

STUDY

Requested by the PECH Committee

Policy options for strengthening the competitiveness of the EU fisheries and aquaculture sector



Fisheries



RESEARCH FOR PECH COMMITTEE

Policy options for strengthening the competitiveness of the EU fisheries and aquaculture sector

Abstract

The EU fisheries and aquaculture products (FAPs) market is largely dependent on external producers. Some of the imports entering the EU market come from countries with lenient regulations. This study gives an overview on existing competitiveness indicators. It shows main trends in the EU's FAPs supply through extra-EU imports and identifies the main internal and external factors affecting the sector's competitiveness. The research presents four case studies and an assessment of options for adaptations to the internal and external policy framework. Finally, it provides a series of recommendations for strengthening the competitiveness of the EU fisheries and aquaculture sector in the future.

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LIST OF ABBREVIATIONS

AAC	Aquaculture Advisory Council
AAM	Aquaculture Assistant Mechanism
ABNJ	areas beyond national jurisdiction
AC	Advisory Council
ATQ	autonomous tariff quota
CBD	Convention on Biological Diversity (CBD)
CCP	Common Commercial Policy
CFP	Common Fisheries Policy
CITES	Convention on International Trade in Endangered Species of Wild Fauna
CMM	conservation and management measure
CMO	Common Market Organisation
CPUE	catch per unit of effort
EC	European Commission
ECA	European Court of Auditors
ECAs	Emission Control Areas
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EMFAF	European Maritime, Fisheries and Aquaculture Fund
EMFF	European Maritime and Fisheries Fund
EP	European Parliament
ERDF	European Regional Development Fund
ETD	Energy Taxation Directive
EWG	expert working group
FAPs	fishery and aquaculture products
FPZ	Fisheries Protection Zone

FSFS	framework for sustainable food systems
FTA	Free Trade Agreement
FTE	full time equivalent
FUI	fuel use intensity
GDP	gross domestic product
GHE	greenhouse emissions
GPM	gross profit margin
GT	gross tonnage
GVA	gross value added
H&G	whole fish, head-off and gutted
ICES	International Council for the Exploration of the Seas
IMO	International Maritime Organization
IMP	Integrated Maritime Policy
IMTA	integrated multitrophic aquaculture
IPOA	International Plan of Action
IUCN	International Union for the Conservation of Nature
IUU	illegal, unreported, and unregulated
LDAC	Long Distance Waters Advisory Council
MAC	Market Advisory Council
MAP	multiannual management plan
MCS	monitoring, control and surveillance
MFN	most favoured nation
MPA	marine protected areas
MSC	Marine Stewardship Council
MSP	Marine Spatial Planning
MSY	maximum sustainable yield

NEAFC	North East Atlantic Fishery Commission
PECH	European Parliament's Committee on Fisheries
RAS	recirculating aquaculture systems
RASFF	Rapid Alert System for Food and Feed
RFB	Regional Fisheries Body
RFMO	Regional Fisheries Management Organisation
ROI	Return on investment
SDG	Sustainable Development Goal
SFPA	Sustainable Fisheries Partnership Agreement
SPS	sanitary and phytosanitary
SRIA	strategic research and innovation agenda
STECF	Scientific, Technical and Economic Committee for Fisheries
SWOT	strengths, weaknesses, opportunities and threats
TAC	total allowable catch
TCA	Trade and Cooperation Agreement
TEU	Treaty of the European Union
TFEU	Treaty on the Functioning of European Union
UNCLOS	United Nations Convention on the Law of the Sea
VMS	vessel monitoring system

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EXECUTIVE SUMMARY

Background

The European Union (EU) is the **world's largest market** for fishery and aquaculture products (FAPs). Over the last 15 years, various EU institutions have expressed concern about the increasing dependence of the EU market on imports. This is seen as a lack of competitiveness of the EU fisheries and aquaculture sector, which can only partially meet the needs of the internal market. The **self-sufficiency rate** is a useful indicator of the ability of the EU producers to meet internal demand. Self-sufficiency has been declining since 2008 to the point where EU producers were only able to meet 38% of demand in 2021. Some of these imports may come from countries where the conservation and management measures (CMMs) for fisheries, the hygiene and quality of FAPs, and working conditions, etc. are too lenient compared to those in force in the EU. They therefore constitute **unfair competition for EU producers**, who are subject to strict CMMs and control measures, and administrative procedures. It appears that the many external operators have a strong comparative advantage in terms of lower production costs, due to the less demanding legal requirements, subsidies and, in some cases, their fleets engaging in illegal, unreported and unregulated (IUU) fishing. This study aims to identify the internal and external factors that are leading to the lack of competitiveness of the EU sector, in order to **propose policy options** to strengthen its competitiveness, while ensuring a level playing field between external and domestic operators.

Internal factors

Fisheries and aquaculture in the EU are regulated by an extensive body of legislation, covering the entire fish value chain, including not only the **Common Fisheries Policy (CFP)**, but also other legislation such as trade, food safety, labour, and environmental aspects. In turn, fishing activities must strictly comply with the CMMs through a comprehensive control and enforcement system. Increasing restrictions on the fishing fleet's access to resources are affecting the supply of fish, while at the same time increasing operating costs. This is particularly problematic given the energy-intensive nature of the EU fleet. In turn, severe restrictions on the use of the marine space for aquaculture concessions, and the difficulties in obtaining production licences limit farmed fish and shellfish. Trade in EU FAPs on the internal market is also subject to the strict regulatory framework of the **Common Market Organisation (CMO)**, which aims to ensure that products meet high standards of quality, hygiene, and labelling, among other things. As a leading player in global maritime governance, the EU has an obligation to lead by example. The **European Green Deal (EGD)**, and its 2030 Biodiversity Strategy, which aims to protect a number of areas identified as vulnerable marine ecosystems (VMEs), is a global reference for other countries, but may affect the competitiveness of the EU fleets vis-à-vis external operators. Emerging sectors may also limit access to traditional fishing grounds and affect offshore fish farming. In turn, generational change in the sector, particularly in the extractive phase, has a negative impact on competitiveness. There is evidence of a lack of effective customs control in some Member States, which would lead to forum shopping and thus access to the EU market for FAPs of dubious origin. Nevertheless, there are a number of structural elements that can strengthen the competitiveness of the sector, such as the EU research and innovation framework, which promotes more energy-efficient processes, more selective fishing, or more productive and more environmentally friendly aquaculture. For its part, the **European Maritime, Fisheries and Aquaculture Fund (EMFAF)** offers opportunities to improve the competitiveness of the sector, provided that the funds are used more effectively by Member States and the sector, leading to more efficient processes and added value for FAPs.

External factors

The EU is a **world leader in ocean governance** and is a signatory to several multilateral conventions and has many bilateral fisheries agreements with developed and developing countries. The EU is also party to several Regional Fisheries Management Organisations (RFMOs) and is active in proposing CMMs, while participating in the provision of scientific advice. The EU's role in the international arena underpins much of the EU's policy and legislation to protect the marine environment, and to ensure sustainable fisheries. These policies impose restrictions on the activities of the EU fleet in international and non-EU countries waters. However, not all international actors are strongly committed to the conservation of the oceans and marine resources. Many foreign fleets and aquaculture producers are heavily subsidised, some fleets engage in significant IUU fishing activities, fishing practices affect endangered, threatened and protected (ETP) species, working conditions are poor, and product quality is not optimal. These FAPs of dubious origin are traded around the world, and there is evidence that many may find loopholes to access the attractive EU market. There is little the EU can do to promote sustainable practices by fishing fleets operating under the sovereign decisions of their governments. However, the EU can impose conditions on access to its market. The **IUU Regulation** and its carding system were designed with the intention of deterring the escalation of illegal FAPs' access to the EU market. The **autonomous tariff quotas** (ATQs) system affects the level of tariffs to be paid, not the conditions of market access. There are currently no provisions on working conditions and alleged forced labour in non-EU countries, although these will be addressed in future legislative instruments. On the other hand, **Brexit** has led to a progressive loss of fishing opportunities and, consequently, economic losses for some EU fleets, increased dependence on imports and rising prices. Future negotiations on access to UK waters after 2026 will therefore be crucial.

Recommendations on policy adaptations

Based on the evidence reviewed, a number of general policy recommendations are set out below, as well as a number of more specific policy recommendations based on the four case studies:

General policy recommendations:

- Better **implementation of the CFP** should lead to equal treatment of imported FAPs and EU products by requiring that all imported products comply with EU's conservation and management measures and internal product requirements.
- In addition to the existing EU fish and aquaculture consumer labels, **another label should be created for FAPs from non-EU countries**, for both fresh and processed products distributed in the EU (including the HORECA channel). This would allow consumers to distinguish between EU and non-EU FAPs.
- In the case of **imported products**, it should also be made compulsory to label fishery products with the **name of the State under whose flag** the catching vessel sailed.
- Strengthen **coordination between the EU's trade and fisheries policies**, in particular when negotiating trade agreements that include fisheries-related issues. In this respect, it is considered essential to analyse the economic and social impact of Free Trade Agreements (FTAs) on the EU fisheries and aquaculture sector, to establish appropriate safeguard measures where necessary and to treat certain FAPs as sensitive products.
- Ensure greater uniformity in the **application of customs rules** and identical customs controls in all Member States in order to prevent non-EU operators from using points of entry with fewer controls to import goods that do not meet EU standards.
- **New Sustainable Fisheries Partnership Agreements** (SFPAs) should be signed to reduce the dependence on imports of FAPs into the EU.

- Products from **non-EU countries** that do not have fully guaranteed domestic **food safety legislation and control mechanisms** equivalent in effect to those applied in the EU, should be **denied access to the EU** market.
- The programme of **inspections in non-EU countries should be improved** by strengthening the missions of the Food and Veterinary Office by increasing the number of inspections carried out by this Office in establishments authorised to carry out inspections in the country of origin or even in a non-EU country.
- Reactivate **cooperation with China** through the already established but dormant Blue Partnerships to improve international maritime governance in the fight against IUU fishing.
- Improve the **collection of trade data**, in particular for processed products from outside the EU, so that authorities can accurately trace the origin of the product and all other intermediate steps until it reaches the final consumer.
- Ensure that all Member States are signatories to each and every international agreement adopted in the field of the fight for **decent working conditions** in the fisheries and aquaculture sector, covering the entire production process including logistics and processing.
- Encourage a more comprehensive use of **EMFAF resources** by all Member States through:
 - promoting *careers* in the sector;
 - promoting *lesser known species* with low demand;
 - identifying new *consumption habits* and new potential fish presentations;
 - the potential of *niche markets* in the EU for domestic production;
 - the development of a *more energy efficient and productive* fisheries and aquaculture sector.
- Strengthen efforts to **add value to the products**, in particular through geographical indications, use of sustainable practices, innovative products or other means that can differentiate the product and obtain a price premium in some niche markets.

Recommendations based on case studies:

- As the **small pelagic fisheries in the North Sea** can be considered unregulated due to the lack of cooperation between coastal States as expected under UNCLOS, the EU could eventually impose trade measures under the IUU Regulation (1005/2008).
- Consider **whether small pelagic species** such as herring should be **excluded from ATQ schemes**.
- **Renegotiate access to UK waters**, particularly in the light of the post-2026 situation.
- Explore the possibility of a **mixed SFPA**, which could provide greater legal certainty for EU fishing companies operating in the **Falklands**.
- Strengthen safety and **hygiene measures for pangasius** and similar non-EU products (e.g. by increasing the inspection rate to 50%, as for Indian shrimp products).
- Investigate **production methods in exporting countries**, including for Norwegian products processed in non-EU countries.
- Restrict imports of Russian products, not just the removal of any duty-free or most-favoured nation treatment. Maintain some **state aid framework** to adjust to the ongoing geopolitical unrest, in particular the level of energy prices.
- **Benchmark the environmental licensing system** used in Norwegian aquaculture.

1. INTRODUCTION

1.1. Background

The EU is the largest market for fishery and aquaculture products (FAPs) in the world, accounting for 34% of the global value of FAPs imports in 2020. Excluding intra-EU trade, the share is around 16% (FAO, 2022). Nevertheless, EU-produced FAPs covered only 38% of the domestic demand in 2021. In this context, the PECH Committee commissioned this study to identify the reasons for the lack of competitiveness of the EU sector.

Concerns about the sector's limited competitiveness are not new, and the EU institutions have been raising awareness of the issue. However, these efforts have been focused on aquaculture. In 2009, the European Commission (EC) published the Communication on a new impetus for the strategy for the sustainable development of European aquaculture¹. In this Communication, the EU recognised the many challenges facing EU aquaculture to become competitive, such as the EU's strict environmental regulations, which create competitive constraints vis-à-vis competitors in Asia or Latin America (EC, 2009). In 2002, the European Parliament (EP) adopted the resolution 'Striving for a sustainable and competitive EU aquaculture'². In this resolution, the EP calls on the EC to continue to work towards a level playing field for EU aquaculture vis-à-vis non-EU country producers. This would consist of revising existing international trade agreements and possibly signing new ones on imports of products from countries where operators do not have to comply with the same environmental and social sustainability requirements as those in force in the EU. The EP also published the resolution of 30 May 2018 on the implementation of control measures on the compliance of fisheries products with the criteria for access to the EU market. In this resolution, the EP stressed that the compliance of non-EU country FAPs with EU standards on environmental and social aspects would contribute to the creation of a level playing field between EU FAPs and non-EU country products.

At the time of writing, there is no ad hoc Communication from the EU institutions on the competitiveness of the fisheries sector. It seems that the EU has not yet decided to assess the competitiveness of its sector in the current context of increasing competition in an increasingly open market (Penas-Lado, 2019). However, according to Regulation (EU) No 1380/2013³, one of the priority objectives of the Common Fisheries Policy (CFP) is to contribute to supplying the EU market with food of high nutritional value and to reduce the EU market's dependence on food imports. For its part, the Market Advisory Council (MAC) expressed concern about the lack of a level playing field between EU producers and those from non-EU countries competing in the EU market. This is one of the main issues affecting the competitiveness of the EU fisheries and aquaculture sector.⁴

Many of the concerns raised by the aquaculture sector also apply to the fisheries sector, in particular, those related to competition with FAPs imported from non-EU countries, where environmental, labour, safety and quality regulations, among others, are not as demanding as those in force in the EU. The study aims to identify the main internal and external factors and drivers of competitiveness in the sector over the last two decades. This analysis is intended to provide a critical assessment of the CFP and its instruments and identify appropriate policy options to strengthen the competitiveness of the sector.

¹ Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030. [COM\(2021\) 236 final](#).

² See: European Parliament resolution of 4 October 2022 on striving for a sustainable and competitive EU aquaculture: the way forward (2021/2189(INI)): https://www.europarl.europa.eu/doceo/document/TA-9-2022-0334_EN.pdf

³ CFP Basic Regulation: [Regulation \(EU\) No 1380/2013](#) of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC, OJ L 354, 28.12.2013, p. 22.

⁴ Advice of the MAC. Level playing field (LPF). 30.09.2019. <https://marketac.eu/level-playing-field/>

1.2. Objectives

The overall objective of this study is to identify the internal and external factors that determine the perceived low competitiveness of the EU fisheries and aquaculture sector. These factors will be identified, described and assessed in order to determine what policy actions at EU and external level could be taken by EU policy makers to propose new management measures or to strengthen and improve existing ones.

1.3. Methodology

The general methodology is based on a thorough review of scientific and grey literature, the collection of insights from key stakeholders, the development of case studies and sound analysis of the EUMOFA database. The analysis is carried out from a multidisciplinary perspective, covering aspects of EU and international policy and legislation, FAPs trade, fish safety and quality, as well as environmental aspects of fisheries and aquaculture. Policy gaps that may require particular attention are identified through a SWOT analysis (see **section 7.3**). The study discusses a range of options for adapting the current EU policy framework for fisheries and aquaculture to strengthen the competitiveness of the sector and provides a set of policy recommendations.

2. INDICATORS ON COMPETITIVENESS

KEY FINDINGS

- The **competitiveness indicators** have been grouped into the following **six categories**: (1) efficiency and effectiveness, (2) product, (3) innovation, (4) nature & culture, (5) socio-economic and (6) policy & regulation.
- The **selection of indicators** was made on the basis of data availability and with the aim of covering all categories of competitiveness.
- The **definition and calculation** of the selected indicators are described in detail.
- There are **data limitations** that do not allow the calculation of all indicators for all case studies or all sectors, as may be the case for aquaculture, where the data series are not as long and detailed as data for fisheries.

2.1. Conceptual aspects of competitiveness

Competitiveness is a frequently used term in the economic literature, for which there is neither a single definition nor a single method of analysis. The origin of the term seems to be rooted in the economics of trade and its role in national and international welfare (Voinescu and Moisoiu, 2015). Sala-i-Martin et al. (2008) define competitiveness as the set of institutions, policies and factors that determine a country's level of productivity, which in turn determines its level of welfare. The EU uses a similar definition in its official glossary⁵, adding that competitiveness has long been one of the objectives of EU policy. This EU definition appears to be too general for the purposes of the current study, which is concerned with the inability of the sector to meet the demand for FAPs on its own market. In their review of competitiveness in the agricultural sector, Jombur and Babu (2016) describe competitiveness as *'the degree to which a country can produce goods and services under open market conditions that meet the test of foreign competition, while maintaining and increasing domestic real income'*. This definition seems to better reflect the objectives of the present study and will be used throughout the text to identify the ability of entities, including the EU, Member States, regions, or industry segments, to compete with other foreign entities of a similar nature. The study will pay attention to comparative advantage (i.e. the prices offered by competitors and the factors leading to such prices, e.g. production factors), soft environmental constraints, soft quality, and food safety requirements, among other issues.

2.2. Definitions of competitiveness indicators

Competitiveness can be analysed along **macro** (i.e. national), **meso** (i.e. firm/organisation) and **micro** (i.e. individual; manager, worker, etc.) dimensions (Nowak and Kaztelan, 2022; Winzar et al., 2022). The **macro dimension** can be influenced by internal (i.e. EU level) and external (i.e. non-EU level) factors, whereas the **meso dimension** can be influenced by company related factors (internal) and environmental factors (external) (Biukšāne, 2016). **Company related** factors are those related to efficiency and effectiveness, product and innovation. **Environmental** factors are those that are not related to the company but to the environment (natural and cultural, socio-economic, political and legislative). In the case of aquaculture and fisheries, the impact on the natural environment is an

⁵ See: <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Competitiveness>

important issue (Nowak and Kaztelan, 2022), which is assessed within the natural and cultural environmental factors.

Competitiveness indicators can therefore be categorised in different ways. For example, the categorisation used by Bostock et al. (2009) in aquaculture is as follows: Legal and administrative issues, environmental aspects, availability of production sites, food safety and other aspects related to consumption, animal health and welfare, competition from non-EU countries and market issues, availability of fish oil and fishmeal, technological issues, production costs and others. **Figure 1** summarises the dimensions, levels and categorisation of the competitiveness indicators, where the arrows indicate that the macro levels, both external and internal, are environmental factors for the meso dimension. Thus, in this section we **focus** on the **macro and meso dimensions**. The micro dimension is outside the scope of this study.

Figure 1: Competitiveness dimensions, levels and categorisation of indicators



Source: Own elaboration

More than 50 indicators have been identified from the literature review (Bostock et al., 2009; Taskov 2020; AER 2022; Turi et al., 2014; SUCCESS project, Van Leeuwen et al., 2017) to assess the competitiveness of the EU fisheries and aquaculture sector. The indicators can be presented along the available time frame and, whenever possible, they should be presented with their limit or reference value in order to show both the temporal trend and the status of the indicator. The difficulty here is the reference value for some indicators, since data may be available at EU-level, but not at the level of countries outside the EU, in particular those competing with EU FAPs producers on the EU market. The

selection of indicators was made on the basis of data availability and with the aim of covering all categories of competitiveness.

Table 1 shows several indicators related to both fisheries and aquaculture regarding their **efficiency and effectiveness**. *Gross profit margin* (GPM) is the percentage of gross profit retained from sales. *Unit production cost* (UPC) is the cost per kilogram produced. *Revenue to break-even revenue rate* (CR/BER) is an indicator of the short-term profitability of the company: if the ratio is greater than one, sufficient cash flow is generated to cover fixed costs (economically viable in the short term). If the ratio is less than one, insufficient cash flow is generated to cover fixed costs (indicating that the segment is not economically viable in the short to medium term). *Capital productivity*, i.e. Return on investment (ROI) measures profits in relation to capital invested. *Labour productivity* (GVA/FTE) measures economic growth, competitiveness and living standards within a sector, while *unit labour cost* (ULC) measures costs per employee. *Labour costs* (LC) per unit of output indicate how productive the labour force in the enterprise is.

In the case of **fisheries**, *catch per unit of effort* (CPUE) measures the productivity of the fleet. Costs are also an important factor in measuring productivity. Fuel costs are one of the most important costs in several fisheries, so *fuel use intensity* (FUI), *fuel use efficiency* (FUE) and *energy efficiency factor* (EEF) assess how efficient the fleet is in terms of energy use.

Table 1: Efficiency and effectiveness related indicators

Indicator	Acronym	Description	Units	Data source	Sector
Gross profit margin	GPM	= gross profit / revenue	%	AER	F&A
Unit production costs	UPC	= total variable and fixed costs / kg of fish produced	EUR/kg	AER	F&A
Revenue to break-even revenue ratio	CR / BER	= income from landings + other income / BER	%	AER	F&A
Capital productivity (Return on investment)	ROI	= (net profit + opportunity cost of capital) / capital asset value ⁶	%	AER	F&A
Labour productivity	GVA / FTE	= gross value added / full time equivalent	%	AER	F&A
Unit labour costs	ULC	= wages and salaries / FTE	EUR	AER	F&A
Labour costs relative to fish produced	LC	= labour costs / kg fish produced	EUR/kg	AER	F&A
Catch per unit of effort	CPUE	= total catches / total effort	kg/days at sea	AER	F
Fuel use intensity	FUI	= fuel consumed / quantity of fish landed	l/t	AER	F
Fuel use efficiency	FUE	= fuel costs / income from landings	%	AER	F
Energy efficiency factor	EEF	= GVA / energy costs	EUR	AER	F
Mortality rate	MR	= kg dead fish / kg fish produced	%	AER, literature	A
Economic food conversion ratio	EFCR	= kg total feed fed / kg total live fish harvested	%	AER, EUMOFA, FAO	A

Source: Own elaboration

⁶ Capital asset value = vessel depreciated replacement value + estimated value of fishing rights

In the case of **aquaculture**, the first is to achieve a good *mortality rate* (MR) in order to be able to sell all the fish produced. In terms of feed costs, the *economic food conversion ratio* (EFCR) measures how efficient the fattening of aquaculture products is.

Product related indicators on *price, quality* and revealed comparative advantage are shown in **Table 2**. The quality of the product is in several cases related to qualitative characteristics that are difficult to assess, so *certifications* and labels can be used as indicators of product quality.

Table 2: Product related indicators

Indicator	Acronym	Description	Units	Data source	Sector
First sale price	PRICE	= EUR/kg	EUR / kg	AER, EUMOFA	F&A
Revealed comparative advantage	RCA	Qualitative description	List of advantages	Questionnaires	F&A
Number of certified fisheries	QUALITY1	Number	Number	MSC, literature	F&A
Quality of production	QUALITY2	= certified production / total production	%	MSC, literature	F&A
Marketing importance	MARK	= Marketing costs / total revenues	%	AER, grey literature	F&A

Source: Own elaboration

The two indicators relating to **innovation** are shown in **Table 3**: the *research and development ratio* (R&D), as expenditure in relation to total turnover, and the *use of innovation grants* (INN).

Table 3: Innovation related indicators

Indicator	Acronym	Description	Units	Data source	Sector
Research and development ratio	R&D	R&D ratio = expenditure on R&D / total revenue	%	AER, EU reports, others	F&A
Use of EMFAF innovation	INN	EUR of EMFAF / total revenue	%	EU, companies	F&A

Source: Own elaboration

Table 4 shows indicators related to **nature and culture**: the status of the different commercial stocks determines the profitability of companies; the better the *stock status*, the higher the TAC set. In the case of aquaculture, the status of stocks used for the production of fishmeal and fish oil is also a key issue to be assessed. In the case of fisheries, the *ratio of bycatch* of endangered, threatened and protected (ETP) species may also limit fishing activity, particularly as a result of the regulations and management measures in place to minimise the bycatch of these species. Closing fishing grounds for conservation purposes could potentially reduce the local supply of protein in the short term, encouraging the fishing fleet to move to other areas and increasing the cost of fishing. However, in the long term, *marine protected areas* (MPAs) could have a positive impact on the state of stocks and thus ensure the sustainability of fishing activities (Mesnildrey et al. 2013). The employment required to produce one kilogram of product (FTE/kg) indicates *labour productivity*. The ability of producers to associate and be *represented before* the administration, or to participate in technical committees working with the administration and other *stakeholders*, can also have an impact on competitiveness. This participation

can take place through the activities of producer organisations (POs), advisory councils (ACs) or professional groups. The specific *conditions of the sector*, such as the barriers or incentives to growth, may also have an impact on access to natural and financial resources. Finally, the *traceability* system can benefit those products that come from healthy or local fishing grounds. The lack of detailed information, or traceability, prevents consumers from identifying the characteristics they value, such as the region of origin or the technology used, etc., and leads them to base their decisions on price alone. They may therefore opt for a cheaper product imported from non-EU country producers.

Table 4: Nature and culture related indicators

Indicator	Acronym	Description	Units	Data source	Sector
Stock status	SS	If the stock status is good, the catchability and CPUE will improve. Proportion of stocks within biologically sustainable levels	%	ICES, ICCAT, IOTC	F&A
Bycatch ratio	BRT	= bycatch / total catch	%	Grey literature	F
Marine protected area surface	MPA	= km ² of MPA / total area	%	EEA	F&A
Labour productivity	FTE/kg	= Full time equivalent / kg produced	Number	AER	F&A
Average education level	EQL	Average education level. Categorise the levels of education and compute the average	Number	AER, survey, other	F&A
Stakeholders' representation	SR	= representation of fishing fleets / aquaculture producers in the fisheries governance process	Qualitative description	European Commission, Advisory Councils, POs	F&A
Sector conditions	SecCond	Barriers and incentives to growth	Qualitative description	STECF, ICES	F&A
Traceability	TRC	= existence of traceability system; international trade norms	Yes/No	Existence of labels (MSC, etc.)	F&A

Source: Own elaboration

Table 5 provides **socio-economic** related indicators. The *self-sufficiency rate* or *internationalisation of domestic demand* show the EU's capacity to satisfy, or not, domestic demand (*apparent consumption*). In turn, the relative weight of imports from the main non-EU suppliers in total extra-EU imports gives an indication of the market share and help to identify the dependence of countries for the provision of certain goods. Market segmentation provides an overview of the likelihood of price wars with other firms (Bostock et al., 2009). In addition, the *availability of credit and its associated costs* can either slow down or encourage the implementation of measures to improve the functioning of firms.

Table 5: Socio-economic related indicators

Indicator	Acronym	Description	Units	Data source	Sector
Apparent consumption	AC	= [(total catches – industrial catches) + aquaculture + imports] – exports	%	EUMOFA, Eurostat, regional statistics	F&A
Self-sufficiency rate	SSR	= EU production / EU apparent consumption	%	EUMOFA, Eurostat, regional statistics	F&A
Share of Imports from main extra EU suppliers	SHI	= Imports from main extra EU supplier / total extra EU imports	%	EUMOFA, Acces2Markets	F&A
Internationalisation of demand	IntD	= imports / national consumption	%	EUMOFA, Eurostat, regional statistics, FAO	F&A
Market segmentation	MarkSeg	= % revenue accounted for by top four national companies - as total EU revenue	%	Company accounts, FAO records	F&A
Credit availability and costs	CredAva	interest rate	%	OECD; national data	F&A

Source: Own elaboration

Table 6 provides an overview on **policy and regulation** related indicators. Some authors (Roca-Flrido & Padilla-Rosa, 2023; Sumalia et al., 2021; Arthur et al., 2019) claim that taxes and subsidies can be detrimental to the fisheries and aquaculture industry. Analysis of trends in fuel taxes or operating subsidies can be helpful to see if the industry is competitive and how competitiveness may be affected by this factor. The fuel tax exemption ratio describes the percentage of fuel oil that is subsidised; in turn, the operating subsidy ratio describes the relative amount of operating subsidies to total operating costs, the same in the case of investment in the investment subsidy indicator. Management levels with specific environmental responsibilities describes how these environmental responsibilities can affect the profitability of the sector. Finally, the share of fisheries covered by management and/or research plans provides information on how the implementation of the plans can affect the competitiveness of the industry.

Table 6: Policy and regulation related indicators

Indicator	Acronym	Description	Units	Data source	Sector
Fuel Tax Exemption Ratio	FUTaxExR	= fuel tax exempted/ fuel costs	%	AER, companies	F&A
Operating Subsidies ratio	OpSub	= operating subsidies / operating costs	%	AER	F&A
Subsidies on investment	InvSub	= subsidies on investment / total investment	%	AER	F&A
Management levels with specific environment responsibilities	MER	Estimate or compute the number of levels	Number	Survey, grey literature	F&A
Share of fisheries covered by management and/or research plans	RP	% of fisheries covered by management and/or research plans	%	ICES, IOTC, ICCAT	F

Source: Own elaboration

2.3. Discussion of indicators on competitiveness

As discussed in **section 2.2**, several indicators can be used to assess the different dimensions of competitiveness. However, the main constraint is the collection of all the necessary data for their calculation. Of all the indicators identified, the **self-sufficiency rate** has been discussed in more detail in this study. This is a key indicator for assessing food security, although it neglects the efficiency benefits of international trade (Kauffman et al., 2002). Data for the estimation of self-sufficiency, i.e. production and apparent consumption, are provided for the period 2008 to 2021 by EUMOFA. An interesting feature of the self-sufficiency rate is its versatility, as it can be calculated at the regional, national and EU levels, among others. The EUMOFA database only provides data on production and apparent consumption in the EU at the level of FAP commodities. Therefore, the present study provides an estimate of the self-sufficiency rate at the level of the ten commodities provided by EUMOFA (**Figure 5**). Some of the efficiency indicators identified in **section 2.2** are presented in **section 3.3**, and estimated where data are available, in order to provide an overview of the evolution of competitiveness in terms of efficiency in the EU fisheries and aquaculture. The **share of imports from the main non-EU suppliers** of raw materials has been used extensively in the chapter on international trade (**section 4**) as an indicator of the relative importance of these countries in supplying the with key FAPs. This can help to identify potential problems arising from high dependence on some products that may be harvested/produced in an unsustainable manner. Some of the indicators identified in **section 2.2** are used in the case studies and illustrate the level of competitiveness, such as loss of **certified fisheries** (CS 2), share of **imports from the main extra-EU suppliers** (CS 1, CS 3, and CS 4), changes in **apparent consumption** (CS 1), and **fuel tax exemptions** and other public support to fisheries (CS 4).

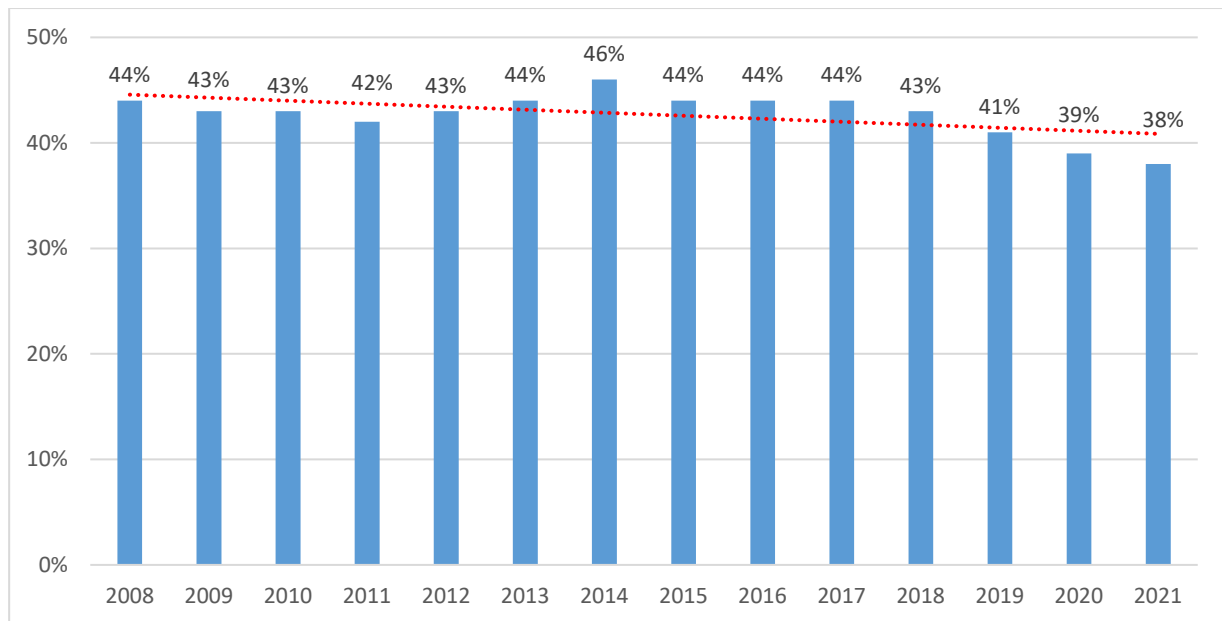
3. EVOLUTION OF COMPETITIVENESS

KEY FINDINGS

- The **self-sufficiency rate shows a negative trend** since 2014. Imports and exports in volume show an increasing trend over the period, but were affected by the COVID-19 lockdown, which caused distortions in trade flows.
- **Production shows a continuous negative trend**, apparently due to fishing restrictions and, especially in the last two years, to the drop in demand caused by the pandemic, which affected fishing and aquaculture activities.
- The EU is highly **self-sufficient in small pelagics and flatfish**. However, the EU is highly **dependent on imports of demersal fish, salmonids, and tuna**. Demersal species such as European hake and cod are subject to strict management. In turn, Brexit may have contributed to a further decline in the self-sufficiency rate for salmon.
- **Fleet productivity** in terms of catches per unit of effort (CPUEs) has increased over the last 10 years, while the **fleet profitability** in terms of gross profit margin (GPM) has declined since 2017 due to cost increases combined with the stability in fish prices. **Labour productivity** in terms of gross value added per full time equivalent (GVA/FTE) increased from 2008 to 2017, after which it showed a downward trend. The energy efficiency or **fuel use intensity** (FUI) of the fleet, measured in litres of fuel per kg of fish landed remained **fairly stable** over the time series, but energy prices increased sharply from 2020 onwards.
- **Aquaculture production** has decreased by 8% since 2018. Fishmeal prices increased by 67% and fish oil prices by 181% between 2009 and 2023, affecting the **production costs** for several species.
- Product and differentiation: There is growing awareness of the **social and environmental qualities of FAPs**, but consumers may find it difficult to identify sustainable FAPs.

3.1. Self-sufficiency rate

The self-sufficiency rate is the main indicator of competitiveness used in this study. **Figure 2** shows the evolution of the self-sufficiency rate since 2008. At present, the EU production covers only 38% of the internal demand. The remainder is therefore supplied by external operators. The negative trend shown in the graph reflects the loss of competitiveness of the fisheries and aquaculture sector vis-à-vis external operators. On the one hand, the sector is losing its capacity to meet the needs of the EU market and, on the other, FAPs from other regions of the world may not be produced and harvested according to the strict requirements imposed on EU operators. There is therefore no level playing field between EU producers and many of their competitors. This means that FAPs consumed in the EU that come from abroad may not be harvested in a sustainable manner (see **section 4**) for the identification of selected IUU cases, and their quality, safety and social conditions may not be in line with EU policy in this area. This is unfair competition for EU producers.

Figure 2: EU's self-sufficiency rate for fisheries and aquaculture products (FAPs) in %, 2008-2021

Source: Own elaboration based on EUMOFA (2022)

It is clear from **Figure 2** that the EU is only marginally self-sufficient in FAPs and is largely dependent on imports from various fishing nations. Europe has traditionally been a large consumer of fish, which is an important part of the European diet. EU consumers perceive FAPs as a healthy and tasty food⁷. The gap between the EU production and the needs of FAP consumers have to be met by imported fish. It appears that one of the main reasons for the low level of self-sufficiency and the high dependence on external sources is the limited access of the EU industry to local resources. Indeed, overexploitation of resources has led to strong conservation and management measures (CMMs), such as quota restrictions in the case of fisheries. Moreover, environmental concerns have led to limited licensing in the regulation of aquaculture activities.

These measures can lead to increased reliance on fish imports to meet domestic demand. In turn, the cost of maintaining domestic fishing fleets in the context of rising fuel prices, environmental, safety and hygiene requirements of FAPs, among others, may also increase production costs, leading to higher prices. Importing fish may be more economically viable than investing in maintaining or modernising domestic fishing or fish farming. Globalisation is also a fact that is changing the habits of EU consumers. Global channels offer a wide variety of products from different regions of the world, which may be much more expensive to produce in the EU.

The EU is a leader in global fisheries governance, seeking to achieve the **Sustainable Development Goals** (SDGs). The EU Biodiversity Strategy⁸ for 2030 sets the target that by 2030 at least 30% of marine area should be legally protected, with 10% of the area under strict protection. This may limit the availability of some traditional fishing grounds, leading to shortfalls in fish supply and fleet profitability that may be partially compensated by growing imports (see also the SWOT analysis – **section 7.3**).

⁷ Special Eurobarometer 475 – EU consumer habits regarding fishery and aquaculture products: <https://europa.eu/eurobarometer/surveys/detail/2206>

⁸ See: https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030_en

3.2. Evolution of the EU self-sufficiency rate

The analysis of the evolution of the self-sufficiency rate requires a closer look at its components: the production of FAPs and apparent consumption, which is estimated on the basis of production for human consumption, imports and exports of FAPs.⁹

At first sight, the self-sufficiency rate indicates a low capacity of EU producers to satisfy the domestic demand for FAPs. There is therefore a growing dependence on external suppliers. As can be seen in **Figure 2**, the self-sufficiency rate was rather stable between 2008 and 2018. On average, it was around 43%. However, in the last two years of the series, the ratio falls to 39% and 38% respectively. In 2020, there is a sudden drop of 4% compared to the historical average. This may reflect further reduced FAPs production in the EU.

