and inclusion:

- **EU Cohesion Policy**[6] supports the social inclusion of people with disabilities, younger and older workers, low-skilled workers, migrants and ethnic minorities, people who live in deprived areas, and women in the labour market. It supports the **Europe 2020 Strategy**[7], which aims to lift at least 20 million people out of the risk of poverty.
- The **Social Investment Package**[8], adopted in 2013, outlines the reforms needed in Member States to secure more adequate and sustainable social policies through investing in people's skills and capabilities. It also delivers some key messages that should be considered when modernising social policies and adjusting them to the new challenges, including through European Structural and Investment (ESI) Funds.
- The **European Pillar of Social Rights**[9] **(EPSR)** was set out in 2017 by the EU to act as a compass for a strong social Europe. The EPSR sets out 20 principles in three main areas: (1) equal opportunities and access to the labour market (2) fair working conditions and (3) social protection and inclusion.

[6] For more information on the Eu Cohesion Policy 2021-2027, see: https://ec.europa.eu/regional_policy/2021-2027_en

[7] For more information on the Europe 2020 Strategy, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52010DC2020

[8] For more information on the Social Investment Package, see: https://ec.europa.eu/social/main.jsp?langId=en&catId=1044&newsId=1807&furtherNews=yes

[9] For more information on the European Pillar of Social Rights, see: https://employment-social-affairs.ec.europa.eu/policies-and-activities/european-pillar-social-rights-building-fairer-and-more-inclusive-european-union_en

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Within the aquaculture sector, communities play a critical role in fostering inclusion. Community-Led Local Development (CLLD) is an inclusion-based approach, where the quality of the partnership plays a key role in ensuring the success of the local strategy. This approach is based on the principle that all members of the community, including the most disadvantaged, have something to contribute to the area's development (new ways of looking at problems, ideas for new projects, etc.). Any member who does not participate means that his or her potential contribution is lost (Budzich-Tabor et al., 2017). In fisheries and aquaculture, CLLD is implemented through FAMENET[10] (Fisheries and Aquaculture Monitoring, Evaluation and Local Support Network), which primary mission is to support the successful implementation of these European funding initiatives.

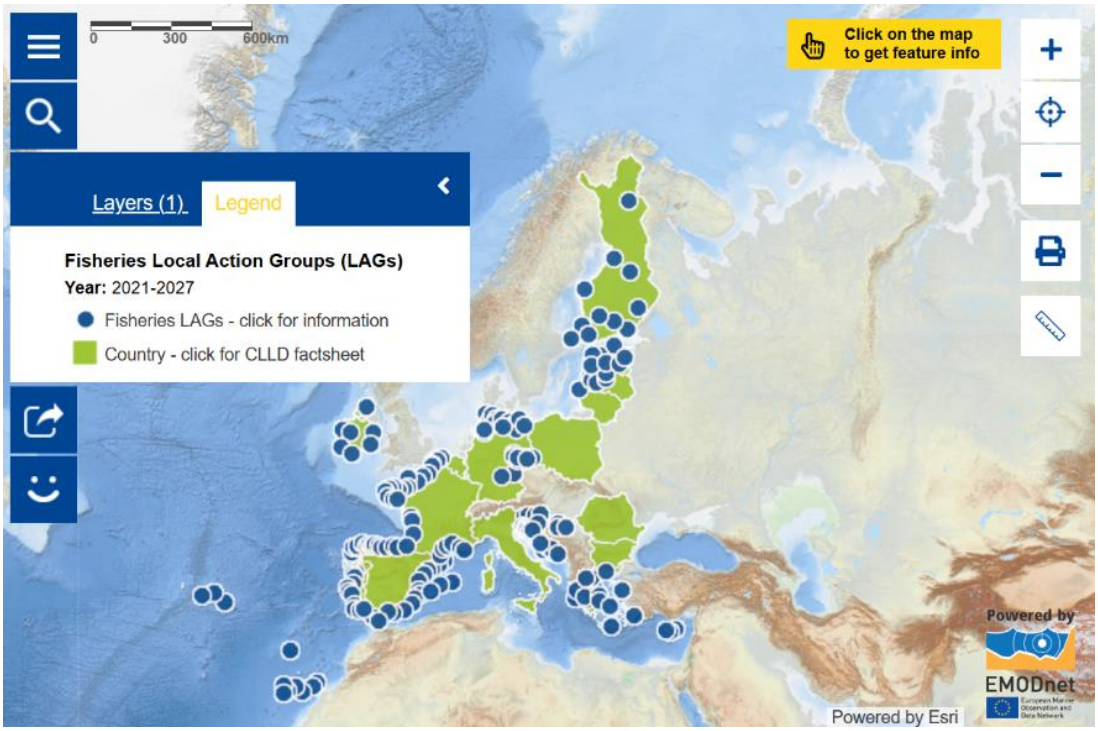

FIGURE 3 MAP FISHERIES LOCAL ACTION GROUPS / SOURCE: FARMENET

5.3. Challenges and recommendations for socio-labour inclusion in the EU aquaculture

Social and labour inclusion is a long-term process that cannot be effectively achieved individually or through isolated projects. Social organizations and NGOs play a pivotal role in this endeavour by acting as bridges between vulnerable groups and the broader community. These organizations provide tailored support to specific populations—such as youth, the elderly, or individuals with disabilities—and actively facilitate collaboration with diverse stakeholders, including government and public administrations, companies, RTD centres and universities, and local communities. Building trust and fostering a shared understanding among all stakeholders is

[10] In FAMENET's website you can check the interactive map features which features the location of the Fisheries Local Action Groups (FLAGs) across Europe: https://oceans-and-fisheries.ec.europa.eu/funding/famenet_en

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essential for success. Achieving this requires a gradual process of sustained effort, open dialogue, and the establishment of strong partnerships to ensure that inclusive initiatives are both impactful and meaningful.

In this section, it will be presented the main conclusions drawn from the studies cited in the literature review, including and Krause et al. (2015), Budzich-Tabor et al. (2017) and Kelling and Lawan (2023). These studies have identified challenges common to the vulnerable groups in the aquaculture sector. These conclusions and recommendations outlined below reflect the findings of our analysis.

5.3.1. Lack of skills and training opportunities

Vulnerable groups often face significant barriers to employment due to a lack of essential skills, training, and basic life competencies such as financial literacy. These challenges are compounded by limited access to resources like housing, transportation, and healthcare. In the aquaculture sector, these challenges are further exacerbated by insufficient training opportunities and a lack of attention to the characteristics and needs of vulnerable groups. To promote inclusive capacity building and training opportunities, a collaborative effort is essential, involving public administrations (for funding and infrastructure), professionals (for technical expertise), and social organizations (for knowledge and direct contact with vulnerable groups).

The learning opportunities should prioritize inclusivity, sustainability, and innovation, ensuring that individuals are well-prepared for a future in the aquaculture sector. Simultaneously, the EU funding represents a great opportunity to establish strong collaborative networks at the EU level that will facilitate knowledge-sharing, align training standards, and create synergies among stakeholders across the sector.

Find below a set of actionable recommendations that stakeholders can implement and support:

- **Implement apprenticeship and mentorship programs**: Pairing vulnerable individuals with experienced professionals is an effective approach to fostering both technical and soft skills development. These programs provide hands-on experience, enabling participants to gain practical knowledge and build confidence in their abilities. Businesses should also actively create opportunities for the final inclusion of participants in the labour market.
- **Develop accessible learning methodologies**: Blended learning, and remote classroom options will help address the limited accessibility faced by individuals in rural areas or those with disabilities, ensuring that training is inclusive and flexible for all learners.

EXAMPLE 1: AQUACULTURE REMOTE CLASSROOM (ARC)

Country	Organisation	Time frame
Ireland	Bord Iascaigh Mhara (BIM)	2019 - now

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The Aquaculture Remote Classroom (ARC) is a mobile classroom which has been designed to raise young people's awareness of aquaculture. This mobile classroom tours small towns around Ireland, delivering aquaculture education and awareness to primary schools. It aims to highlight the benefits of aquaculture in supplying sustainable seafood, creating employment and helping sustain coastal communities. The remote classroom is supported by four online lessons, regular webinars direct to schools and a range of learning resources and materials such as posters and workbooks.

Source: BIM - The ARC / Aquaculture remote classroom - European Commission



©BIM

- **Provide multicultural learning opportunities**: To ensure the inclusion of migrants and refugees in the aquaculture sector, it is essential to offer language support, cultural sensitivity training for instructors, and providing tailored learning resources. Legal aid services are equally important to help them navigate immigration laws, understand their rights, and secure the necessary work permits to enter the aquaculture sector. Additionally, the use of multilingual digital platforms or mobile apps with translation tools, could facilitate communication.