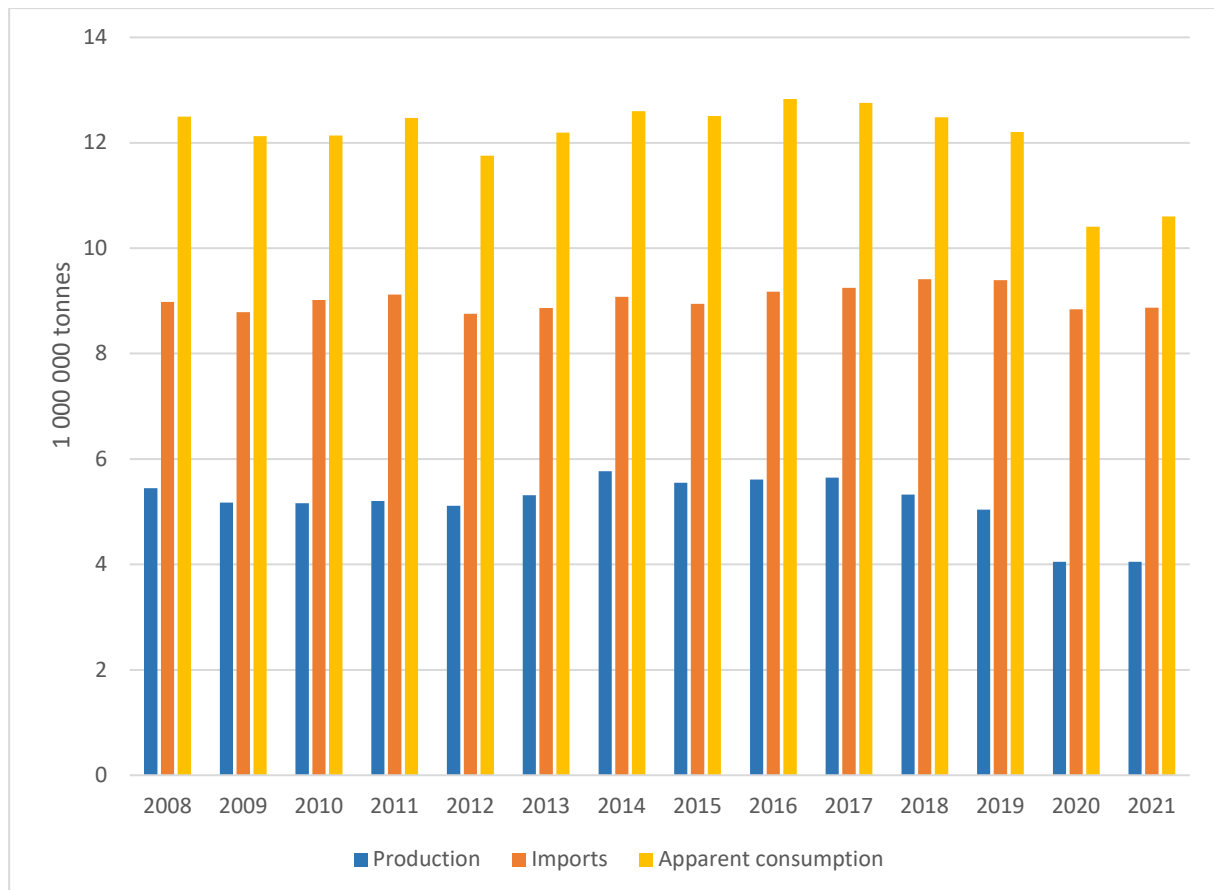
Overall, imports¹⁰ remain stable over the study period at around 9 million tonnes, although they fall to 8 838 million tonnes in 2020 (**Figure 3**). In 2021, FAP imports start to grow again, albeit slightly. This seems to be caused by an initial shock to demand due to the temporary closure of the HORECA and institutional channels due to the COVID-19 pandemic.

In terms of production, the EU sector shows a continuous downward trend throughout the study period. Several factors may explain this downward trend. In the last two years of the series, two factors have a strong impact on fishing effort and thus on landings. On the one hand, the lockdown of the COVID-19 pandemic (Carpenter et al., 2023) and, on the other hand, peaks in fuel prices from 2021 due to the war in Ukraine (STECF, 2022). The sharpest drop in production is observed in the period 2019-2020 (around 19%). This can be largely explained by the COVID-19 pandemic and the closure of various distribution channels, and initial restrictions on fishing activities. In 2021, production does not increase compared to the previous year, which may also reflect the impact of Brexit. The three last years of the series are the lowest of the entire study period in terms of production (**Figure 3**). Note that in 2021, production is around 4.05 million tonnes, which is around 22% below the average of the study data series. Imports in the last two years of the series are twice the level of production.

⁹ SSF = production of FAPs in the EU/ apparent consumption in the EU. Where production is equal to the production of the fishing and aquaculture industry minus exports, whilst apparent consumption is defined as: AC = (production for human consumption + imports) – exports.

¹⁰ Supply balance data (production, imports and exports) for the estimation of apparent consumption and self-sufficiency rates are provided by EUMOFA in live-weight equivalent volume. The data used for the extra-EU imports analysis in section 4 and are expressed in net volume.

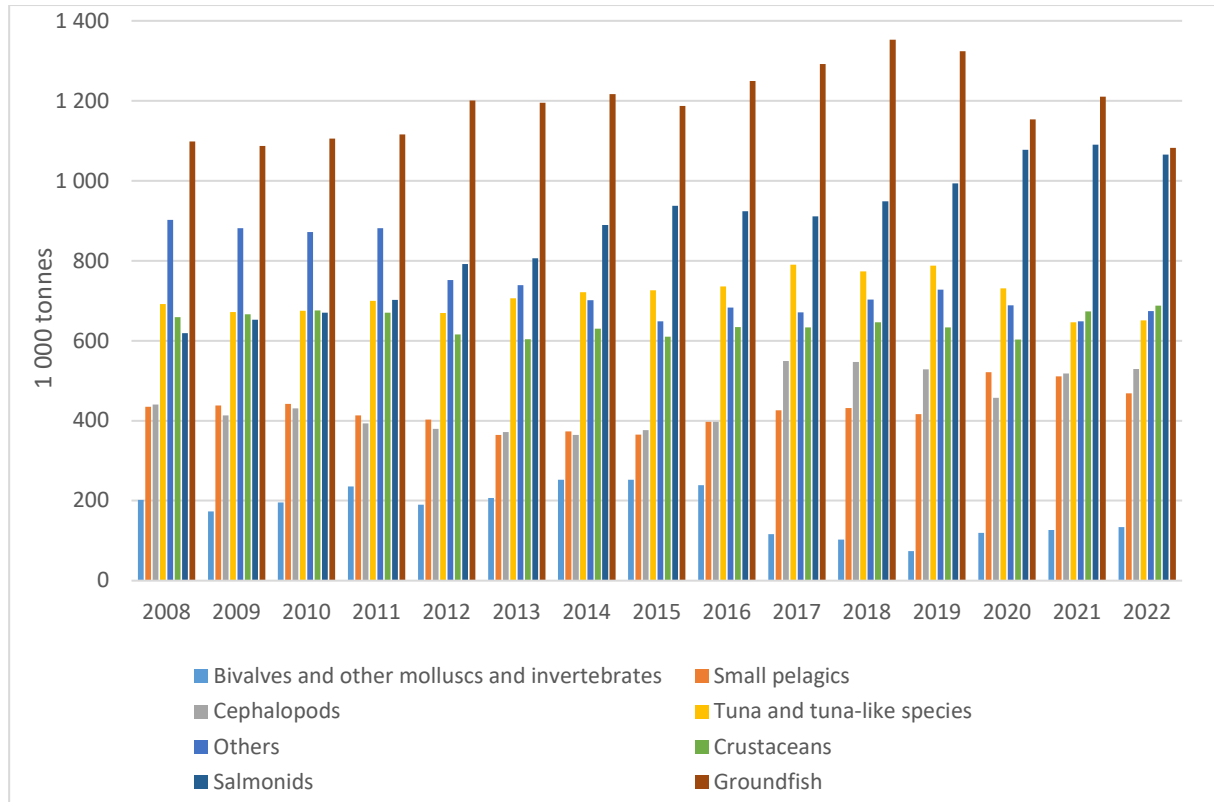
Figure 3: Evolution of fisheries and aquaculture sector in terms of production, imports and apparent consumption in live-weight equivalent (million tonnes), 2008-2021



Source: Own elaboration based on EUMOFA publication.

The evolution of imports by commodity group is shown in **Figure 4** below. Note that the main imported species are those for which domestic production is limited; in the case of groundfish¹¹ species, this is largely due to restrictions on the exploitation of species such as cod. In the case of salmon, domestic production is limited, and the market relies heavily on traditional producers of salmonids such as Norway. Before Brexit, the UK was the main producer of salmon in the EU. For tuna, the EU is dependent on tuna caught in non-EU waters by fleets of different nationalities. More detailed information on the main non-EU competitors in the EU market is provided in **section 4** on extra-EU imports.

¹¹ Groundfish: A common name for several species of demersal finfish, particularly commercial species such as cod. See also: https://knowledge4policy.ec.europa.eu/glossary-item/groundfish_en

Figure 4: Evolution of import volumes by commodity groups, in live-weight equivalent in 1 000 tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

Figure 5 below shows the degree of self-sufficiency for the period 2008-2021 by commodity and by type of production, i.e. fisheries and/or aquaculture. A close look at the data shows that the EU is highly self-sufficient in small pelagic fish and flatfish harvested by its domestic fleets. However, in the last four years of the series, its self-sufficiency rate has slightly decreased. On the other hand, the EU market is highly dependent on foreign producers of demersal fish, salmonids, and tuna. As can be seen from the historical data series, this is a pattern that has been observed over the years and is a structural feature of the EU market. The level of self-sufficiency is low for groundfish species, where the main species, such as European hake and cod, have experienced changes in abundance due to situations of overfishing leading to strict conservation and management measures (CMMs), see **section 5.1.5** for more details. The majority of the groundfish consumed in the EU is supplied by non-EU countries (see **section 4.2**). Salmonids are also a group of species for which the EU is clearly dependent on foreign producers. Brexit may have contributed to the decrease in self-sufficiency for salmonids, as the UK is currently the second supplier of these species to the EU market, after Norway.

Figure 5: Evolution of the self-sufficiency ratio by commodity and type of production, 2008-2021



Source: Own elaboration based on EUMOFA

3.3. Efficiency indicators

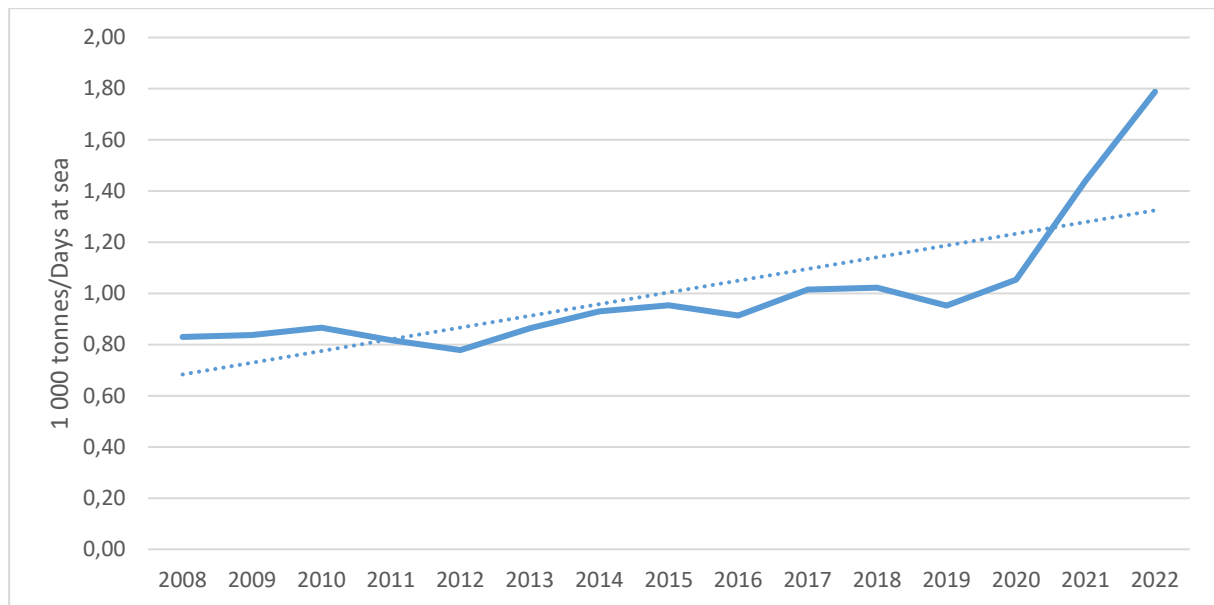
This section presents some indicators to give a general overview of the European fisheries and aquaculture sector. Efficiency indicators are analysed first for the fisheries sector and then for the aquaculture sector, as each activity has its own specificities and therefore requires specific indicators.

3.3.1. Fisheries – EU overview

The main source of data for this section is STECF 22-06 - AER 2022. This is the basis for the analysis of the study period. However, this dataset is incomplete as some Member States did not provide the full data sets. Therefore, it is not possible to make a consistent trend analysis of the economic performance of the EU fleet over the analysis period. However, in this section we analyse relative values or averages which, although inconsistent, can give us an idea of the efficiency of the EU fleet.

The first indicator analysed for fisheries is the **catch per unit of effort** (CPUE) of the EU fleet (see **Table 1**), where the measure of effort is days at sea. The trend in CPUE has been increasing over the last 10 years, with a more pronounced increase in 2021 and 2022 (**Figure 6**). The increase in CPUE could be due to improvements in fishing operations or to the status of the target species. On average, the status of stocks has improved: in the Northeast Atlantic, stocks are now within the range consistent with the CFP targets for fishing mortality. Although good progress has been made towards the 2022 targets set under the CFP, further progress is needed, particularly in the Mediterranean and Black Seas.¹²

Figure 6: Catches per unit of effort (CPUEs) in 1 000 tonnes / days at sea, 2008-2022

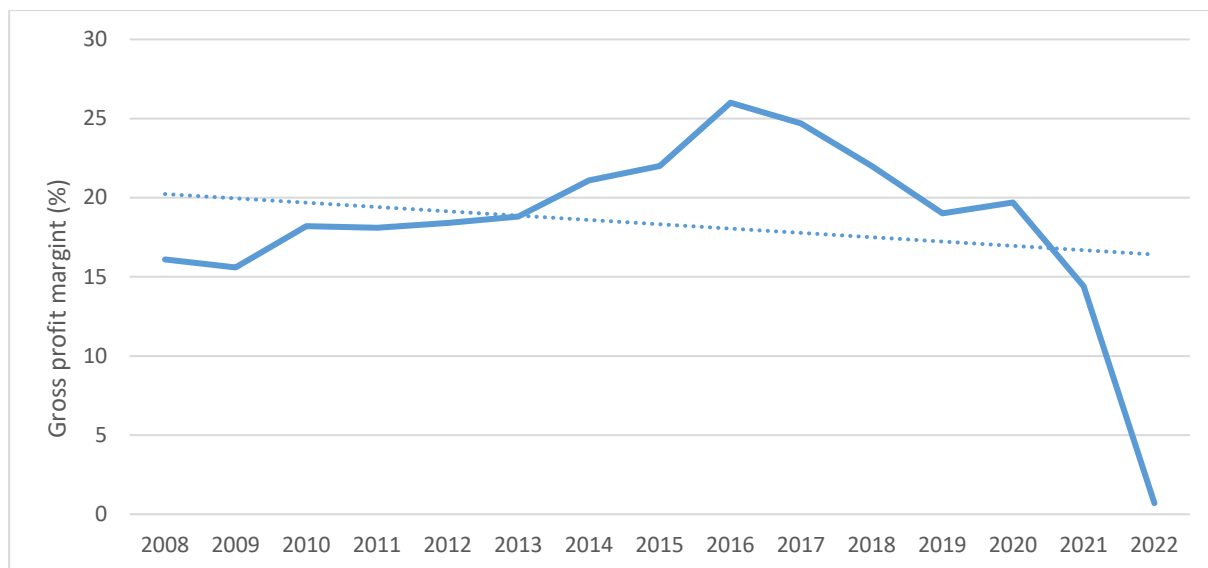


Source: STECF 22-06 - AER 2022

Gross profit margin (GPM), a profitability indicator, shows an upward trend from 2008 to 2016, after which the indicator shows a downward trend from 25% in 2017 to 0.7% in 2022. (**Figure 7**). The loss of profitability is not due to the catches per unit of effort (CPUE), but to the increase in costs combined with the stability of first sale fish prices.

¹² https://oceans-and-fisheries.ec.europa.eu/system/files/2023-06/COM-2023-303_en.PDF

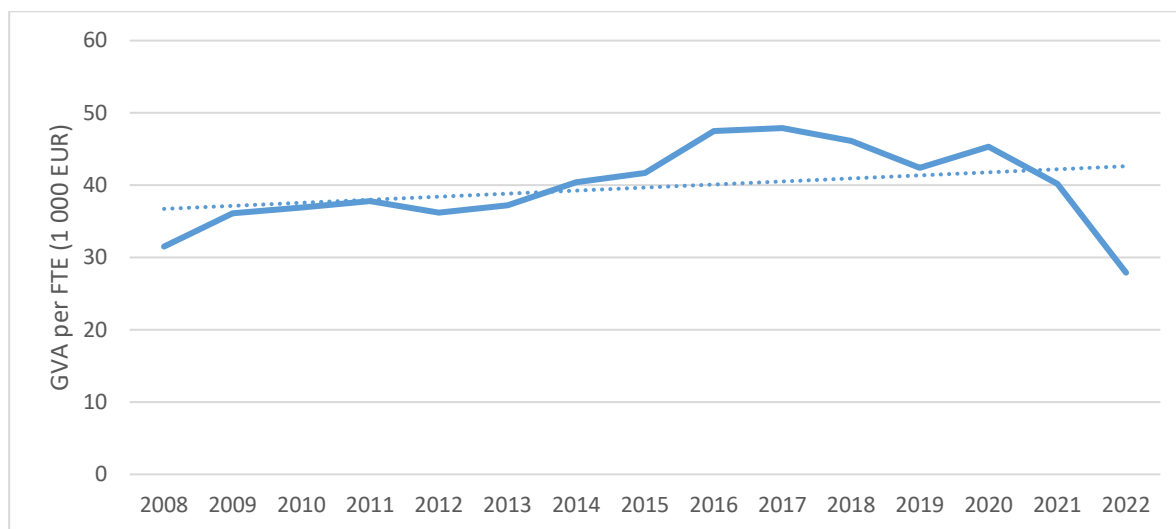
Figure 7: Gross profit margin (GPM) in %, 2008-2022



Source: STECF 22-06 - AER 2022

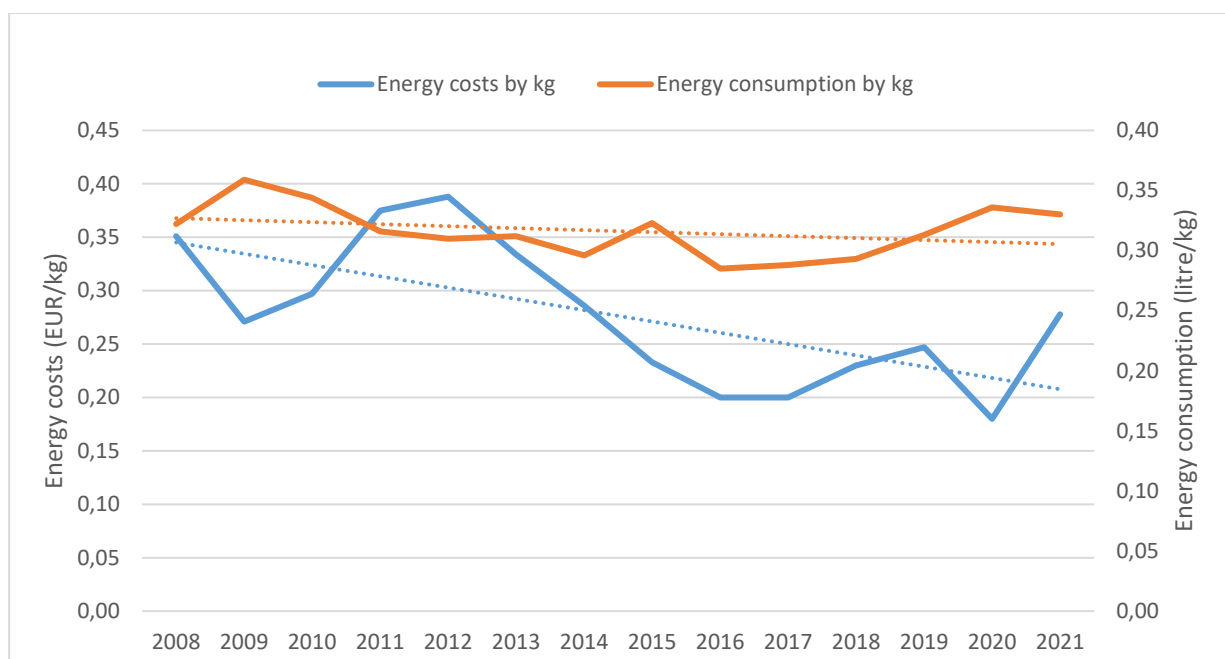
In terms of costs, personnel costs increase by more than 40% between 2008 and 2022, but this increase is due to crew costs and not to the number of FTEs, as the number of FTEs decreases by 26% over the same period (**Figure 8**). This means that fewer people are employed, but each FTE is more expensive than before. The labour productivity (in GVA/FTE, see **Table 1**) increased from 2008 to 2017, after which it showed a negative trend. The changes in the trend of the last three years of the analysed time series could be due to the COVID-19 crisis together with the energy crisis. Brexit also had an impact in some fisheries.

Figure 8: Labour productivity (GVA/FTE) in 1 000 EUR, 2008-2022



Source: STECF 22-06 - AER 2022

Energy costs also affected the profitability of the sector. Energy consumption in litre per kg remained more or less stable over the whole time series, but the price of energy increased sharply from 2020 onwards (see **Figure 9**), affecting the profitability of the fleets. The fuel price increased globally in 2021, but in 2022 the increase was more pronounced due to the Russian invasion of Ukraine (Guillen et al., 2023).

Figure 9: Energy costs in EUR/kg and energy consumption in litre/kg, 2008-2021

Source: STECF 22-06 - AER 2022

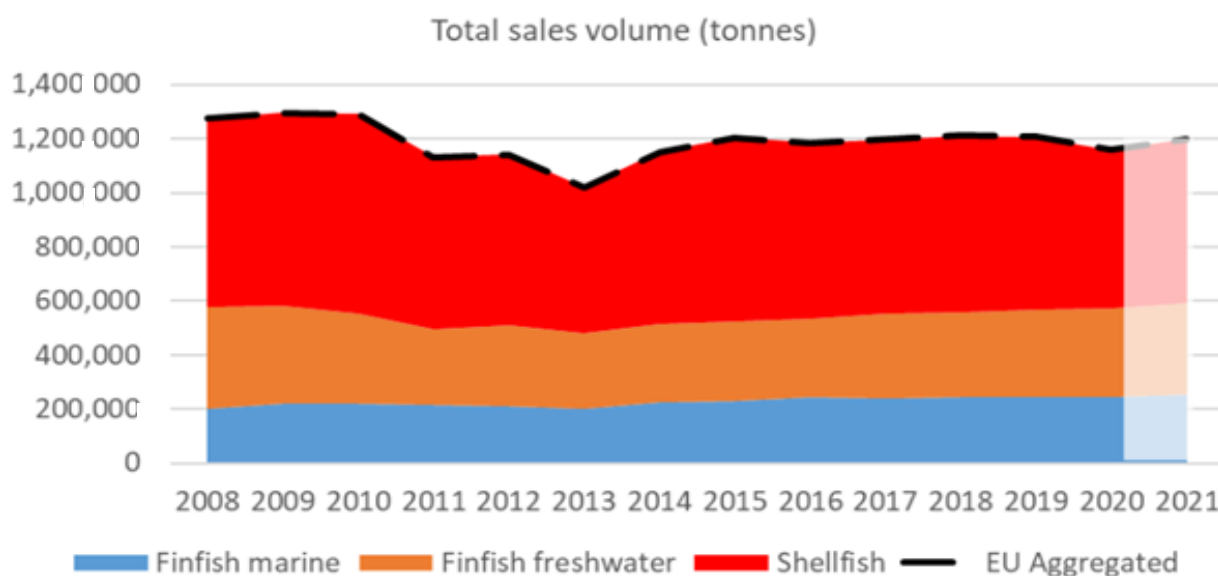
The average price of landings remained between 1.4 EUR/kg and 1.7 EUR/kg, with an increasing trend from 2020 to 2022, in line with the trend in fuel prices. However, although prices increased slightly, this increase was not sufficient to maintain the gross profit margin (GPM) at the previous level. Domestic production prices are influenced by demand. EU apparent consumption decreased from 2017 onwards, as did per capita consumption (data from EUMOFA).

3.3.2. Aquaculture – EU overview

Aquaculture production in the EU has increased by 11% since 1990 (STECF, 2023)¹³. However, it has stagnated in the last decade of the historical series (**Figure 10**). This figure shows that total sales are around 1.2 million tonnes and the largest variation in production since 2008 has been negative, corresponding to the sharp drop in production between 2012 and 2013 due to environmental events affecting mussels production (STECF, 2021). Production has further decreased by 8% since 2018 (STECF, 2023).

¹³ It should be noted that figures 10 to 12 are taken directly from the EWG-22-17 report (European Commission, 2023). This is because the data base for sales comes from different sources depending on the year (from 2008 to 2016 from DCF and from 2015 to 2020 from EUMAP). Although the main data source for total sales is the submission of data by Member States through DCF or EUMAP, there were data gaps, and the latest reporting year was adjusted based on the percentage change in FAO production data. Further information can be found in Annex 1 of EWG-22-17 (STECF, 2023).

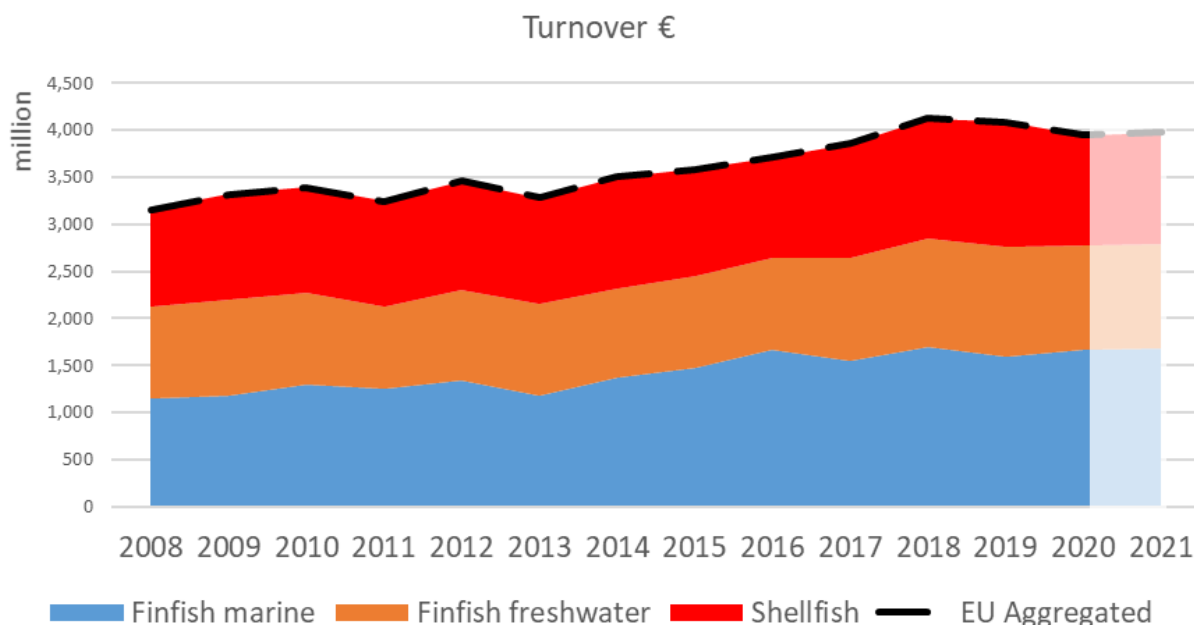
Figure 10: Total sales volume of fishery and aquaculture products in tonnes, 2008-2021



Source: EU MS data submission and STECF-EWG estimations, 2022

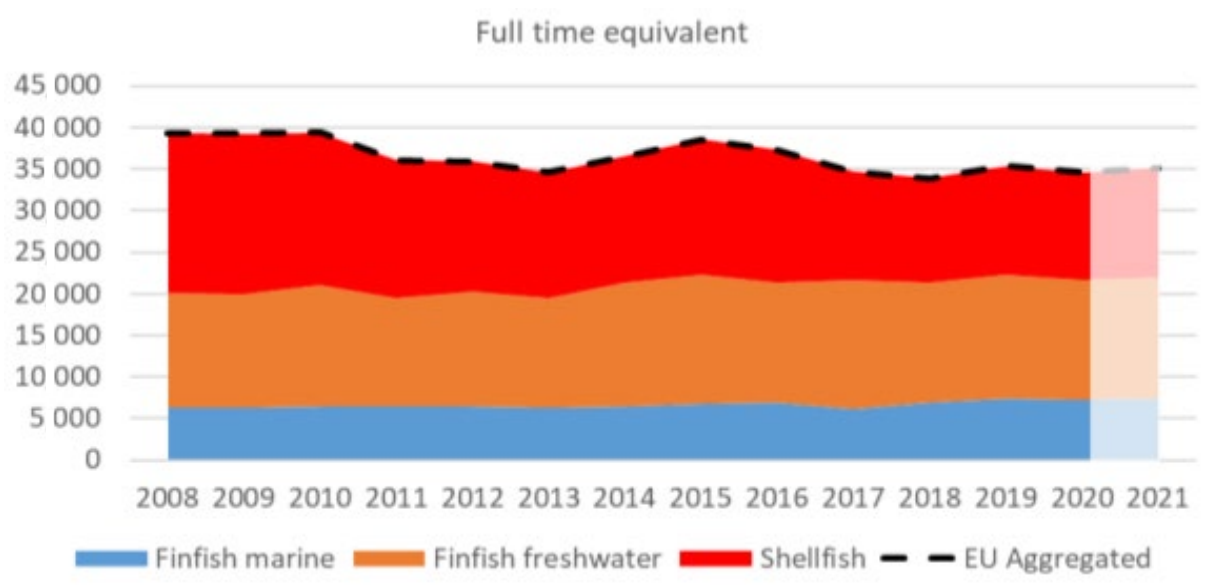
The **turnover** for fishery and aquaculture products showed an increasing trend between 2008 and 2018, especially due to the marine finfish production. Afterwards the turnover remained relatively stable (**Figure 11**).

Figure 11: Turnover for fishery and aquaculture products in million EUR, 2008-2021



Source: EU MS data submission and STECF-EWG estimations, 2022

The **number of employed persons** decreased from 2015 onwards (**Figure 12**), the full time equivalent (FTE) also presents a slightly decreasing trend. The capital profitability or return on investment (ROI) increased from 7.4% in 2019 to 9% in 2020.

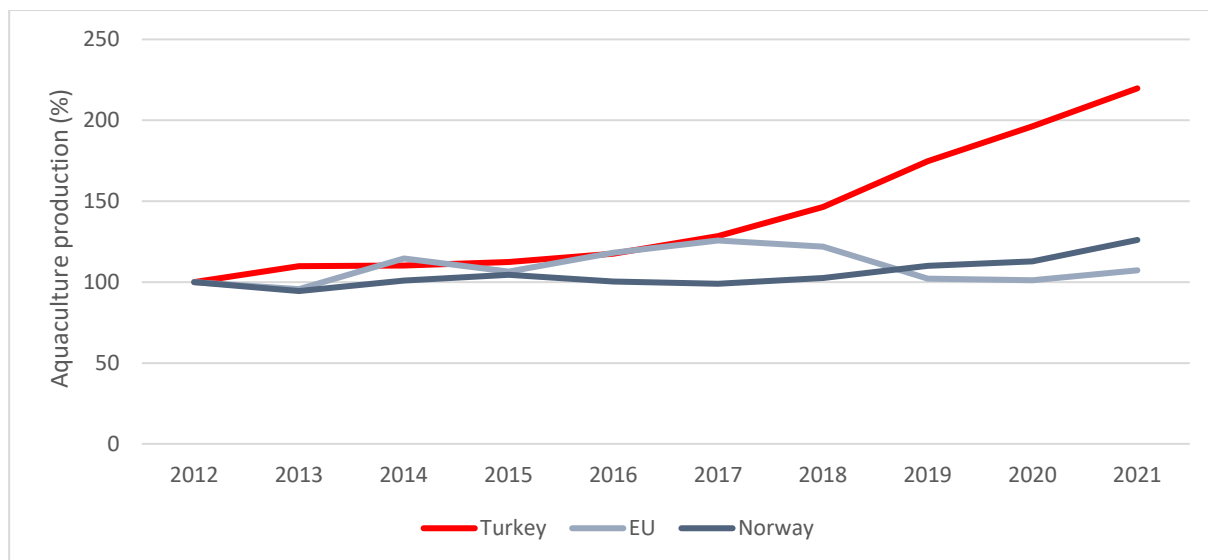
Figure 12: Employed persons in fishery and aquaculture in full time equivalent (FTE), 2008-2021

Source: EU MS data submission and STECF-EWG estimations, 2022

Fishmeal and fish oil is also an important input for several aquaculture species, especially finfish. The EU price of fishmeal and fish oil are highly correlated to the global prices, in particular the price is linked to the supply of Peru and Chile and demand from China. The price of fishmeal increased 67% from 2009 to 2023 and the price of fish oil increased 181% (EUMOFA, 2021). As regards exports, the fishmeal volume decreased 31% and the value 11% from 2012 to 2022; imports also decreased by 42% in volume and 25% in value in the same period. The EU imports of fish oil decreased 29% in volume and 15% in value from 2012 to 2022, and the export decreased 2% in volume but increased 42% in value. According to EUMOFA, the production of fishmeal and fish oil is projected to grow moderately the coming years due to better utilisation of by-products and development of new raw materials (i.e. microalgae, insect meals).

EU aquaculture production is stagnating despite substantial EU funding (ECA, 2023). The stagnation of EU production is particularly striking when compared with other leading world producers (**Figure 13**). Norway is the main supplier of aquaculture products to the EU, especially salmon. This country shows sustained growth over the last decade. Another major producer of aquaculture products is Turkey, which also shows continuous growth. This country is a strong competitor of EU aquaculture producers on the EU market for seabass and seabream, and trout. Turkish aquaculture has lower production costs, and its production is subsidised by its government, in particular for trout production¹⁴. **Section 5.1.7** provides an overview of the obstacles that may lead to the stagnation of EU aquaculture.

¹⁴ Recommendation of the AAC. Import of subsidized portion sized rainbow trout from Turkey. July 2019. https://aac-europe.org/wp-content/uploads/2019/07/AAC_recommendation_Turkey_subsidized_imports_July_2019.pdf

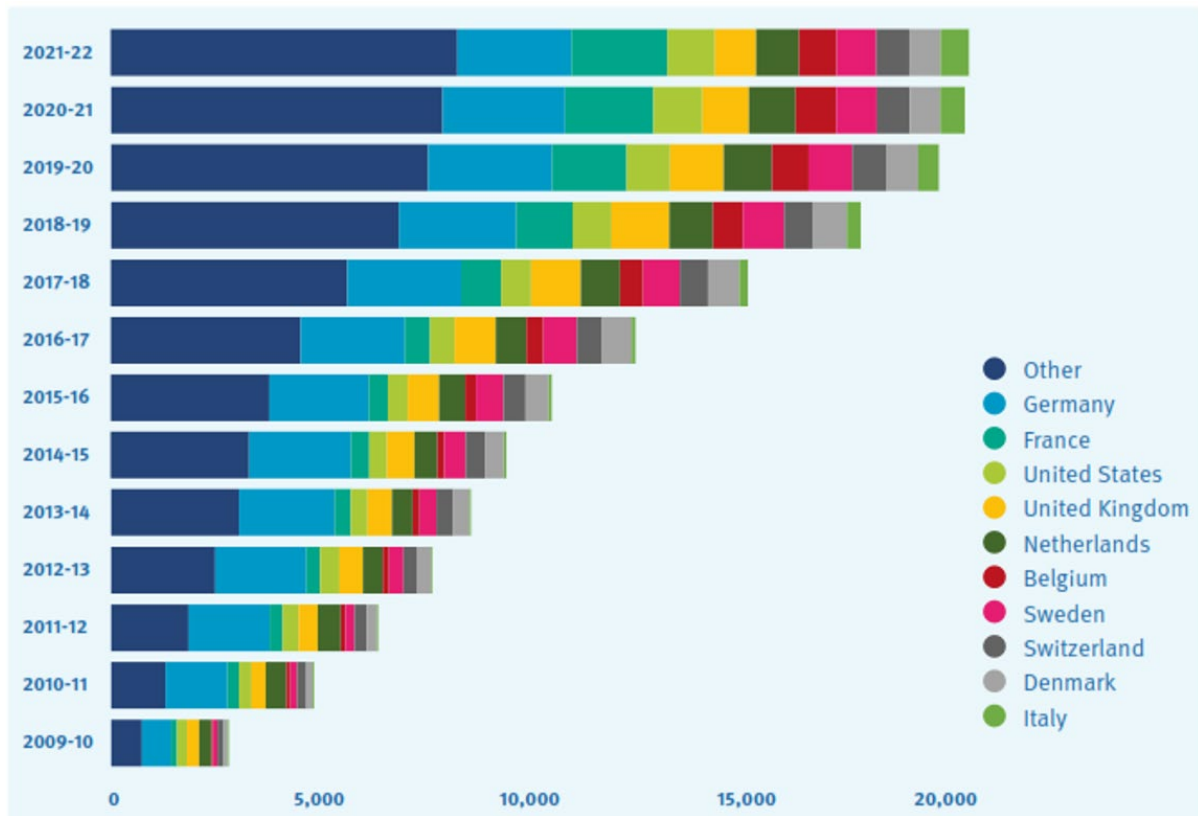
Figure 13: Growth of EU aquaculture production compared to Norway and Turkey in %, 2012-2021

Source: Own elaboration based on EUROSTAT. Base year: 2012 = 100

3.3.3. Product quality and differentiation

There is a growing awareness of the social and environmental qualities of FAPs (Oliveira et al., 2021). However, although the EU regulation allows producers to include a wide range of voluntary claims on their product labels (Bogliacino et al., 2023), consumers may find it difficult to identify how sustainable the fishery is, or may not have sufficient information on, for example on the date and place of capture or on the fishing gear used, which also affects quality. On the other hand, the large amount of information on labels may discourage consumers from reading them. Despite these difficulties, 35.21% of FAPs in Europe include at least one sustainability claim (Lucas et al., 2021), with an increasing trend in recent years. One example is the Marine Stewardship Council (MSC) label, which is experiencing dynamic growth at a global level (**Figure 14**). Another important aspect is the origin of the fish; in Spain, for example, most consumers pay attention to the origin of the fish. They look for products that are differentiated by their origin. This factor is perceived as directly related to quality and indirectly related to taste and freshness (Rodriguez Salvador and Calvo Dopico, 2023).

Figure 14: Evolution of live MSC labelled consumer products in total numbers, 2009-2022



Source: MSC¹⁵.

Note: "Other" includes countries around the world for which data are not specified.

¹⁵ <https://www.msc.org/docs/default-source/default-document-library/about-the-msc/msc-annual-report-2021-2022.pdf>

4. EXTRA-EU IMPORTS OF FISHERIES AND AQUACULTURE PRODUCTS

KEY FINDINGS

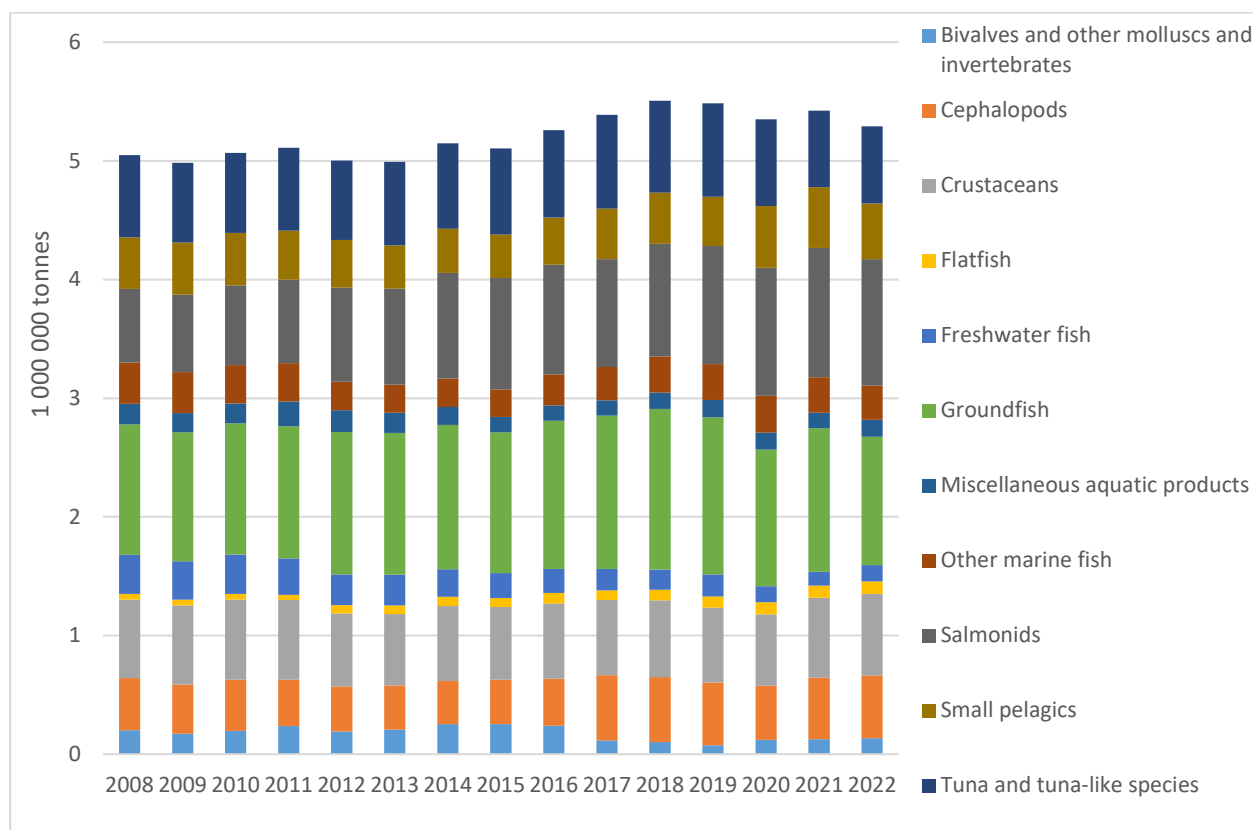
- Between 2008 and 2022, **EU imports** of FAPs appear to be **fairly stable in terms of volume**, with around 5.05 million tonnes net weight in 2008 compared to 5.53 million tonnes net weight in 2022 (an increase of **5%**), see Figure 15.
- However, the **structure of imports has evolved**, in particular the growing share of **salmonids** (+**72%** in 2022 compared to 2008), which is now the second imported commodity type with 1.06 million tonnes, after groundfish with 1.08 million tonnes.
- In **terms of value**, the **increase in EU imports is much higher**. In 2022, imports will reach around EUR 30.7 billion, an increase of **89%** compared to 2008 (EUR 16.2 billion).
- The structure of EU imports has also changed because of **trade agreements**, with some **important EU suppliers** in 2022 being absent from the top five a few years earlier. These include, for example:
 - **Ecuador**: Trade Agreement provisionally applied since **2013**;
 - **Mauritius**: Economic Partnership Agreement provisionally applied since **2012**;
 - **Papua New Guinea**: Interim Partnership Agreement provisionally applied since **2013**;
 - **Vietnam**: Free Trade Agreement (FTA) in force since **2020**.
- The so-called "**Nordic countries**" (Norway, Iceland, Faroe Islands, Greenland) also benefit from **FTAs**, as do some other major suppliers (**India; Argentina**).
- With regard to the competitiveness of the European fishing industry, which has to comply with the sustainability standards of the CFP, it should be noted that some of the extra-EU imports come from **fisheries** that are **clearly overexploited**. These include, for example:
 - Indian Ocean Yellowfin tuna (e.g. **Seychelles**)
 - Squid from Dakhla and Cap Blanc stocks (**Morocco**)
 - Octopus from Cap Blanc stock (**Morocco**)
 - Sardinella and Chub mackerel (**Morocco; Mauritania**)
- On the other hand, some of the extra-EU imports come from fisheries where **IUU** is clearly taking place or is strongly suspected. These include, for example:
 - **Ecuador** (EU yellow card in 2019)
 - **India** and **Argentina** (unregulated areas for squid fishing)
 - Key stocks in the **North Sea** (in particular mackerel and herring) are also the subject of disagreement between coastal states.

4.1. Overview

Between 2008 and 2022, EU imports of FAPs appear to be fairly stable in terms of **volume**, at around 5.05 million tonnes net weight in 2008 compared to 5.53 million tonnes net weight in 2022 (an increase of 5 %), see **Figure 15**.

However, while the overall **volume** of imports appears to be rather stable, the **structure** of the imports has evolved, with in particular the **growing share of salmonids** (more than 72% in 2022 compared to 2008), which is now the second imported commodity type with 1.06 million tonnes, after groundfish at 1.08 million tonnes¹⁶.

Figure 15: Extra-EU imports by main commodity group in million tonnes, 2008-2022

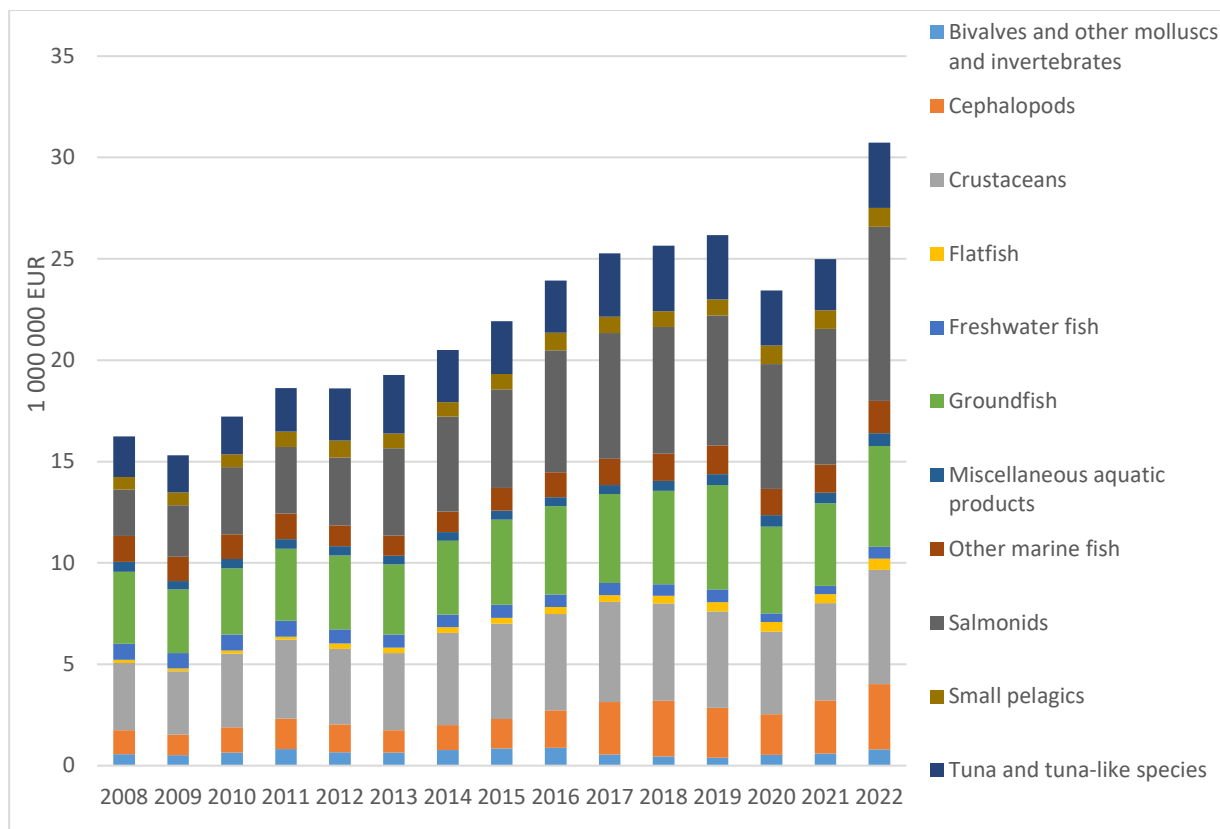


Source: Own elaboration based on EUMOFA

In terms of **value**, the increase of imports is much higher. In 2022, imports reached around EUR 30.7 billion in 2022, an increase of 89% compared to 2008 (EUR 16.2 billion), see **Figure 16**.

¹⁶ Trade (import/export) data are expressed in net volume. As Eurostat/EUMOFA/STECF provide data on the production of fish and shellfish in live weight, the net volume of imports/exports has to be converted by means of conversion factors (CF) in order to establish a harmonised supply balance. For example, the CF for cod, or more precisely for the product whose CN8 code is 0304 44 10, is set at 2.85, which is an average of those found in Eurostat and FAO publications for skinned and boned fillets of this species. The live weight equivalent of EU imports of cod is therefore around 1.4 million tonnes, while net imports are around 496 000 tonnes (2019 figures, see below). As a result, total imports in 2020 will be around 8.8 million tonnes live weight equivalent (food use only) (EUMOFA, 2022).

Figure 16: Extra-EU imports by main commodity group in million EUR, 2008-2022



Source: Own elaboration based on EUMOFA

When looking at the structure of the imports in terms of **degree of processing**, three groups of products are of interest in the **UN Harmonized System** trade databases¹⁷ (see **Table 7** below):

- 03: Fish and crustaceans, molluscs, and other aquatic invertebrates;
- 1604: Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs;
- 1605: Crustaceans, molluscs, and other aquatic invertebrates, prepared or preserved.

The following table shows the situation over the past 20 years (for years 2002; 2012 and 2022), which appears to be fairly stable, with unprocessed products accounting for around 82%-85% in value.

¹⁷ The EU trade portal: <https://trade.ec.europa.eu/access-to-markets/en/statistics>

Table 7: Extra-EU imports of selected processed FAPs (in billion EUR) and relative share (in %), by UN Harmonized System (HS) codes, 2002-2022

UN Harmonized System (HS) Codes	2002		2012		2022		Change 2002-2022
	billion EUR	%	billion EUR	%	billion EUR	%	
03: Fish and crustaceans, molluscs, and other aquatic invertebrates	10.2	85	14.4	82	26.3	86	+158 %
1 604: Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	0.5	4	0.97	5	1.2	4	+140 %
1 605: Crustaceans, molluscs, and other aquatic invertebrates, prepared or preserved	0.1	11	0.2	13	3.1	10	+3 000 %
Total	11.9	100	17.6	100	30.6	100	+157 %

Source: Access2market; consulted from 10-15 August 2023

In terms of value, comparing 2022 data with 2002, the **increase of EU imports of selected processed FAPs** is even more significant (plus 157%). This can be explained by several factors:

- Inflation**, especially during the last 3 years due to increase in freight and logistics costs (COVID-19; conflict in Ukraine);
- a change in the **structure of imported commodities**, with a strong decrease in imports of (low value) freshwater fish between 2008 and 2022 (minus 194 000 tonnes¹⁸; a decrease of 57%) and a strong increase of (high value) salmonids import during the same period (plus 447 000 tonnes; an increase of 72%);
- the **depreciation of the euro against the Norwegian krone** in recent years (mostly from March 2021), which makes imports from Norway even more expensive, to the detriment of the EU trade deficit¹⁹.

In terms of commodities, the most important in 2022 are **salmonids** (EUR 8.58 billion), **crustaceans** (EUR 5.64 billion), **groundfish** (EUR 4.75 billion, after a peak of EUR 5.15 billion in 2019) and **tuna** (EUR 3.23 billion).

In 2022, the main extra-EU suppliers are **Norway** (EUR 8.58 billion; 27% of EU imports in value terms), **China** (EUR 1.81 billion), **Morocco** (EUR 1.61 billion), the **United Kingdom** (EUR 1.57 billion) and **Iceland** (EUR 1.32 billion).

¹⁸ Mostly related to Pangasius / catfish from Vietnam

¹⁹ Comment: an increase in the price should in principle result in a change in production or sourcing strategy. If this is not the case, a situation of strong dependency can be suspected

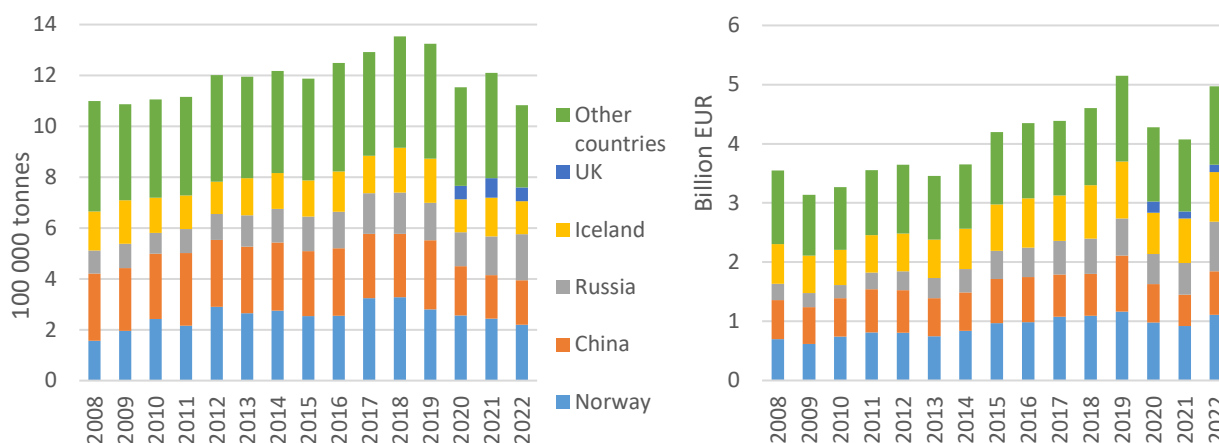
The following sections look at **extra-EU imports** of the four main commodity groups:

- 1) **Groundfish:** cod, hake, Alaska pollock;
- 2) **Salmonids:** salmon;
- 3) **Crustaceans:** warm water shrimp;
- 4) **Tuna and tuna-like:** skipjack tuna, yellowfin tuna;
- 5) **Cephalopods:** squid, octopus;
- 6) **Small pelagics:** mackerel, herring, sardines.

4.2. Groundfish

Over the period 2008-2022 (EUMOFA data), extra-EU imports of groundfish vary between 1.1 million tonnes and 1.35 million tonnes (net values), with the most important years being 2018 and 2019 (1.35 and 1.32 million tonnes respectively), see **Figure 17**.

Figure 17: Extra-EU imports of groundfish in 100 000 tonnes and in billion EUR, 2008-2022



Source: EUMOFA

Although extra-EU imports of groundfish appear to be rather stable in terms of volume, they increased significantly in terms of value, reaching EUR 5.1 billion in 2019, the last 'regular' year. In 2022, the main suppliers of groundfish were Norway (around 220 000 tonnes), Russia (around 180 000 tonnes), China (around 175 000 tonnes), Iceland (around 130 000 tonnes) and the UK (around 54 000 tonnes). However, most of the Chinese products are in fact processed demersal species originating from Norway (cod), Russia (cod, Alaska pollock) or the USA (Alaska pollock).

The most important species are cod (around 376 000 tonnes), Alaska pollock (around 270 000 tonnes), hake (around 180 000 tonnes), saithe (or coalfish; 90 000 tonnes) and haddock (around 79 000 tonnes), which account for 92% of total groundfish imports from the EU (995 000 tonnes out of 1.08 million tonnes). In addition, imports of blue whiting (around 57 000 tonnes in 2022) are also included in the groundfish category in the EUMOFA database (see **section 6.2** with the Case study 2 on small pelagics).

The following tables show the **top 5 EU suppliers** for each of the **demersal species**. In a nutshell, the following results can be derived (2022 figures):

- **Norway** is the first EU supplier for **cod** (131 000 tonnes, worth EUR 902.5 million), saithe (45 000 tonnes, worth EUR 116.6 million), haddock (8 700 tonnes, worth EUR 23.1 million) and pollack;

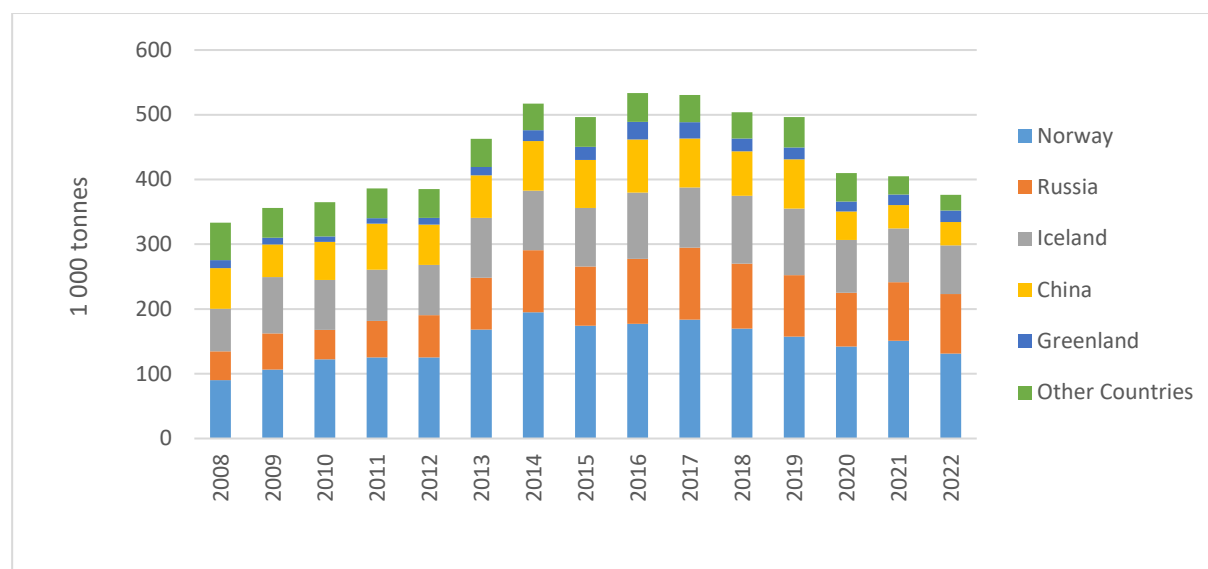
- **Norway** is the second EU supplier of **ling and redfish** and other groundfish (4 700 tonnes, worth EUR 26.7 million);
- **Norway** ranks third for **blue whiting** (17 500 tonnes, worth EUR 5 million) and **whiting**;
- **Russia**, despite geopolitical issues, maintains its position as the EU's second supplier in 2022 for **cod** (92 000 tonnes, worth EUR 509 million), **Alaska pollock** (80 800 tonnes, worth EUR 301 million) and **haddock** (5 300 tonnes, worth EUR 20 million);
- Although **China** is the first supplier of **Alaska pollock** (123 000 tonnes, worth EUR 442 million), most of the fish comes from the USA and Russia, with China acting only as a processor²⁰.

The EU industry benefits from significant autonomous tariff quota (**ATQ**) allocations for **cod** (110 000 tonnes for headed and gutted fish (H&G)²¹ and 50 000 tonnes for fillets), **Alaska pollock** (340 000 tonnes, the largest single ATQ allocation) and **haddock**. While Russian products were qualifying for these trade agreements up to 31/12/2023²², they have been excluded from the ATQ regime agreed in November 2023 for imported products for the 2024-2026 period²³.

4.2.1. Cod

The EU market is mainly dependent on imports of cod from the Arctic and the North Sea (Norway, Russia, Iceland, Greenland). Although China is the fourth largest supplier of cod to the EU (36 000 tonnes in 2022, worth EUR 220 million), most of the fish comes from Russia and Norway, with China acting only as a processor. Over the period 2008-2022, extra-EU imports of cod increase by 12% in volume and by 43% in value (reaching EUR 2.46 billion in 2022, partly due to the depreciation of the euro against the Norwegian currency), see **Figure 18**.

Figure 18: Extra-EU imports of cod in 1 000 tonnes, 2008-22



Source: Own elaboration based on EUMOFA

²⁰ Which can raise some traceability issues, especially for Russian processed products.

²¹ Whole, head-off and gutted.

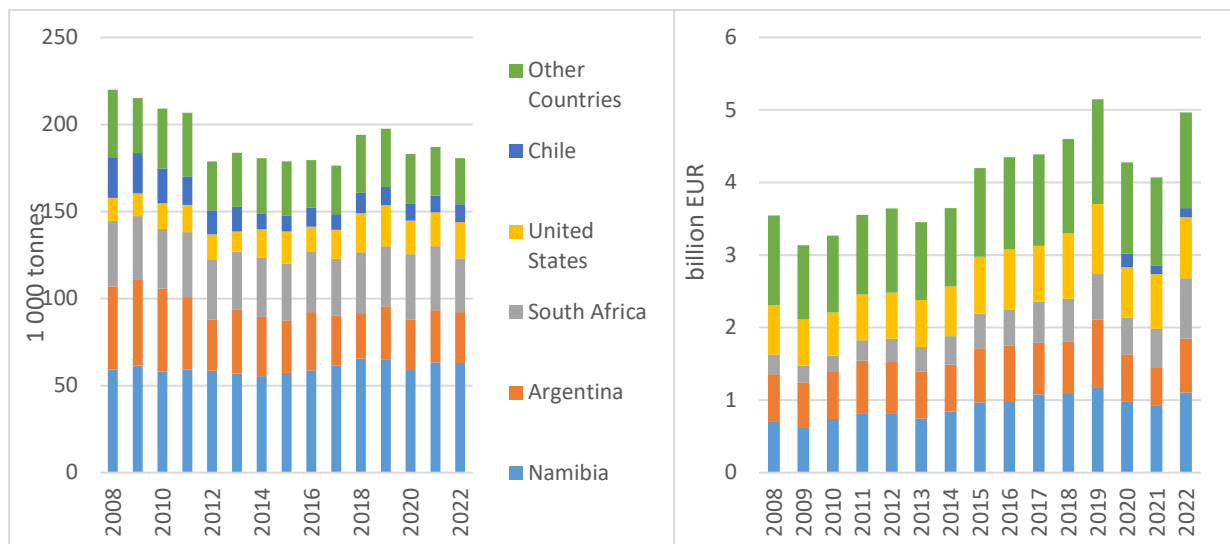
²² See for instance the document published by the MAC, indicating that 19% of the (Alaska) Pollock ATQ involves Russia. MAC, 2021. "Existing EU trade policy instruments and their impacts on the EU market for fish and fishery products".

²³ Council of the European Union, 2023. COUNCIL REGULATION opening and providing for the management of the Union autonomous tariff quotas for certain fishery products for the 2024-2026 period.

4.2.2. Hake

The EU hake market is mainly dependent on imports from the **Southeast Atlantic** (Namibia and South Africa) and the **Southwest Atlantic** (Argentina). Global imports of hake are projected to fall by around 18% in volume between 2008 and 2022, partly due to the recovery of the EU Northern hake stock from 2010 onwards²⁴. However, the value of imports increases by 14% to reach EUR 712.5 million in 2022. This can be partly explained by the strong increase in prices (more than 36% on average between 2008 and 2022), see **Figure 19**.

Figure 19: Extra-EU imports of hake in 1 000 tonnes and in billion EUR, 2008-2022



Source: Own elaboration based on EUMOFA

The EU's main supplier is by far **Namibia**, which accounts for almost 50% of the value of extra-EU imports of hake (EUR 273 million), followed by **South Africa** (18% of imports). Although, according to the South African Ministry²⁵, the two Cape hake stocks²⁶ appear to be in relatively good shape, this may raise some concerns, as several sources frequently mention the conduct of potentially illegal activities²⁷. Similarly, some observers report IUU fishing activities in **Argentina**²⁸.

4.2.3. Alaska pollock

In 2019, the last 'regular' year, extra-EU imports of Alaska pollock reached 305 005 tonnes, worth EUR 838 million. **Three suppliers** account for **99.3% of total EU imports: China, the USA and Russia**. However, as mentioned above, China is a primary processor (filleting) of both US and Russian products. In the current geopolitical context, this may raise some concerns, as evidenced by the US bill to block

²⁴ ICES Advice 2016; in https://europeche.chil.me/post/success-story-for-european-fisheries-and-policies-137153#_ftn1

²⁵ Republic of South Africa. 2021. Status of the South African marine fishery resources. 2020. 132 p.

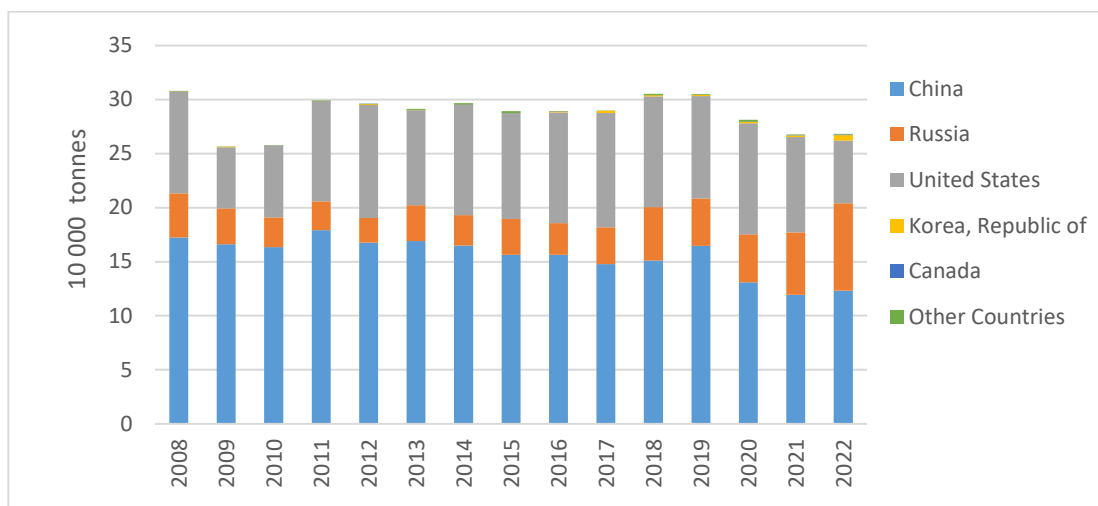
²⁶ Namely 'shallow water cape hake' and 'deep-water cape hake'.

²⁷ <https://mg.co.za/environment/2021-10-24-illegal-fishing-is-our-only-option/>
<https://adf-magazine.com/2022/08/south-african-academy-wields-technology-against-illegal-fishing/>
<https://saiia.org.za/research/billions-of-dollars-lost-to-illegal-fishing-in-the-sadc-region/>

²⁸ Valentine, Dr. Marla. (2021). Now You See Me, Now You Don't: Vanishing Vessels Along Argentina's Waters. Zenodo. <https://doi.org/10.5281/zenodo.4893397>

the entry of Russian products into the USA, even if they are processed in China²⁹. While the USA is the largest market for double-frozen cod and haddock fillets using Russian H&G, the EU imports most of China's Alaska pollock fillets³⁰ (see **Figure 20**).

Figure 20: Extra-EU imports of Alaska pollock in 10 000 tonnes, 2008-2022



Source: Own elaboration based on EUMOFA

4.3. Salmonids

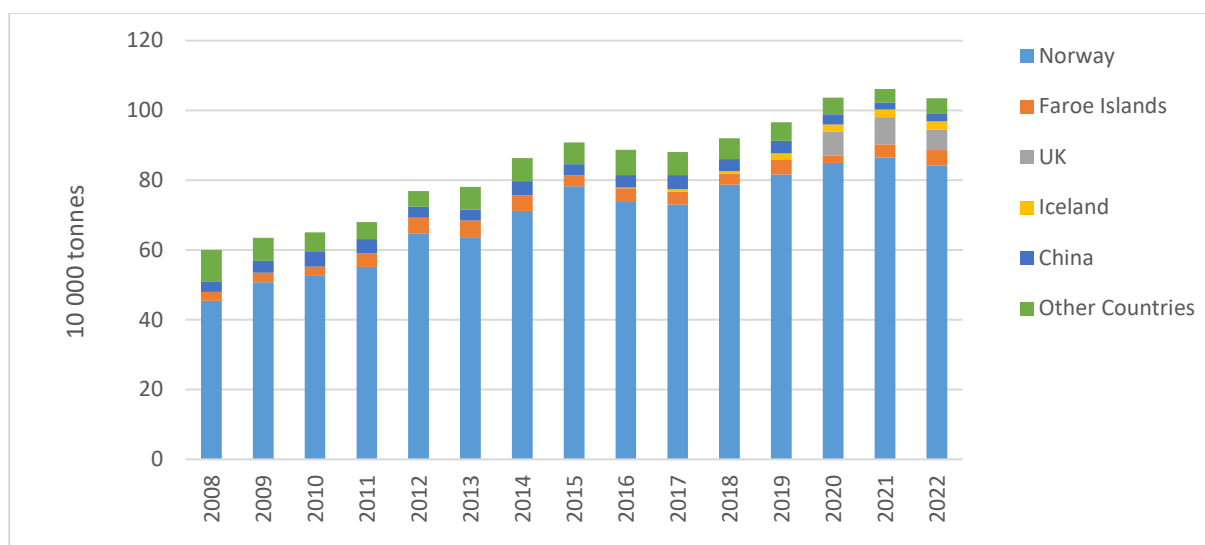
Over the 2008-2022 period (EUMOFA data), the **extra-EU imports of salmon strongly increased** from 0.6 million tonnes and 1 034 million tonnes (net values), with the most important years being 2020 and 2021 (respectively 1 037 and 1 061 million tonnes), see **Figure 21**.

Over the period 2008-2022 (EUMOFA data), extra-EU imports of salmon increase strongly from 0.6 million tonnes to 1 034 million tonnes (net value), with the most important years being 2020 and 2021 (1 037 and 1 061 million tonnes respectively).

In 2022, the main salmonids suppliers were respectively Norway (around 842 000 tonnes; worth EUR 6.7 billion), UK (59 000 tonnes, worth EUR 521 million) and Faroe Islands (44 000 tonnes, worth EUR 521 million).

²⁹ "U.S. Senators Dan Sullivan and Lisa Murkowski (both R-Alaska) [this week] introduced the U.S-Russian Federation Seafood Reciprocity Act of 2023, legislation that would impose a comprehensive ban on the import of all Russian-origin seafood products into the United States." Companion legislation was introduced in the House by Representatives Garret Graves (R-La.) and Mary Sattler Peltola (D-Alaska), see: <https://www.sullivan.senate.gov/newsroom/press-releases/sullivan-murkowski-graves-and-peltola-see-to-close-loopholes-allowing-russian-access-to-us-seafood-market>).

³⁰ Under Current News, 2023. US bills may harm Russian cod more than pollock, according to trade data. Posted on 18/08/2023.

Figure 21: Extra-EU imports of salmon in 10 000 tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

In a nutshell, the following outcomes can be derived (2022 figures):

- **Norway** is by far the main EU supplier, accounting for **81% of the imports** (842 000 tonnes).
- Since Brexit, the **UK** is the **second EU supplier** (59 000 tonnes, after a peak of 78 000 tonnes in 2021). It is worth commenting that the bulk of the Scottish production is made by foreign-owned companies, including Norwegian ones³¹.
- **Norway** is currently developing a **new licensing scheme for offshore aquaculture**, combining the knowledge of both the aquaculture and the oil and gas sectors³².
- In the meantime, the **production in the EU**, mainly through **land-based facilities**, is **progressing slowly**, mainly due to lack of public acceptability³³.
- The **third largest** EU supplier is **Faroe Island**, with around 44 000 tonnes in 2022. Here again, part of the production is made by Norwegian-owned companies³⁴.

4.4. Crustaceans

Over the 2008-22 period, the extra-EU imports of crustaceans remain fairly stable in volume, with a peak of around 688 000 tonnes in 2022 (against 660 000 tonnes in 2008), see **Figure 22**. However, in value, the extra-EU imports increased by 70% from around EUR 322 million in 2008 to EUR 5.64 billion in 2022, with Vietnam, Ecuador and India enjoying the greatest jump in value, with more than 297%, 212 % and 144% (respectively).

³¹ MOWI, ex-Marine Harvest, is producing about 68 000 tonnes annually (<https://mowi.com/uk/about/>), while other companies such as Aquamaof or Leroy also have facilities in Scotland.

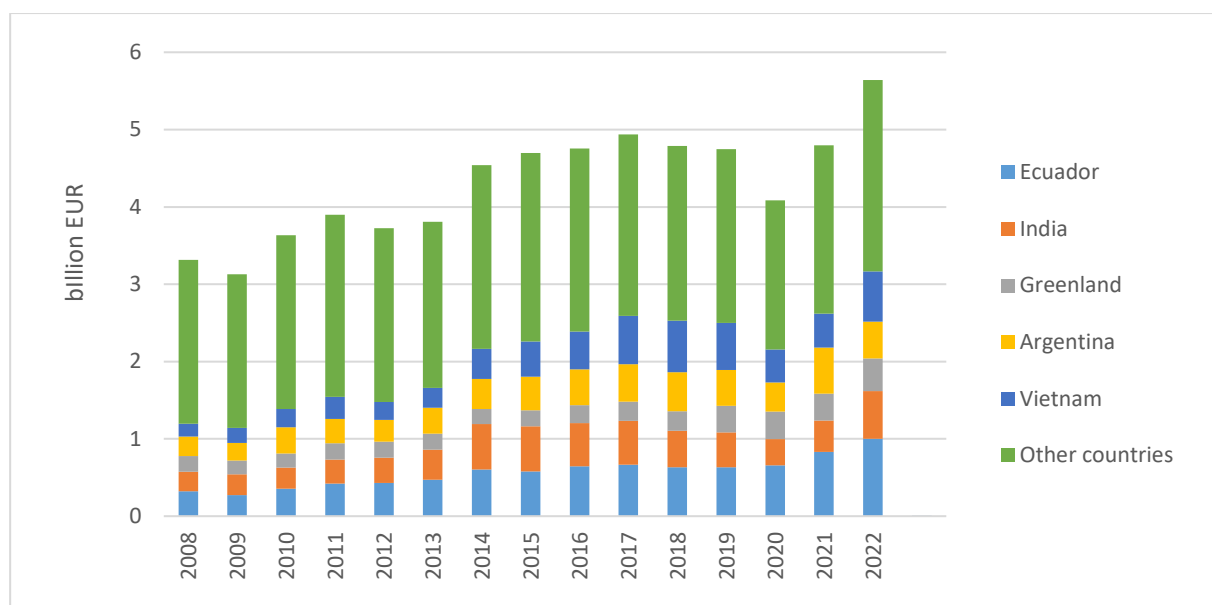
³² See: <https://www.fishfarmermagazine.com/news/norway-plans-new-rules-for-offshore-farms/>; <https://thefishsite.com/articles/oil-and-gas-firm-moves-into-offshore-aquaculture>.

³³ See: Weitzman et al, 2022. Identifying key factors driving public opinion of salmon aquaculture. <https://doi.org/10.1016/j.marpol.2022.105175>.

See also: <https://www.20minutes.fr/planete/4049664-20230822-calais-nouveau-projet-elevage-industriel-saumons-inquiete-ecologistes>.

See also: <https://france3-regions.francetvinfo.fr/provence-alpes-cote-d-azur/alpes-maritimes/cannes/le-projet-de-ferme-aquacole-a-golfe-juan-recoit-un-avis-defavorable-apres-l-enquete-publique-2754242.html> for other type of production systems.

³⁴ E.g. 7 700 tonnes for MOWI, see: <https://mowi.com/contact/mowi-faroe-islands/>.