EXAMPLE 2 FISHERY SPEAK APP

Country	Organisation	Time frame
France	ETF and Europêche	2021-now

The Fishery Speak App facilitates communication on fishing vessels by providing the user with a safety glossary available in English, French, Spanish, Italian, Dutch, Polish, Arabic, Russian and much more languages.

Source: FisherySpeak: Communication APP at sea

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©Fishery Speak

5.3.2. Social and personal challenges

Vulnerable individuals often face social exclusion due to the lack of supportive networks like family, friends, or community ties, which limits their access to opportunities and resources. This isolation is further compounded by psychological barriers such as low self-esteem, mental health issues, and a sense of disempowerment, leading to demotivation and disengagement from employment, civic participation, and community life**.**

By providing community engagement opportunities, these initiatives create a supportive environment that boosts confidence, fosters resilience, and reduces feelings of isolation. Furthermore, by involving these individuals in aquaculture and related sectors, they gain access to professional networks and peer support, helping them build lasting connections that enhance their sense of belonging and create pathways for future success.

Find some recommendations for stakeholders below:

- **Collaborate on initiatives with social organizations**. Outreach to vulnerable groups and support their integration into the sector. These partnerships can help with recruitment, provide training and social services, and ensure that support structures are in place for long-term success.

EXAMPLE 3 PROYECTO TANZA

Country	Organisation	Time frame
Spain	Grupos de Acción Local do Sector Pesqueiro (GALP) de Galicia	2020-2021
Proyecto Tanza (Project Tanza) establishes cooperation links between the fishing sector and the social sphere, especially regarding disabilities and environmental improvement. This project is mainly based on the implementation of two activities: innovation workshops for products made from discarded fishing nets and the creation of an artistic proposal to decorate areas of the town hall, in collaboration with the female netmakers of Burela. **Source:** Empleo inclusivo en la zona costera gallega “Empleo Inclusivo” (TANZA) | Red Española de Grupos de Pesca		

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©Proyecto Tanza

- **Promote multicultural events related to the blue economy**: Organizing cultural events can raise awareness about the importance of aquaculture and the blue economy while celebrating diversity and reducing stereotypes about the capabilities of people with functional diversity.

EXAMPLE 4 MAR DIVERSO

Country	Organisation	Time frame
Spain	Asociación Ambar das Persoas con Diveridade Funcional	Periodically

Mar Diverso (Diverse Sea) is an inclusive festival of performing and visual arts that highlights maritime heritage through artistic actions by people with functional diversity within the coastal area of the Ría de Arousa, thus linking creation + inclusion + territory. The festival Increases its knowledge of traditional maritime culture and the heritage of the region, the positive appreciation of the contribution of people with diversity to the community and reduces stereotypes about the capabilities of people with functional diversity.

Source: Mar Diverso - Asociación Ambar / MAR DIVERSO: FESTIVAL DE ARTE INCLUSIVO E PATIMONIO COSTEIRO | Grupos de Acción Costeira.



©Ambar

- **Acknowledge inclusive initiatives**: Celebrating projects that promote inclusion and accessibility within the aquaculture sector is vital. This could involve creating awards or recognition programs, raising awareness of such efforts, and offering regular EDI training to foster an inclusive culture in the workplace.

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EXAMPLE 5 PREMIOS ECONOMÍA AZUL

Country	Organisation	Time frame
Spain	Consejería del Mar	Biannually
Premios Economía Azul (Blue Economy Awards) are biennial and were created to recognize outstanding projects funded under the support of the grants within the framework of the participatory local development strategies. These strategies were approved for the local action groups of the fishing sector with the aim of promoting the sustainable development of fishing areas within the context of the European Maritime and Fisheries Fund 2014-2020. The award categories support artisanal coastal fishing, job creation, diversification and circular Economy. **Source:** III Premios Economía Azul | Grupos de Acción Costeira		
©Consejería del Mar		

5.3.3. Inflexible work structures and limited accessibility

The fisheries and aquaculture sector is often associated with physically demanding work, limited accessibility and inflexible job structures, such as the absence of part-time, remote, or flexible work options. These factors pose significant barriers to the inclusion of vulnerable groups. Additionally, the industry appears to have a limited commitment to Equity, Diversity, and Inclusion (EDI), as inadequate recruitment and retention policies further hinder the participation of diverse talent.

To address these challenges and promote greater inclusivity, the following recommendations are proposed:

- **Adopt inclusive practices**: Aquaculture companies should adopt recruitment and hiring strategies that prioritize individuals from vulnerable groups. Job postings should explicitly highlight the company's commitment to inclusivity and offer clear accommodations for diverse applicants, such as accessible interview locations or alternative application methods for those with disabilities. At the same time, offer flexible work options—such as part-time positions or adaptable schedules—to accommodate those with caregiving responsibilities, health conditions, or other barriers to full-time employment.

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- **Address accessibility needs**: Ensure that workspaces and facilities are fully accessible to individuals with disabilities or mobility challenges. This may include providing transportation support, adaptive equipment, or structural modifications within the workplace.
- **Promote diversity and inclusion:** In collaboration with social organizations, offer inclusive workshops that create environments where vulnerable groups are understood and respected. These workshops can provide essential education and awareness on inclusivity, cultural sensitivity, and the challenges faced by these groups. By fostering such an environment, the integration of these individuals into the workforce becomes smoother, and teams are more dynamic and responsive to global challenges.

EXAMPLE 6 RACE EQUALITY FORUM

Country	Organisation	Time frame
Ireland	University College Cork (UCC)	2019-now
The Race Equality Forum was established at UCC with the aim of listening to and learning from the experiences of staff and student of racial and ethnic minorities, learning from their experiences and ensuring UCC a welcoming space. This Forum was set as part of a joint priority action between the UCC Equality, Diversity and Inclusion Unit and the UCC Equality Committee in response to an identified need for anti-racist action to improve race equality across higher education. The Race equality Network was subsequently launched at UCC with the aim to improve the representation, progression and success of staff from minority groups. **Source:** Race Equality | University College Cork		
©UCC		

- **Diversification of the aquaculture sector:** The inclusion of diverse profiles and the opening of new opportunities for individuals from various backgrounds can also be supported by the diversification of the sector. Additionally, sector diversification can help address the challenge of weak labour markets and seasonal employment, which is common in aquaculture and fisheries. By extending the operational period year-round—such as by developing value-added products or expanding tourism activities during the off-season—businesses can create more stable, year-round employment opportunities. This approach not only improves employment stability but also contributes to long-term economic growth. Aquaculture offers multiple and significant opportunities for diversification, enabling businesses to expand beyond traditional practices and explore new avenues for growth.

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For this diversification to take place, aquaculture stakeholders can foster the creation of entrepreneurial hubs that provide collaborative spaces for aspiring entrepreneurs in aquaculture and fisheries. These hubs would offer access to essential resources, expert guidance, and networking opportunities to help launch and sustain innovative businesses. Additionally, inviting experts from fields such as tourism, culture, and food to analyse and develop synergies can further enhance the sector's growth and innovation. This environment will not only foster the inclusion of vulnerable groups but also create a bidirectional benefit. The sector stands to gain from improved innovation, creativity, and heightened awareness, while vulnerable groups benefit from increased opportunities and integration into the workforce. Below are some examples of diversification within the fisheries and aquaculture sector:

- **Art galleries**: Promote the cultural value of aquaculture and fisheries through art exhibitions that explore their role in local heritage and environmental sustainability, fostering a deeper public connection to the sector.

EXAMPLE 7 GALERÍA DE ARTE DE LA ANCHOA

Country	Organisation	Time frame
Spain	Conservas Ana María S.L	2024-now

Supported by the local FLAG, a family processing business has created the first Anchovy Art Gallery in the city of Santoña (Cantabria). The project enabled the creation of a gallery consisting of two main areas: an exhibition area and a cafeteria/store where the company can offer its processed products. The design of the space is highly innovative, recreating the underwater environment with audiovisual projections. This initiative arises from the need to diversify the business, established in 1997, which focuses on the artisanal processing of anchovies.

Source: Award-winning anchovy art gallery - European Commission / Galería de Arte de la Anchoa | Museo de la Anchoa



©Conservas Ana María SL

- **Aquaculture-themed restaurants:** Develop restaurants centred around sustainable seafood to showcase aquaculture products while also serving as training grounds for careers in culinary arts, marketing, and hospitality—stimulating local economic growth.