Figure 22: Extra-EU imports of crustaceans in billion EUR, 2008-2022

Source: Own elaboration based on EUMOFA

In a nutshell, the following outcomes can be derived (2022 figures):

- The increase of both **Vietnamese and Ecuadorian imports** seem to be linked to trade policy, with a Free Trade Agreement being in force with Vietnam since 2020, and a Trade Agreement with Ecuador being provisionally applied since 2013³⁵;
- **Warm water shrimps** account for around 46% of the imports in value (and 48% in volume; see data below), involving especially Ecuador (EUR 987 million), India (EUR 408 million), Vietnam (EUR 362 million) and Bangladesh (EUR 200 million).
- The **imports of these shrimps** have recently been subject to some **safety concerns**:
 - in 2018³⁶, the EU was about to ban Indian shrimp imports due to the presence of contaminants in the products and the lack of efforts of Indian authorities;
 - in March 2023, Saudi Arabia banned shrimp imports from India due to the detection of Virus (WSSV)³⁷;
 - in June 2023, the US FDA published the entry line refusal in May, which included the rejection of Antibiotic contaminated Indian shrimps³⁸;
 - in a context of a high rate of sampling for Indian shrimps (50% instead of 10%), India reportedly asked the EU to re-list previously de-listed exporting firms and to revert to a sampling rate of 10%³⁹;
 - when using the EU Rapid Alert System for Food and Feed (RASFF) database⁴⁰, 65 issues were identified for crustacean products, with the detailed information for shrimp only: Ecuador: 39 cases; Vietnam: 6 cases; India: 3 cases; Bangladesh: 2 cases.

³⁵ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

³⁶ <https://www.globalseafood.org/advocate/eu-antibiotics-india-shrimp/>

³⁷ <https://curlytales.com/saudi-bans-shrimps-from-india-all-you-need-to-know/>

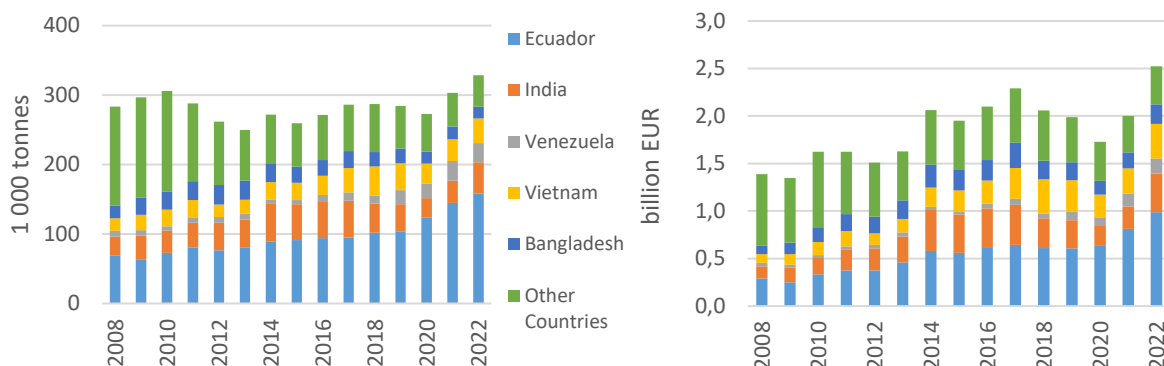
³⁸ <https://shrimpalliance.com/antibiotic-contaminated-shrimp-from-india-rejected-by-fda-in-may/>

³⁹ <https://www.livemint.com/news/india/india-urges-eu-to-allow-export-of-farmed-shrimps-reduce-sampling-frequency-at-border-inspection-post-11690542826168.html>

⁴⁰ Consulted 11/09/2023. <https://webgate.ec.europa.eu/rasff-window/screen/search>

Over the 2008-2022 period (EUMOFA data), the extra-EU imports of **warm water shrimp** slightly increased in volume, with a peak at around 329 000 tonnes in 2022 (against 283 000 tonnes in 2008; more than 16%) see **Figure 23**. However, in value, the extra-EU imports increased by 82% from around EUR 1.39 billion in 2008 to EUR 2.52 billion in 2022. Here again, it is worth underlying the consolidation of the sector as from 2013, with the top five suppliers accounting for 84% of the imports in 2022 against 46% in 2008.

Figure 23: Extra-EU imports of warm water shrimp in 1 000 tonnes and billion EUR, 2008-2022

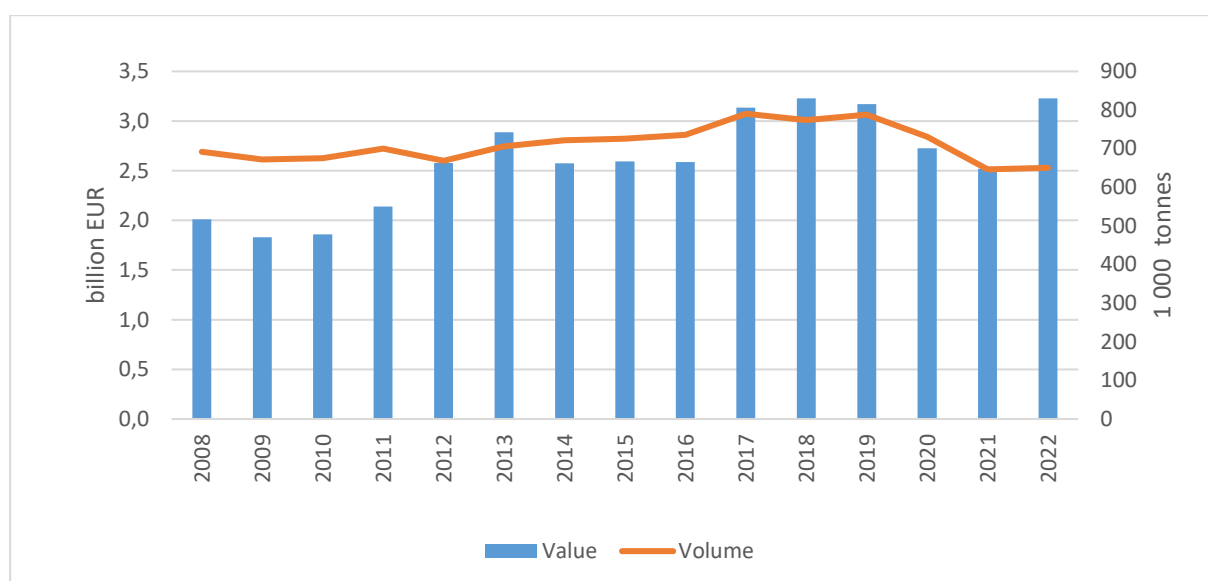


Source: Own elaboration based on EUMOFA

4.5. Tunas and tuna-like species

Over the 2008-2022 period (EUMOFA data), the extra-EU imports of tunas slightly decreased in volume (minus 6%), with around 651 000 tonnes in 2022 (against 672 000 tonnes in 2008; but after reaching a peak of 790 000 tonnes in 2017). However, in value, the extra-EU imports increased by 60 % from around EUR 2.01 billion in 2008 to EUR 3.23 billion in 2022 (see **Figure 24**).

Figure 24: Extra-EU imports of tuna in 1 000 tonnes and billion EUR, 2008-2022



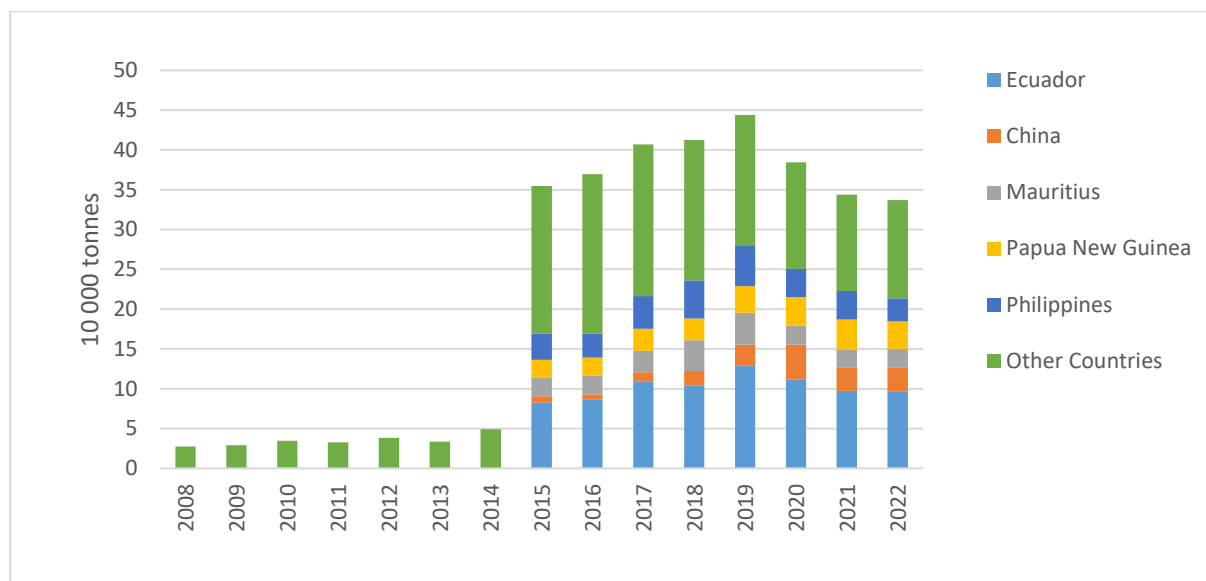
Source: Own elaboration based on EUMOFA

Skipjack tuna accounted for around 52% of the tuna imports in volume in 2022, with around 337 000 tonnes, followed by yellowfin tuna, accounting for 31% of the Tunas imports in volume in 2022.

4.5.1. Skipjack tuna

Over the 2008-2022 period (EUMOFA data), the extra-EU imports of skipjack tuna strongly increased in volume (plus 1 137%), in particular since 2015, with around 337 000 tonnes in 2022 (against 27 000 tonnes in 2008) (**Figure 25**). The peak (444 000 tonnes) was reached in 2019, the last ‘regular’ year.

Figure 25: Extra-EU imports of skipjack tuna in 10 000 tonnes, 2008-2022



Source: Own elaboration based on EUMOFA

Here again, the extra-EU imports of skipjack tuna are strongly affected by EU trade policies, with the key primary suppliers in 2022 benefiting for specific agreements as from 2013-2015⁴¹:

- **Ecuador:** Trade Agreement provisionally applied since 2013;
- **Mauritius:** Economic Partnership Agreement provisionally applied since 2012;
- **Papua New Guinea:** Interim Partnership Agreement provisionally applied since 2013.

In a nutshell, the following outcomes can be identified (2022 figures):

- several studies pointed to the rather poor social conditions in **Ecuador**⁴² and the EC even issued a yellow card in 2019 as part of the EU’s IUU Regulation 1005/2008⁴³ (see also **section 5.2.3**⁴⁴);
- the EC also issued a yellow card in 2014 against **Papua New Guinea** as part of the EU’s IUU Regulation (EU) No 1005/2008.

4.5.2. Yellowfin tuna

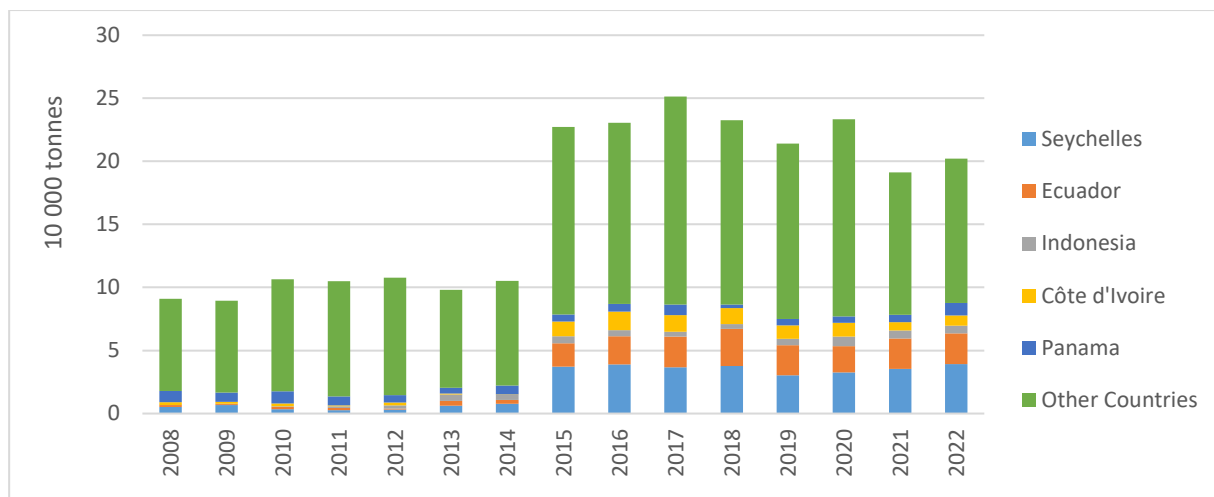
Over the 2008-2022 period, the extra-EU imports of yellowfin tuna increased massively (+ 121% in volume), see **Figure 26**. However, the 2022 production level (202 000 tonnes) is below the record level registered in 2017 (251 000).

⁴¹ https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en

⁴² E.g., see Seafish, 2020. Ethical Issues in Seafood. January 2020.

⁴³ Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing, amending Regulations (EEC) No 2847/93, (EC) No 1936/2001 and (EC) No 601/2004 and repealing Regulations (EC) No 1093/94 and (EC) No 1447/1999, OJ L 286, 29.10.2008, p. 1.

⁴⁴ European Parliamentary Research Service, 2022. Illegal, unreported, and unregulated (IUU) fishing. Infographic. PE 614.599 – May 2022

Figure 26: Extra-EU imports of yellowfin tuna in 10 000 tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

In a nutshell, the following outcomes can be identified (2022 figures):

- the two **main EU suppliers** are **Seychelles** (39 300 tonnes) and **Ecuador** (24 200 tonnes), accounting for 31% of EU imports;
- the **Indian Ocean** yellowfin tuna stock is considered to be **overexploited**⁴⁵, with fishing pressure exceeding F_{MSY} , and the Commission itself recognised that the failure to adopt appropriate management measures to curb the phenomenon was a ‘missed opportunity’⁴⁶;
- as mentioned above, the same concerns apply to **Ecuador** (rather poor social conditions, and IUU fishing).

4.6. Cephalopods

Over the 2008-2022 period, the extra-EU imports of cephalopods increased both in volume (reaching 530 000 tonnes in 2022; + 20%) and in value (reaching EUR 3.2 billion in 2022; + 171 %). This can be explained by the huge rise in price over the period (+ 125%), with an acceleration as from 2021, mostly due to the changes in logistic activities.

Based on 2022 data, two species are representing 74% of the total extra-EU cephalopods imports:

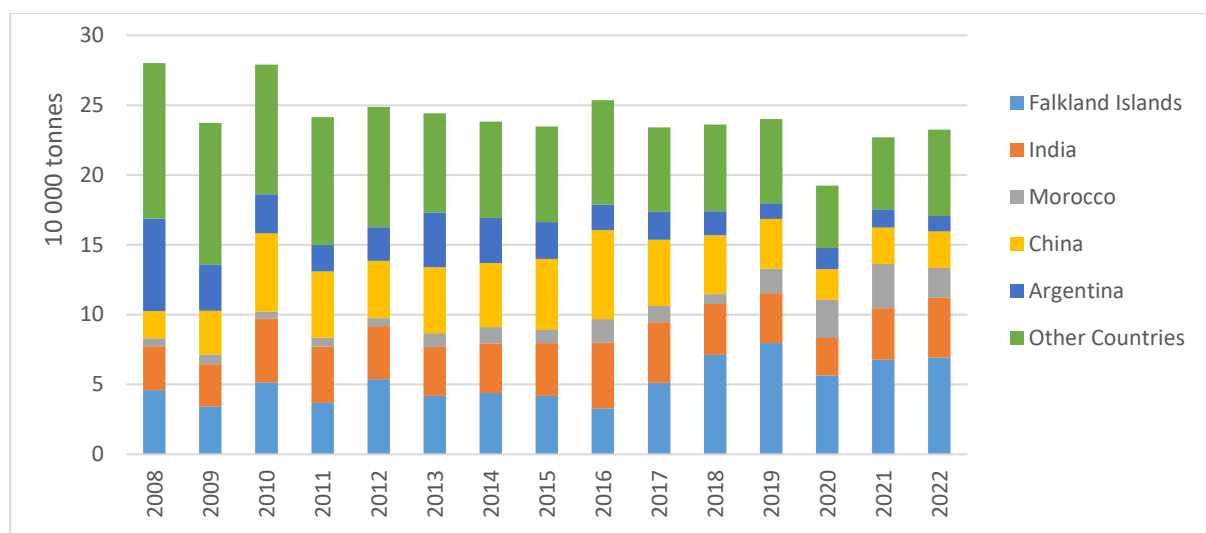
- **Squid**: EUR 1.30 billion; 232 000 tonnes;
- **Octopus**: EUR 1.07 billion; 103 100 tonnes.

4.6.1. Squid

In 2022, the three main EU suppliers are Falkland Islands (69 400 tonnes), India (42 800 tonnes) and Morocco (21 200 tonnes), see **Figure 27**.

⁴⁵ E.g., see Global Tuna Alliance, 2022. ‘2022 IOTC position Statement’.

⁴⁶ https://oceans-and-fisheries.ec.europa.eu/news/iotc-annual-meeting-missed-opportunity-2022-05-23_en

Figure 27: Extra-EU imports of squid in 10 000 tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

In a nutshell, the following outcomes can be identified (2022 figures), in a context of global suspicion about the unregulated nature of the squid fisheries around the world revealed by the journal *Science* in March 2023⁴⁷:

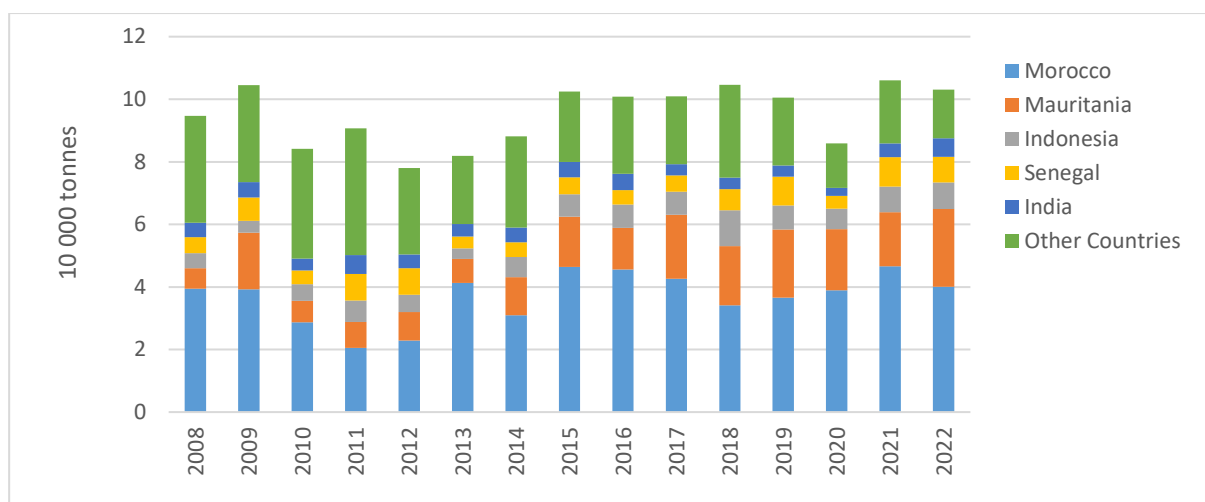
- In 2023, the **Falkland Islands** Loligo squid season closed early due to stock management reasons, because of consistent decline in the biomass⁴⁸.
- According to the CECAF (FAO, 2023), the squid stocks (*Loligo vulgaris*) targeted by the **Moroccan** fleet (Dakhla stock and Cap Blanc stock) are overexploited.
- Seto et al. (2023) clearly indicated that part of the **Indian and Argentinian** squid can come from unregulated areas.

4.6.2. Octopus

In 2022, the **four main** EU suppliers are **Falkland Islands** (40 000 tonnes), **Mauritania** (24 900 tonnes), **Indonesia** (8 400 tonnes) and **Senegal** (8 200 tonnes), see **Figure 28**. They are accounting for **79% of the extra-EU imports of octopus**.

⁴⁷ Seto et al. (2023). Fishing through the cracks: The unregulated nature of global squid fisheries. *Sci. Adv.*9, eadd8125 (2023). DOI:10.1126/sciadv.add8125

⁴⁸ <https://penguin-news.com/headlines/2023/falkland-islands-loligo-squid-season-closes-early-refund-uncertain/>

Figure 28: Extra-EU imports of octopus in 10 000 tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

In a nutshell, the following outcomes can be identified (2022 figures):

- According to the CECAF (FAO, 2023), one of the octopus stock (*Octopus vulgaris*) targeted by the **Moroccan** fleet (Cap Blanc stock) is overexploited (with a production of 22 300 tonnes in 2021⁴⁹), while the other stock (Dakhla stock) is considered to be fully exploited (with a production of 39 300 tonnes in 2021)⁵⁰. A clearer indication/information about the exact origin of the octopus would be needed to inform the EU consumer, as expected by the CMO.
- According to the CECAF (FAO, 2023), the octopus stocks targeted by **Mauritania** and **Senegal** (stock Cap Blanc and stock Senegal, Gambia) are both overexploited.

4.7. Small pelagics

In 2022, the EU imported around 469 000 tonnes of small pelagic, **worth EUR 933 million**. Mackerel, herring, sardines and anchovy are the main species of interest for the EU market, while the main suppliers are Norway, UK, Iceland and Faeroe Islands for the northern fisheries, as well as Morocco for the southern fisheries.

4.7.1. Mackerel

Over the 2008-2022 period, the extra-EU imports of mackerel increased both in volume (reaching 147 000 tonnes in 2022; more than 106%) and in value (reaching EUR 276.4 million in 2022; + 158 %), see **Figure 29**. Such increases can be explained by two sets of phenomena:

- **Iceland** and **Faeroe Islands** decided unilaterally to increase their quotas in 2010, as indicated in the case study section (see **section 6.2**), the fact. As a result, the imports of mackerel from Iceland increased by 538% over the 2008-2022 period. Imports of mackerel from Faeroe Islands increased by 225%⁵¹.

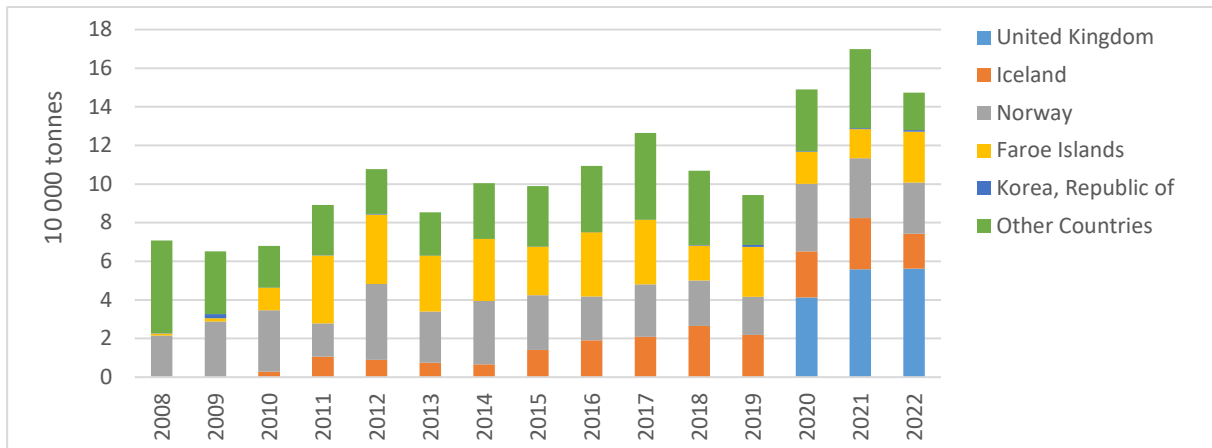
⁴⁹ <https://firms.fao.org/firms/resource/10132/en>

⁵⁰ <https://firms.fao.org/firms/resource/10131/en>

⁵¹ Despite several attempts from the EU services to establish trade measures.

- Brexit, which generated a new EU competitor: **UK**, being since 2020 the **first supplier of mackerel**.

Figure 29: Extra-EU imports of mackerel in 10 000 tonnes, 2008-2022



Source: EUMOFA

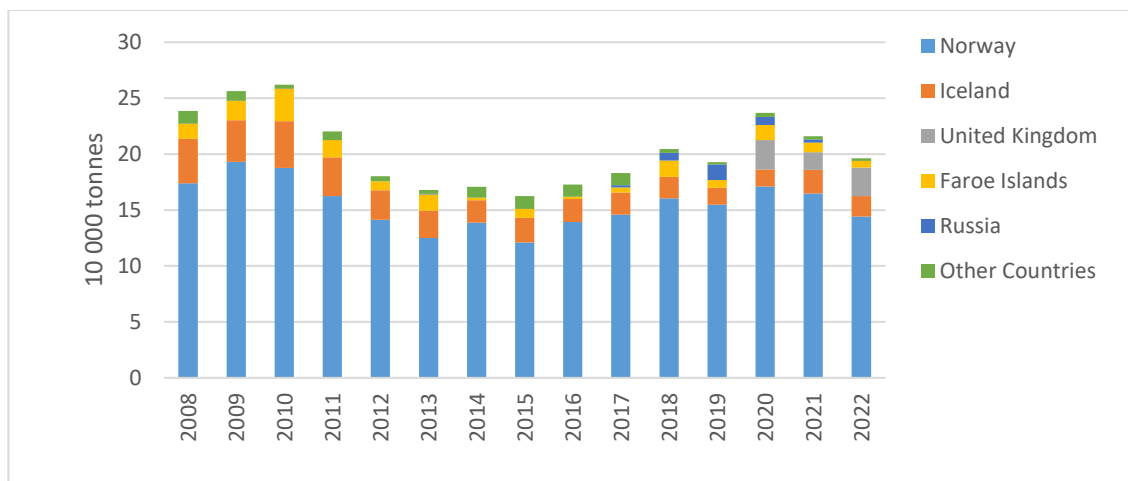
As indicated in the case study section, the main issue at stake now is that the North Sea mackerel fishery is considered as unregulated, because of the lack of agreements between the coastal States. As a result, in line with the IUU Regulation from 2008, measures against IUU fishing practices could be applied,

4.7.2. Herring

Over the 2008-2022 period, the extra-EU imports of herring decreased in volume (reaching 265 000 tonnes in 2022; –18%) but increased in value (reaching EUR 202 million in 2022; + 39 %), see **Figure 30**). This can be explained by the following factors:

- The **high share of imports from Norway** (73% of the extra-EU imports of herring), associated to the strong increase of the Norwegian herring prices (from 0.84 EUR/kg in 2008 to 1.40 EUR/kg in 2022; + 66%);
- the **decrease in the level of Norwegian imports** in 2022, partly due to the geopolitical developments.

Here again, as indicated in the case study section, the main issue at stake now is that the North Sea herring fishery is considered as unregulated, because of the lack of agreements between the coastal States. This would allow IUU measures to be applied according to the IUU Regulation.

Figure 30: Extra-EU imports of herring in 10 000 tonnes, 2008-2022

Source: EUMOFA

4.7.3. Sardines

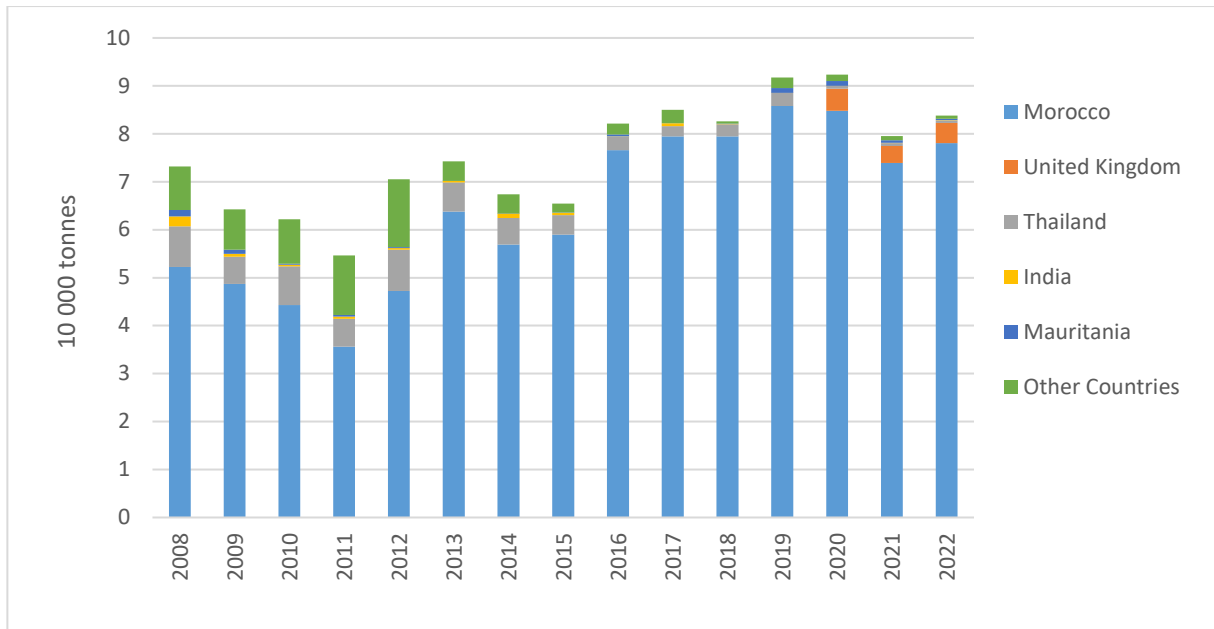
Over the 2008-2022 period, the extra-EU imports of sardines increased in volume (reaching 84 000 tonnes in 2022; + 15%⁵²) and in value (reaching EUR 182 million in 2022; + 30 %), see **Figure 31**. This can be mostly explained by the increase in price (+ 63%).

In 2022, the main EU supplier was Morocco, accounting for 93% of the total extra-EU imports of sardines. The following comments on the state of the stocks concerned will therefore concentrate on this country.

- **Sardine** (*Sardina pilchardus*), which is the main species (48% of the catch of the CECAF area). According to FAO (2023; op. cit.), both stocks were considered non-fully exploited in 2021.
- **Sardinella** (*Sardinella aurita*, *S. maderensis*, and *Sardinella* spp.), representing 14% of the total catch of the main small pelagic fish species in 2021. According to FAO (2023; op. cit.), both stocks were considered over- exploited in 2021.
- **Chub mackerel** (*Scomber colias*), representing 21% of overall catches in 2021 for the CECAF area. (480 000 tonnes). According to FAO (2023; op. cit.), while the stock is considered fully exploited, the current level of capture is not sustainable.

⁵² After a peak of around 82 000 tonnes in 2019 and 2020.

Figure 31: Extra-EU imports of sardines in 10 000 tonnes, 2008-2022



Source: EUMOFA

5. FACTORS AFFECTING COMPETITIVENESS

KEY FINDINGS

- The EU fisheries and aquaculture sector is regulated by a **large body of legislation** covering the entire value chain. Besides the CFP Basic Regulation this includes also regulations on trade, food safety, labour and environmental aspects.
- Increasing **restrictions** on the **fishing fleet's access** to marine resources are affecting the supply of fish, while operating costs are rising and may seriously affect the competitiveness of the EU fleet vis-à-vis external operators.
- Severe **restrictions** on the use of marine space for **aquaculture** concessions and licences limit the expansion of fish and shellfish production, especially offshore.
- There is evidence of a lack of effective **customs controls** in some Member States, which would allow FAPs of dubious origin to enter the Union market.
- The **protracted generational replacement** in the sector, particularly at the extraction stage, negatively affects competitiveness.
- Some of the **countries that regularly export FAPs to the EU**, do not exploit marine resources sustainably. Their sectors are often highly subsidised, some fleets are involved in IUU fishing, working conditions are often poor and product quality is not optimal.
- The EU can do very little to **promote sustainable practices in non-EU country** fishing fleets and aquaculture operators. Nevertheless, under its normative framework, the EU should further strengthen its mechanisms for a uniform control of market entry. In addition, the EU should use its political, economic and trade weight in international fora and conferences to encourage the adoption of measures to promote sustainable practices in fisheries and aquaculture.
- The EU fisheries and aquaculture sector can **hardly compete on price** with external operators. However, it could **add value to its FAPs** by using its research capacities, structural funds and sectoral organisations. This would differentiate its products on the internal market and even abroad.

5.1. Internal factors (EU level)

5.1.1. Sectoral EU Regulations

The fishing and aquaculture activity of European operators is subject to an extensive and detailed body of legislation, which is mainly based on **Articles 38-44 of the Treaty** on the Functioning of European Union (TFEU). The **CFP Basic Regulation** (EU) No 1380/2003⁵³ refers to the conservation, management,

⁵³ [Regulation \(EU\) No 1380/2013](#) of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

and exploitation of marine biological resources, to the processing, transport, and marketing of fishery products and to aquaculture. It sets out the objectives of the CFP and the control and enforcement requirements (in particular, Articles 2 and 36). A wide range of rules are applicable to the fisheries sector complement the CFP Basic Regulation: These include, *inter alia*:

- the **technical and conservation measures** for marine biological resources (Regulation (EU) No 2019/1241)⁵⁴;
- the sustainable management of **external fishing fleets** (Regulation (EU) No 2017/2403)⁵⁵;
- the **CMO** - Common Market Organisation (Regulation (EU) No 1379/2013)⁵⁶;
- the **IUU Regulation**, setting up a system to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing (Council Regulation (EC) No 1005/2008)⁵⁷;
- the new **Fisheries Control Regulation** (Regulation (EU) No 2023/2842)⁵⁸;
- the **EMFAF** - European Maritime, Fisheries and Aquaculture Fund (Regulation (EU) No 2021/1139)⁵⁹.

This vast *corpus iuris* conditions the activities of EU operators both in “EU waters” and in waters outside the jurisdictions of EU Member States. The EU legislation in this field furthermore applies in “EU waters” to fishing vessels flying the flag of, or registered in, a non-EU country (Article 1(2) of the CFP Basic Regulation). The above-mentioned regulations apply in line with the provisions of the 1982 **United Nations Convention on the Law of the Sea** (UNCLOS)⁶⁰ and international agreements supplementing and developing it.

One of the objectives of the above-mentioned regulations is to ensure the traceability, safety, and quality of FAPs sold in the EU. It also aims to ensure market stability, the availability of food products, and an adequate standard of living for the European fisheries and aquaculture sector. Specifically, Recitals 12 and 53 as well as Articles 2(1) and 5(e) of the CFP Regulation set as a priority objective to contribute to supplying the EU market with food of high nutritional value, and to reduce the dependence on food imports, in line with what is enshrined in **Articles 38 and 39 of the Treaty** (TFEU). The Recital 12 of the CFP Regulation furthermore mentions that the CFP “*should also foster direct and indirect job creation and economic development in coastal areas*”. According to Article 2(5)(c) of the CFP Basic Regulation direct and indirect creation of jobs and the economic development of coastal areas

⁵⁴ [Regulation \(EU\) No 2019/1241](#) of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005, OJ L 198, 25.7.2019, p. 105.

⁵⁵ [Regulation \(EU\) No 2017/2403](#) of the European Parliament and of the Council of 12 December 2017 on the sustainable management of external fishing fleets, and repealing Council Regulation (EC) No 1006/2008, 28.12.2017, p. 81.

⁵⁶ [Regulation \(EU\) No 1379/2013](#) of the European Parliament and of the Council of 11 December 2013 on the common organisation of the markets in fishery and aquaculture products, amending Council Regulations (EC) No 1184/2006 and (EC) No 1224/2009 and repealing Council Regulation (EC) No 104/2000, OJ L 354, 28.12.2013, p. 1.

⁵⁷ [Council Regulation \(EC\) No 1005/2008](#) of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing, amending Regulations (EEC) No 2847/93, (EC) No 1936/2001 and (EC) No 601/2004 and repealing Regulations (EC) No 1093/94 and (EC) No 1447/1999, OJ L 286, 29.10.2008, p. 1.

⁵⁸ Regulation (EU) 2023/2842 of the European Parliament and of the Council of 22 November 2023 amending Council Regulation (EC) No 1224/2009, and amending Council Regulations (EC) No 1967/2006 and (EC) No 1005/2008 and Regulations (EU) 2016/1139, (E) 2017/2403 and (EU) 2019/473 of the European Parliament and of the Council as regards fisheries control, OJ L, 2023/2842, 20.12.2023.

⁵⁹ [Regulation \(EU\) No 2021/1139](#) of the Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004, OJ L 247, 13.7.2021, p. 1.

⁶⁰ The United Nations Convention on the Law of the Sea [and of the Agreement on the Implementation of Part XI thereof](#), OJ L 179, 23.6.1998, p. 3.

should be promoted. Thus, these provisions seek to strengthen the EU's food security, the development of coastal areas dependent on fishing and the competitiveness of the European fisheries and aquaculture sector.

The CFP legislation therefore is a factor that clearly conditions the activity of European operators. Compliance by operators is ensured through a **fisheries control regime**, which is mainly developed in the new Fisheries Control Regulation (EU) No 2023/2842⁶¹. The control regime is complemented by Council Regulation (EC) No 1005/2008 on Illegal, Unreported and Unregulated (IUU) fishing⁶², Regulation (EU) No 2017/2403 on the management of external fishing fleets⁶³, and Regulation (EU) No 2019/473 on the European Fisheries Control Agency⁶⁴.

The **new Fisheries Control Regulation** reinforces and digitises control measures, to ensure a level playing field in the Member States as regards the judicial treatment of infringements to the CFP rules, a harmonised system of sanctions, and a fully transparent exchange of information contained in national registers between Member States in order to make them more effective. Furthermore, it provides for an extensive list of **measures for better control**: establishment of monitoring centres, the tracking of fishing vessels, catch reporting obligations, prior notifications, authorisations for transshipment in non-EU countries, publication of closures of fisheries, control of fishing capacities, national control programmes, control of recreational fisheries, controls of the supply chain of fisheries and aquaculture products, weighing of fisheries products, transport documents, landing declarations, sales notes and takeover declarations, inspections and audits, sanctions for infringements and access to data⁶⁵.

Moreover, new **advances in the digitisation** of the European fisheries and aquaculture sector and the application of **new technologies** are reinforcing the control mechanisms and measures that the European operators are subject to. In this regard, it is worth highlighting the new requirements set out in the new Fisheries Control Regulation, related to vessel monitoring systems (VMS) and electronic registration on all EU vessels, including the artisanal fleet, electronic registration of catches, on board cameras to ensure compliance with the landing obligation, review of sanctions, digital traceability, amongst others⁶⁶.

As a result, the EU fisheries and aquaculture operators are faced with an arsenal of demanding control measures that clearly condition their activities and may affect their competitiveness if a similar level of control is not applied to non-EU country operators whose products are imported into the EU market.

EU fisheries and aquaculture legislation also develops **in line with EU trade legislation** that channels its Common Commercial Policy (CCP), which sets the conditions for importing products that must be uniformly applied by Member States.

The EU has developed an extensive body of legislation on **health standards and controls aimed at consumer protection**. It is pertaining to food safety, traceability and prevention for fishery and

⁶¹ [Regulation \(EU\) 2023/2842](#) of the European Parliament and of the Council of 22 November 2023 amending Council Regulation (EC) No 1224/2009, and amending Council Regulations (EC) No 1967/2006 and (EC) No 1005/2008 and Regulations (EU) 2016/1139, (EU) 2017/2403 and (EU) 2019/473 of the European Parliament and of the Council as regards fisheries control

⁶² [Regulation \(EC\) No 1005/2008](#), *doc. cit.*

⁶³ [Regulation \(EU\) 2017/2403](#), *doc. cit.*

⁶⁴ [Regulation \(EU\) No 2019/473](#) of the European Parliament and of the Council of 19 March 2019 on the European Fisheries Control Agency, OJ L 83, 25.3.2019, p. 18.

⁶⁵ See the Article 1 of [Regulation \(EU\) No 2023/2842](#), which contains the amendments to the Regulation (EC) No 1224/2009, especially those related to the Articles 9 bis, 21, 33, 55, 56, 60, 68, 74, and 89-95.

⁶⁶ See the Article 1 of [Regulation \(EU\) No 2023/2842](#), which contains the amendments to the Regulation (EC) No 1224/2009, especially those related to the Articles 13, 17, 78.

aquaculture products, including animal feed and must be respected by EU operators. On the one hand, these aspects are highlighted in the Recital 16 of Regulation (EU) No 1380/2013 and, on the other hand, they are key elements of the Common Market Organisation (CMO), which defines marketing standards for fish produced or imported into the EU and relating to quality, freshness, size, etc. Such requirements must be respected by EU's fisheries sector for placing their products on the market and are complemented by labelling requirements for consumer information purposes.⁶⁷

As long as such measures do not apply equally to products imported from non-EU countries, they may significantly affect the competitiveness of the sector. The **CMO Regulation (EU) No 1379/2013** already refers to this possible situation when it explicitly states in Recital 4 that "*conditions for fair competition should be ensured, in particular through respect for sustainability and the application of social standards equivalent to those which apply to EU products*". In addition, Recital 18 emphasises that the **common marketing standards** should not only allow the market to be supplied with sustainable products in order to develop the full potential of the internal market in FAPs but should also "*facilitate marketing activities based on fair competition, thereby helping to improve the profitability of production*".

In this area of concern, legislation has been developed for **FAPs from non-EU countries** that are imported into the EU. It provides that these products must meet the **same requirements that apply to those of the European operators**, or requirements that are recognised as at least equivalent in relation to the objectives pursued by EU agri-food chain legislation (Article 11 of Council Regulation (EC) No 178/2002⁶⁸, and Article 19 of CMO Regulation (EU) No 1379/2013). The verification of this through official controls is of vital importance to ensure that the objectives of this EU legislation are achieved in practice across the EU.

The requirements for importing fishery and aquaculture products from non-EU countries, as well as the procedures for inspecting and authorising their access to the EU market are laid down in **Regulation (EU) No 2017/625** of the European Parliament and of the Council⁶⁹. It regulates **inspections** of food, both produced in the EU and imported, and includes **provisions for imported fishery products** (in addition to direct landings in EU's ports). The EU established a list of approved non-EU countries whose competent authorities provide appropriate guarantees as regards the compliance or equivalence with EU feed and food law and animal health rules. These provisions enable the competent authorities of these countries to inform the EU of which processing establishments and fishing vessels are authorised to export to the EU. These competent authorities may also delegate approval and inspection responsibilities to another non-EU country, for example a coastal country, provided that this country is also on the list of countries approved by the EU. The non-EU country has the obligation to ensure that the establishments referred to comply with the EU's requirements. It must carry out inspections and has the power to prohibit non-compliant establishments from exporting to the EU. It must also keep

⁶⁷ [Regulation \(EU\) No 1169/2011](#) of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004, OJ L 304, 22.11.2011, p. 18.

⁶⁸ [Regulation \(EC\) No 178/2002](#) of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, OJ L 31, 1.2.2002, p. 1.

⁶⁹ Regulation (EU) No [2017/625](#) of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 652/2014, (EU) No 2016/429 and (EU) No 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC, and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC, OJ L 95, 7.4.2017, p. 1.

the list up to date. The EC regularly sends inspection teams to these non-EU countries in order to check whether the applicable conditions are met (Articles 120-123 of the Regulation (EU) No 2017/625).

The above mentioned Regulation (EU) No 2017/625 establishes that different competent authorities **authorise and inspect FAPs** when being placed on the EU market. Depending on the case, these authorities are of the Member States or of the non-EU countries. It is worth mentioning that the FAPs of the Member States are not subject to the same health controls as those from non-EU countries. While compliance of EU FAPs with EU normative framework is the responsibility of the Member States, for imported fish, the Commission asks non-EU countries to decide which establishments are authorised to export fishery products to the EU, provided that equivalent standards can be guaranteed. The question is whether the guarantees provided by some non-EU countries are sufficient and appropriate. If this would not be the case, the traceability and quality of these imports would be seriously undermined, thereby distorting competition and eroding the competitiveness of thoroughly controlled EU operators and products.

Traceability provisions for products of animal origin include measures established through Regulation (EC) No 178/2002⁷⁰, and the respective Implementing Regulation (EU) No 931/2011⁷¹. These require EU operators to register a specific set of information, to make it available to the competent authorities upon request and to transmit it to the operator to whom the fishery or aquaculture product is supplied. The purpose of this is to ensure **food safety** and facilitate **consumer protection**. In addition, it introduces a unique identifier of the fishing trip in order to link a specific lot of fishery products to a specific landing by EU operators of the same geographical area concerned. This information must be available from the first sale up to the retail stage in order to guarantee an accurate information on the species and the origin of the FAPs for consumers. Moreover, Article 58(1) of the Regulation (EU) No 2023/2842 provides for that the origin of all lots of FAPs are fully traceable from catch or harvest to the retail phase.

EU border inspection posts must ensure the application of the EU's **sanitary and phytosanitary (SPS) legislation**. A stringent system of official controls applies to both intra-EU traded products and FAPs imported from non-EU countries. It guarantees that all products comply with the legal requirements, regardless of their origin. Imported FAPs must be accompanied by a health certificate issued by the competent authority of the country of origin. It is the official document between the exporting country and the EU. It shall guarantee that imported FAPs from non-EU countries comply with the EU legislation on **food safety** and **hygiene of foodstuffs** of animal origin (Regulation (EC) No 178/2002⁷², Regulation (EC) No 853/2004⁷³, and Regulation (EU) No 2017/625⁷⁴).

However, as the EP points out in its resolution of 30 May 2018 on the implementation of control measures for establishing the conformity of fisheries products with access criteria to the EU market (point 11)⁷⁵, it is often not properly checked whether these products from non-EU countries comply with the fishing, production, and marketing conditions according to EU standards. **Shortcomings and loopholes in customs controls** have been identified by the European Court of Auditors (ECA) in its

⁷⁰ [Regulation \(EC\) No 178/2002](#), Article 18.

⁷¹ [Commission Implementing Regulation \(EU\) No 931/2011](#) of 19 September 2011 on the traceability requirements set by Regulation (EC) No 178/2002 of the European Parliament and of the Council for food of animal origin, OJ L 242, 20.9.2011, p. 2.

⁷² [Regulation \(EC\) No 178/2002](#), doc. cit.

⁷³ [Regulation \(EC\) No 853/2004](#) of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin, OJ L 139, 30.4.2004, p. 55.

⁷⁴ Regulation (EU) No [2017/625](#), doc. cit.

⁷⁵ P8_TA(2018)0223. OJ C 76, 9.3.2020, p. 54.

Special Report No. 19/2017⁷⁶ and by the Commission in its Implementation report on the CMO Regulation of 21 February 2023⁷⁷. These loopholes favour illegal imports that distort competition. As paying less customs duties is a commercial advantage for these exporters, they can import their products into the EU market at a lower cost. This creates unfair competition with EU production, undermining the competitiveness of the EU fisheries and aquaculture sector.

5.1.2. Preventing access of suspected IUU fishing products

In relation to access of foreign FAPs into the EU market, reference should also be made to Regulation (EU) No 1026/2012 on **non-sustainable fishing**⁷⁸, allowing the EU to ban imports from countries that do not cooperate in the management of fish stocks of common interest (Article 4(1)). Reference should also be made to Regulation (EC) No 1005/2008 on **IUU fishing**⁷⁹ in relation to the control of the origin of imported fishery products. This Regulation applies to all imported marine fishery products, whether processed or not, originating from non-EU country fishing vessels by any means of transport. It also applies to catches from EU fishing vessels destined for export to non-EU countries. Transshipments and processing operations are covered by the IUU catch certification scheme, supported by a digital system, called "CATCH". It aims to record the origin of all seafood products reaching the EU market: i.e. who caught it, where it was caught, how much was caught, when it was caught and the fishing gear in which it was caught. Finally, the scheme attempts to ensure that all these activities were carried out in accordance with a verifiable regulatory framework.

Furthermore, Article 4 of the new Fisheries Control Regulation⁸⁰ on the amendments to Regulation (EU) 2017/2403, includes Article 12a related to the integrated computerised information management system for the **catch certification scheme**, which sets out that the *"exchange of information, data and documents in relation to the importation, re-exportation and, where relevant, exportation of fishery products and related checks, risk management, verifications and control, as well as in relation to documents [...] such as importer declarations, catch certificates, re-export certificates, statements, applications or decisions, between the importer, the re-exporter and, where relevant, the exporter and the competent authorities of Member States, between the competent authorities of Member States or between the competent authorities of Member States and the Commission as provided for in this Regulation, shall be made using CATCH"*.

5.1.3. Working conditions and other labour aspects

Labour legislation, training, and vessel safety also condition the fishing and aquaculture activities of EU operators. The objectives of the CFP include, among other things, contributing to the improvement of safety and working conditions for operators in the fisheries sector (Recital 15 of Regulation (EU) 1380/2013). This objective is in line with Article 3(3) TEU, which defines the EU as a social market economy *"aiming at full employment and social progress"*. In its development, the EU has endowed itself with a **rich labour legislation** (Article 4(2)(b) TFEU) that also affects EU fishing and aquaculture operators. As far as these operators are concerned, this legislation takes into consideration

⁷⁶ European Court of Auditors (2017), "Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU, [Special Report No. 19](#), 2017, pp. 11 and 12.

⁷⁷ Report from the Commission to the European Parliament and the Council Implementation of Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products, [COM \(2023\) 101 final](#), 21.2.2023.

⁷⁸ [Regulation \(EU\) No 1026/2012](#) of the European Parliament and of the Council of 25 October 2012 on certain measures for the purpose of the conservation of fish stocks in relation to countries allowing non-sustainable fishing, OJ L 316, 14.11.2012, p. 34.

⁷⁹ [Regulation \(EC\) No 1005/2008](#), *doc. cit.*

⁸⁰ Regulation (EU) 2023/2842 of the European Parliament and of the Council of 22 November 2023 amending Council Regulation (EC) No 1224/2009, and amending Council Regulations (EC) No 1967/2006 and (EC) No 1005/2008 and Regulations (EU) 2016/1139, (E) 2017/2403 and (EU) 2019/473 of the European Parliament and of the Council as regards fisheries control, OJ L, 2023/2842, 20.12.2023.

the provisions of the **Maritime Labour Convention** (ratified by 25 EU Member States, transposed by Directive 2009/13/EC)⁸¹ and on **ILO Convention No. 188** as regards the conditions for working in the fishing sector (ratified by eight Member States; partially transposed by **Directive (EU) 2017/159**)⁸². Others refer to ship construction and navigability – covered by the **Safety of Life at Sea Convention** for seafarers (ratified by all Member States) and the **Cape Town Agreement** to enhance fishing safety (ratified by nine Member States⁸³; only transposed for vessels over 24 metres in length by **Directive 97/70/EC**)⁸⁴.

There are also other rules on training and certification inspired by the International Convention on **Standards of Training, Certification and Watchkeeping for seafarers (STCW)** (ratified by all Member States; transposed by several directives) and the International Convention on **Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F)** (ratified by ten Member States⁸⁵; not transposed into the body of EU law). These rules, which include high labour, safety, and training standards, obviously condition the activity of EU operators. If similar requirements are not applied to the fleets of non-EU countries exporting their products to the EU market, this impedes the competitiveness of EU operators. These issues become apparent when competition takes place with fleets where there are cases of forced labour, i.e. coercive labour practices where an individual is required to perform work or services for which he or she does not volunteer⁸⁶. For example, situations of salary withholdings, long working hours, under threat of the use of force, debt bondage, for very low pay, and without adequate health and safety conditions. In many cases, these abuses may go unnoticed due to the remoteness of fishing activities.

This is reflected in a **Commission proposal for a new regulation on ‘prohibiting products made with forced labour’** to enter the EU market (2022/069 (COD))⁸⁷, see Recital 14 and Article 3). This prohibition applies, *inter alia*, to products for which forced labour has been used at any stage of their production, manufacture, harvest, or extraction, irrespective of sector or origin (Recital 16, and Article 2(g)), which would therefore also include fishery and aquaculture products.

5.1.4. Due diligence

In relation to the negative impact that the activities of fishing and/or aquaculture companies marketing their products in the EU may have on human rights (in particular, on the rights of workers to fair remuneration, decent working conditions, and health and safety at work), the increasingly established obligation of companies to exercise due diligence with respect to human rights and the environment comes into play. Indeed, since 2011, when the **United Nations Human Rights Council** adopted the **United Nations Guiding Principles on Business and Human Rights**⁸⁸, we have witnessed an

⁸¹ [Council Directive 2009/13/EC](#) of 16 February 2009 implementing the Agreement concluded by the European Community Shipowners' Associations (ECSA) and the European Transport Workers' Federation (ETF) on the Maritime Labour Convention, 2006, and amending Directive 1999/63/EC, OJ L 124, 20.5.2009, p. 30.

⁸² [Council Directive \(EU\) 2017/159](#) of 19 December 2016 implementing the Agreement concerning the implementation of the Work in Fishing Convention, 2007 of the International Labour Organisation, concluded on 21 May 2012 between the General Confederation of Agricultural Cooperatives in the European Union (Cogeca), the European Transport Workers' Federation (ETF) and the Association of National Organisations of Fishing Enterprises in the European Union (Europêche), OJ L 25, 31.1.2017, p. 12.

⁸³ Namely; Belgium, Croatia, Denmark, Finland, France, Germany, Portugal, The Netherlands, and Spain.

⁸⁴ [Council Directive 97/70/EC](#) of 11 December 1997 setting up a harmonised safety regime for fishing vessels of 24 metres in length and over, OJ L 34, 9.2.1998, p. 1.

⁸⁵ Namely: Denmark, France, Latvia, Lithuania, the Netherlands, Poland, Portugal, Romania, and Spain.

⁸⁶ ILO definition of forced labour according to the ILO Forced Labour Convention, 1930 (No. 29).

⁸⁷ Proposal for a Regulation of the European Parliament and of the Council on prohibiting products made with forced labour on the Union market, COM(2022) 453, [2202/0269 \(COD\)](#), 14.9.2022. For more details on the ordinary legislative procedure, see the [Legislative Observatory](#).

⁸⁸ UN Human Rights Council Resolution 17/4 “Human rights and transnational corporations and other business enterprises”, [A/HRC/RES/17/4](#), 16 June 2011.

evolution from the affirmation of standards with a merely incentive or voluntary value to the progressive adoption of national⁸⁹, international⁹⁰ and EU standards that are legally binding and mandatory.

As part of this trend, the **European Commission proposed** in February 2023 a **directive on corporate sustainability due diligence** (2022/0051(COD))⁹¹, which aims to ensure that companies operating in the internal market take measures to identify, prevent, mitigate, eliminate, and remedy adverse impacts on human rights and the environment caused by their own activities, those of their subsidiaries or those of their value chains (Recital 6 and Article 1). This proposal for a directive is part of the EU's policies and strategies to promote decent work in the world, including global value chains (fisheries and/or aquaculture), as set out in the Commission's **Communication on decent work** in the world (COM(2022) 66 final)⁹².

This proposal for a directive, which is at an advanced stage in the legislative process⁹³, is aimed at large companies, but will also affect micro, small and medium-sized enterprises, including many companies related to fisheries and aquaculture, in the sense that they may be subsidiaries or enter the value chains of large companies, even those whose headquarters are outside the EU (Article 2). In this context, and as added in the proposed Directive (Recital 17), for the duty of vigilance to be truly effective, it must refer to the negative impacts on human rights and the environment that occur throughout the cycle of production, use and disposal of products or provision of services, at the level of the companies' own activities and those of their subsidiaries and their value chains. In addition, the proposal for a directive includes fishing and aquaculture and the marketing of products derived from them among the sectors identified as having a high impact (Recital 26 and Article 2(1)(ii)).

The EU legislation on corporate due diligence also aims to create a level playing field for EU and non-EU companies both from the EU and of non-EU countries operating in the EU market (point 1 of the Explanatory Memorandum and Article 2). In this sense, when this European legislation on due diligence enters into force, it will also apply to fishing and/or aquaculture companies involved in the value chain of companies marketing their products in the EU (Articles 1(a) and 3(g)). In our opinion, this requirement must be considered by the EU authorities in the implementation of their trade policy so that in the event of non-compliance they can apply the mechanisms they deem appropriate, including the withdrawal of preferential access for these products. Thus, compliance with the due diligence obligation could be a condition for access to the internal market, requiring operators to provide evidence that the FAPs they intend to place on the internal market comply with the obligation to respect human rights through the exercise of due diligence.

5.1.5. Resource availability and fisheries management

The EU sets strict **conservation and management measures** (CMMs) to regulate the fishing activities of its fleets and restrict access to fish resources and fishing grounds. The state of resources and the restrictions imposed can affect the competitiveness of the fishing sector and lead to shortages of wild

⁸⁹ For example, in France (Loi n° 2017-399, 27 mars 2017 relative au devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre, JO du 28 mars 2017), Germany (Sorgfaltspflichtengesetz, 2021) or The Netherlands (Wet zorgplicht kinderarbeid, 2019), etc.

⁹⁰ See: [Updated draft legally binding instrument to regulate, in international human rights law, the activities of transnational corporations and other business enterprises](#), July 2023.

⁹¹ Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937, [COM\(2022\) 71 final](#), 2022/0051(COD), 23.2.2022.

⁹² Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee on decent work worldwide for a global just transition and a sustainable recovery, [COM\(2022\) 66 final](#), 23.2.2022.

⁹³ After a long process that started with the European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate responsibility ([2020/2129\(INL\)](#)), and the publication of the above mentioned [COM\(2022\) 71 final](#), on 14 December 2023 the [European Parliament](#) and the [Council](#) have separately announced the provisional agreement reached on the future directive on corporate due diligence on sustainability. See Sobrino-Heredia (2023).

fish, which could be met by imports from non-EU countries. Two examples are given below to illustrate how the state of resources may require hard decisions on resource exploitation. This is particularly relevant for **groundfish species**, which enjoy a strong preference among EU consumers.

There are **two stocks of cod in the Baltic Sea** - the Western and the Eastern stock. The Eastern Baltic cod stock has historically been much larger than the neighbouring Western stock, from which it is biologically distinct. The International Council for the Exploration of the Seas (ICES) classified the **Western Baltic cod stock as collapsed in 2016**. The cause of the collapse was well understood: for many years, catches were significantly higher than the levels recommended by ICES. Currently, the Western Baltic cod stock is showing signs of very low biomass levels. The size of spawning stock is below MSY (maximum sustainable yield) $B_{trigger}$, B_{PA} , and B_{lim} . No reference points for fishing pressure have been defined for this stock (ICES, 2023 a). The **Eastern stock is an even worse situation**, its population has collapsed, and ICES advice remains at **zero catches from 2020 to 2024** (ICES, 2023b).

From 2023, the **North Sea cod** is part of a combined ICES assessment of the former North Sea (cod.27.47d20) and the West of Scotland (cod.27.6a) cod stocks. This new northern shelf cod stock has been divided into **three** reproductively **isolated substocks**: north-western, Viking, and southern cod. Fishing pressure on all three substocks is above F_{MSY} and spawning stock size is below MSY $B_{trigger}$ for southern and Viking substocks and above MSY $B_{trigger}$ for the north-western sub-stock (ICES, 2023c). The **North Sea cod** stock is considered to have a reduced reproductive capacity and **exploitation is unsustainable**. The North Sea cod stock was subject to a recovery plan until 2008, and a management plan since 2008, which has been amended several times. In **July 2018**, the EU agreed on a **multiannual management plan (MAP)** for demersal fisheries in the North Sea. However, the plan has not been accepted by Norway and the UK. Details of the plan can be found in Regulation (EU) 2018/973⁹⁴ (ICES, 2023 d).

European hake is widely distributed throughout the north-east Atlantic. Two stocks are defined in the relevant ICES area: the northern stock and the southern stock. Both support a major commercial fishery in European Atlantic waters, which began in the eighteenth century (Casey and Pereiro, 1995). Due to the critical state of the **northern stock** during the twentieth century, an emergency plan was introduced in June 2001 (Regulation (EC) 1162/2001⁹⁵) to assist its recovery. Finally, a recovery plan for the northern stock of European hake was implemented in 2004 under Council Regulation (EC) No 811/2004⁹⁶ (Murua, 2010). The objective of this recovery plan was to increase the spawning biomass to a level equal to or greater than 140 000 tonnes (B_{PA}) in two consecutive years. Once the target level has been reached, the EC would introduce follow-up management measures to replace the recovery plan. As a result of the **recovery and management plans** implemented, the spawning stock biomass reached a historic high in 2015. Based on the **stock assessment** carried out in **2023**, the state of Northern hake is expected to be within **safe biological limits**, with fishing pressure on the stock below F_{MSY} and spawning stock size above MSY $B_{trigger}$ (ICES. 2023e).

Due to the sharp decline in spawning biomass during the 1990s, the state of the **southern stock** of European hake was considered critical, and a recovery plan was introduced in December 2005 to

⁹⁴ [Regulation \(EU\) 2018/973](#) of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 676/2007 and (EC) No 1342/2008, OJ L 179, 16.7.2018, p. 1–13.

⁹⁵ [Commission Regulation \(EC\) No 1162/2001 of 14 June 2001 establishing measures for the recovery of the stock of hake in ICES sub-areas III, IV, V, VI and VII and ICES divisions VIII a, b, d, e and associated conditions for the control of activities of fishing vessels, OJ L 159, 15.6.2001, p. 4–9.](#)

⁹⁶ [Council Regulation \(EC\) No 811/2004](#) of 21.4.2004 establishing measures for the recovery of the Northern hake stock, OJ L 150, 30.4.2004, p. 1–11

rebuild the stock (see Council Regulation 2166/2005⁹⁷). The objective of the **recovery plan** for Southern hake was to increase the level of spawning biomass to at least 35 000 tonnes (B_{PA}) in two consecutive years within a 10-year period. Today, based on the **stock assessment** carried out in **2023**, the Southern hake stock is **within safe biological limits**, with fishing pressure on the stock below F_{MSY} , and spawning stock size is above $MSY B_{trigger}$ (ICES. 2023f). The recovery of these stocks shows how effective CMM can be in rebuilding fish populations. However, the restrictions applied in the past may have allowed foreign products to enter the EU market, which are now strong competitors for European hake and other groundfish species on the domestic market.

In the following years, **fisheries targeting demersal species** will face **new access restrictions**. Based on ICES advice, the EC announced in September 2022 the **closure of 87 vulnerable marine areas in EU waters to bottom fishing** (Regulation (EU) 2022/1614)⁹⁸. The total area of the closures is 16 419 km² reserved for the protection of vulnerable marine ecosystems (VMEs) between 400 and 800 metres deep. The closures apply to **vessels using bottom gears**, namely bottom trawls, dredges, bottom-set gillnets, bottom-set longlines, pots and traps. In addition, the Commission Communication **COM(2023) 102 final** published on 21 February 2023 mentions the **phasing out of 'bottom fishing' in MPAs by 2030**, which is likely to affect not only beam and bottom trawling, but also generally well-managed dredge fisheries in several Member States, e.g. clams in Italy: king scallops in France, among others⁹⁹.

There are also potential **emerging sectors**, e.g. **offshore energy** may affect the competitiveness of traditional sectors such as fisheries and aquaculture. **Marine Spatial Planning (MSP)** is emerging as a tool to reduce conflicts and create synergies between different activities. However, MSP may mean that **fishing and aquaculture activities are restricted** in some areas, affecting market supply and prices. This is particularly relevant for **small-scale fishers** who would not be able to move to target resources in other fishing grounds. Other measures are aimed at protected, endangered and vulnerable marine species, as recently decided by the French Council of State in the **Bay of Biscay fisheries** to avoid by-catches of **dolphins and porpoises**¹⁰⁰. These measures may also affect the competitiveness of fishing activities by limiting access to certain areas.

5.1.6. Barriers to fishing operations

Fishing in the EU is considered costly due to factors such as the **strict regulatory framework**, working conditions and quality standards. In the first case, the EU's commitment to **sustainable fishing limits** access to resources through strict regulation. A system of **TACs and quotas** is in place to ensure that fishing takes place within safe biological limits. TACs are set per stock and then allocated to Member States according to the principle of relative stability. Member States in turn allocate quotas to the various fishing fleets. Any reduction in the TACs, based on the state of the stocks and scientific advice, implies a change in the quotas allocated to Member States. Limited availability of fish can lead to higher operating costs and consequently higher prices. In addition, fishers must comply with **strict reporting**

⁹⁷ [Council Regulation \(EC\) No 2166/2005](#) of 20 December 2005 establishing measures for the recovery of the Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian peninsula and amending Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms, OJ L 345, 28.12.2005, p. 5–10.

⁹⁸ Commission Implementing Regulation (EU) 2022/1614 of 15 September 2022 determining the existing deep-sea fishing areas and establishing a list of areas where vulnerable marine ecosystems are known to occur or are likely to occur, OJ L 242, 19.9.2022, p. 1–141.

⁹⁹ See EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. [COM\(2023\) 102 final](#). 21.2.2023.

¹⁰⁰ <https://www.conseil-etat.fr/en/news/accidental-capture-of-small-cetaceans-the-government-must-act-within-six-months-to-ensure-the-survival-of-dolphins-and-porpoises-in-the-bay-of-biscay>.

requirements. There is also a robust system of **monitoring, control and surveillance** (MCS), which imposes strict conditions on the fleets and a system of penalties.

Regulations such as the **landing obligation** (LO) result in increased fuel consumption due to the need to land fish that cannot be traded, which may mean more trips. There may also be an increase in crew, ice and on board fuel costs due to the need to handle fish that would otherwise be discarded. In turn, the additional cost of fuel can have a significant impact on fishing operations. This is a significant expense, particularly for vessels that have to travel long distances to find more marketable fish, or when quotas for some of the species targeted are exhausted. The small-scale fishing fleet may be more affected than other fleets under the LO (Fitzpatrick et al. 2019).

According to Guillen et al. (2023), the EU fleet is **fuel intensive** and **highly dependent on fossil fuels**. Thus, the economic performance of the EU fleets depends on fuel prices, even if they benefit from the fuel tax exemptions (Carvalho and Guillen, 2021). As a result of the war in Ukraine, fuel prices increased, peaking at EUR 1.2 per litre in June 2022, around three times the normal average price. Energy costs raised from 13% in 2020 to 35% in 2022.¹⁰¹ This has a negative impact on the economic performance of the EU fleet, although the EC has **activated the crisis mechanisms** of the European Maritime, Fisheries and Aquaculture Fund (**EMFAF**) and amended the European Maritime and Fisheries Fund¹⁰² (**EMFF**). The decarbonisation of the fishing fleet is one of the EC's objectives. The aim is to develop a more **energy efficient and environmentally friendly fleet**, while reducing fuel costs¹⁰³. It appears that one of the constraints on the use of more energy efficient engines is that they require an increase in vessel capacity in terms of gross tonnage (GT). This would require changes to the **regulatory framework on fishing capacity limits**.

The EU has adopted various measures to **tackle climate change** through its **decarbonisation** roadmap, known as the **European Green Deal** (EGD). This initiative consists of a series of proposals to adapt climate, energy, transport and fiscal policies with the aim of reducing greenhouse gas (GHG) emissions by 55% by 2023 compared to 1990 levels and making the **EU carbon neutral by 2050**. In other words, the aim is to achieve a sustainable economy by implementing an environmentally friendly model that promotes new job opportunities and creates market niches. The fishing industry is particularly affected because of its heavy reliance on fossil fuels. **Reducing GHG emissions is a challenge**, especially when it comes to ensuring the profitability, resilience and sustainability of fisheries.

However, current **air pollution** regulations appear to be **disconnected from coastal fisheries**, or at least from most of the EU fishing fleet, in terms of their impact on fishing operations. **Maritime pollution** is regulated by the International Maritime Organization (**IMO**), and emissions such as SOx and NOx are limited in all areas, but more so in **Emission Control Areas** (ECAs), which are linked to the sulphur content of fuels and the amount of fuel oil used. **GHG emissions are verified** through Ship Energy Efficiency Management Plans (SEEMP I), the Energy Efficiency Design Index and the Energy Efficiency eXisting ships Index, but these are only mandatory for ships of 400 GT and above engaged in international trade; SEEMP II and III are required for ships of over 5 000 GT (see Marpol Annex VI, Chapter 4). At present, environmental **regulations on marine pollution in fisheries** have **no impact on operating costs** and therefore on fish prices and markets. Prices of fish products are likely to be

¹⁰¹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. On the Energy Transition of the EU Fisheries and Aquaculture sector. [COM\(2023\) 100 final](#). 21.2.2023.

¹⁰² General Secretariat of the Council (2022). Energy transition of the EU's fisheries and aquaculture sector, Information note, Brussels, 15 November 2022. (OR. en). [14780/22. PECHE 461](#).

¹⁰³ See: Scholaert, F. (2023). Energy transition in the EU fisheries and aquaculture sector, EPRS, European Parliament, Brussels, June 2023. [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2023\)747916](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2023)747916)

affected by, among other things, rising fuel costs, which are more related to energy efficiency than to environmental restrictions. Nevertheless, there are EC plans to **decarbonise the fleet**, which would require investment. However, these investments will be financed by the **EMFAF** and other funds, such as the European Regional Development Fund (**ERDF**), to make the **fleet more energy efficient** and environmentally friendly, while at the same time reducing fuel costs. In turn, the possible removal of the fossil fuel tax exemption under the EGD and the revision of the Energy Taxation Directive (ETD) would facilitate the reduction of GHG emissions and the improvement of energy efficiency. The **adaptation of the EU fleets** to a scenario without energy tax exemptions and the resulting increase in fuel costs appears to be **rather limited in the short term** (Carvalho and Guillen, 2021).

Generational replacement is also an issue for the competitiveness of EU fleets, as crews are ageing, and recruitment of new fishers is low. According to STECF (2019), 58% of EU fishers are aged between 40 and 64. This is also a concern for the EP, which has produced an own-initiative report¹⁰⁴ on attracting a new generation of workers to the fishing industry. The report highlights that the future of EU fisheries faces a number of environmental, economic and social challenges. Action would therefore be needed to address employment issues, in particular the generational renewal of workforce in the fisheries and aquaculture sector. The **lack of workers in the sector is critical** to its competitiveness. It is also necessary that these workers are **technically qualified** and have **digital skills**, as required by technological needs throughout the value chain.

5.1.7. Barriers to aquaculture growth

The EU aquaculture sector faces a number of **constraints and barriers to growth**. Some of these constraints are of a sectoral and infrastructural nature: the **fragmentation** of the sector, higher **production costs** compared to other countries, **strict regulations**, lack of **space**, limited **access to water**, difficulties in obtaining **licences**, and access to **finance**. Others are related to **production costs**, such as food, repairs and maintenance, quality seeds, labour, and competition from non-EU countries (Gutiérrez et al. 2020). **Stringent environmental** and **food safety regulations**, and inefficient and flexible **command and control policies** that **limit innovation** have been identified as factors limiting aquaculture growth in the EU (Naylor et al. 2023). Puzzkarski and Sniadach (2022) highlighted that the current **EU legislation** on the rearing of fish and other marine organisms from aquaculture is **inadequate** and does not provide a comprehensive set of rules to meet modern needs, as it is based on general principles that have been adopted in EU secondary legislation for animal husbandry, which is mainly land-based. They also pointed out that the **policy instruments** used so far by the EC to implement sustainable aquaculture are mainly **based on communications**. However, aquaculture, as one of the food production methods promoted in the EU, is increasingly covered by binding legislation. There is therefore a strong case for **reviewing EU aquaculture legislation** on the conditions under which fish and marine organisms are reared. For its part, the Aquaculture Advisory Council (**AAC**) reiterated its **concern** that the main **EU instruments** to facilitate the development of aquaculture are **non-binding**, for example, strategic guidelines, Member States' multi-annual national strategic plans, the exchange of information and best practices between Member States, among others. The AAC believes that the **lack of growth** in the EU aquaculture sector is a direct consequence of the **lack of an ad hoc aquaculture policy**¹⁰⁵.

¹⁰⁴ European Parliament resolution of 16 September 2021 on Fishers for the future: Attracting a new generation of workers to the fishing industry and generating employment in coastal communities (2019/2161(INI))

¹⁰⁵ Letter of the chair of the AAC to Ms Al Khudhairi, Director for Maritime Policy and Blue Economy at DG MARE (17.04.2023): https://aac-europe.org/wp-content/uploads/2023/08/CFP-letter-Ms-Khudhairi_17042023.pdf

The **stagnation of the EU aquaculture** sector can largely be explained by a **decline in the aquaculture production of mussels**. The meat of this species is a low-fat, low-calorie food with a very competitive price. Demand for mussels is expected to increase in the coming years (Bene et al. 2015; Guillen et al. 2019). In addition, there is a wide variety of mussel products (e.g. frozen, canned, ready-to-eat products, etc.), and opportunities to access to new consumers and market niches (Goulas et al. 2005; Bernárdez and Pastoriza 2011). The decline in the EU mussel production may be due to environmental rather than economic factors. Harmful algal blooms (red tides), the lack of spat, bad weather, predators, diseases, and parasites, among others, have often led to a declining production (in quantity and quality). But they have also led to an increase in production costs per unit of product. In the EU, producers have not been able to translate higher costs into higher ex-farm prices, largely due to the high atomisation of the sector, typically in the raft, longline and 'bouchot' segments. On the other hand, enterprises using bottom culture tend to be larger and better capitalised, with a higher degree of vertical integration. There is therefore a need to improve ex-farm prices, not only to increase profitability, but also to enable mussel farmers to increase in production.

Avdelas et al. (2021) identified the main **bottlenecks and opportunities for the expansion and economic viability of offshore mussel aquaculture** in the EU. The main weaknesses identified are the low price of mussels, the fragmentation of the sector (small or micro-enterprises), the lack of suitable space to expand or establish new farms, and the difficulty of obtaining production permits. In turn, there are a number of environmental threats namely algal blooms, bad weather, diseases, predators, poor water quality and pollution, which can have a negative impact on mussel production. The decline in the availability of spat is also a critical issue for the long-term sustainability of mussel productions. In contrast, a wide variety of marketable mussel products, a lower environmental impact, the ability of mussels to improve water quality, carbon sequestration, and the potential to provide cheap and nutritious food for a growing population, are seen as strengths that can promote mussel farming. In addition, the European mussel sector could benefit from several opportunities that would support its development: product certification, access to EU funding, growing consumption, product diversification, Marine Spatial Planning (MSP), offshore and **integrated multitrophic aquaculture (IMTA)**.

Current technologies for **offshore mussel production are less profitable** than traditional farming (bottom culture or rafts), and new strategies are being investigated, such as multi-use platforms, where mussel farming can be combined with offshore wind energy or even IMTA (Jansen et al. 2016; van den Burg et al. 2017). Co-culture of mussels with seaweed in offshore infrastructure (e.g. longlines, multi-use) may be appropriate, as it allows for more efficient use of marine space and infrastructure, as well as product diversification. IMTA helps to reduce the environmental costs of aquaculture by integrating extractive species (e.g. mussels and/or seaweed and/or fish) into existing fed monoculture operations, which can potentially increase farm profits in the EU. The public has a positive perception of IMTA, which is reflected in the willingness to pay a premium price for its products. This may further increase the profitability of adopting IMTA in the EU (Knowler et al. 2020; Carras et al. 2020). Although mussel aquaculture production systems can have a (low) impact on the environment, the degree of impact should be discussed on a case-by-case basis in order to find an optimal trade-off between food security, economic activity and nature conservation.

Seabass and seabream are mainly produced in the **Mediterranean**. The objective of a responsible and sustainable Mediterranean aquaculture sector has promoted the implementation of national and regional regulations in line with international policies and initiatives such as the IUCN (2009) and GFCM (2009) recommendations and the ecosystem approach to aquaculture (EEA). The main tools used to promote these are environmental impact assessments (EIAs), MSP, allocated zones for the

establishment of aquaculture (AZA), environmental monitoring programmes (EMPs) and conflict resolution processes. These are implemented to varying degrees by the main Mediterranean finfish producing countries and in some cases by regional governments, e.g. in Croatia and Spain. There are further restrictions on aquaculture activities in some specific areas (e.g. Natura 2000, certain sensitive habitats or archaeological areas). Each country (region) usually has its own development strategies and therefore spatial planning may differ between countries (regions). The integration of AZA, EIA, aquaculture thresholds and monitoring systems into national policies are in place to assess the environmental impact of aquaculture. In Member States, EIA is required as part of the licensing process (establishment of farms). Due to their complexity and requirements, licensing and administrative procedures remain one of the main barriers to the development of aquaculture in the Mediterranean (Galparsoro et al., 2020). In turn, the quality status of the marine environment concerned is ensured by national marine water regulations and established aquaculture monitoring programmes. Thresholds and indicators are not homologous between Mediterranean countries. Other factors, such as the "carrying capacity" of a system, which is crucial for the development and sustainability of aquaculture (Karakassis et al., 2013), are only included in the legislation of Greece and France. The relocation of fish farms to the sea and a better allocation of fish cages in the framework of sustainability tools (e.g. AZA, EMP) benefits fish production by allowing larger cages and improving water quality for fish farming.