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EXAMPLE 8 TADEUSZ BALATA RESTAURANT

Country	Organisation	Time frame
Poland	Tadeusz Bałata	2018-now

The family fish farm of Tadeusz Bałata have created a fish restaurant with high windows and terraces from which clients can observe the nature surrounding the fishponds, including different species of birds. The period of fish sales, typically concentrated in December, has been extended, the range of fish species has been expanded (in addition to carp, it includes species such as pike, tench or catfish), and equipment has been purchased for on-farm processing. Other fish farms from the area of neighbouring fisheries LAG provide certain fish species. A follow-up project increased the capacity of the restaurant and added a refrigerated fish preparation space, thus enabling the owners to maintain the year-round employment of the restaurant staff.

Source: The shortest way to the plate - European Commission



© Tadeusz Bałata

- **Tourism attractions:** Establish educational and interactive tourism sites—such as guided fish farm tours, aquaculture museums, or boat excursions—to raise awareness of sustainable aquaculture practices while creating jobs in tourism and hospitality.

EXAMPLE 9 BURGAS-KAMENO TOURISM ATTRACTION

Country	Organisation	Time frame
Bulgaria	Burgas-Kameno FLAG	-

A Bulgarian coastal community is increasing tourism and improving working conditions for fishers through the construction of a “cultural and historic complex” tourist centre and boat shelters. Today, the exhibition houses in the tourist complex, “Tayfa”, “Buruntiya” and “Evksinski pont” are taking us on an adventure through the history of the Black Sea, the fishermen’s customs and the everyday life of the sea wolves. Here is the only place you can see net knitting, entanglement of ropes and sea knots, to try a traditional food and hear stories about their beliefs and legends.

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Source: Infrastructure to boost tourism while improving fishers' lives - European Commission / Chengene skele | Official tourist portal of Burgas
 © Tadeusz Bałata

5.3.4. Negative public image and difficulties in sector renewal

The perception of the fisheries and aquaculture sector as offering unstable and low-paying jobs contributes to its negative public image. As a result, the sector faces significant recruitment challenges, particularly in terms of renewing the workforce and attracting younger workers.

Creating effective awareness campaigns is key to bridging the gap between the aquaculture sector and the community at large. By doing so, people can gain firsthand knowledge of the industry while highlighting its positive aspects, such as sustainability (efficient water use, renewable energy, and waste reduction), technological innovation (smart sensors, automation, and biotechnology), and its broader applications (not only in food production but also in fields like pharmaceuticals, nutraceuticals, cosmetics, biofuels, and bioplastics is crucial). Showcasing real-world examples of successful aquaculture farms that have balanced production with sustainability can help build trust in the industry and promote individual actions that contribute to ocean and aquatic ecosystem conservation.

Ultimately, improving the general perception of aquaculture will help society recognize the importance of this sector, along with its benefits and potential for sustainable development. With greater public understanding and engagement, policymakers are more likely to gain the necessary support to implement DEI-focused regulations, ensuring that both the sector and society can thrive in a more diverse, inclusive, and equitable environment.

Find some recommendations for stakeholders below:

- **Develop raising awareness campaigns**: Install informative panels about aquaculture in public and natural spaces to provide easy access to key facts and insights about the sector. These efforts can help develop a sense of belonging and create connections with local communities, fostering a better understanding of the industry and its importance.

EXAMPLE 10 VODOMEC FISH FARM

Country	Organisation	Time frame

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Slovenia	Vodomec d.o.o fish farm	2024 - now
This trout farm integrated solar energy, waste management innovations, and community engagement, becoming a regional hub for renewable energy, biodiversity, and education. It organized workshops and installed information boards to raise awareness about sustainability and biodiversity. These activities have helped foster a strong connection between the farm and the local community. **Source:** Leading the way in sustainable aquaculture - European Commission / TRAJNOSTNI RIBOGOJSKI CENTER - LAS Gorenjska košarica		
 © Vodomec d.o.o		

- **Create impactful resources:** Produce engaging videos and documentaries that highlight the positive impact of aquaculture. These could showcase real-world success stories, sustainable practices, and the broader potential of the industry, helping to raise awareness and improve public perception.

EXAMPLE 11 MAR DE GENTES

Country	Organisation	Time frame
Spain	Mar de Gentes	2016 - now
The goal of the project Mar de Gentes (Sea of Peoples) is to highlight the cultural and environmental maritime fishing heritage, as well as the way of life of the people who directly or indirectly depend on fishing. It also aims to raise awareness of the best practices in the fishing sector related to environmental conservation and the sustainability of the activity in its broadest sense (economic, cultural, social, and environmental). **Source:** Mar de Gentes. Campaña de comunicación, divulgación y sensibilización del sector pesquero		
 © Mar de Gentes		

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These actions can also address another important challenge that hinder the sustainable development of the sector such as the lack of awareness of aquaculture as career options. Strengthening collaborations between educational institutions and stakeholders in the aquaculture industry can enhance the social and labour inclusion of, for example, young people and support the renewal of the sector. By forming partnerships, educational centres can offer relevant, up-to-date training aligned with industry needs, ensuring that students are well-prepared for careers in aquaculture. Additionally, stakeholders can support internships, mentorship programs, and job placements, creating a direct link between education and real-world career opportunities. Following, some recommendations to establish these relationships.

- **Host informative sessions:** Workshops and student events can inspire youth from all backgrounds, including marginalized groups, to see aquaculture as a viable and meaningful career path.

EXAMPLE 12 DIA ABERTO MARE-UÉVORA

Country	Organisation	Time frame
Portugal	MARE / University of Évora	Periodically
Researchers from MARE-Polytechnic of Leiria, opened the doors of the CETEMARES building, in Peniche, to second and third cycle students, at the MARE Open Day 2023 | CETEMARES. Throughout the day, visitors had the opportunity to get to know "the scientific infrastructure of the CETEMARES building and discover the ongoing research projects". **Source:** MARE-UÉvora Open Day | MARE		
 © MARE-UÉvora		

- **Development of educational resources**: Creating tailored resources for classrooms, including reading materials and interactive tools, to help students understand the principles and significance of aquaculture from an early age.

EXAMPLE 13 EHNACEMICROALGAE COMIC

Country	Organisation	Time frame
Spain	ANFACO-CECOPESCA	2017 - 2022

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With the aim of raising awareness about the world of microalgae, one of the dissemination activities of the European project **EHNACEMICROALGAE** was the creation of a comic, designed to bring these unicellular organisms closer to society. Microalgae have great potential in sectors such as food and nutraceuticals, cosmetics, as well as in biofuels and bioplastics.

Source: Publicado el cómic MICROALGAS "Más allá de la Tierra" - Anfaco - Cecopesca



© ANFACO-CECOPESCA

5.3.5. Absence of reliable data and inadequate policies

As mentioned before, one of the major challenges to inclusion in the aquaculture sector is the lack of reliable and disaggregated data and inadequate policies, which hinder the visibility and inclusion of underrepresented groups.

To overcome these challenges, the recommendations are:

- **Conduct periodic research:** This can include surveys, focus groups, or interviews with workforce and representatives from vulnerable groups (such as those in aquaculture or fisheries) to better understand their unique challenges, needs, and opportunities. The goal is to gather disaggregated data that is often not readily available through secondary sources.

EXAMPLE 14 INFOTEAM SURVEY ON INCLUSION

Country	Organisation	Time frame
Italy	Infoteam Srl	Periodically
Internal company survey on inclusiveness issues: questionnaire to learn about workers' perception of the company climate on the topic of inclusiveness. The organization intends to ensure gender equality in the workplace through concrete actions that satisfy organizational, relational and personal needs relating to working life. The survey includes the assessments of specific factors, regarding the following aspects: Selection and hiring (recruitment); Career management; Salary equity; Parenting, care; Work-life balance; Prevention of abuse and harassment. The survey is anonymous, and the data is processed in relation to scores and not to people.		

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Source: Corporate social responsabiity | INFOTEAM S.r.l.
 © INFOTEAM

- **Develop technological solutions:** Establish systems to collect detailed demographic data on the aquaculture workforce to improve visibility and support more targeted policymaking. These data-driven insights will help inform evidence-based interventions aimed at increasing inclusivity within the sector.

The previous challenge, combined with the lack of collaboration among stakeholders in decision-making processes, leads to inequities and missed opportunities for inclusivity. To address these challenges, stakeholders should consider the following recommendations for the development and implementation of policies, initiatives, and guidelines:

- **Partner with Local NGOs:** Collaborate with NGOs experienced in working with vulnerable groups to develop and implement inclusive initiatives. Ensure that vulnerable groups are actively involved in decision-making processes and provide trained volunteers (e.g., for sign language assistance) and impartial facilitators to ensure that the voices and needs of these groups are heard.
- **Use group representatives as ambassadors:** Engage representatives from potentially excluded groups as ambassadors to help involve others and contribute to the design and implementation of inclusive practices and initiatives. These ambassadors bring unique perspectives, which can help develop innovative solutions and promote greater inclusivity.