A **policy-driven economic development of aquaculture** has been observed in **several Mediterranean countries**. The decline in finfish production from 2018 to 2020 could be due to the economic impact of the COVID-19 pandemic or to extreme weather events. In addition, the adaptation to environmental policies and the implementation of new technologies have led to the closure of many small farms and the readaptation of the sector at national level. However, although the financial and economic crisis has had a negative impact on the aquaculture sector, established good practices and growing market demand have prevented the collapse of the aquaculture industry. For example, AZA provides an important tool for site selection and allocation to avoid conflicts with other uses, which remains one of the main problems for aquaculture growth (Cavallo et al., 2021). Papageorgiou et al. (2021) argued that the growth of the Mediterranean finfish sector is due to the adoption of more sustainable and environmentally friendly regulations, triggered by technological developments. They highlighted that existing guidelines and recommendations for good aquaculture practice (IUCN, EU, FAO-GFCM) should be harmonised across countries.

The **growth of the finfish sector**, although positive since 2008, has been slow due to production cycles and profitability. Despite technological development and increased production, operating costs (cost per kg produced) have increased over time, mainly due to the increase in feed, fingerlings and energy costs. Thus, in contrast to non-EU countries such as Egypt, Tunisia and especially Turkey, where production has increased, EU production has been stagnated since 2014 (**Figure 10**). The seabream and seabass sector has traditionally been characterised by periods of oversupply, leading to falling prices on the consumer markets, with a negative impact on the medium and long-term profitability of the industry. In Turkey, for example, the continued depreciation of the lira has allowed producers to better withstand price falls. Llorente et al. (2020) confirmed the positive effect of farm size on the profitability of seabass and seabream farms in the Mediterranean. This is a result of horizontal integration, which involves a reduction in the number of companies and an increase in fewer and larger companies, which generate economies of scale and lower average production costs. Technical improvements, such as the design and materials used in floating cages, have made it possible to increase their number and size and to install them offshore, leading to an increase in aquaculture production. In turn, companies in Spain and Italy have committed to vertical integration towards processing, differentiation and marketing activities that increase value added.

Long-term strategies, such as increasing production efficiency through innovation, are foreseen to **improve the competitiveness of the finfish sector**. Reducing production costs should increase economic margins and make profitability less dependent on production volumes. This, together with the diversification of products and markets, should help to reduce the risks associated with fluctuations in supply and price reductions (Guillen et al., 2019). Despite the observed increase in concentration, there are still a large number of small and medium-sized enterprises, which are characterised by lower production volumes but socio-economic and environmental relevance. Differentiation is a key strategy for their competitiveness. These strategies can be based on higher product quality, supplying local markets and the HORECA sector, exporting to new markets and innovation in processing and packaging. The strengthening of policies to support SMEs is therefore encouraged (Llorente et al., 2020). The use of public funds (e.g. EMFAF) is encouraged to support innovation and collaboration between industry and the public sector. For example, Llorente et al. (2020) recommend focusing on increasing the value of production rather than the quantity produced. A positive development of SMEs in the seabass and seabream sector would be to increase the value of their production by improving product quality, nutritional value of the products, food safety, new products and opening up new markets, among others. Overall, the vertical integration of fish producers, processing industry and marketing is also proposed to maintain the economic viability of the sector. This can also support better control of the product, ensuring traceability (Llorente et al., 2020). In turn, technological developments such as artificial breeding and seed production techniques and the expansion of aquaculture to offshore locations are foreseen as key aspects to increase the profitability and opportunities for finfish (Choudhary et al., 2021).

The **growth of aquaculture has led to many concerns**, including excessive water use, pollution, overuse of antimicrobials and other chemicals to control disease, depletion of wild fish stocks as a source of protein and fat for aquaculture diets, spread of disease to native fish populations, and impacts on biodiversity due to escapees (Austin et al. 2022). There is therefore a growing awareness of the need for sustainable development of aquaculture to ensure its long-term future. Austin et al. (2022) suggest a number of good practices to address the above challenges. These include polyculture, offshore rather than coastal mariculture sites, the use of aquaponics and land-based RAS (recirculating aquaculture systems), improved disease management, and mitigation of the effects of pollution, such as the use of biofloc technology. However, there are challenges arising from the effects of environmental change, i.e. global warming, which will require adaptation and mitigation strategies. Research and innovation are needed to address the above activities. Offshore aquaculture may offer new opportunities to address some of the issues that limit the expansion of aquaculture.

Morro et al. (2022) highlighted the **potential of offshore aquaculture** to address the lack of suitable, sheltered coastal areas, while providing potential benefits to aquaculture such as improved water quality and oxygenation, increased production efficiency and fish quality. However, extreme weather conditions require innovation in new building concepts, remote monitoring and greater automation to keep construction costs within an economically viable range (Jensen et al., 2007). Research has been conducted to assess the potential environmental issues of offshore aquaculture (Holmer, 2010; Gentry et al., 2017) and its potential to provide food and positive socio-economic outcomes by minimising negative externalities (Massa et al., 2017). Offshore aquaculture could be successful if appropriate steps are taken, including the use of renewable energy sources and self-sustaining integrated systems. Mascorda-Cabré et al. (2021) described the research gaps related to oceanographic and ecosystem interactions of offshore mussel aquaculture. Assessment of the carrying capacity of seas and oceans is critical for the expansion of offshore aquaculture.

5.1.8. Liberalism in question? The cases of ATQ schemes and FTAs

As the crisis in the agricultural sector at the beginning of 2024 shows, opening up economies to third country competitors can have a strong impact on domestic producers, especially if the competition is perceived as unfair, for example due to different standards.

In the case of fisheries and aquaculture products (FAPs), as mentioned above, two different mechanisms aim at facilitating the access of non-EU country products to EU markets: the ATQ system and Free Trade Agreements (FTAs). In both cases, the rationale is the following: the reduction of trade barriers (whether tariff or non-tariff) should reduce the cost of imported products and thus increase consumer surplus. However, in the case of FAPs, the bulk of imports are raw materials (**see Table 7**), so lower import prices can also benefit the processing industry (the intermediate consumer). In short, there is a clear trade-off between two economically important sectors: the production sector (fisheries and aquaculture), which regularly questions the merits of any measure that would lead to an increase in supply on the EU FAP markets, and the processing industry, which is pushing for the greatest possible degree of liberalisation.

In addition to this general situation, which applies to all sectors of the economy¹⁰⁶, several cases are worth mentioning in the case of FAPs, particularly in the case of IUU fishing. As indicated in **sections 4.1.4** and **5.1.8**, the EU has issued yellow cards to third countries benefiting from FTAs, as has been the case for Ecuador since 2019 and Vietnam since 2017, two of the EU's main suppliers. Other countries that are far less important as seafood suppliers (such as Trinidad and Tobago, and Cameroon) continue to benefit from FTAs, although these two countries were identified as non-cooperative parties (red card) in 2023¹⁰⁷.

For some industry representatives and stakeholders, such a situation is inconsistent, and any trade benefit should be withdrawn in case of suspicion of IUU activities, which are very difficult to detect and document. For example, when the card issued to South Korea was listed in 2015, some observers considered that the decision was not sufficiently substantiated.

In the same vein:

- Argentina could soon benefit from the EU-Mercosur Free Trade Agreement, negotiated in 2019 but not yet fully ratified. As noted in **section 4.1.1**, there are suspicions of IUU there, particularly in the case of hake.
- Species that can now be considered unregulated in the Northern Small Pelagic case study can also be imported from countries benefiting from an FTA, such as Iceland and the Faroe Islands, which have decided to unilaterally increase their quotas.

As with ATQs, they are set for a three-year period to 'ensure that the EU fish processing industry can continue to source raw materials for further processing from non-EU countries at reduced or zero tariffs' (Consilium, 2023¹⁰⁸). In principle, their potential impact on EU suppliers is analysed in order to "*ensure fair competition between imported and EU fishery products*". However, the EU fishing industry regularly expresses concerns that social and environmental standards are lower in some third country suppliers benefiting from ATQs. In addition, these ATQ schemes are likely to include fisheries where IUU fishing

¹⁰⁶ The potential negative effects of trade liberalization on employment has indeed been recognized at the EU level since 2007, with the establishment of the "European Globalisation Adjustment Fund for Displaced Workers (EGF); <https://ec.europa.eu/social/main.jsp?catId=326&langId=en>

¹⁰⁷ European Commission (2023). See the "News" section, press releases of 5 January (Cameroon) and 25 September (Trinidad and Tobago) in the following link: https://oceans-and-fisheries.ec.europa.eu/fisheries/rules/illegal-fishing_en#news

¹⁰⁸ Consilium (2023). Import of fishery products: Council adopts autonomous EU tariff quotas for 2024 to 2026, Council of the EU, Press release, 27 November 2023: <https://www.consilium.europa.eu/en/press/press-releases/2023/11/27/import-of-fishery-products-council-adopts-autonomous-eu-tariff-quotas-for-2024-to-2026/>

is taking place (e.g. 'Argentine hake' or 'fillets known as 'loins' of tuna and skipjack tuna, for processing', both of which benefit from a 0% quota duty).

5.1.9. Structural fisheries and aquaculture funds

The **European Maritime, Fisheries and Aquaculture Fund** (EMFAF) is one of the structural funds of the EU and is the financial instrument to support the implementation of the CFP, and to promote a sustainable and competitive fisheries and aquaculture sector. The EMFAF has a total budget of EUR 6.1 billion for the period 2021-2027. The EMFAF comprises four **union priorities** (UPs), as per Article 3 of the Regulation (EU) 2021/1139¹⁰⁹:

- UP1: Fostering sustainable **fisheries** and the restoration and conservation of aquatic biological resources;
- UP2: Fostering sustainable **aquaculture** activities, and processing and marketing of fisheries and aquaculture products, contributing to food security in the Union;
- UP3: Enabling a sustainable **blue economy** in coastal, island and inland areas, and fostering the development of fishing and aquaculture communities;
- UP4: Strengthening international **ocean governance** and enabling safe, secure, clean and sustainably managed seas and oceans.

EMFAF supports innovative projects that contribute to the supply of quality and healthy seafood to EU consumers, to the socio-economic attractiveness and generational renewal of the fisheries sector, in particular small-scale coastal fisheries, to the development of sustainable and competitive aquaculture contributing to food security, and to the improvement of skills and working conditions in the fisheries and aquaculture sector, among many others¹¹⁰. The funding of these activities is of particular importance for improving the competitiveness of the fisheries and aquaculture sector. EMFAF also finances the preparation of production and marketing plans by POs. These have great potential for improving the competitiveness of the fisheries and aquaculture sector and include, for example, improving consumer information, promotional campaigns and improving the image of the sector. The EMFAF also contributes to the objectives of the EGD.

The implementation of this structural fund may face various difficulties and challenges, which should be addressed in order to make better use of the opportunities offered by the fund. The difficulties in the implementation of the previous fund, the **European Maritime and Fisheries Fund** (EMFF)¹¹¹, are reflected in the absorption rate, which is the percentage of the total amount committed to an operational programme that has been paid.¹¹² The most recent public data on absorption rates of the UPs are as follows (European Commission, 2021):

- UP1: Promoting environmentally sustainable, resource-efficient, innovative, competitive and knowledge-based **fisheries** (39.6% of absorption rate);
- UP2: Fostering environmentally sustainable, resource-efficient, innovative, competitive and knowledge-based **aquaculture** (32.5%);

¹⁰⁹ [Regulation \(EU\) 2021/1139](#) of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004, OJ L 247, 13.7.2021, p. 1–49.

¹¹⁰ See: https://oceans-and-fisheries.ec.europa.eu/funding/emfaf_en on the European Maritime, Fisheries and Aquaculture Fund (EMFAF).

¹¹¹ [Regulation \(EU\) No 1380/2013](#) of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC, OJ L 354, 28.12.2013, p. 22–61.

¹¹² See: European Court of Auditors (2018), "Commission's and Member States' actions in the last years of the 2007-2013 programmes tackled low absorption but had insufficient focus on result", Special Report No. 17, https://www.eca.europa.eu/lists/ecadocuments/sr18_17/sr_absorption_en.pdf

- UP 3: Fostering the **implementation of the CFP** (57.3%);
- UP 4: Increasing **employment and territorial cohesion** (29.8%);
- UP 5: Fostering **marketing and processing** (44.5%);
- UP 6: Fostering the **implementation of the Integrated Maritime Policy (IMP)** (32.3%)

Note that the competitiveness of the sector is most affected by UPs 1, 2, 4, and 5. Among these, UP1, 2, and 4 have an absorption rate of less than 40%, while UP5 has the second-highest rate among all priorities.

The reasons for the low take-up of the EMFF are explained in various studies, such as AZTI & INXENIA (2019), Ballesteros et al. (2019), FAME (2021) and Gambino et al. (2022). Among the factors identified in the literature are the complexity of the many regulations concerned, complex guidelines for the implementation of Member States' Operational Programmes, delayed implementation of Operational Programmes, complex administrative and financial requirements, legal uncertainty in the interpretation of some articles, tight timeframes for the different procedures, performance and compliance indicators, and the certification process. These are all factors that challenge the capacity of Member States and beneficiaries to make full use of the Fund. In particular, the eligibility criteria for costs have caused problems of interpretation, leading to different interpretations by the managing authorities concerned. The reporting procedures associated with the EMFF have been administratively burdensome for both Member States and beneficiaries. This is likely to have led to delays in project implementation and disbursement of funds. Procedures put in place by the administration to ensure effective control mechanisms to prevent misuse of funds and to ensure that projects contribute to the sustainability of fisheries and aquaculture increase the complexity of the use of the Fund and may have an impact on the low absorption rate. Finally, it should be noted that small-scale operators have been most affected by the complexity of the EMFF. This is due to the lack of trained staff to assist beneficiaries in the application and implementation processes.

EMFAF, as its precursors, offers great opportunities to improve the competitiveness of the fisheries and aquaculture sector. However, greater use of these funds requires clarity of rules and simplification of regulations and administrative procedures, especially for small-scale producers.

5.1.10. Research and innovation

In the EU, research and innovation are funded through multiannual framework programmes: The two most recent ones are **Horizon 2020** from **2014 to 2020** and the current **Horizon Europe** from **2021 to 2027**. The Healthy Seas and Oceans Unit within the Healthy Planet Directorate of the Directorate-General for Research and Innovation defines and implements the objectives and priorities for fisheries and aquaculture research and innovation in support of the **Integrated Maritime Policy (IMP)** and in particular the CFP. Horizon Europe aims to provide a strong science and innovation base for a sustainable blue economy. It focuses on the conservation of the marine ecosystem and its services; adaptation to the impacts of climate change on the oceans; mitigation of climate change; exploitation of the vital resources provided by the oceans such as food, energy and ecosystem services; and of particular interest for the competitiveness of the fisheries and aquaculture sector, helping innovative companies to enter the market across the range of opportunities offered by the maritime economy, including seafood production and micro-algae production. This research is part of the EU's bio-economy strategy. Examples of projects addressing competitiveness issues include avoidance of unwanted catches, management of unavoidable unwanted catches, innovative food products from marine and freshwater ecosystems, including research and testing of solutions for more sustainable fisheries and aquaculture, e.g. with low carbon approaches, improving the environmental impact of the sector, or addressing issues of proximity between seafood production and consumption.

There are other **EU research funding programmes** that may support projects related to fisheries and aquaculture. For instance, the **EU's Life programme** funds projects related to environmental and natural resource conservation, and **ERDF's Interreg programme**, amongst others. In addition, **fisheries, and aquaculture research** is also funded by the EMFAF, Member States contributions, and industry funding.

The **strategic guidelines for the sustainable development of EU aquaculture** provide Member States and stakeholders with a common vision for the further development of EU aquaculture in a way that contributes to the growth strategy set out in the EGD. More specifically, it aims to build an EU aquaculture sector that is competitive and resilient, provides a supply of nutritious and healthy food, reduces the EU's dependence on seafood imports, creates economic opportunities and jobs, and becomes a global reference for sustainability. Based on these new guidelines, several initiatives have been launched to address research and innovation gaps, **Strategic Research and Innovation Agendas (SRIAs)** and knowledge transfer activities.

Initiatives such as the **Blue Bioeconomy COFUND** (BlueBio) should be noted¹¹³. BlueBio aims to establish a coordinated R&D funding scheme to strengthen the EU's position in the blue bioeconomy and to bring bio-based products and services to the market. BlueBio has developed a foresight analysis and a Strategic Research and Innovation Agenda (SRIA). This covers six areas: ecosystem balance, societal balance, climate change, technological innovation, value chain development and science for society. This SRIA builds on several analyses in the areas of the marine value chain. The SRIA has a time horizon of 30 years.

The **Aquaculture Assistant Mechanism** (AAM)¹¹⁴ provides logistical, technical and administrative support to the EC and Member States for the implementation of the new strategic guidelines. It is an instrument that will be of benefit to the EU and can have a positive impact on the competitiveness of the sector. Some of the objectives are to collect and share knowledge and good practices, develop training, contribute to the development of official guidelines and background papers, develop training tools, organise workshops, conferences, training and technical meetings for Member States, the aquaculture industry and other stakeholders to support the implementation of the EU strategic guidelines.

5.2. External factors (Non-Union level)

5.2.1. International legal instruments

The EU, which has international legal personality (Article 47 TEU), has created and developed a complex legal and institutional framework that has enabled it to participate in international maritime conferences, to negotiate multilateral conventions and bilateral agreements, and to act as a member or observer in other international organisations directly or indirectly related to fisheries. It has also enabled it to intervene in dispute settlement procedures in fisheries-related matters.

The EU is a contracting party to **UNCLOS**¹¹⁵, and to the agreements that have developed it, such as:

¹¹³ The COFUND is the result of a collaboration between JPI Oceans and the former ERA-NETS COFASP, and ERA MBT, and consists of 27 partners from 16 EU countries, see: <https://bluebioeconomy.eu/>

¹¹⁴ <https://aquaculture.ec.europa.eu/about>

¹¹⁵ [Council Decision 98/392/EC](#) of 23 March 1998 concerning the conclusion by the European Community of the United Nations Convention of 10 December 1982 on the Law of the Sea and the Agreement of 28 July 1994 relating to the implementation of Part XI thereof, OJ L 179, 23.6.1998, p. 1.

- the Agreement for the implementation of the provisions of UNCLOS relating to the conservation and management of straddling stocks and highly migratory fish stocks, (**UN Fish Stocks Agreement**)¹¹⁶ from 1982;
- the Agreement to promote compliance with international **conservation and management measures** (CMMs) by fishing vessels on the high seas of the Agreement on **Port State Measures** to Prevent, Deter and Eliminate IUU Fishing from 2009¹¹⁷.

The EU was actively engaged in the diplomatic negotiations, launched by the UN, through the General Assembly resolution 69/292¹¹⁸, for elaborating a legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of **areas beyond national jurisdiction (ABNJ)**. On 19 June 2023, a consensus text containing the Agreement under the UNCLOS on the Conservation and Sustainable Use of Marine Biological Diversity of ABNJ¹¹⁹ was adopted and opened for signature on 20 September 2023. It is worth mentioning the EU's participation in the ongoing negotiations launched on 2 March 2022 by the UN General Assembly for a **treaty on plastic pollution** including marine pollution which is expected to have, in due course, an impact on fisheries and aquaculture activities.

Moreover, the EU has participated in the elaboration of a number of important **voluntary instruments** within the FAO, among which the following stand out:

- the **Code of Conduct** for Responsible Fisheries¹²⁰, adopted in 1995;
- the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (**IPOA-IUU**)¹²¹, adopted in 2001;
- the International Guidelines for **Bycatch Management** and **Reduction of Discards**¹²², adopted in 2011;
- the Voluntary Guidelines for **Flag State** Performance¹²³, adopted in 2014;
- the Voluntary Guidelines for **Catch Documentation** Schemes¹²⁴, adopted in 2017.

These texts set the path for good practices and have led or may lead to legally binding instruments.

All these binding legal instruments, which form part of EU law, introduce a series of fisheries-related requirements and demands that legally condition the activities of EU operators and affect their competitiveness. In this regard, they provide for conservation norms, including the obligation to adopt conservation and management measures (CMMs) aimed at maintaining or restoring marine resources at levels capable of producing the maximum sustainable yield, both in waters under national jurisdiction and on the high seas, and to cooperate with other States to this end; to apply the Precautionary Approach widely; to ensure compatibility of CMMs where marine resources are found in

¹¹⁶ [Council Decision 98/414/EC](#) of 8 June 1998 on the ratification by the European Community of the Agreement for the implementing of the provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the conservation and management of straddling stocks and highly migratory fish stocks, OJ L 189, 3.7.1998, p. 14.

¹¹⁷ [Council Decision 2011/443/EU](#) of 20 June 2011 on the approval, on behalf of the European Union, of the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, OJ L 191, 22.07.2011, p. 1.

¹¹⁸ Resolution adopted by the General Assembly on 19 June 2015 on the development of an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, [A/RES/69/292](#), 6 July 2015.

¹¹⁹ Agreement under the United Nations Convention on the Law of the Sea (UNCLOS) on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, United Nations General Assembly, [A/RES/77/321](#).

¹²⁰ <https://www.fao.org/responsible-fishing/resources/detail/en/c/1316854/>

¹²¹ <https://www.fao.org/fishery/en/ipoa-iuu>

¹²² <https://www.fao.org/responsible-fishing/resources/detail/en/c/1316864/>

¹²³ <https://www.fao.org/iuu-fishing/international-framework/voluntary-guidelines-for-flag-state-performance/en/>

¹²⁴ <https://www.fao.org/iuu-fishing/resources/detail/en/c/1132200/>

sea areas with different jurisdictional status; and to take due account of other legitimate uses of the seas. With regard to these standards, the EU and Member States' authorities scrupulously ensure that EU operators strictly respect them and conduct responsible and sustainable fishing in accordance with them. However, this situation does not apply to the same extent to all non-EU fishing fleets, which sometimes use flags of convenience or sign onerous fishing agreements with developing coastal States that facilitate IUU fishing or fishing that is not very responsible or sustainable. These fisheries products can end up on the EU market and reach EU consumers. The difference in compliance with international standards constitutes unfair competition for EU operators and has a negative impact on their competitiveness.

5.2.2. Fishing in non-EU waters

Unfair competition is noted with regard to the activity of the EU fleet operating within the framework of **Sustainable Fisheries Partnership Agreements** (SFPAs) in the waters under the jurisdiction of non-EU countries (Article 31 of the Basic Regulation), which are subject to the strict measures established in this respect by the EU fisheries legislation with regard to the exploitation of resources, transparency, data collection, monitoring, surveillance, and control. These agreements allow the EU fishing vessels to fish surplus stocks in the EEZs of the non-EU country concerned under two conditions, namely: to consider the sustainability of the marine environment and the conservation of resources; and, to ensure compliance with the EU fisheries legislation and other fundamental principles, for example in the field of human rights. In other words, the EU fishing activities in non-EU country waters must be based on the same principles and norms as those applicable under the EU law. This is not the case for the fleet of other non-EU countries that conclude fisheries agreements with these coastal countries and have less demanding legal obligations than the EU fleet has under Article 28(d) of the Basic Regulation¹²⁵. This situation is not curbed, as practice shows, for example, in relation to the Asian fleet, by the provisions of Article 31(6)(a) of the Basic Regulation, which states that these agreements should also include, "*as far as possible*", a clause prohibiting the granting of more favourable conditions between the different fleets fishing in those waters than those granted to the EU operators, including conditions relating to the conservation, development and management of resources, financial arrangements and fees and charges relating to the granting of fishing authorisations.

This is aggravated by the fact that some of this fishing, carried out by non-EU countries, then enters the EU market, sometimes duty-free, with negative consequences for EU operators. And these consequences are contrary to the provisions of the Basic Regulation (in particular Recital 50 and Article 28(d)), which states that the EU shall promote "*a level-playing field for Union operators vis-à-vis third country operators*". This is not yet the case.

International fisheries governance includes Regional Fisheries Bodies (**RFBs**) and Regional Fisheries Management Organisations (**RFMOs**). While the former are advisory in nature, the latter can decide on CMMs in specific maritime areas, such as setting catch limits and fishing effort, technical measures and control obligations. EU participation in various RFMOs and compliance with their measures also affect the competitiveness of EU operators. The EU currently participates in five RFMOs that manage highly migratory species, mainly tunas and 13 RFMOs that manage other stocks (Aranda, Ulrich, Le Gallic et al., 2019). However, not all non-EU countries that export to the EU participate in RFMOs or follow their rules, giving them a competitive advantage over those that do, with the result that if there were no

¹²⁵ [Regulation \(EU\) No 1380/2013](#), Article 28 (d): "*ensure that Union fishing activities outside Union waters are based on the same principles and standards as those applicable under Union law in the area of the CFP, while promoting a level-playing field for Union operators vis-à-vis third-country operators;*"

retaliatory measures to counter this behaviour and if they were allowed free access to the EU market, there would be a displacement of compliant producers from the EU market in favour of those that do not.

5.2.3. IUU fishing activities in non-EU waters and access of its products to the EU

The EU is committed to contributing to the eradication of illegal, unreported, and unregulated (IUU) fishing, in line with Sustainable Development Goal target 14.4. IUU fishing is a major concern for the EU as it can lead to overfishing and depletion of fish stocks, which can have negative impacts on the marine environment and ecosystems. IUU fishing can also damage the economic interests of the EU fishing industry. In its Special Report 20/2022, the Court of Auditors expressed serious concern about the consumption by EU consumers of fish of dubious origin from external operators. It is reported that large quantities of such fish are traded on the EU market, which is incompatible with the principles of the CFP, while at the same time creating unfair competition for EU operators and other non-EU countries where fishing activities are highly regulated. When illegally caught fish products enter the EU market, they have a price advantage and compete on a level playing field with legally caught fish. In turn, the quality and safety standards of fish products entering the EU market may not meet EU food safety and hygiene standards, posing health risks to consumers.

Fish from IUU fishing can enter the EU market through a variety of channels, circumventing EU and non-EU regulations. According to Tessnow-von Wysocki et al. (2022), illegal fish entering the EU market may originate from the activities of non-EU vessels fishing in international waters and non-EU EEZs, but also from EU vessels operating under bilateral agreements with non-EU countries. Illegally caught seafood from non-EU countries enters the EU market through nation-to-nation trade or through intermediaries. With regard to the latter, EU vessels operating under a legitimate fishing access agreement may violate the domestic regulations of the host country, such as entering prohibited zones, or may circumvent EU regulations where such activities are not illegal (Belhabib and Le Billion, 2022). The products of these vessels may be transhipped and then brought to EU markets via EU ports. If the vessel has not been caught transhipping, the product is unlikely to be denied access to EU markets.

As noted in a previous section, the IUU Regulation (Council Regulation (EC) No 1005/2008)¹²⁶ includes a catch certification scheme, which requires certificates for seafood products to verify their legality, and the card system, which identifies non-EU countries that do not cooperate in the fight against IUU fishing. Despite the robust legal framework, the ECA found that the certification scheme is only partially effective in preventing IUU fish from entering the EU market. The implementation of the IUU Regulation appears to be uneven across Member States in terms of controls and sanctions. The Market Advisory Council (MAC) and the Long Distant Waters Advisory Council (LDAC) have also highlighted the lack of harmonisation of import controls implemented in EU Member States and have provided their advice on this issue¹²⁷. For example, the catch certification scheme has improved traceability, but differences in the level and quality of checks and verifications by customs authorities undermine the effectiveness of the system. Progress has been made in digitising the certification system, which until recently was entirely paper-based. The digital system, called "CATCH", aims to ensure that catch certificates and other related documents are managed in a single digital environment at EU level, thereby improving the ability of authorities to detect products derived from IUU fishing. On the other hand, non-EU countries will be able to create and validate catch certificates directly in the CATCH digital environment.

¹²⁶ Regulation (EC) No 1005/2008, *doc. cit.*

¹²⁷ Joint advice of the MAC-LDAC. Harmonised import controls to prevent IUU fishing products from entering EU market. 30.09.2019. <https://marketac.eu/harmonised-import-controls-to-prevent-iuu-fishing-products-from-entering-eu-market/>

For fisheries products imported into the EU, importers will also be required to submit catch certificates through CATCH.

The carding system consists of three cards: green, yellow and red. The yellow card is a first warning that the country in question must address the problem of IUU fishing, otherwise it will be listed as a non-cooperating country in the fight against IUU fishing. The red card means that a country will be listed as a non-cooperating country and that effective measures will be required from the country to deter IUU activities. If progress is made, the red card is removed, and the country is returned to green card status. If progress is limited, the EC may instead impose an import ban on the country in question. The current scope of the carding system only covers fisheries aspects. According to Kadfak and Linke (2015), the lifting of Thailand's yellow card in 2015 was subject to a dialogue that also included labour issues related to suspected modern slavery. Serious violations of working conditions and fundamental human rights on board fishing vessels currently fall outside the scope of the IUU Regulation. However, as explained in **section 5.1.3**, the Commission has submitted a proposal for a regulation on this issue (COM(2022) 453)¹²⁸, which aims to ban access to the EU market for products made with forced labour. Another example of suspected IUU fishing products entering the EU market is the case of Ecuador and skipjack tuna. The EC even issued a yellow card in October 2019. This decision was based on the identification of serious shortcomings in the mechanisms implemented by the country to ensure compliance with its international obligations as a flag, port and market state¹²⁹. These shortcomings include an outdated regulatory system that is not aligned with the conservation and management of fisheries resources and is insufficient to enforce measures against violators, as well as inefficient administrative procedures. The MCS system is incapable of controlling tuna fishing and processing activities. As a result, the traceability system underpinning the certification of catches is called into question.

5.2.4. Trade aspects

The EU's policy to defend open and fair trade is aimed at defending EU production against trade disruptions caused by measures taken by non-EU countries. An important part of the CCP are the bilateral and multilateral trade agreements, which define the terms of trade between the parties, based on the principle of reciprocity. These agreements can also have a significant impact on the competitiveness of the fisheries and aquaculture sector if the third country is a fish producer. In general, these agreements do not pay much attention to fisheries marketing issues, beyond the regulation of quotas and import tariffs, and do not provide for dispute settlement mechanisms in case of disputes. On the other hand, the effect of these agreements is to open the EU market to fisheries from these countries rather than to regulate trade in these products within the EU. These trade agreements do not consider FAPs as sensitive products, which would make it possible to introduce safeguard measures if necessary. It may also be the case that the non-EU country in question has not ratified or is not effectively implementing key international fisheries instruments or is not complying with the standards of the relevant RFMOs.

In relation to the access of non-EU FAPs to the EU market, there are also tariff norms (GSP¹³⁰, GSP+, Everything but Arms – EBA¹³¹, autonomous tariff quotas – ATQs, etc.) which mainly concern the level of tariffs to be paid and not the conditions of market access. This would make it possible to prevent

¹²⁸ [COM\(2022\) 453](#), *doc. cit.*

¹²⁹ See: https://ec.europa.eu/commission/presscorner/detail/en/qanda_19_6037

¹³⁰ Regulation (EU) No 978/2012 of the European Parliament and of the Council of 25 October 2012 applying a scheme of generalised tariff preferences and repealing Council Regulation (EC) No 732/2008, OJ L 303, 31.10.2012, p. 1.

¹³¹ <https://trade.ec.europa.eu/access-to-markets/en/content/everything-arms-eba>

fleets linked to IUU fishing and serious labour abuses from benefiting from preferential market access through tariff quotas.

As far as the market in FAPs is concerned, the CMO Regulation states in its Recital 4 that it should be implemented in accordance with the international obligations of the EU, in particular those established under the rules of the World Trade Organisation (WTO). This is in line with the provisions of the TEU itself, which states that one of the main objectives of the EU is to contribute to "free and fair trade" (Article 3(5) TEU) and that in its relations with the rest of the world it is committed to "encourage the integration of all countries into the world economy, including through the progressive abolition of restrictions on international trade" (Article 21(2)(e) TEU).

5.2.5. Fisheries subsidies

The EU is a party to the Marrakesh Agreement establishing the WTO¹³². WTO norms aim to ensure free trade and free, fair and undistorted competition. To resolve disputes over the correct application of these rules, the WTO has established a dispute settlement system that includes the possibility bringing complaints against countries that are suspected of maintaining or allowing measures that distort competition. In the debate on fair competition in the international fisheries production chain, one of the most common issues is "fisheries subsidies". In line with WTO norms, the EU law states that subsidies are prohibited if they favour certain operators and distort or threaten to distort competition. It should be noted that not all subsidies are prohibited, it depends on the conditions under which they are granted and the effects they have. The aid co-financed by the Member States and the EU under the EMFAF therefore meets the criteria set by the WTO.

With regard to fisheries subsidies, it is worth highlighting the international treaty standards that are being adopted, and in particular the WTO Agreement on fisheries subsidies, which was ratified by the EU on 9 June 2023. The WTO reached an agreement in June 2022 to prohibit subsidies that can be considered harmful because of their potential contribution to overfishing and overcapacity. Among other things, the agreement bans government subsidies for IUU fishing and for fishing in unregulated waters for fleets targeting the most vulnerable stocks. It also includes provisions to address the harmful practice of re-flagging and strengthens transparency and reporting criteria to monitor the implementation of the Agreement.

Among the extra-EU providers of FAPs are countries that provide significant subsidies to the fishing industry. India, which is a major supplier of warm water shrimp (see 4.4), provides financial support to its aquaculture sector, for example by facilitating access to loans¹³³. Some US legislators have introduced a bill in September 2023 to protect US producers, claiming that Indian shrimp producers receive "massive government subsidies"¹³⁴. In addition, India offers transfers, infrastructure provisions and tax exemptions. Mexico is another supplier of FAPs, where transfers and provisions for infrastructure are significant. According to the OECD, some of these subsidies are likely to contribute to overfishing. Vietnam, a major supplier of pangasius and warm water species, also grants transfers to its sector. According to the OECD, Norway provides substantial transfers and support for "tax exemptions" to its sector.

¹³² Council Decision 94/800/EC of 22 December 1994 concerning the conclusion on behalf of the European Community, as regards matters within its competence, of the agreements reached in the Uruguay Round multilateral negotiations (1986-1994), OJ L336, 23.12.1994, p. 1.

¹³³ <https://www.agrifarming.in/fish-farming-loan-in-india-how-to-get-apply-banks-interest-rate-documents-and-nabarddocuments-and-nabard-agrifarming-in>

¹³⁴ <https://www.cassidy.senate.gov/newsroom/press-releases/cassidy-colleagues-introduce-bills-to-protect-louisiana-agriculture-against-dumping-from-china-india>. At the time of writing this issue was still in the investigation phase by the International Trade Administration, US Department of Commerce. <https://www.federalregister.gov/documents/2023/11/21/2023-25735/frozen-warmwater-shrimp-from-ecuador-india-indonesia-and-the-socialist-republic-of-vietnam>

5.2.6. Safety and working conditions onboard

The sustainable exploitation of fish stocks is achieved not only through measures to manage stocks in the narrower sense, but also through broader measures relating to the safety of vessels and to pollution caused by vessels of all kinds, including fishing vessels. In this context, the International Maritime Organization (IMO) has adopted a comprehensive set of international standards, including mandatory criteria for the construction, stability and seaworthiness of fishing vessels of 24 metres in length and over (Cape Town Agreement, 2012)¹³⁵. Despite the increasing international regulation in this area, there are still regions of the world where regulations have not been introduced that are as stringent as those to which EU operators are subject in the development of these standards. Indeed, there are States that allow unscrupulous shipowners to fail to maintain their vessels in safe conditions, endangering the health or even the lives of their crews, polluting the marine environment (e.g. through an accident) or engaging in IUU fishing. It is clear that such situations distort competition and undermine the competitiveness of EU operators.

As an example of poor working conditions, pangasius production in Vietnam is considered to be non-compliant with EU standards on basic working time and working conditions. Several analyses also point to suspicions of forced labour, including the 2019 US government report on various types of labour abuses¹³⁶. China's fishing fleets are also suspected of using forced labour. In 2021, US Customs and Border Protection imposed a new ban on seafood imports from a Chinese fishing fleet because of forced labour on its 32 vessels, including the abuse of many Indonesian workers. On 24 October 2024, the US Congress will hold a public hearing to investigate allegations of forced labour in seafood processing plants and the so-called Chinese IUU fleet¹³⁷.

5.2.7. International ocean governance

The Convention on Biological Diversity (**CBD**), the International Union for the Conservation of Nature (**IUCN**) or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**) are imposing increasingly restrictive rules, such as the 30% target for marine protected areas (**MPAs**), the adoption of the shark finning policy or the listing of shark species of commercial interest in Appendix II of CITES, to name but a few. This leads to a double standard of compliance, as once measures are in place, they are usually effectively complied with by EU fleets. Other fleets, particularly in Asia, continue to fish finfish in vulnerable marine ecosystems (**VME**) or to tranship on the high seas without reporting.

Another notable factor affecting the competitiveness of the EU fisheries and aquaculture sector is the respect of the fundamental environmental principles set out in the 1972 **Stockholm Declaration** and developed since then in numerous international texts of varying legal value, including in particular the 2015 resolution A/Res/70/1 entitled "*Transforming our world: The 2030 Agenda for Sustainable Development*", which presents the 17 **Sustainable Development Goals**¹³⁸, and in particular SDG 14 "*Life below water*". This SDG aims to protect oceans and seas in a broad sense, including actions such as reducing nutrient pollution, minimising acidification or ending IUU fishing. In this context, the EU has

¹³⁵ It is worth mentioning that the Cape Town Agreement has so far been ratified by only nine of its 27 Member States. Although the provisions of the Agreement fall within the exclusive competence of the EU, the EU could not become a party to the Agreement as only States can be parties to it. This is why the Council adopted the Council Decision 2014/195 of 17 February 2014 authorising Member States to sign, ratify or accede to the Cape Town Agreement (OJ L 106, 9.04.2014, p. 4).

¹³⁶ Department of State, 2019. Trafficking in Persons Report. 538 p. <https://www.state.gov/reports/2019-trafficking-in-persons-report/>. See also <https://www.intrafish.com/news/us-downgrades-vietnam-in-latest-labor-abuse-report/2-1-625153>

¹³⁷ <https://www.cecc.gov/events/hearings/from-bait-to-plate-how-forced-labor-in-china-taints-the-american-seafood-industry>

¹³⁸ On 25 September 2015, the United Nations General Assembly adopted the resolution entitled "Transforming our world: the 2030 Agenda for Sustainable Development" (A/RES/70/1, 21 October 2015), presenting the seventeen Sustainable Development Goals (SDGs).

participated in most of the international conferences dealing with these issues, has concluded treaties when they have been opened for signature, and has developed these principles into EU law, inspiring the **roadmap of the EGD** to be launched in 2019¹³⁹. This means that EU operators are obliged to respect these principles in their activities. In this context, it should be noted that compliance with these principles entails costs in the production of goods for those producers who adapt and respect the general normative, which would put them at a competitive disadvantage compared to those producers who choose to ignore this normative. A fair market is not possible as long as such divergences persist.

¹³⁹ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions "The European Green Deal", COM(2019) 640 final, 11.12.2019.

6. CASE STUDIES

KEY FINDINGS

Case study 1: Whitefish (North-Western Waters) – Market competition, inflation, and Brexit

- Traditional EU whitefish products face competition from low-priced imported substitutes, not only from fisheries (Alaska pollock from the US and Russia; hoki from New Zealand; hake from Namibia and Argentina) but also from aquaculture (pangasius from Vietnam; tilapia), which puts pressure on ex-vessel prices;
- The increase in energy prices has a direct impact on the cost of fishing for trawlers;
- In the context of high inflation, demand for FAPs has recently fallen (e.g. in France), making it impossible to increase ex-vessel prices;
- As part of the EU-UK Trade and Cooperation Agreement (TCA), significant reductions in fishing opportunities are planned for several key whitefish stocks between 2021 and 2025; the situation after 2026 is unknown.

Case study 2: Small pelagic fish (North Sea) – Climate change, Brexit, and disputes on quotas

- North Sea small pelagic fisheries, especially herring and mackerel and blue whiting's ones, used to be sustainably managed until 2010, even benefiting from the MSC certification.
- As from 2010, Iceland, the Faroe Islands and even Greenland unilaterally increased their national quotas at several instances.
- Due to the lack of cooperation between the coastal states, and the fact that the overall catches are exceeding sustainable limits, the North Sea mackerel fishery lost again its MSC label in 2019, followed by blue whiting and Atlanto-Scandian herring fisheries in 2020.
- In 2020, when Brexit occurred, the situation got even more complicated, with one new, but major, nation entering the negotiations. In addition, under the terms of the TCA, Brexit also directly implies a progressive loss of fishing opportunities for several small pelagic fisheries
- Given the risk of overfishing, and according to the CFP objectives, there might be a pressure to limit the overall fishing pressure, potentially resulting in a loss of fishing opportunities for the EU fleet.
- Due to the lack of cooperation between the coastal states, these small pelagic fisheries can be considered unregulated. So that the EU could impose trade measures in line with the IUU Regulation (1005/2008).

KEY FINDINGS (continued)

Case study 3: Impacts of Brexit on market and socio-economic aspects

- The EU market is the most important for the competitiveness of the UK sector. This may grant the EU some bargaining power in negotiations.
- Irish salmon production has a market niche and therefore UK production of this species may not be a strong competitor for this sector. In contrast, the UK is a competitor for Member States targeting mackerel.
- The British Overseas Territories are not covered by the TCA, which affects the competitiveness of EU producers dependent on imports from these regions, in particular the Falkland Islands.

Case study 4: Norway as a competitor for the EU

- At present, Norway and the EU supply each other with differentiated FAPs and serve different market niches.
- Norway could become an important competitor in the EU market for organic aquaculture products.
- The Norwegian experience in aquaculture management can provide useful policy lessons for the management of the EU sector.
- The EU and Norway have disagreements over access to fishing opportunities in the Norwegian EEZ. Non-cooperative management of small pelagic fisheries is threatening the resource while negatively affecting economic interests.

6.1. Case study 1: Whitefish (North-Western Waters) – Market competition, inflation, and Brexit

6.1.1. Main issues at stake

- Traditional EU whitefish products face competition from low-priced imported substitutes, not only from fisheries (Alaska pollock from the USA and Russia; hoki from New Zealand; hake from Namibia and Argentina) but also from aquaculture (pangasius from Vietnam; tilapia), which puts pressure on ex-vessel prices.
- The increase in energy prices has a direct impact on the cost of fishing for trawlers.
- In the context of high inflation, demand for seafood products has recently fallen (e.g. in France), making it impossible to increase ex-vessel prices.
- As part of the EU-UK Trade and Cooperation Agreement (TCA), significant reductions in fishing opportunities are planned for several key whitefish stocks between 2021 and 2025; the situation after 2026 is unknown.

Table 8: Safety cases involving Vietnamese fish, 2022-2023

Reference	Subject	Date	Notifying Member State	Risk decision
2023.4733	leucomalachite green in catfish fillets (<i>Clarias gariepinus</i>) from Vietnam	13/07/2023	Germany	serious
2023.3840	Salmonella Brunei in pacific white shrimps from Vietnam, via Latvia	08/06/2023	Lithuania	serious
2023.3220	exceeded histamine content in tuna steaks	15/05/2023	Slovakia	serious
2023.2836	unauthorised leucomalachite green in frozen catfish fillets (<i>Clarias gariepinus</i>) from Vietnam	28/04/2023	Slovenia	serious
2023.1647	malachite green-leuco in frozen catfish from Vietnam	09/03/2023	Italy	serious
2023.1438	chlorates in cinnabar goatfish from Vietnam	28/02/2023	Belgium	no risk
2023.0056	high content of E 300-ascorbic acid in Red Tuna fillet from Vietnam	03/01/2023	Estonia	not serious
2022.7427	histamine (up to 3743 mg/kg - ppm) in frozen yellowfin tuna loins (<i>Thunnus albacares</i>) from Vietnam, via the Netherlands	20/12/2022	Latvia	serious
2022.6362	unauthorised substance malachite green (205 µg/kg - ppb) in frozen Asian sea bass (<i>Lates calcarifer</i>) from Vietnam	31/10/2022	Netherlands	serious
2022.4564	foodborne outbreak caused by histamine in frozen tuna from Vietnam, via the Netherlands	04/08/2022	Sweden	serious
2022.4398	unauthorised substance malachite green in frozen catfish (<i>Clarias macrocephalus</i>) from Vietnam	28/07/2022	France	serious
2022.4031	malachite green and leucomalachite green in pangasius fillet from Vietnam	08/07/2022	Norway	serious
2022.2117	mercury in red tuna steaks from Vietnam	08/04/2022	Netherlands	serious
2022.1947	malachite green and leucomalachite green in frozen red tilapia from Vietnam	01/04/2022	Netherlands	serious
2022.1202	listeria monocytogenes in frozen vannamei shrimp	01/03/2022	Netherlands	serious
2022.1026	High level of chlorate in pangasius fillets from Vietnam	22/02/2022	Austria	serious

Source: Own elaboration based on European Commission, RASFF Window, see footnote above

In addition to the market competition aspect, which was the main concern of this case study, two other recent developments are likely to affect the competitiveness of the EU whitefish fleet. The first one is mainly structural (Brexit), with the progressive loss of fishing opportunities. The second may be more conjunctural (price increases).

b. Reduction in fishing opportunities

As part of the post-Brexit negotiations (EU-UK Trade and Cooperation Agreement), a gradual transfer of EU fishing opportunities to the UK has been agreed, representing around 25% of the value of EU production from UK waters¹⁴⁷. Several whitefish stocks are particularly affected:

- **North Sea hake:** - 35 percentage points;
- **Norway pout:** - 25 percentage points;
- **Cod:** - 10 percentage points;
- **Saithe** (or coalfish): - 10 percentage points.

Such a trend has a direct impact on the competitiveness of several EU demersal fleets, in particular the Irish and French fleets. One direct consequence is the decommissioning of vessels with public aid. For example, 42 Irish vessels are expected to be scrapped, including whitefish trawlers¹⁴⁸, while around 90 French vessels are expected to be decommissioned, half of them in Brittany (the 'PAI Brexit' scheme is expected to halve the Cornish¹⁴⁹ whitefish fleet in particular). As such schemes could help the remaining vessels to be profitable, such a reduction in the size of the fleet could destabilise the whole seafood industry¹⁵⁰.

c. Inflation

Since the COVID-19 crisis and the Russian-Ukrainian conflict, inflation has affected all the countries and most of the sector. Two factors are likely to affect the competitiveness of the EU whitefish fleet.

Fuel price increase

In all EU Member States, fishing vessels use tax-free fuel, so any increase in the price of the raw material (barrel of oil) has a direct impact on fuel costs. In March 2023, the price of a barrel of Brut Brent (London) rose from EUR 97 to EUR 117, an increase of 21%. In June 2022, the price reached a record of 122 EUR/barrel, far above the 30.7 EUR/barrel registered in January 2016 (307% increase)¹⁵¹. As clearly described by Guillen et al. (2023), such a trend has several associated effects:

- In 2022, EU fishing enterprises had to pay 0.93 EUR/litre for fuel, with a peak of 1.2 EUR/litre in June 2022, three times the price at the beginning of 2021 and almost five times the price in 2016 and 2020 (the lowest being 0.35 EUR/litre).

¹⁴⁷ See: Popescu, I. & Scholaert, F. (2022). Brexit and the reduction in EU fishing quota shares, 2021 to 2023, EPRS, European Parliament, Brussels, December 2022, see: [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2022\)739253](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)739253).

¹⁴⁸ See: <https://fishingnews.co.uk/news/42-irish-vessels-to-be-scrapped-as-part-of-irish-governments-decommissioning-scheme/>

¹⁴⁹ Ports of Le Guilvinec.

¹⁵⁰ See also the situation in The Netherlands, although this extends also to the flatfish sector: <https://www.wur.nl/en/research-results/research-institutes/economic-research/show-wecr/the-dutch-fishery-sector-is-shrinking-and-this-does-not-just-affect-fishermen.htm>

¹⁵¹ See: <https://www.insee.fr/fr/statistiques/serie/010002077>

- While all EU vessels are affected by fuel price increases, some fleet segments are more exposed than others. Again, the EU offshore whitefish fleet is one of the most exposed, with a short-term break-even fuel price for the 24-40 metres trawl fleet of around 0.52 EUR/litre, Guillen et al. (2023). When compared to current fuel price levels, this indicates that the profitability of the whitefish trawling fleet is at risk, especially when the state aid provided under the EC temporary crisis framework¹⁵² comes to an end.

d. Consumption reduction

Inflation, and in particular inflation affecting food, is particularly important in 2022, exceeding 10 per cent in most cases. Such a situation naturally affects consumer behaviour and purchasing patterns. In France, consumption of the main whitefish products fell from 37 000 tonnes to 29 200 tonnes¹⁵³. In Germany, consumption fell from 12 200 tonnes to 9 000 tonnes, in Italy from 13 000 tonnes to 11 400 tonnes and in Portugal from 5 900 tonnes to 4 200 tonnes. In this context, any attempt to increase ex-vessel fish prices to compensate for the increase in fuel costs could lead to a further reduction in whitefish consumption.

6.1.3. Competitiveness implications

As shown by Guillen et al. (2023) and by STECF (2022), the economic performance of the EU whitefish fleet has deteriorated since 2017:

- **loss of revenue** between 2019 and 2020 for Spain (EUR 9.5 million; –41%), France (EUR 23 million; –38%) and Belgium (EUR 7 million; –28%);
- in **Ireland**, all **economic indicators** are expected to **deteriorate from 2021** onwards due to COVID-19 and the TCA;
- although not specific for the to the whitefish fleet:
 - The **Irish, Belgian and French fleets** are expected to show negative gross and net profits in 2022, despite the temporary state aid framework adopted by the EC on 23 March 2022 to support the EU economy against the effects of the Russian invasion and the resulting economic sanctions, including fuel discounts in some countries¹⁵⁴;
 - the **Danish fleet** is expected to remain, but with a sharp reduction in net profit.

6.2. Case study 2: Small pelagic fish (North Sea) – Climate change, Brexit, and disputes on quotas

6.2.1. Main issues at stake

- Loss of **fishing opportunities** for the EU fleet;
- risk of **overfishing**;
- loss of **certification** label (MSC);
- potential situation of **unregulated fishing** -> Possibility of applying anti-IUU measures?

¹⁵² European Commission, 2022. State aid: Commission amends the Temporary Crisis Framework. Press Release available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_4622, consulted on 02/10/2023.

¹⁵³ Net weight. EUMOFA data. <https://www.eumofa.eu/fr/consumption>, consulted on 02/10/2023.

¹⁵⁴ See: <https://www.comite-peches.fr/crise-du-carburant-les-mesures-annoncees-pour-la-peche/>

6.2.2. Short description of the case study

The North Sea small pelagic case study mainly¹⁵⁵ concerns Atlantic mackerel, herring (*Clupea harengus*) and blue whiting¹⁵⁶. These three migratory species are fished by several countries, including Norway, Iceland, Faroe Islands, Greenland, Russia, the UK¹⁵⁷ and the EU. Under UNCLOS, these countries are expected to negotiate under the auspices of the North East Atlantic Fishery Commission (NEAFC) to ensure that the fisheries are managed sustainably. The main EU fleets are those of Ireland, Denmark and the Netherlands.

According to STECF (2022), the Danish pelagic fleet accounts for 34% of the Danish total revenue. For the Netherlands it is 29% and for Ireland 21%. The following section therefore focuses mainly on these three countries, which account for 90% of the '*Pelagic Reference EU Fleet*'.

In general, the countries have accepted scientists' recommendations on the maximum amount of fish that should be caught; but since 2010 there has been disagreement on their respective **national quotas**. This is partly¹⁵⁸ due to observed changes in migration / distribution patterns, reportedly as a result of climate change, leading to greater abundance of mackerel and herring in the waters of Iceland and the Faroe Islands.

In 2010, Iceland and the Faroe Islands unilaterally increased their national quotas for mackerel, from 2 000 tonnes to 130 000 tonnes and from 25 000 tonnes to 150 000 tonnes respectively. Without any change in the other respective national quotas, this resulted in a 35% overrun of the ICES recommended limits. As a result, the North Sea mackerel fishery lost its MSC certification in 2012, to the detriment of several EU Member States (including Ireland, Denmark, Sweden, and the Netherlands)¹⁵⁹.

Similarly, in 2013, the Faroe Islands unilaterally increased their national herring quota to around 105 000 tonnes, three times the quota that would have been expected under the existing fishing quotas. Again, MSC certification of the Faroese Atlantic herring fishery was suspended due to the dispute between the countries involved. In the context of potential trade sanctions by the EU and Norway and a very positive stock assessment by ICES, some partial agreements were reached in 2014. As a result, the MSC label was reinstated for the Northeast Atlantic mackerel fishery was restored in 2016. However, the situation has deteriorated again since 2019, with Iceland and Greenland deciding to unilaterally increase their catches¹⁶⁰.

In 2020, when Brexit took place, the situation became even more complicated, as a new, but important, country entered the negotiations. For example, in June 2023, the UK and Norway reached an agreement on their relative quotas of mackerel, accounting for around 59% of the TAC. The agreement, reached after several months of negotiations, did not involve the other coastal States, including the EU. Under the TCA, Brexit also directly implies a progressive loss of fishing opportunities for several small pelagic fisheries, for example –31 000 tonnes for the Western mackerel stock for instance between 2021 and 2023, and –15 000 tonnes for the North Sea herring stock¹⁶¹.

¹⁵⁵ Sprat and horse mackerel could also be involved, but with a very low importance.

¹⁵⁶ Blue whiting is listed in the EUMOFA database in the 'groundfish' category, but is considered by the industry as a small pelagic and is also caught with the same gear.

¹⁵⁷ Individual contracting party of NEAFC since the Brexit.

¹⁵⁸ Other elements are quoted, such as the Icelandic banking system crisis in 2008-2009 and the decrease in the stock of Blue whiting, which was previously the main target species of the Icelandic and the Faeroese fleets.

¹⁵⁹ Including the UK, which was part of the EU in 2012.

¹⁶⁰ As well as Russia.

¹⁶¹ See: Popescu & Scholaert, 2022. Brexit and the reduction in EU fishing quota shares, 2021 to 2023, see: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/739253/EPRS_BRI\(2022\)739253_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/739253/EPRS_BRI(2022)739253_EN.pdf)

Due to a lack of cooperation between the coastal States, and the fact that the overall catches are exceeding sustainable limits, the North Sea mackerel fishery lost its MSC certification in 2019, followed by the blue whiting and Atlanto-Scandian herring fisheries in 2020. And despite regular calls from the MSC and other industry stakeholders, these fisheries have yet to be decertified¹⁶².

6.2.3. Competitiveness implications

The first impact of these trends is the decrease in production observed for almost all the species and Member States involved (the main source used here, when not otherwise indicated, is the STECF database¹⁶³):

- **The Netherlands:**

- **herring:** decrease from around 112 000 tonnes in 2018 (worth EUR 44 million) to 75 500 tonnes in 2021 (around 72 000 tonnes in 2022 according to the EUMOFA database, worth EUR 19 million);
- **blue whiting:** decrease from around 120 000 tonnes in 2018 (worth around EUR 38 million) to 61 500 tonnes in 2021 (around 62 000 tonnes in 2022 according to the EUMOFA database, worth EUR 16 million);
- **mackerel:** decrease from around 43 500 tonnes in 2017 (worth EUR 30 million) to 23 400 tonnes in 2021 (around 19 200 tonnes in 2022 according to the EUMOFA database, worth EUR 8.8 million);
- **horse mackerel:** decrease from around 32 000 tonnes in 2018 (worth EUR 16.6 million) to 24 600 tonnes in 2021 (around 22 000 tonnes in 2022 according to the EUMOFA database, worth EUR 14.5 million).

- **Ireland:**

- **mackerel:** decrease from around 86 500 tonnes in 2017 (worth EUR 58 million) to 61 000 tonnes in 2021 (worth EUR 48.5 million);
- **blue whiting:** decrease from around 50 000 tonnes in 2018 (worth EUR 17.8 million) to 39 000 tonnes in 2021 (worth EUR 15 million);
- **herring:** decrease from around 16 300 tonnes in 2017 (worth EUR 8.5 million) to 5 800 tonnes in 2021 (worth EUR 1.2 million);
- **jack and horse mackerel:** decrease from around 29 000 tonnes in 2019 (worth EUR 15 million) to 19 000 tonnes in 2021 (worth EUR 14.5 million).

- **Denmark:**

- **herring:** decrease from around 167 000 tonnes in 2018 (worth EUR 73.6 million) to 88 600 tonnes in 2021 (worth EUR 55.6 million);
- **blue whiting:** decrease from around 87 000 tonnes in 2018 (worth EUR 20 million) to 40 000 tonnes in 2021 (worth EUR 10 million¹⁶⁴);

¹⁶² See: <https://fisheries.msc.org/en/fisheries/@@search?q=north+sea+mackerel&search=>. Consulted on 29 August 2023.

¹⁶³ STECF 2022. EU Fleet Economic and Transversal data ; [STECF 22-06 - EU Fleet Economic and Transversal data fleet segment.xlsx \(Version 1.1\)](#), consulted on 03/10/2023

¹⁶⁴ The data from the EUMOFA database, consulted 06/10/2023, shows also a decrease, although less pronounced.

- **mackerel:** decrease from around 40 000 tonnes in 2017 (worth EUR 38 million) to 33 000 tonnes in 2021 (around 16 000 tonnes in 2022 according to the EUMOFA database, worth EUR 22 million).

Such decrease in the EU production means in turn that more imports of small pelagic fish might be needed, including from non-cooperating Northern countries. This is also affecting the economic performances of the pelagic reference EU fleet, as the fixed costs remain constant.

The following findings can also be quoted from the STECF 2022 annual economic report on the EU fishing fleet (STECF 22-06)¹⁶⁵:

- **The Netherlands:** an important factor that will determine the performance of the Dutch fleet is the outcome of the negotiation after the current Brexit deal (until 2025). In general, up to 60% of the weight in landings by demersal trawlers and pelagic freezer trawlers (TM40XX) are caught in British waters. The impact of Brexit is high for the Dutch fisheries and entire fish industry.
- **Denmark:** The forthcoming years will be challenging to observe the potential effects for the Danish pelagic fleet following not only Brexit and any unilateral United Kingdom regulatory initiatives, but also the consequences of changed access to the Norwegian waters. The loss of fishing opportunities can affect the value of the quota shares, so that the capital value of some fishing rights is expected to be reduced.

6.3. Case study 3: Impacts of Brexit on market and socio-economic aspects

6.3.1. Relevance of the EU market for the UK's exports

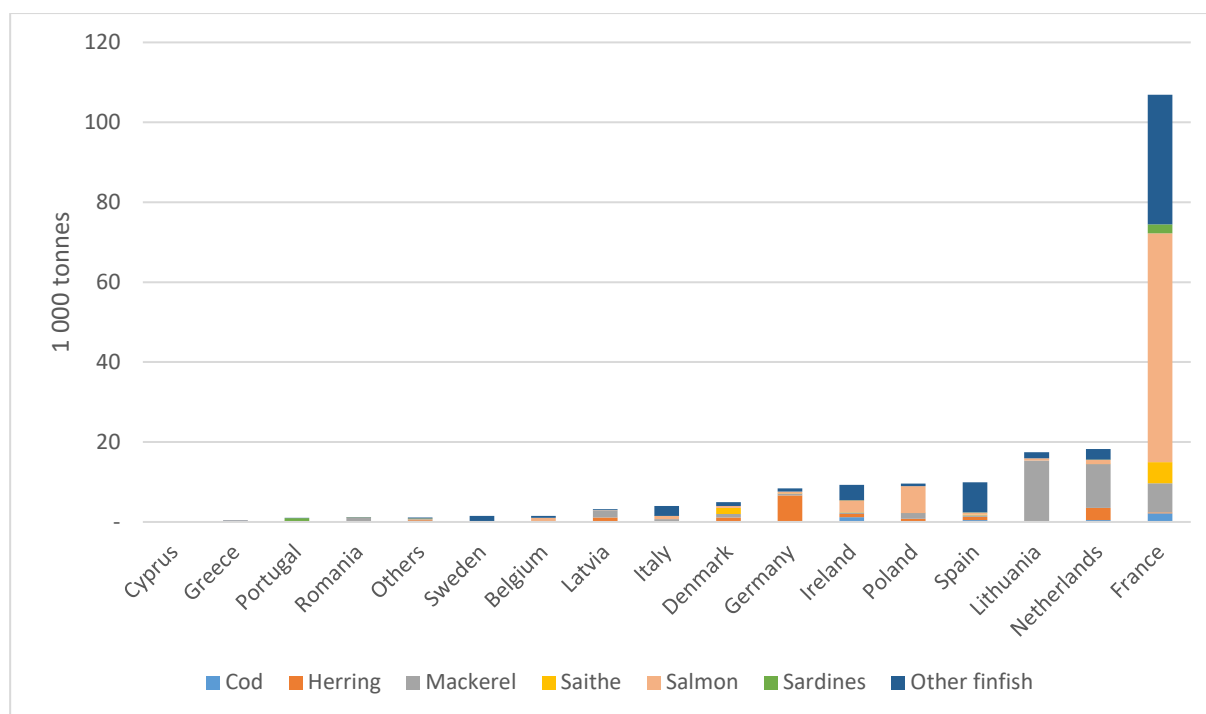
The UK is heavily dependent on the EU market for the export of FAPs. Based on DEFRA data¹⁶⁶, it is estimated that 71% of the UK's exports of FAPs in 2021 volume were sent to the EU market in terms of volume. The value of these exports represented 71.5% of the total value of the country's exports of FAPs. In turn, the FAPs imported from the EU represent 26.3% of the UK's total imports of these products, and 24.4% of the total value of the UK imports. UK producers are more dependent on the EU market than vice versa. Based on EUMOFA data, the UK ranks the fourth among the main extra-EU suppliers to the EU market in 2022, with around 325 thousand tonnes of FAPs and a value of EUR 1.57 billion¹⁶⁷.

The main products supplied by the UK to the EU market in 2021 are salmon (36%), mackerel (21%), and herring (7%) as shown in **Figure 32**. The main destination of UK exports in the EU, **France** was the largest with 54% of all FAPs exported to the EU. It was also the main market for UK farmed salmon; accounting for 80% of all the species exported to France. The **Netherlands** is the second largest importer (9%), and the dominant species is mackerel (60%).

¹⁶⁵ <https://op.europa.eu/en/publication-detail/-/publication/bba413d1-484c-11ed-92ed-01aa75ed71a1/language-en>

¹⁶⁶ <https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021>

¹⁶⁷ For a wider discussion on Brexit in fisheries see: Popescu, I. & Scholaert, F. (2021). EU-UK relation in fisheries, EPRS, European Parliament, February 2021. [https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689341/EPRS_IDA\(2021\)689341_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/689341/EPRS_IDA(2021)689341_EN.pdf)

Figure 32: UK supply of FAPs to EU Member States in 1 000 tonnes, 2021

Source: Own elaboration based on EUMOFA

6.3.2. Impacts of Brexit

Prior to Brexit, one of the main difficulties anticipated for UK's producers was the end of single market freedoms and the non-tariff regime for the UK. The TCA, agreed on 24 of December 2020, includes a non-tariff regime for trade flows between the UK and the EU. However, Brexit has determined the end of the single market for the UK and the free movement of goods. As a result, there are a number of non-tariff barriers such as catch certificates, health certificates for aquaculture products, customs checks and others, which cause additional costs and delays. EUMOFA (2022) reports a decrease in imports from the UK of 11% in volume and 14% in value in 2021-2022, probably due to this situation. Statistical evidence shows that UK producers are more dependent on the EU market than vice versa. Therefore, despite the non-tariff regime, other types of barriers may lead to a loss of competitiveness for the UK sector.

In turn, the impact on the competitiveness of the EU sector is more related to the reduction in fishing opportunities and access to the UK EEZ than to market conditions. As described in detail in Case Studies 1 and 2, the TCA involves a gradual transfer of EU fishing opportunities to the UK. These represent around 25% of the value of EU production from UK waters. The loss of fishing opportunities has had some negative effects on Member States. In the case of Ireland, for example, Brexit has drastically changed the situation of the fishing sector¹⁶⁸. The fleet has lost access to 15% of its annual quota until 2026, mainly affecting pelagic stocks, shrimps and stocks of white fish stocks such as monkfish and haddock. The loss to Ireland, for example, has been estimated at EUR 43 million. Similarly, Irish FAPs exports to the UK, a market valued at EUR 80 million before Brexit, have been affected, as have Irish FAPs imports from the UK, estimated at EUR 219 million in 2018, and the processing supply chain have been disrupted.

¹⁶⁸ See the report of the Report of the Seafood Task Force. Available at: <https://bim.ie/wp-content/uploads/2022/01/Report-of-the-Seafood-Taskforce.pdf>

Brexit meant a reduction in EU salmon production, as the UK was the main producer of salmonids. Today, Ireland is the main producer of salmon. This country provided 75% of the total EU salmon production in 2020 (12 870 tonnes with a total value of EUR 113 million in 2020). Ireland's prices are higher than those of other producing countries, such as Denmark and Poland, because Irish salmon production is exclusively organic (STECF, 2023).

The TCA does not include a non-tariff regime for British Overseas Territories. As a result, the Falkland Islands are not included in the non-tariff agreement, and these products are subject to tariffs when entering the EU market. This hurts the fishing industry and in the economy of the archipelago, as 90% of its products are exported to the EU. In turn, this affects the competitiveness of Spanish companies that import squid from the Falklands to be processed in Galicia (Amigo-Dobaño et al. 2020)¹⁶⁹. According to the Galician sector, they are able to cope with this situation through ATQs for products intended for processing¹⁷⁰. According to Oanta (2021), a solution to this problem could be the conclusion of a mixed SFPAs¹⁷¹, which would provide greater legal certainty for EU fishing companies operating in the Falklands.

On the social impact side of Brexit, the end of free movement of people has also had an impact on European Union citizens working in the various links of the fisheries and aquaculture value chain. Around a third of workers in the UK's fish processing industry are EU nationals, some of whom had to leave the UK after Brexit¹⁷².

In turn, the UK is the main supplier of Atlantic mackerel to the EU and after Brexit has become a major competitor to Germany, the Netherlands, Poland, Ireland, and France for the supply of this species. There are concerns about the exploitation of this resource by different countries in the North Sea, which may lead to unregulated fishing due to unilateral decisions on catch limits. This may affect the access of this fish to the EU market.

6.3.3. Competitiveness implications

- The EU market is the most important for the competitiveness of the UK sector, while the UK market is only the fourth most important for the EU, which could provide some bargaining power in negotiations.
- Irish production of salmon has a niche market and therefore UK production of this species may not be a strong competitor for this sector. In contrast, the UK is a competitor for Member States targeting mackerel.
- The British Overseas Territories are not covered by the TCA, which affects the competitiveness of EU producers dependent on imports from these regions, in particular of the Falklands.

¹⁶⁹ <https://es.euronews.com/my-europe/2021/01/11/las-repercusiones-del-brexit-en-las-islas-malvinas>

¹⁷⁰ <https://www.atlantico.net/articulo/economia/intentamos-remediar-efecto-brexit-incertidumbres/20210912020156863556.html>

¹⁷¹ This type of SFPAs provides access to a wide range of fish stocks in the partner country's EEZ.

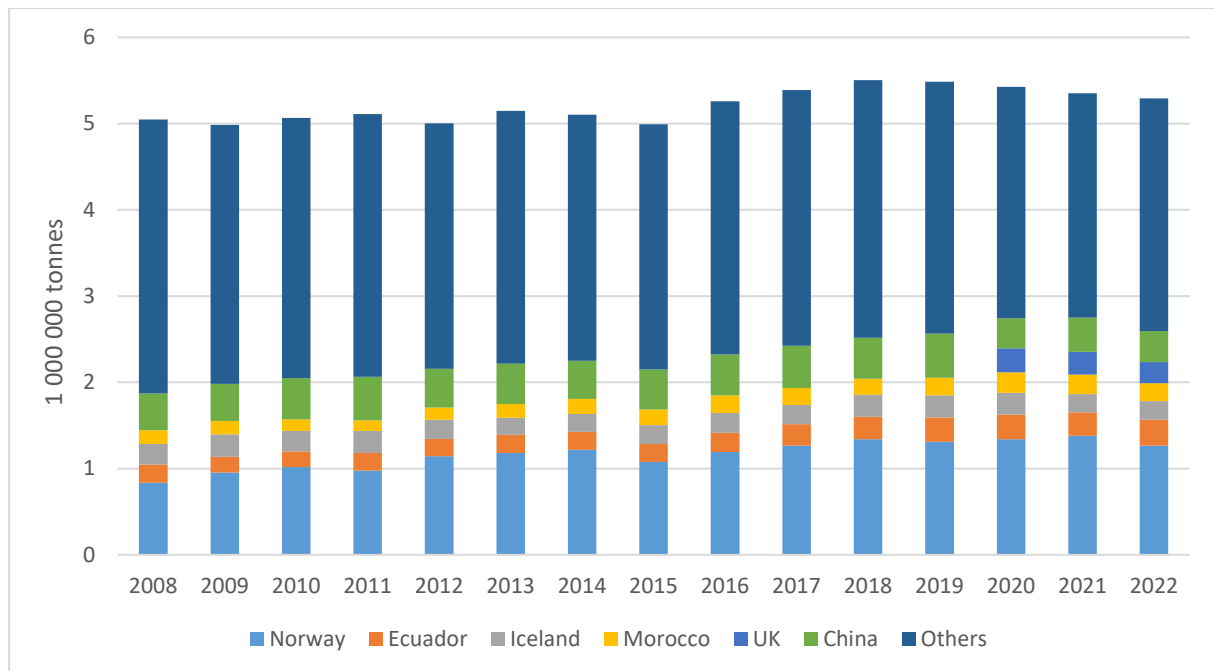
¹⁷² <https://www.bloomberg.com/features/2023-brexit-fails-uk-fishing/#:~:text=Hundreds%20of%20jobs%20are%20now,Technology%20also%20threatens%20employment>

6.4. Case study 4: Norway as a competitor for the EU

6.4.1. Mutual dependency on FAPs

Norway has a large and highly developed fisheries and aquaculture sector and is one of the world's leading producers and exporters of FAPs. Norway and the EU have bilateral fisheries management and trade agreements. The Northern Agreement with Norway provides access to each other's EEZs for fishing and ensures a smooth trade in FAPs. In turn, the European Economic Area (EEA) agreement allows Norway to participate in the EU's single market for most goods, including seafood. The EU has tariff agreements with the country, which vary according to species and product type. However, as a sovereign state, Norway has its own fisheries policies and regulations and sets its own CMMs for its sector and in its EEZ.

Norway is the main supplier of fish to the EU market. In 2022, the EU imported around 1.6 million tonnes of FAPs from Norway, representing 26% of the total extra-EU imports in volume. These imports are worth EUR 8 500 million, which represents 27% of the extra-EU imports in terms of value. Looking at the period 2008-2022, imports from Norway represent on average around 24% of the FAPs imported in volume and around 24% of value. Norway's share of the EU market has followed a smooth increasing trend since 2008, increasing by around 50% in 15 years (**Figure 33**). In turn, the EU is the main supplier of FAPs to Norway. In fact, 30% of its imports come from the EU. These are mainly fishmeal and fish oil used in aquaculture production (EUMOFA, 2020). It is worth noting that some of the Norwegian cod entering the EU market is processed in China (see **section 4.2.1**). There have been journalistic investigations that the Chinese processors do not fully comply with the EU regulation on the use of phosphates and water in these products. The Norwegian authorities and industry representatives have stated that these are investigations into processing practices in China. These should not call into question the quality of Norwegian wild and farmed fish¹⁷³.

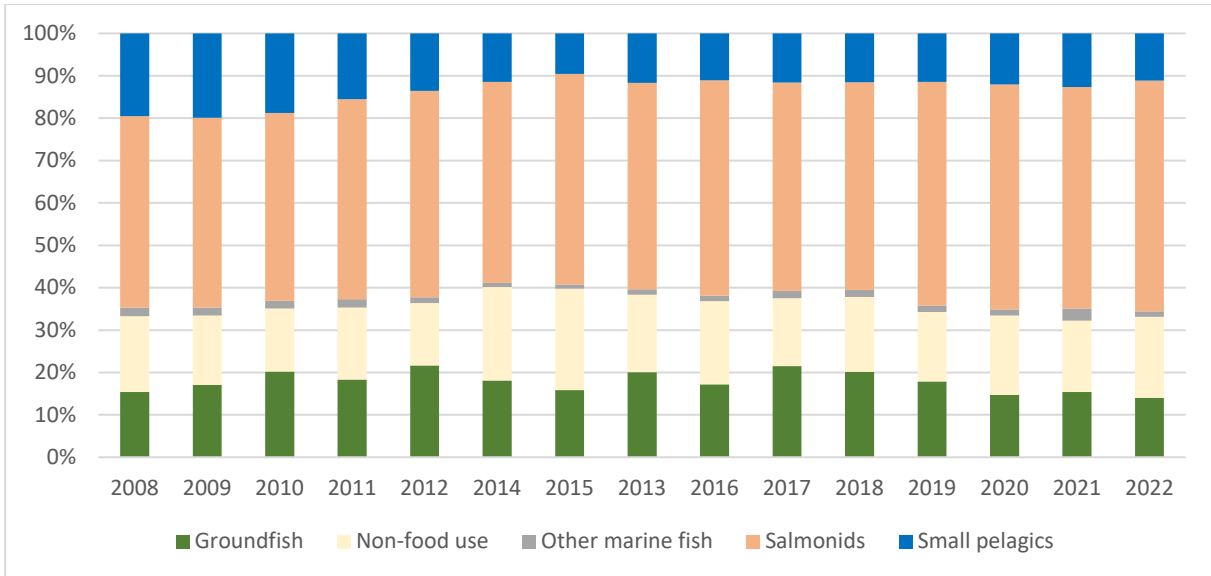
Figure 33: Extra-EU imports of fish commodities from selected non-EU countries in million tonnes, 2008-2022

Source: Own elaboration based on EUMOFA

Imports from Norway consist of salmonids, groundfish, and small pelagics, other fish, and non-food products (**Figure 34**). Throughout the study period 2008-2022, salmonids are the main imported commodities. The average over the study period is 49%. From 2019 onwards, imports of salmonids account for more than 52% of the volume of FAP imports from this country. Groundfish, in turn, is the second most important food product imported from Norway over the period, with a share of around 18%. Nevertheless, imports of this species group from Norway have decreased since 2019 and are slightly below the historical average. Small pelagics have historically been the third most important commodity for human consumption. The historical average has been around 13.5% and has followed a decreasing trend over the last five years, falling to 12%. The EU is the main supplier of FAPs to Norway. In fact, 30% of imports come from the EU. These are mainly fishmeal and fish oil uses in aquaculture production (EUMOFA, 2020).