6. GENDER EQUALITY IN THE EU AQUACULTURE SECTOR

6.1. What do we mean by gender equality?

Before addressing the challenges hindering gender equality, it is essential to first understand the concept of gender. To provide clarity, the reference will be the Gender Mainstreaming Glossary by the European Institute for Gender Equality (EIGE) (n.d.), which offers a comprehensive framework for understanding gender and its social implications. Gender refers to the social attributes and opportunities historically associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed

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and are learned through socialization processes. They are context/ time-specific and changeable. Gender determines what is expected, allowed and valued in a woman or a man in a given context. In most societies there are differences and inequalities between women and men in responsibilities assigned, activities undertaken, access to and control over resources, as well as decision-making opportunities. Gender is part of the broader socio-cultural context. Other important criteria for socio-cultural analysis include class, race, poverty level, ethnic group and age.

When referring to gender equality, it involves ensuring equal rights, responsibilities, and opportunities for individuals regardless of their gender and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality should be of concern and fully engage men as well as women. Equality between women and men is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centred development.

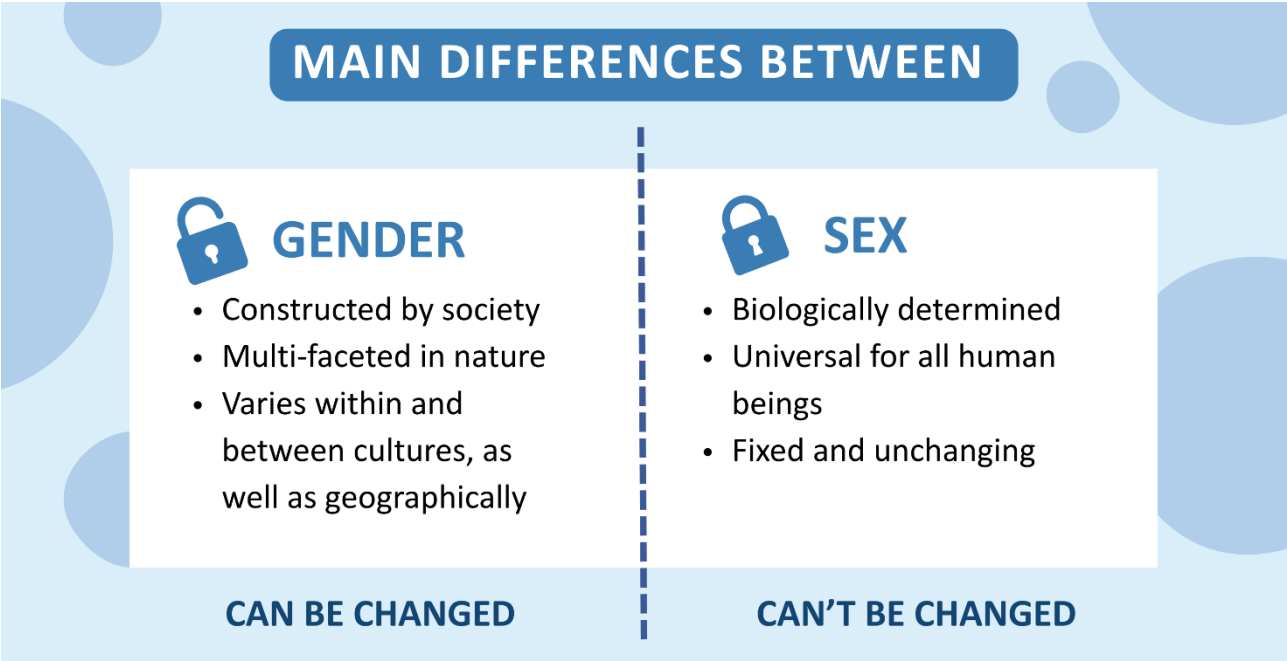

FIGURE 4 MAIN DIFFERENCES BETWEEN GENDER AND SEX

Gender discrimination refers to the unequal treatment of individuals based on their sex, typically manifesting when women are treated less favourably than men. Intersectional discrimination, on the other hand, acknowledges the interconnected nature of social categories such as race, class, and gender. These overlapping identities create systems of disadvantage and discrimination that are interdependent, affecting individuals or groups in complex and multiple ways.

One of the key strategies to address these challenges, adopted at the European level, is Gender Mainstreaming. This approach involves the (re)organization, improvement, development, and evaluation of policy processes to ensure that a gender equality perspective is integrated into all

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policies, at every level and stage, by the actors typically involved in policymaking. Like social inclusion, EIGE (2024) underscores that gender inequality in employment significantly undermines economic prosperity, costing the EU €370 billion annually, even though women have higher educational attainment than men. Other conclusions from the current situation of gender disparity in employment are:

- **Economic violence is another manifestation of gender inequality:** In addition to there being fewer women than men in paid work, women earn less than men and are more likely to be secondary earners when in a couple. Progress in closing these gender gaps remains painfully slow. Gender differences in unpaid care and domestic work are key to understanding gender gaps in earnings.
- **Disaggregating gendered labour is key to new labour demands:** Women's under-representation and working conditions in the field of research and development and among scientists in high-technology manufacturing and knowledge-intensive services also need to remain high on policy agendas.
- **Gender-based violence is holding women back in most sectors:** Women are disproportionately affected by violence and harassment in the workplace, particularly in sectors dominated by men or involving precarious work arrangements. According to the ILO, more than one in five people experience workplace violence, with women being particularly vulnerable to sexual harassment and abuse. Insecure contracts, poor work–life balance and gender stereotypes exacerbate the risk, with both paid and unpaid work environments posing threats.

6.2. The current situation of gender equality in the EU aquaculture sector

Women play a key role in the EU fisheries and aquaculture sector as contributors to family businesses, employees and entrepreneurs. However, according to the available data, 78% of the persons employed in the sector are male, and thus European aquaculture is clearly gender biased. This differs from the processing industry, which shows an equal gender distribution. The large share of male is prevalent in all member states and in all production technologies, however, the shellfish segment employs a higher percentage of female workers (STECF, 2023).

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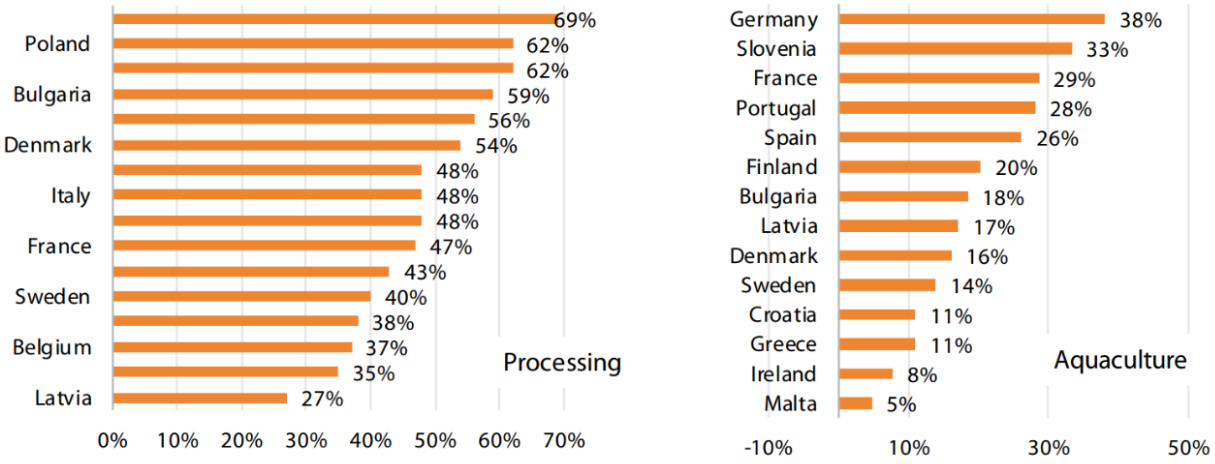

FIGURE 5 PROPORTION OF FEMALE EMPLOYEES IN EU AQUACULTURE AND PROCESSING SECTOR IN SELECTED MEMBER STATES (2020) / SOURCE: STECF

Additionally, there are significant differences among the member states. While women represent more than 25% of persons working in aquaculture (including farm managers and family workforce) in states like Germany, Spain, France and others; their share in the Netherlands, Malta, Ireland, Italy and others is less than 10%. This variation in gender equality in aquaculture by country might be explained by cultural and historical differences and need further research. Making aquaculture more attractive for women also touches upon the question of enhancing the attractiveness of the primary sector for the next generation and provide development for rural areas in general (Nicheva, et al., 2022).