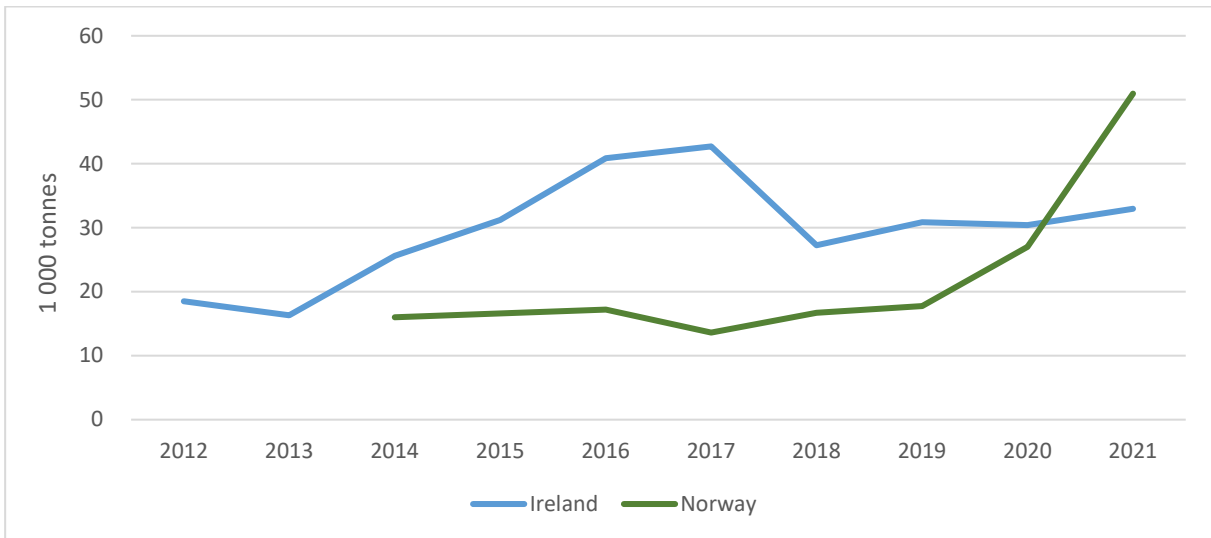
Norwegian salmon production does not currently compete with EU production, as most EU salmon is organic. Ireland is the main producer of organic FAPs in the EU, accounting for around 25% of EU production. Irish producers have found a market niche for their organic products in the EU. However, as observed in **Figure 35**, Norwegian organic aquaculture production is growing rapidly and overtook Irish production in 2021.

Figure 34: Evolution of fish commodities shares in EU imports from Norway, 2008-2022



Source: Own elaboration based on EUMOFA

Figure 35: Production of organic aquaculture in Norway and Ireland in 1 000 tonnes, 2008-2022



Source: Own elaboration based on Eurostat

6.4.2. Aquaculture management

Norway is a world leader in aquaculture, particularly in salmonid farming, which accounts for 95% of production¹⁷⁴. Policy attempts to balance aquaculture growth and environmental protection. This is very different from what is observed in other developed regions of the world, including the EU (Naylor et al. 2023). It is also a benchmark for aquaculture management. The salmon industry has environmental impacts that are being addressed through a licensing system that came into force in 2013. The aim is to encourage the development of more environmentally friendly production technologies. The positive impacts seem to outweigh the side effects of the system, such as a high administrative burden and a long licensing process (Osmundsen et al., 2022). The government is seeking to reconcile multiple uses of the seas with aquaculture and is currently developing a new licensing scheme for offshore aquaculture, combining the experience of both the aquaculture and the oil and gas sectors¹⁷⁵.

Large amounts of public funds are used to improve the competitiveness of the fisheries and aquaculture sector. This support may have contributed significantly to the growth of the Norwegian aquaculture (**Figure 13**). According to the OECD database on *'Fisheries Support Estimates'*¹⁷⁶, in 2019 the Norwegian seafood industry received USD 3 million in public support for *'Transfers based on input use'*, around USD 26 million for *'Transfers based on fishermen's income'*, USD 85 million support for *'tax exemption'*. In addition, around USD 49 million was granted for *'research and development'* in 2019 (USD 46 million in 2018, to compare with France – USD 0.8 million and Germany – no support – for the same year). This shows Norway's potential to develop the production in the coming years, partly in the aquaculture sector (offshore and recirculating aquaculture systems (RAS) technologies).

6.4.3. EU and Norway relations on fishing opportunities

The EU is particularly concerned about a number of issues affecting the fishing opportunities for its fleets in non-EU waters. Following Brexit, Norway set separate cod quotas for the EU and UK fleets in the Fisheries Protection Zone around Svalbard. However, the EU challenged the setting of these quotas, citing the Svalbard Treaty (1920), which limits Norwegian sovereignty over the Svalbard archipelago. After formal discussions, Norway and the EU finally reached an agreement on fisheries in April 2022, which recognises Norway's rights and obligations as a coastal State to regulate, in accordance with international law, living marine resources in waters under its sovereignty, including the Fishery Protection Zone off Svalbard. The agreement stipulates that Norway will establish a quota for the EU equal to 2.8% of the TAC for the year in question, which may be fished in the Fisheries Protection Zone (FPZ) around Svalbard¹⁷⁷.

Another important issue is the management of small pelagics fisheries in the North Sea. As discussed in case study 2 on small pelagics (section 6.2), these fisheries are considered unregulated due to the lack of agreement between the coastal States (EU, Norway, the UK, Iceland, and the Faroe Islands) on the setting of quotas. The EC's main concern is that Norway has unilaterally set quotas for mackerel from 2020. This is seen as a non-cooperative behaviour that undermines the status of the resource and

¹⁷⁴ <https://www.ssb.no/en/fiskeoppdrett>

¹⁷⁵ See for example <https://www.fishfarmermagazine.com/news/norway-plans-new-rules-for-offshore-farms/>; <https://thefishsite.com/articles/oil-and-gas-firm-moves-into-offshore-aquaculture>

¹⁷⁶ https://stats.oecd.org/Index.aspx?DataSetCode=FISH_FSE

¹⁷⁷ <https://www.regjeringen.no/contentassets/70a18c8e8d7542558dbffdc76e95ca55/ad-hoc-exploratory-consultations-in-relation-to-the-fisheries-in-ices-areas-1-and-2.pdf>

has negative economic consequences for EU fleets, in particular the Irish fleet¹⁷⁸. These actions are also contrary to the provisions of UNCLOS and the 1995 Straddling Stocks Agreement. According to the EC, Norway has increased its share of mackerel to 31.99% in 2022. This is a significant increase compared to the quota agreement reached by the coastal States in 2014¹⁷⁹. The agreement expired in 2020 and since then the EU and Norway have been arguing about the allocation of the quota. The Norwegian position is that mackerel have changed their migratory pattern and spend most of the year in their waters.

In October 2023, the EU pelagic industry¹⁸⁰, represented by the Pelagic AC, called on the EC and the Council to strongly condemn the setting of unilateral quotas by coastal States and to take immediate action against these practices, such as selective trade measures. According to reports, the unilateral quotas set by Norway and the Faroe Islands exceed the TAC by 40%.

6.4.4. Competitiveness implications

- At present, Norway is not a threat to the EU in terms of competition for the FAPs market. Both countries supply each other with differentiated products and fill different market niches. It appears that both parties are largely dependent on each other for the supply of fish for very different purposes.
- Norway has increased its production of organic aquaculture products and has overtaken Ireland in the production of these products. In the future, Norway could be a competitor for Ireland in the EU market niche of organic products.
- Norway is a benchmark in aquaculture management. Policy efforts have been made to address environmental issues without restricting the growth of the sector, e.g. through licensing systems. The Norwegian experience can provide useful policy lessons for the management of the EU sector.
- The EU and Norway have had a number of disagreements on access to fishing opportunities in the Norwegian EEZ, which have been resolved. However, Norway's unilateral settings of quotas on mackerel by Norway, and its non-cooperative management of small pelagics, are threatening the stocks, while negatively affecting economic interests. This may lead to measures affecting access to the EU market.

¹⁷⁸ <https://thefishingdaily.com/featured-news/european-commission-asks-for-conservationist-approach-to-mackerel-sharing/>

¹⁷⁹ <https://thefishingdaily.com/latest-news/eu-and-norway-clash-in-mackerel-dispute-eu-threatens-retaliation/>

¹⁸⁰ <https://www.pelagicfish.eu/wp-content/uploads/2023/10/EAPO-23-60-EAPO-NPWG-position-paper-on-fishing-opportunities-for-2024.pdf>

7. ASSESSMENT OF THE POLICY OPTIONS

KEY FINDINGS

- The current rules of the EU fisheries policy have certain shortcomings that affect the competitiveness of EU operators. It is therefore necessary to **improve the enforcement of the fisheries legislation** and to **introduce measures to combat unfair competition** and to **ensure a level playing field** in the EU fisheries market.
- The new legislation on **fisheries control and surveillance** should ensure a similar level of requirements for both the fleets of non-EU countries exporting their products to the EU and the EU fleet. This requires the proper use of the control system in order to guarantee better traceability that ensures better traceability of all fishery products placed on the EU market, but also from the point of view of sustainability, compliance with health requirements and working conditions.
- In short, the aim is to introduce measures to ensure that **FAPs imported** from non-EU countries and placed on the EU market is subject to the **same controls** and meets the **same requirements** as products from the EU fleet.
- Contributing to food supply and food security is one of the objectives of the CFP Basic Regulation (Article 2(5)(e)) and is therefore one of the objectives of the **EU's external fisheries policy** as well. The supply of these products must be made in a framework of **fair competition**. To achieve this objective and reinforce this fair competition, the EU's international action – both in RFMOs and through sustainable fisheries partnership agreements – should monitor that no FAPs originating from vessels that practice IUU fishing or whose activities involve labour abuses and violate human rights benefit from preferential access to the Union market.
- Similarly, **international trade agreements** concluded by the EU should consider **FAPs as sensitive products**, allowing for the application of safeguard measures where necessary.
- The EU should strengthen its mechanisms and instruments for **investigating and monitoring subsidies granted by non-EU countries** to their fleets whose products are marketed in the EU.

7.1. Adaptation of the internal policy framework

Securing the food supply from fisheries and aquaculture activities is a fundamental objective of the CFP as stated in the European Parliament resolution of 18 January 2024 on the state of play in the implementation of the CFP and future perspectives¹⁸¹. However, as the EU fisheries and aquaculture market is one of the largest in the world, it is not sufficiently supplied with products from European operators, making it necessary to import FAPs from non-EU countries. This importation must take place under conditions of fair and equitable competition, otherwise the result will be that producers from

¹⁸¹ European Parliament resolution of 18 January 2024 on the state of play in the implementation of the Common Fisheries Policy and future perspectives (2021/2169(INI)), [P9_TA\(2024\)0045](#).

non-EU countries with bad practices will end up displacing those who respect the rules, whether from the EU or from outside the EU. In this context, and in line with the EC Communication *"The common fisheries policy today and tomorrow: A Fisheries and Oceans Pact towards sustainable, science-based, innovative and inclusive fisheries management"*¹⁸², of 21 February 2023, Parliament considers that the implementation of the CFP rules should be improved in order to ensure the fair competition for EU operators and to defend the interests of the EU fisheries sector at global level (point 115).

In this respect, it is necessary to take advantage of the impetus given to the CFP by the fisheries policy package adopted by the Commission on 21 February 2023¹⁸³ in order to improve the implementation of all those provisions that can defend the competitiveness of the European fisheries and aquaculture sector, combat unfair competition and ensure a level playing field in the EU fisheries and aquaculture market. With regard to the **CFP**, the Recitals 12 and 53 and Articles 2(1) and 5(e) of **Regulation (EU) 1380/2013** set as a **priority objective** of the CFP to contribute to supplying the EU market with food of high nutritional value and to reducing the EU market's dependence on food imports, in line with what is enshrined in Articles 38 and 39 TFEU. These provisions also state that the CFP should promote direct and indirect job creation and the economic development of coastal areas.

The reality is that these **objectives are not being properly achieved**, as unfair competition, which has a negative impact on the competitiveness of the EU fisheries and aquaculture sector, poses, among other things, a serious problem of self-sufficiency and, consequently, food sovereignty. This present situation is the result of the gradual increase and growing dependence on imports of fishery products from non-EU countries, which in many cases offer significantly lower prices. The loss of "market share" has a negative impact on employment and economic development in coastal areas dependent on fishing and aquaculture.

In recent years, the EC has carried out **several evaluations**¹⁸⁴ of the application of **marketing standards** for FAPs, which, as noted above, are broadly the same for both EU and non-EU products. It has concluded that these rules are *"are generally relevant and efficient and add value within the boundaries of their current scope and underlying criteria"*¹⁸⁵. However, these evaluations have also identified **shortcomings** in their ability to achieve the objectives of the **CMO Regulation**, including sustainability, such as the limited role of these marketing standards in ensuring the sustainability of products marketed in the EU, or the relatively low level of control by national authorities to ensure compliance with these standards.

¹⁸² Communication from the Commission to the European Parliament and to the Council: *"The common fisheries policy today and tomorrow: A Fisheries and Oceans Pact towards sustainable, science-based, innovative and inclusive fisheries management"*, [COM\(2023\) 103 final](#), 21.2.2023.

¹⁸³ The EC's fisheries policy package adopted on 21 February 2023 consists of: (1) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the Energy Transition of the EU Fisheries and Aquaculture sector, [COM\(2023\) 100 final](#); (2) Report from the Commission to the European Parliament and the Council *"Implementation of Regulation (EC) 1379/2013 on the common organisation of the markets in fishery and aquaculture products"*, [COM\(2023\) 101 final](#); (3) Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions *"EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries"*, [COM\(2023\) 102 final](#); (4) Communication from the Commission to the European Parliament and the Council *"The common fisheries policy today and tomorrow: A Fisheries and Oceans Pact for sustainable, science-based, innovative and inclusive fisheries management"*, [COM\(2023\) 103 final](#); (5) Commission Staff Working Document: Common Fisheries Policy – State of play accompanying the document Communication from the Commission to the European Parliament and the Council *"The common fisheries policy today and tomorrow: a Fisheries and Oceans Pact for sustainable, science-based, innovative and inclusive fisheries management"*, [SWD\(2023\) 103 final](#).

¹⁸⁴ Commission staff working document on the evaluation of the marketing standards framework for fishery and aquaculture products, [SWD\(2019\) 453 final](#), 20.12.2019.

¹⁸⁵ [COM\(2023\) 101 final](#), p. 10.

In response, the Commission has launched a process to **review of marketing standards**¹⁸⁶. So far, it has taken the form of a first impact assessment (published in April 2020¹⁸⁷), the **Farm to Fork Strategy action plan**¹⁸⁸, which has been published by the Commission as a follow-up to the EGD¹⁸⁹, as well as a public consultation¹⁹⁰ (conducted between November 2020 and February 2021) and a series of targeted stakeholder consultations¹⁹¹. The Commission is also expected to propose in the near future an initiative on a sustainable food system – which will undoubtedly include fishery and aquaculture products intended for consumption by EU citizens – to ensure a harmonised EU approach to sustainable food production. In this vein, **the European Committee of the Regions** has also adopted its opinion on a legislative framework for sustainable food systems (FSFS) in May 2023¹⁹², in which it calls on the Commission, *inter alia*, to “ensure that horizontal and sectoral policies linked to food and food systems are in line with the objectives and targets set by the future FSFS, the farm-to-fork strategy, the European Climate law, the biodiversity strategy and zero pollution targets, with proper evaluation and regular monitoring in place” (para. 4).

The concerns expressed by the Commission, the Parliament and the Committee of the Regions are, in our opinion, relevant and we should moreover include other considerations, which reflect the existence of distorted competition that threatens the competitiveness of the EU fisheries and aquaculture sector and, ultimately, the EU’s food sovereignty.

As far as the legislation on **monitoring, control, and surveillance** of the EU fleet is concerned, Article 1 of the new Fisheries Control Regulation amends many provisions of the Regulation (EC) No 1224/2009¹⁹³ to ensure effective compliance with EU **fisheries legislation** by introducing a wide range of demanding measures affecting EU operators. This level of rigour does not apply either to measures concerning fleets flying the flag of non-EU countries and whose products are exported to the EU market, nor to the control of such measures. This leads to a **loss of competitiveness** of the EU fleet, which suffers the negative consequences of unfair competition. Therefore, only through a better implementation of Articles 1 and 2 of the new Fisheries Control Regulation could strengthen import controls and better protect European fishers from illegal fishing in non-EU countries and from unsustainable fishing, thus achieving the desired international level playing field.

The new control rules should therefore provide for a stronger, more effective, and harmonised control system for the EU, with **improved traceability** for all fishery products. However, in addition to improved traceability, in order to avoid discrimination, the EU must require that all products marketed on its territory comply with the same level of **conservation and management measures** (CMMs), in

¹⁸⁶ Commission staff working document on the evaluation of marketing standards framework for fishery and aquaculture products, SWD(2019) 453 final.

¹⁸⁷ “Review of the marketing standards framework for fishery and aquaculture products”, Inception Impact Assessment, [Ares\(2020\)1962951, 7.04.2020](#).

¹⁸⁸ Annex to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on “A Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system”, [COM\(2020\) 381 final Annex](#), 20.5.2020.

¹⁸⁹ Annex to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “A Farm to Fork Strategy: For a fair, healthy and environmentally-friendly food system”, [COM\(2020\) 381 final Annex](#), 20.5.2020.

¹⁹⁰ “Summary Report: Public consultation on the revision of seafood marketing standards”, Ares(2021)4238135-29/06/2021; available at: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12262-Review-of-the-marketing-standards-framework-for-fishery-and-aquaculture-products/public-consultation_en

¹⁹¹ See: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12262-Fish-seafood-products-review-of-marketing-standards/public-consultation_en

¹⁹² [OJ C 257/23, 21.7.2023](#).

¹⁹³ For an overview of these changes, see: Scholaert, F. (2023). New EU fisheries control system, At a glance, Plenary October II 2023, EPRS, European Parliament, Brussels [https://www.europarl.europa.eu/RegData/etudes/ATAG/2023/753962/EPRS_ATAG\(2023\)_753962_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2023/753962/EPRS_ATAG(2023)_753962_EN.pdf).

addition to the **hygiene** requirements imposed by the EU legislation. In this way, all the potential offered by the new Fisheries Control Regulation should be used to achieve a stronger, more effective and harmonised control system for the EU, with improved traceability for fisheries products (Article 58).

The products of **EU operators have to compete** in the international trade with products that are not produced under the same regulatory framework. With regard to the **EU legislation on the import and marketing of FAPs** on the EU market, practice shows that this **legislation is not always properly respected** by the fleets of non-EU countries and that their **exports to the EU circumvent EU sanitary requirements**. In addition, these practices show how fishery products from **IUU** or **unsustainable fishing** and from vessels whose **working or health conditions** are far from the standards applicable to the EU fleet, reach the EU market. This situation is facilitated by **customs controls** in the EU Member States themselves, which are not always adequate and effective¹⁹⁴.

In this context, it should be recalled that **imports** of these products into the EU **market are not subject to the same health controls** as products from non-EU countries. For the former, Member States are responsible, while for imported fish, the EC allows non-EU countries to decide which establishments may export fishery products to the EU, provided that they can guarantee equivalent standards. However, health controls at EU border inspection posts are often hampered by the fact that **some non-EU countries do not adequately ensure that products meet the necessary health standards**, at least as far as fishing and factory vessels and refrigerated vessels are concerned. The **veracity of the certificates** issued by the authorities of non-EU countries authorised to export to the EU on the traceability of products and compliance with health standards by non-EU fishing vessels operating in their waters **has been questioned**. Finally, there are concerns about the possibility of non-EU countries delegating the right to issue these certificates to other selected non-EU countries, which would run counter to the concept of **flag State responsibility** underpinning the CFP, and in particular the responsibility of the flag State to validate the **catch certificate**.

These situations should be **corrected in future legislation** in order to avoid situations where these products are not properly controlled for compliance with fishing, production and marketing conditions in accordance with EU standards, thus creating unfair competition with EU production and **undermining the competitiveness of the EU** fisheries and aquaculture sector. This situation is not only an obstacle to the EU's progress towards **sustainable** fisheries from an environmental point of view, but also from a **social and economic** point of view, as it affects the long-term survival of **coastal communities** dependent on fishing and undermines the EU's **food sovereignty** with regard to an essential food source such as fisheries. It is therefore necessary to include measures to strengthen this **harmonisation in controls** and, where this is not the case, in **inspection and sanction procedures**.

EU legislation on this issue should therefore ensure that **all competent authorities** are subject to the **same rules on controls on imports** of FAPs from non-EU countries **and on sanctions** for offenders. It is therefore essential that these **controls are properly harmonised** by the Member States. However, as we have said, it can happen that a **Member State does not apply this legislation correctly** and does not carry out these controls with the same rigour as others, allowing products that do not comply with EU legislation to enter the EU market. This creates a **situation of imbalance** where there is no longer a level playing field.

¹⁹⁴ See: European Court of Auditors (2017), "Import procedures: shortcomings in the legal framework and an ineffective implementation impact the financial interests of the EU", Special Report No. 19, 2017, pp. 11 and 12; <https://op.europa.eu/webpub/eca/special-reports/eu-customs-19-2017/en/#chapter0>

In short, there is a need to establish a **more comprehensive system to control imports** and bring them into line with EU criteria to ensure the sustainability of fisheries and farms. It is also necessary to **strengthen measures to achieve a fair, transparent and sustainable fish trade**. The need to promote measures to ensure that imports of fishery products from third countries entering the EU market are subject to the same controls and meet the same requirements as EU fleets. Furthermore, the need to **harmonise and strengthen the monitoring and control of imports** of FAPs in all Member States to ensure that those that reach the consumer meet the bio-sanitary and sustainability standards in force in the EU.

This would be in line with Parliament's resolution of 8 July 2010 on "**Arrangements for importing fishery and aquaculture products into the EU**" in the light of the CFP reform¹⁹⁵ and with Parliament's resolution of 30 May 2018 on "**Conformity of fisheries products with access criteria to the EU market**" of fishery products with the criteria for access to the EU market¹⁹⁶. The latter stated that one of the main objectives of the **CFP import policy** should be to ensure that **imported products meet the same requirements in all areas** as those imposed on EU production, and that the **EU's efforts to achieve sustainability in fisheries are incompatible** with importing products from countries that do not care about sustainability.

In relation to all this, it would be appropriate that, in line with a better implementation of the CFP rules highlighted by the EC in its Communication "The common fisheries policy today and tomorrow: a Fisheries and Oceans Pact towards sustainable, science-based, innovative and inclusive fisheries management" of 21 February 2023, it should be emphasised that one of the **objectives of the CFP** is to ensure **equal treatment of imported FAPs** and EU products by requiring that all imported products comply with the conservation and management rules and health requirements laid down in EU legislation. This would contribute to **fairer competition** and strengthen the rules governing the exploitation of marine resources in non-EU countries. In addition, the adoption of a **label to identify EU fisheries products**, which would allow consumers to distinguish them from fisheries products from non-EU countries, could be a factor in improving competitiveness. This would **improve the information available to EU consumers** on their geographical origin, their quality and the conditions under which they were produced or caught. In the case of imported products, it should also be compulsory to **label fishery products** with the **name of the State under whose flag the catching vessel sailed**. P8_TA(2018)0223

EU **labour law** also has a **significant impact on the competitiveness** of EU FAPs subject to its provisions. These **rules are often stricter** than those in other countries' legislation. This disparity in obligations leads to **distortions of competition** that should be corrected. This does not mean that the EU should lower its standards; on the contrary, it should move in the direction of **protecting and safeguarding workers' rights**, ensuring that they are respected and rigorously enforced. However, for reasons of fair competition, as well as for ethical and moral reasons, **all countries wishing to export** their fishery products to the EU **should have ratified**, be in the process of ratifying or have **national labour legislation** that is **equivalent to the main international conventions** on the subject. In this sense, future EU legislation should monitor and control the access to the EU market of FAPs from non-

¹⁹⁵ European Parliament resolution of 8 July 2010 on "Arrangements for importing fishery and aquaculture products into the EU with a view to the future reform of the CFP" (2009/2238(INI), [P7_TA\(2010\)0287](#)).

¹⁹⁶ European Parliament resolution of 30 May 2018 on "Conformity of fisheries products with access criteria to the EU market" (2017/2129(INI), [P8_TA\(2018\)0223](#)).

EU countries that do not have internal regulations or have not acceded to the relevant international labour conventions, from entering the EU market.

7.2. Adaptation to the external policy framework

The **products of EU** operators, whose **presence on this market has been declining** over time, **do not meet the needs** of the EU fisheries and aquaculture market. The need for security of supply has led to an **increase in imports** of products from non-EU countries. However, this dynamic must be balanced in order to guarantee the EU's food autonomy, to allow fair competition on the market and, finally, to ensure that imported products meet the same health and safety conditions as those produced by EU operators.

In this regard, the application of fisheries legislation in the field of the external fisheries policy should be consistent with the EU's social and trade policies, in order to prevent non-EU fleets linked to IUU or unsustainable fishing and where labour abuses occur, from benefiting from preferential market access, for example, through tariff quotas. We also believe that, at international level, the EU's application of the rules deriving from the multilateral conventions to which it is a signatory should be accompanied by a policy aimed at encouraging non-EU countries wishing to export their products to the EU market to adhere to and to comply with these conventions, otherwise such exports or the tariff advantages they enjoy will be penalised.

In this context, and in order to prepare the external dimension of the CFP for the future and to address social and environmental resilience, on 21 February 2023 the EC launched the idea of creating a *"Fisheries and Oceans Pact towards sustainable, science-based, innovative and inclusive fisheries management"*¹⁹⁷ to which stakeholders from the fisheries sector and the scientific community could adhere. Among the key principles around which this Pact would be articulated is precisely the improvement of governance leading to further progress in the EU cooperation with non-EU countries to ensure a *"level playing field"*.

With regard to the EU's Common Commercial Policy (CCP), it should be noted that, in recent years, it has allowed an extensive liberalisation of imports of FAPs from non-EU countries into the EU market.

In other words, the EU's international conventional trade policy and the international conventional fisheries policy should ensure that products from non-EU countries entering the EU market are subject to the same scrutiny and meet the same requirements as EU Member States' fleets. In other words, it is desirable to promote a level playing field in terms of documentation, control and access of fishery products to the EU market. In other words, international trade agreements should pay more attention to FAPs, by giving them the status of sensitive products and opening up the possibility of applying safeguard measures when the situation on the EU market so requires.

On the other hand, with regard to SFPAs, it is not enough to include most favoured nation (MFN) clauses in them, but it would be advisable to include monitoring and control mechanisms so that if the country contracting with the EU gives privileged treatment to the fleet of a non-EU country within the framework of an international agreement or by means of fishing authorisations, or if this fleet does not comply with the labour and safety criteria applied to the EU operators, the EU should take the necessary retaliatory measures, so that coastal countries increase their sustainability and transparency requirements when granting access to their EEZs.

¹⁹⁷ See: https://oceans-and-fisheries.ec.europa.eu/publications/common-fisheries-policy-today-and-tomorrow-fisheries-and-oceans-pact-towards-sustainable-science_en

As regards the EU's presence in RFMOs with conservation, management and control competencies, the way forward would be to seek international mechanisms that would allow the development of a level playing field by improving the functioning of RFMOs and increasing their number and the number of RFMOs to which the EU is a member, in order to cover a larger number of high seas areas. Effective action by RFMOs is key to improving the competitiveness of the EU fisheries sector and avoiding overfishing.

An operator whose fishing and aquaculture activities are not subject to rules on the conservation of fishery resources by his own state, by an international agreement or by a RFMO has a comparative advantage in the short term, since he does not have to comply with a long list of rules, which means he produces under different conditions, to the detriment of the activities of economic actors operating under a much stricter legal framework.

With regard to the trade policy in its international dimension, the EU should strengthen its mechanisms and procedures for investigating and monitoring the extent of subsidies granted by certain non-EU countries, particularly China, and ensure compliance with the principles adopted by the WTO.

Fair and equitable trade does not imply identical conditions of production. However, compliance with the main international conventions, be it in the field of responsible and sustainable fishing, trade standards, labour rights or environmental rights, must be a point of reference, as they are the instrument to ensure a level playing field. Otherwise, the existence of different levels of compliance with international standards creates an imbalance in which the compliant party loses competitiveness vis-à-vis the non-compliant party.

7.3. SWOT analysis

SWOT stands for strengths, weaknesses, opportunities and threats. Strengths and weaknesses characterise the current situation, from which future opportunities and threats are derived. **Strengths** refer to those features of the EU fisheries and aquaculture sector that give it a competitive advantage. **Weaknesses** refer to areas where the sector is at a disadvantage. **Opportunities** are factors and trends that the sector can exploit to improve its competitiveness in the future. **Threats** are external factors that can potentially undermine the competitiveness of the EU fisheries and aquaculture sector. The general objective of the SWOT analysis is to **identify needs for action** that can guide the adaptation of policy and regulation. Two SWOT analyses are presented below, one on the competitiveness of the sector at **EU level** (see **Figure 36**) and the other at **international level** (see **Figure 37**).

Figure 36: SWOT analysis Internal (EU level)

Strengths	Weaknesses
<ul style="list-style-type: none"> • A regulatory framework covering all aspects of the sector's value chain, including enforcement, within EU waters. • A robust research and development apparatus, including research facilities, scientific networks and EU funding. • The EU Advisory Councils on trade, aquaculture, distant waters and all those dealing with regional fisheries play a key role in the decision-making process. • EMFAF and other EU funds can contribute to the development of the sector. • EMFAF funds POs' marketing plans, which may include the promotion of seafood consumption. • Working conditions, hygiene and quality standards and traceability add value to FAPs and provide a reference point for consumers against imported products. • A wide variety of marketable FAPs. • Education and training infrastructure covering the seafood production value chain. • A growing number of labels that add value to FAPs and at the same time provide incentives for producer responsibility. 	<ul style="list-style-type: none"> • An extensive corpus iuris and strict regulations place a heavy burden on EU operators, which can restrict access to resources and lead to lengthy administrative procedures and costs. • Customs in some Member States are unable to prevent access of FAPs from non-EU countries with more lenient regulations. • Restrictions on aquaculture production due to lengthy administrative procedures for obtaining licences and limited availability of licences for exploitation. • The EU fleet is highly dependent on fossil fuels, so escalating fuel prices affect fleet performance and first sale prices. • Predominance of fragmented aquaculture activities unable to achieve economies of scale. • Fragmentation of some fishing and aquaculture segments, giving market power to buyers and retailers. • Labour, hygiene and quality standards for FAPs production are costly and require complex administrative processes and extensive knowledge of procedures. • Marketing information for seafood is not always available to EU consumers, although this is required by the CMO. • Difficulties in generational renewal affect the availability of crews for fishing vessels.

Opportunities	Threats
<ul style="list-style-type: none"> • The proper implementation of the existing fisheries legislation (especially the CFP Basic Regulation, the new Fisheries Control Regulation, the proposed Regulation to ban products made with forced labour from the EU market, and the proposed Directive on due diligence). • The research network can work together with the industry to identify and address the new market needs for FAPs. • EMFAF funds improvements to engines and the selectivity of gears that contribute to efficient operation. • EMFAF provides funding to improve aquaculture production, processing and marketing. • Modernisation of the system for controlling access to the EU market through digitalisation. • Awareness of environmental and resource status issues can attract consumers willing to pay a premium price for FAPs from sustainably managed fisheries. • Vertical integration of the aquaculture sector, which can increase efficiency and innovation in new products and markets. • Technical possibilities to develop land-based aquaculture facilities, including RAS for salmon or tropical shrimp. • IMTA and offshore aquaculture production, promoting diversification, efficiency and reduced environmental impact. 	<ul style="list-style-type: none"> • The gradual increase and growing dependence on imports of fishery products from non-EU countries, which in many cases offer much lower prices. • The management plan for trawl fisheries in the Mediterranean and the reduction in fishing effort and the spatial and temporal closures imposed are of great concern to fishers. • Some of the objectives set out in the EGD agenda, such as the establishment of strictly protected areas or the protection of recovering marine mammal populations, are also of serious concern. • The fuel tax exemption for fisheries and aquaculture activities may disappear as a result of current policy initiatives. • Brexit, as well as emerging issues such as the pandemic and the war in Ukraine, are reducing the availability of fish, closing markets and increasing fuel prices. • Climate change and other factors such as red tides, disease and predation are affecting aquaculture production in the EU. • Offshore aquaculture is threatened by rough sea conditions, especially in the context of climate change, which requires further research on offshore facilities. • Loss of attractiveness of the whole fishing sector to new generations compared to land-based and urban activities.

Source: Own elaboration

Figure 37: SWOT analysis External (international level)

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Relevant and influential participation in RFMOs and in other international fora gives the EU a leading role in ocean governance. • The EU has extensive bilateral fisheries relations with non-EU countries. • The EU has a strong bargaining power to set conditions for non-EU countries wishing to trade in the EU market. • The card system established by the IUU Regulation is a step-to-step process to motivate third parties to combat IUU fishing in their fisheries. 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Because of its role in the international arena, the EU leads by example, which implies a strict regulation of the activities of the EU producers. • The EU relies on the authorities of non-EU countries to issue catch certificates, and it is difficult for all these bodies to ensure compliance with EU requirements. • Inconsistent implementation of controls in the different Member States. This would allow some FAPs of dubious origin to enter the EU market and compete with domestic products. • The EU has agreements with countries in whose EEZ domestic and foreign fleets operate with questionable fish, labour and food practices, etc. The EU has little power to stop these activities.
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • The EU has the political, scientific and financial capacity to contribute to ocean governance while ensuring a level playing field for its sector. • High-quality FAPs could continue to be exported to some niche markets, such as the Gulf States, Japan and China. • The EU can use trade measures to restrict imports from several undesirable suppliers of FAPs (e.g. IUU fishing; forced labour; safety) or for geopolitical reasons (e.g. not only excluding Russian products from trade agreements such as the ATQ, but also banning regular seafood products, as done by USA for instance). 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • The TCA with the UK implies a loss of fishing opportunities, which may increase the price of fish or increase dependence on imported FAPs. • Climate change includes changes in the migratory patterns of some stocks, e.g. mackerel and herring. This encourages unilateral decisions by non-EU countries and leads to overfishing. • Escalating IUU fishing and subsidised production of FAPs in other regions of the world will continue to prevent a level playing field if no political action is taken. • Several (free trade) agreements currently under negotiation may severely affect the competitiveness of some EU fleets and their ancillary activities. • International conflicts affect fuel prices and therefore the economic performance of the fleet • Increasing aquaculture production worldwide, with new competitors for key markets, in particular salmonids and whitefish (freshwater), emerging through new licensing schemes and land-based facilities.

Source: Own elaboration

8. POLICY RECOMMENDATIONS

Recommendations on policy adaptations

Based on reviewed evidence a number of general policy recommendations are set out below, as well as a number of more specific policy recommendations based on the four case studies are set out below:

General policy recommendations:

- Better **implementation of the CFP** should lead to equal treatment of imported FAPs and EU products by requiring that all imported products comply with EU CMMs and product requirements.
- In addition to the existing EU fish and aquaculture consumer labels, **another label should be created for FAPs from non-EU countries**, for both fresh and processed products distributed in the EU (including the HORECA channel). This would allow consumers to distinguish between EU and non-EU FAPs.
- In the case of **imported products**, it should also be made compulsory to label fishery products with the **name of the State under whose flag** the catching vessel sailed.
- Strengthen **coordination between the EU's trade and fisheries policies**, in particular when negotiating trade agreements that include fisheries-related issues. In this respect, it is considered essential to analyse the economic and social impact of Free Trade Agreements (FTAs) on the EU fisheries and aquaculture sector, to establish appropriate safeguard measures where necessary and to treat certain FAPs as sensitive products.
- Ensure greater uniformity in the **application of customs rules** and identical customs controls in all Member States in order to prevent non-EU operators from using points of entry with fewer controls to import goods that do not meet EU standards.
- **New Sustainable Fisheries Partnership Agreements (SFPAs)** should be signed to reduce the dependence on imports of FAPs into the EU.
- Products from **non-EU countries** that do not have fully guaranteed domestic **food safety legislation and control mechanisms** equivalent in effect to those applied in the EU, should **be denied access to the EU** market.
- The programme of **inspections in non-EU countries should be improved** by strengthening the missions of the Food and Veterinary Office by increasing the number of inspections carried out by this Office in establishments authorised to carry out inspections in the country of origin or even in a non-EU country.
- Reactivate **cooperation with China** through the already established but dormant Blue Partnerships to improve international maritime governance in the fight against IUU fishing.
- Improve the **collection of trade data**, in particular for processed products from outside the EU, so that authorities can accurately trace the origin of the product and all other intermediate steps until it reaches the final consumer.
- Ensure that all Member States are signatories to each and every international agreement adopted in the field of the fight for **decent working conditions** in the fisheries and aquaculture sector, covering the entire production process including logistics and processing.

- Encourage a more comprehensive use of **EMFAF resources** by all Member States through:
 - promoting *careers* in the sector;
 - promoting *lesser known species* with low demand;
 - identifying new *consumption habits* and new potential fish presentations;
 - the potential of *niche markets* in the EU for domestic production;
 - the development of a *more energy efficient and productive* fisheries and aquaculture sector.
- Strengthen efforts to **add value to the products**, in particular through geographical indications, use of sustainable practices, innovative products or other means that can differentiate the product and obtain a price premium in some niche markets.

Recommendations based on case studies:

- As the **small pelagic fisheries in the North Sea** can be considered unregulated due to the lack of cooperation between coastal States as expected under UNCLOS, the EU could eventually impose trade measures under the IUU Regulation (1005/2008).
- Consider **whether small pelagic species** such as herring should be **excluded from ATQ schemes**.
- **Renegotiate access to UK waters**, particularly in the light of the post-2026 situation.
- Explore the possibility of a **mixed SFPA**, which could provide greater legal certainty for EU fishing companies operating in the **Falklands**.
- Strengthen safety and **hygiene measures for pangasius** and similar non-EU products (e.g. by increasing the inspection rate to 50%, as for Indian shrimp products).
- Investigate **production methods in exporting countries**, including for Norwegian products processed in non-EU countries.
- Restrict imports of Russian products, not just the removal of any duty-free or most-favoured nation treatment. Maintain some **state aid framework** to adjust to the ongoing geopolitical unrest, in particular the level of energy prices.
- **Benchmark the environmental licensing system** used in Norwegian aquaculture.

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The EU fisheries and aquaculture products (FAPs) market is largely dependent on external producers. Some of the imports entering the EU market come from countries with lenient regulations. This study gives an overview on existing competitiveness indicators. It shows main trends in the EU's FAPs supply through extra-EU imports and identifies the main internal and external factors affecting the sector's competitiveness. The research presents four case studies and an assessment of options for adaptations to the internal and external policy framework. Finally, it provides a series of recommendations for strengthening the competitiveness of the EU fisheries and aquaculture sector in the future.

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