From the EU legislative and political point of view, since 2010, significant efforts have been made to foster gender equality in labour markets. The **EU Gender Equality Strategy 2020-2025**[11] presents policy objectives and actions to make significant progress by 2025 towards a gender-equal Europe. The Strategy pursues a dual approach of gender mainstreaming combined with targeted actions, and intersectionality is a horizontal principle for its implementation. Regarding employment, the key objectives are:

- Ending gender-based violence
- Challenging gender stereotypes
- Closing gender gaps in the labour market
- Achieving equal participation across different sectors of the economy
- Addressing the gender pay and pension gaps
- Closing the gender care gap and achieving gender balance in decision-making and in politics

[11] For more information on the EU Gender Equality Strategy 2020-2025, see: https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en#:~:text=The%20EU%20Gender%20Equality%20Strategy%20delivers%20on%20the,significant%20progress%20by%202025%20towards%20a%20gender-equal%20Europe.

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Within the aquaculture sector, the **EU Fisheries Policy** (including strategies, funds and regulations) makes very clear and strong commitments towards achieving gender equality and women's empowerment in the sector. Additionally, the European Maritime and Fisheries Fund (EMFF) establishes that the Union should, at all stages of implementation of the EMFF, aim to eliminate inequalities and promote equality between men and women, as well as to combat discrimination based on sex, racial or ethnic origin, religion or belief, disability, age or sexual orientation (FAO, 2018).

In this regard, women's networks and associations play a key role in achieving gender equality. In the 1990s, many women fishers' organizations emerged in the EU in response to women's invisible work in the sector. In addition to the associations representing the rights of women as spouses, other types of associations were established to serve the interests of women in paid employment and the formalization of women's activities undertaken within the sector. The formation of these associations was unique across Europe and has been a success story at the local level. However, women's organizations in the EU are currently experiencing financial challenges, and some organizations that do not receive governmental support are disappearing (Frangoudes, 2013). In response to this challenge, the 2014 European Parliament resolution on developing the role of women in fisheries urged the Commission to:

- Strengthen the collection, use and **dissemination of sex-disaggregated statistics** in the […] sector.
- Legally and socially **recognize women's roles** and particular tasks undertaken by women in the sector.
- Support financially the **establishment of women's associations** through national and European women's networks.
- Strengthen women's effective **participation in decision-making** in both public and private sectors (European Parliament, 2014b).

In this context, **AKTEA**[12] has been acting at European and national level to gain recognition for the role of women in fisheries and aquaculture and to achieve gender equality in these sectors. AKTEA's other priorities include gaining access for women to decision-making processes within fisheries management at EU level (Advisory Councils) and within national fishers' organisations, access to vocational training, and of course the defence of small-scale fisheries and fishing communities in general.

In recent years, the European Commission has launched the "**Women in the Blue Economy**"[13] call for proposals under the EMFAF. With a EUR 2.5 million budget, the call will help increase the participation of women in the different sectors of the blue economy, such as fisheries, aquaculture, shipbuilding, maritime transport, offshore renewable energy, blue bioeconomy, as

[12] For more information on AKTEA, see: https://akteaplatform.eu/

[13] For more information on Women in the Blue Economy initiative, see: https://cinea.ec.europa.eu/funding-opportunities/calls-proposals/women-blue-economy-call-proposals_en

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well as inland and offshore aquaculture. Up to 2 projects are expected to be funded, with an exceptional co-funding of 90%.

At a national level, there are also initiatives to promote women's networks and associations. In 2024, the Ministry of Agriculture, Fisheries and Food in Spain[14] announced grants worth 550,000 euros to achieve greater integration of women and promote research and technological development in the aquaculture sector. Associative entities of a national character representing the fishing and aquaculture sectors, as well as legal entities at the national level whose purpose is to promote industrial research, technological development, and Research, Development, and Innovation (R&D+i) projects, or to defend the economic and professional interests of women working in the sector, may apply for these grants.

6.3. Challenges and recommendations for gender equality in the EU aquaculture

The gender analysis conducted as a part of social Life Cycle Assessment (7.3.1) and described in D7.3 within the NOVAFOODIES project, revealed key insights into gender dynamics within the consortium. While the gender wage gap observed in the broader sector or country is not present within the consortium, due to regulated pay structures in the organised research sectors, disparities remain in hierarchical roles. One partner noted that men dominate higher-level positions, which influences the median wage and reflects broader trends in workforce composition, with more men employed than women across most entities. Additionally, the analysis found that while most partners have established systems to report and address workplace discrimination, four partners lack such formal mechanisms. However, even in the absence of organised systems, employees are generally encouraged to report discrimination without fear of reprisal.

As mentioned before, women's organizations, associations, and networks are among the most effective solutions to address the challenges women face in the aquaculture sector. To overcome the lack of support, it is essential to strengthen and invest in these organizations. Women's networks and associations serve as vital platforms for support, training, and advocacy, defending the economic and professional interests of their members and all women involved in aquaculture and related services.

In this section, we present the main conclusions drawn from the studies cited in the literature review, including EIGE (2015, 2016), FAO (2018), European Commission (2020), PTEPA (2020), Ministerio de Agricultura, Pesca y Alimentación (2021) and WINBLUE (2023, 2024) These studies have identified challenges common to gender equality in the aquaculture sector. These conclusions and recommendations outlined below here reflect the findings of our analysis.

[14] For more information, see: https://www.mapa.gob.es/es/prensa/ultimas-noticias/el-ministerio-de-agricultura-pesca-y-alimentaci%C3%B3n-convoca-ayudas-a-entidades-asociativas-del-sector-pesquero-y-acu%C3%ADcola-por-550.000-euros/tcm:30-686369

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6.3.1. Limited training and development opportunities

Women face significant barriers to career growth and economic participation due to limited access to training and development opportunities in critical areas such as technology and business management, as well as restricted access to economic resources, funding, and entrepreneurial opportunities. To address this, it is essential to identify the skill gaps that prevent women from entering or advancing in these industries. Developing targeted training programs will equip women with the necessary skills and competencies to enter aquaculture and maritime sectors, while also supporting those already active in the field by helping them acquire the competencies required for managerial and leadership roles.

Collaboration with social organizations can support the objective of facilitating the inclusion of women, especially those facing difficulties such as economic, social, or cultural barriers. These collaborations can provide women with access to resources, support networks, and opportunities for skill-building and employment in the aquaculture industry.

Find some recommendations for stakeholders below:

- **Support mentorship and leadership programs**: Create platforms that connect experienced female leaders in aquaculture with younger or less experienced women in the sector. These mentorship programs can focus on technical skills, business management, and leadership development, fostering a new generation of women leaders. Additionally, these initiatives can help women build valuable connections and gain industry insights while fostering a sense of community and support.

EXAMPLE 15 TRAINING PROGRAM IN THE MEDITERRANEAN REGION

Region	Organisation	Time frame
Mediterranean	General Fisheries Commission for the Mediterranean (GFCM) / Federation of European Aquaculture Producers (FEAP)	Periodically
The transformative training program for young women in aquaculture from countries around the Mediterranean and the Black Sea brought together aspiring female students, researchers and entrepreneurs from across the Mediterranean region, aiming to enhance their skills and knowledge in sustainable aquaculture practices. The program offered: visits to leading aquaculture facilities; interactive workshops and cultural experiences and networking opportunities. **Source:** Empowering women towards sustainable aquaculture development – FEAP / Empowering Future Leaders: Young Women Aquaculture Training in Spain – FEAP		

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- **Offer scholarships for women**: Offer scholarships specifically aimed at women to support their education and development in the aquaculture sector. These scholarships can help women gain the knowledge and skills needed to succeed and advance in their careers.

EXAMPLE 16 KVARØY ARCTIC SCHOLARSHIPS

Country	Organisation	Time frame
Norway	Kvarøy Arctic	2019-2023

Kvarøy Arctic offers an international scholarship program that aims to empower women in aquaculture. The family-owned salmon farm based in the Arctic Circle in Norway awards two annual scholarships that support the further education, research, and career development of women in the field of aquaculture.

Source: Women In Aquaculture Scholarship — Kvaroy Arctic



© Kvarøy Arctic

6.3.2. Gender stereotypes and traditional roles

The fisheries and aquaculture value chain has long been regarded as a male-dominated industry, and this perception is reinforced by the persistence of deeply ingrained gender stereotypes. These stereotypes create significant barriers for women, limiting their opportunities for career advancement and reducing their participation in leadership roles within the sector. Consequently, women are often relegated to lower-paid, undervalued positions that do not reflect their full potential or contributions to the industry. This not only perpetuates economic inequality

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but also stifles the industry's overall growth by failing to fully leverage the talents and perspectives of half of the workforce.

Find some recommendations for stakeholders below:

- **Create impactful resources:** Producing engaging videos and documentaries that showcase the vital role of women in the fisheries and aquaculture sector can raise societal awareness and inspire collective action in the fight for gender equality.

EXAMPLE 17 SEREAS

Country	Organisation	Time frame
Spain	FUNDAMAR	Periodically
The Foundation for Fisheries and Shellfish – FUNDAMAR- and the Foundation for the Conservation of Products of the Sea, launched the SEREAS brand, at the service of the dissemination and visibility of women in the blue economy sector, with the aim of highlighting the strategic role of women in the extractive and transformative sector of seafood products, highlighting their contribution and recognizing their effort, being configured as an essential pillar within the fishing and canning community. **Source:** sereas | As Mulleres do mar		
SEREAS © FUNDAMAR		

- **Raise awareness about women's role**: Organize and promote dissemination activities on digital platforms, especially during events like International Women's Day. These activities can focus on highlighting the contributions of women as researchers, scientists, and leaders within the aquaculture sector. Their expertise, achievements, and career paths, can serve as role models for students and aspiring professionals, inspiring the next generation of female aquaculture leaders.

EXAMPLE 18 AQUAWIND PROJECT

Region	Organisation	Time frame
EU	Partnership	Periodically
The AquaWind project proudly celebrated the International Day of Women and Girls in Science by recognising the exceptional women driving innovation in renewable energy and offshore aquaculture. Their expertise and leadership are essential to the success of this pioneering initiative, which integrates offshore wind energy and aquaculture for a more sustainable future. Their contributions span across project management, financial		

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oversight, environmental monitoring, and technological development, ensuring that AquaWind remains at the forefront of sustainable marine solutions.

Source: [AquaWind highlights the role of women in science and innovation on the International Day of Women and Girls in Science - Aquawind]



© AquaWind

- **Seek acknowledgement on media channels**: International and regional media channels play a crucial role in shaping public perceptions and raising awareness. By covering success stories and challenges faced by women, the media can help amplify their voices, creating more visibility and encouraging others to pursue careers in aquaculture.

EXAMPLE 19 EURONEWS AND THE FISH SITE

Region	Organisation	Time frame
EU	Media channels	Periodically

Euronews and The Fish Site are two examples of media channels that actively dedicate content to supporting the role of women in the blue economy. They cover topics such as sustainable fishing, aquaculture, climate change, ocean energy, and more, addressing these issues from diverse perspectives, including gender equality, the undervalued contributions of women, and the fight against stereotypes.

Source:

- Fishing for gender equality: empowering women in Europe's seafood sectors
- The invisible women of Europe's fishing industry - YouTube
- The invisible women of Europe's fishing industry | Euronews
- The woman challenging stereotypes in Europe's fishing industry | Euronews
- Women in fisheries | Epthinktank | European Parliament

6.3.3. Barriers in the work environment

Women in aquaculture face significant barriers, including limited access to resources, funding, and entrepreneurship opportunities, which hinder their full participation in the sector's growth. Their work is often undervalued, with a focus on post-harvest roles that receive lower pay and fewer opportunities compared to primary production. Poor working conditions, such as

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informal employment, wage gaps, and challenges in achieving work-life balance, further exacerbate inequality.

Regarding equality plans, a troubling trend has emerged where some individuals deny the existence of gender gaps in the sector. This form of denial can be particularly damaging, as it downplays the importance of gender inequality, thereby impeding meaningful efforts to address and rectify these disparities. When the existence of gender gaps is ignored, there is little incentive to implement the necessary changes, such as policy reforms, leadership development programs, or workplace initiatives, that could promote greater gender equity and inclusion in the sector.

The following section offers recommendations and examples:

- **Promote equal pay and work-life balance:** Adopt inclusive recruitment practices and implement transparent policies to ensure equal pay for equal work, regularly review salary structures, and take proactive steps to close gender pay gaps. Additionally, support work-life balance by introducing family-friendly policies, including paid parental leave, flexible working arrangements, and accessible childcare services.

- **Implement gender equality plans:** Develop and implement gender equality plans and assessment tools that help stakeholders better understand the challenges and barriers women face in the aquaculture sector. These tools can provide valuable insights for improving policies, practices, and outcomes related to gender inclusion.

- **Foster an inclusive workplace and engage men as allies:** Cultivate a workplace culture that prioritizes diversity, inclusivity, and respect, supported by robust policies against gender-based harassment and discrimination. Additionally, actively involve men as allies by encouraging male leaders and employees to advocate for balanced representation, challenge traditional gender roles, and support initiatives that promote workplace diversity and inclusivity.

EXAMPLE 20 JOTIS AND KEFISH WOMEN TEAMS

Country	Organisation	Time frame
Greece	Yiotis Anonimos Emporiki & Viomixaniki Etaireia / Kefalonia Fisheries	-
-JOTIS: Several women (38%) hold key positions in production, quality control, and management, serving as role models for gender diversity in the workplace. Jotis S.A. promotes gender equality through its employment policies, with women representing 40% of its workforce. Source: JOTIS - jotis.gr **-KEFISH:** Kefalonia Fisheries is all about people. Every member of the Geroulanos family continues to lend a hand, and its values and social commitment are consistently upheld by our extended family of employees and stakeholders. In Kefalonia, respect for our product		

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goes hand in hand with respect for people: our customers, our employees and our community. **Source:** Our Team | Kefalonia Fisheries
 © KEFISH

6.3.4. Underrepresentation in leadership roles and decision-making

Women in aquaculture are underrepresented in leadership roles, limiting their influence on policies and strategies, and are often overlooked as key drivers of change and innovation, restricting their visibility and contributions to the sector. Women networks not only work to increase the visibility of women already contributing to the industry but also focus on boosting female representation, particularly in decision-making processes and senior leadership roles.

The implementation of these initiatives will help position women as change agents in the aquaculture and blue economy sectors. By addressing training gaps, providing mentorship, and creating supportive networks, women will be empowered to take on leadership roles and become influential figures in shaping the future of the sector. This shift will not only benefit women but also foster greater innovation and sustainability within the industry.

Some initiatives that can increase the support are the following:

- **Support women in leadership and decision-making**: Stakeholders should implement policies that encourage the inclusion of women in leadership and decision-making roles to ensure gender balance in decision-making processes. Offering training programs focused on leadership, governance, and professional development can empower women to take on more prominent roles in aquaculture.

EXAMPLE 21 SHE4SEA PROJECT

Region	Organisation	Time frame
UE	Partnership	2023-now
The She4Sea project aims at promoting professional readiness and development of women wishing to pursue a career in maritime tourism, fisheries & aquaculture, and shipping. To this end, it fosters the acquisition of soft skills, grouped into the following three competence eras: Leadership, Entrepreneurship, and Sustainability. Being human-		

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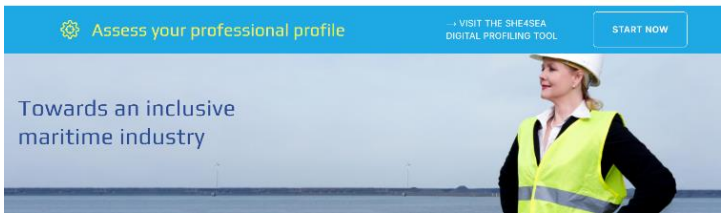
centred, these skills are suitable for women's introduction and adaptation to smarter and greener maritime job positions as well as for de-gendering existing traditional notions.

Source: The Project – She 4 Sea Project



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- **Support women's entrepreneurship:** Through tailored guidance and business management training is essential for promoting sustainable growth and empowering women to thrive in these industries. These efforts can include providing mentorship programs, access to financial resources, and opportunities for networking within the fisheries, aquaculture, and broader blue economy sectors.
- **Encourage women's role through workshops and networking events:** Participate in and organize workshops and networking events to promote women in the aquaculture sector. These create platforms to address gender disparities, share knowledge, and showcase successful women-led initiatives, building a more inclusive and equitable industry.

EXAMPLE 22 FORUM CATALAN ASSOCIATION OF WOMEN OF THE SEA

Country	Organisation	Time frame
Spain	The Catalan Association of Women of the Sea	Periodically

The forum included a round table of production projects led by women of the sea, and a round table of projects from other areas of the sea also led by women such as diving, sailing and marine research. It included a coaching session to empower the attending women to carry out new projects and weave networks between them, and then they were able to enjoy a local menu from a seafood restaurant. And visit to a diversify business, anchovy museum.

Source: Success at the II Forum of the ACDM in L'Escala under the slogan of equality in the blue economy - Dones de la Mar

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6.3.5. Lack of data and inadequate policies

Gender equality in aquaculture faces multiple systemic challenges that limit progress and inclusion. Policies often fail to incorporate women's specific needs and interests, with inadequate mechanisms for their active participation in decision-making processes. This lack of gender integration results in policies that do not address the unique barriers faced by women in the sector. Furthermore, existing laws designed to ensure equal treatment and non-discrimination are weakly enforced, particularly in male-dominated fields like fisheries and aquaculture, leaving women vulnerable to rights violations and unequal opportunities.

Find some recommendations for stakeholders below:

- **Foster networking and collaboration**: Facilitate the creation of networks and associations to help women in aquaculture connect, share knowledge, and access resources and support to advance their careers.

EXAMPLE 23 WINBLUE PROJECT

Region	Organisation	Time frame
EU	Partnership	2024

WINBLUE intends to accelerate the empowerment of women in the blue economy, facilitating their participation in five sectors focused on the conservation and sustainable use of aquatic resources. The project promotes an **increase in the number of women in operational and decision-making positions in companies, research, educational and training entities through upskilling and coaching programmes**. Also, it enhances the entrepreneurial good practices that engage female human capital, drive competitiveness and strengthen business undertakings.

Source: Winblue Project

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- **Enhance data collection and monitoring:** Developing comprehensive systems for collecting and analysing gender-disaggregated data within the aquaculture sector is essential to identify and address existing inequalities. This includes tracking women's participation, roles, wages, access to resources, and leadership opportunities.

EXAMPLE 24 WIN-BIG PROJECT

Country	Organisation	Time frame
EU	Partnership	2024

WIN-BIG is addressing the gender imbalance and capacity gaps across blue economy sectors in the EU to support women joining and climbing their way up the value chain. To do so: provide an accurate and comprehensive dataset on gender status and women's role in BuE across all 6 EU sea basins (Atlantic, Mediterranean, Baltic, North, Arctic and Black Sea); identify skills gaps preventing women from entering or progressing in the career ladder; develop female- and sea basin-oriented learning labs, acceleration programs and networking events to promote female role models and women-oriented in the Blue emergent sector.

Source: WOMEN IN BLUE ECONOMY | WIN_BIG



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7. SELF-ASSESSMENT TOOLS FOR AQUACULTURE STAKEHOLDERS

This chapter presents two assessment tools designed for aquaculture stakeholders. These tools consist of two questionnaires, each providing a general overview of inclusion and gender standards. They are intended to assist stakeholders in assessing these crucial aspects within their own organizations and across the aquaculture sector more broadly. The questionnaires address four distinct categories that are vital for assessing organizational practices in relation to social inclusion and gender equality:

- **Internal processes and practices:** This category focuses on the organization's internal policies and procedures that directly impact the inclusivity of its workforce. It examines recruitment, training, professional, and other strategies to ensure they promote equality and offer equal opportunities for all individuals, regardless of gender or background.
- **Policies and practices pertaining to partners, stakeholders, and beneficiaries:** This category evaluates how the organization engages with external partners, stakeholders, and beneficiaries in relation to inclusion and gender equality. It considers how inclusive practices are integrated into contracts, collaborations, and partnerships within the aquaculture sector.
- **Staff Support:** This category examines the measures taken by the organization to provide support to its staff, ensuring they have the necessary resources and opportunities to succeed in an inclusive environment. It includes analysing available employee support services, such as mentoring, coaching, work-life balance policies and professional development programs.
- **Organizational Culture:** This section delves into the organization’s culture and how it nurtures an inclusive and diverse environment. It looks at the values, beliefs, and behaviours that are promoted within the organization and how these shape the overall atmosphere regarding diversity and inclusion.

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7.1. Minimum standards for social-labour inclusion

	YES	NO	N/A
Are recruitment strategies inclusive of individuals from marginalized groups, such as long-term unemployed, migrants, refugees, youth, and elderly people?			
Are services and facilities accessible to people with diverse needs (e.g., language support, physical accessibility for the elderly or people with disabilities)?			
Are internal policies free from discrimination, ensuring all staff and clients are treated equally regardless of age, employment status, or migration background?			
Are social inclusion goals clearly integrated into the organization's mission, vision, and strategic objectives?			
Is data collected and progress monitored regarding the inclusion of marginalized groups, with measurable indicators for employment, engagement, and service usage?			
Does the organization develop partnerships with local NGOs, migrant associations, youth centres, and other relevant community organizations to support marginalized groups?			
Are there targeted outreach and engagement strategies in place to ensure marginalized groups are reached, especially those who might otherwise be excluded?			
Are services designed to be culturally sensitive and inclusive, particularly for migrants, refugees, and ethnic minorities, with language support and culturally appropriate assistance?			
Are there strong referral systems and support networks with external services that assist marginalized groups, such as housing, legal aid, or mental health services?			
Does the organization provide tailored training and educational programs to marginalized groups (e.g., digital literacy for the elderly or employment readiness for the long-term unemployed)?			
Does the organization provide ongoing diversity and inclusion training for staff to build awareness of social inclusion issues, such as unconscious bias, diversity, and cultural competence?			
Are staff working with vulnerable groups given guidance, training, and supervision to ensure they feel confident and competent in delivering inclusive services?			
Is there mental health and well-being support available for staff working with marginalized groups, considering the emotional challenges of such work?			
Does the organization strive for diversity within the team, ensuring representation from the communities served, which fosters greater empathy and understanding?			
Is leadership and decision-making within the organization inclusive, with individuals from diverse backgrounds involved in key discussions to prioritize social inclusion at all levels?			

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7.2. Minimum standards for gender equality

	YES	NO	N/A
Are recruitment processes gender-neutral, with equal opportunities for both men and women in all job categories and levels of responsibility?			
Is there a clear policy ensuring equal pay for equal work, and is the organization regularly conducting audits to identify and address gender pay gaps?			
Are there measures in place to ensure gender balance in leadership positions and decision-making roles? Does the organization set targets or quotas for gender representation in leadership?			
Are there policies in place to prevent gender-based discrimination, harassment, and biases? How are complaints handled, and is there a clear procedure for reporting gender-based discrimination?			
Are job descriptions and performance evaluation criteria free from gender bias? Are they designed to ensure that both men and women have equal opportunities to succeed?			
Do partnerships and collaborations with external organizations (e.g., suppliers, NGOs, government bodies) promote gender equality? Are gender considerations embedded in contracts and agreements?			
Are marketing materials, advertisements, and outreach efforts inclusive, using gender-neutral language and showcasing gender diversity?			
Does the organization ensure that both men and women have equal access to resources (e.g., training, financial support, technology) and opportunities for advancement, both within the company and in its partnerships?			
Is gender analysis integrated into research and development initiatives? Are the needs and contributions of both men and women considered in product development or community engagement projects?			
Does the organization engage with or support external gender equality initiatives, such as local or international campaigns, community outreach programs, or gender equality advocacy groups?			
Are employees provided with gender equality training, including awareness of unconscious bias, gender stereotypes, and workplace discrimination?			
Are policies and practices in place to support work-life balance for all genders, such as flexible work hours, parental leave, and childcare options?			
Are there mentorship programs, leadership development opportunities, or networking initiatives aimed at supporting women's professional growth and career advancement?			
Are there support mechanisms in place for employees to voice concerns related to gender equality, such as a gender equality committee, confidential reporting systems, or counselling services?			
Does the organizational culture promote inclusivity and respect for all genders? Are the organization's values and behaviours actively promoting gender equality at all levels, from top management to entry-level positions?			

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8. CONCLUSIONS

In summary, the aquaculture sector has significant potential to advance the United Nations Sustainable Development Goals (SDGs), particularly in addressing critical issues such as hunger, poverty, health, gender equality, and inequality. However, its progress is often hindered by the complexity of fisheries and aquaculture value chains and a lack of knowledge and guidance for stakeholders. This gap limits the enforcement of effective laws and policies, especially on social and labour inclusion. Ensuring socio-labour inclusion and gender equality is vital for fostering resilient communities and sustainable development.

Despite its potential, the sector faces systemic barriers for vulnerable groups, such as skill gaps, limited training opportunities, inflexible work structures, and gender stereotypes. Women, in particular, encounter challenges including underrepresentation in leadership, unequal pay, and a lack of support networks. Addressing these issues requires robust partnerships among social organizations, governments, aquaculture stakeholders, and local communities. Social organizations and NGOs play a pivotal role by providing tailored support and facilitating collaboration, while women's networks and associations are crucial in advocating for their members' interests and advancing gender equality in aquaculture.

Additionally, educational resources and training programs should be developed to close knowledge gaps and highlight the sector's role in sustainability. Policy efforts must focus on creating and enforcing measures that address the needs of vulnerable groups, with specific attention to gender equality. Moreover, it is essential to build flexible work structures, improving accessibility, and fostering trust and dialogue among stakeholders are key to creating meaningful and lasting progress. Finally, robust systems for data collection and monitoring are needed to track progress, inform policies, and refine initiatives. By taking these steps, the aquaculture sector can realize its potential as a driver of sustainability and social equity.

In conclusion, building partnerships between public administration, industry stakeholders and social organizations ensures that the aquaculture sector is seen as a driver of positive social change. By building strong, inclusive partnerships, the aquaculture industry can play a pivotal role in reducing inequality and creating opportunities for those who are often overlooked in traditional employment pathways.

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ANNEX

The SUSTAINABLE development of the EU aquaculture sector

NOVAFOODIES
Funded by the European Union

Aquaculture holds immense potential to contribute positively to the Sustainable Development Goals (SDGs) outlined in the 2030 Agenda, adopted by world leaders at the historic United Nations Summit in September 2015. Specifically, the aquaculture sector can contribute to the following goals:



Socio-labour inclusion

Integrating socio-labour inclusion and gender equality is essential for fostering resilient economies and communities. In aquaculture, inclusive practices can enhance sustainability, innovation, and growth.

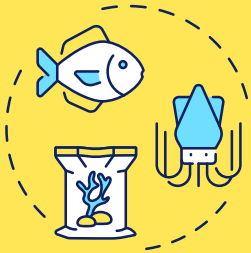
Legislative framework

As a component of the fisheries sector, aquaculture falls under the scope of the Common Fisheries Policy (CFP), with shared competences between the EU and its Member States.

European Parliament

Regarding the fisheries and aquaculture workforce, the EU emphasizes the need for improved data collection, the development of specialized curricula, and enhanced qualification opportunities for women.

Research indicates that diverse and inclusive teams consistently perform better than homogeneous teams. Diversity, if harnessed effectively, increases not only staff well-being, but also productivity, creativity and awareness, thanks to staff collectively having a broader range of skills, experiences and perspectives (EEAS, 2023).



ANNEX

What do we mean by **social and labour INCLUSION**?

NOVAFOODIES
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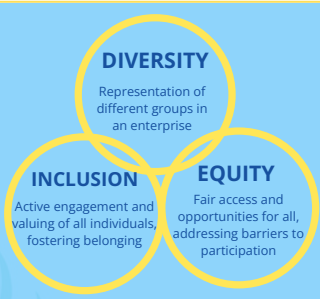
Social inclusion is the process of ensuring equal opportunities, allowing everyone, regardless of their background, to reach their full potential in life. Empowering vulnerable groups to become active members of society through employment or other forms of work can be a powerful tool for fostering social inclusion.



VULNERABLE groups in aquaculture


Long-term unemployed


People with disabilities


Elderly


Women


Young people


Minorities

How to create inclusive **LABOUR markets**?

Supporting job creation

Promoting the social economy and inclusive entrepreneurship, as well as removing obstacles to employment, helps individuals integrate into the labour market.

Preventing in-work poverty

Quality jobs are essential, and policies that focus on adequate pay and benefits, workers' rights, and sufficient working conditions (including health and safety) are key.

Promoting skills and qualifications

Ensuring access to training and adult learning improves job retention and helps individuals advance in their careers.

ANNEX

Challenges and RECOMMENDATIONS for social and labour inclusion

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Lack of skills and training opportunities

Vulnerable groups often face significant barriers to employment in the aquaculture sector due to a lack of training opportunities and a lack of attention to the characteristics and needs of vulnerable groups.

- Implement apprenticeship and mentorship programs to foster technical and soft skills
- Develop accessible learning methodologies ensuring an inclusive and flexible training
- Provide multicultural learning opportunities addressing language and cultural sensitivity

Social and personal challenges

Vulnerable individuals often face social exclusion due to the lack of supportive networks like family, friends, or community ties. This isolation is further compounded by psychological barriers such as low self-esteem, mental health issues, and a sense of disempowerment.

- Collaborate on initiatives with social organizations to outreach vulnerable groups
- Promote multicultural events related to the blue economy to raise awareness
- Acknowledge inclusive initiatives within the aquaculture sector

Inflexible work structures and limited accessibility

The aquaculture sector is often associated with physically demanding work, limited accessibility and inflexible job structures, such as the absence of part-time, remote, or flexible work options.

- Adopt inclusive recruitment and hiring strategies that prioritize vulnerable groups
- Address the accessibility needs of individuals with disabilities in the workplace
- Promote diversity and inclusion within the workforce through workshops and initiatives

Negative public image and difficulties in sector renewal

The perception of the fisheries and aquaculture sector as offering unstable and low-paying jobs contributes to its negative public image. As a result, the sector faces significant recruitment challenges, particularly in terms of renewing the workforce.

- Develop raising awareness campaigns to create connections with local communities
- Produce engaging videos that highlight the positive impact of aquaculture
- Host informative sessions to inspire young students

Absence of reliable data and inadequate policies

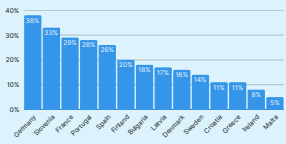
One of the major challenges to inclusion in the aquaculture sector is the lack of reliable and disaggregated data and inadequate policies, which hinder the visibility and inclusion of underrepresented groups.

- Develop technological solutions to collect detailed demographic data
- Conduct periodic research with workforce and representatives from vulnerable groups
- Collaborate with NGOs to develop and implement inclusive policies

ANNEX

What do we mean by **GENDER equality?**

Gender equality refers to equal rights, responsibilities and opportunities of women and men. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. The European Institute for Gender Equality (EIGE, 2024) underscores that gender inequality in employment costs the EU €370 billion annually.



Proportion of female employees in EU aquaculture sector (2020)

How to promote the **role of WOMEN** in aquaculture?



Sex-disaggregated statistics



Raise awareness on women's role



Establishment of women's associations



Participation in decision-making

Which are the main **GENDER disparities** in employment?

Closing gender gaps

Progress in closing these gender gaps remains painfully slow. Gender differences in unpaid care and domestic work are key to understanding gender gaps in earnings.

Disaggregating gendered labour

Women's under-representation and working conditions in the field of research and development in high-technology also need to remain high on policy agendas.

Ending gender-based violence

Women are disproportionately affected by violence and harassment in the workplace, particularly in sectors dominated by men or involving precarious work arrangements.

ANNEX

Challenges and RECOMMENDATIONS for gender equality

Funded by the European Union

Limited training and development opportunities

Women face significant barriers to career growth and economic participation due to limited access to training and development opportunities in critical areas such as technology, business management and entrepreneurship.

- Support mentorship programs focus on technical skills
- Offer scholarships for women to support their education
- Collaboration with NGOs to facilitate the inclusion of women

Gender stereotypes and traditional roles

The aquaculture value chain has long been viewed as a male-dominated industry, a perception reinforced by deeply ingrained gender stereotypes. These stereotypes reduce their opportunities for career advancement and limit their participation in leadership roles within the sector.

- Create impactful resources that showcase the role of women
- Raise awareness about women's role with dissemination activities
- Seek support on the media to shape public perceptions

Barriers in the work environment

Women contribution is often undervalued, with a focus on post-harvest roles that offer lower pay and fewer opportunities. Poor working conditions, such as informal employment, wage gaps, and challenges in achieving work-life balance, further exacerbate inequality.

- Promote equal pay and work-life balance
- Implement gender equality plans and assessment tools
- Foster an inclusive workplace and engage men as allie

Underrepresentation in leadership roles and decision-making

Women in aquaculture are underrepresented in leadership roles, limiting their influence on policies and strategies, and are often overlooked as key drivers of change and innovation. Women's networks focus on increasing female representation in decision-making processes and leadership.

- Support women through policies that promote gender balance
- Facilitate women's entrepreneurship by providing tailored guidance
- Encourage women's role through workshops and networking events

Lack of data and inadequate policies

Policies often fail to address women's specific needs and interests. Moreover, existing laws intended to ensure equal treatment and non-discrimination are poorly enforced, particularly in male-dominated sectors like fisheries and aquaculture

- Develop technological solutions to collect data
- Conduct periodic research and monitoring
- Foster networking and collaboration among women