# SOCIO-ECONOMIC IMPACTS OF THE EU COMMON FISHERIES POLICY

## An evaluation of the European Union fishing fleet and options for the future

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The WWF European Policy Office wishes to thank colleagues from across the WWF EU network for their contributions to this report.

For more detailed analysis, background information on the methodology, as well as further research and results on the topics explored in this report, please consult the technical annex available at wwf.eu.

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**MarFishEco Fisheries Consultants Ltd.**

MarFishEco Ltd is a network of senior fishery professionals with experience in over 25 countries, helping to formulate and implement viable and practicable sustainability solutions across fishery sectors. Headquartered in Edinburgh, Scotland, with offices in Portland, Oregon, USA, MFE is a trusted source of objective advice and support for the future of sustainable and profitable fisheries. www.marfisheco.com

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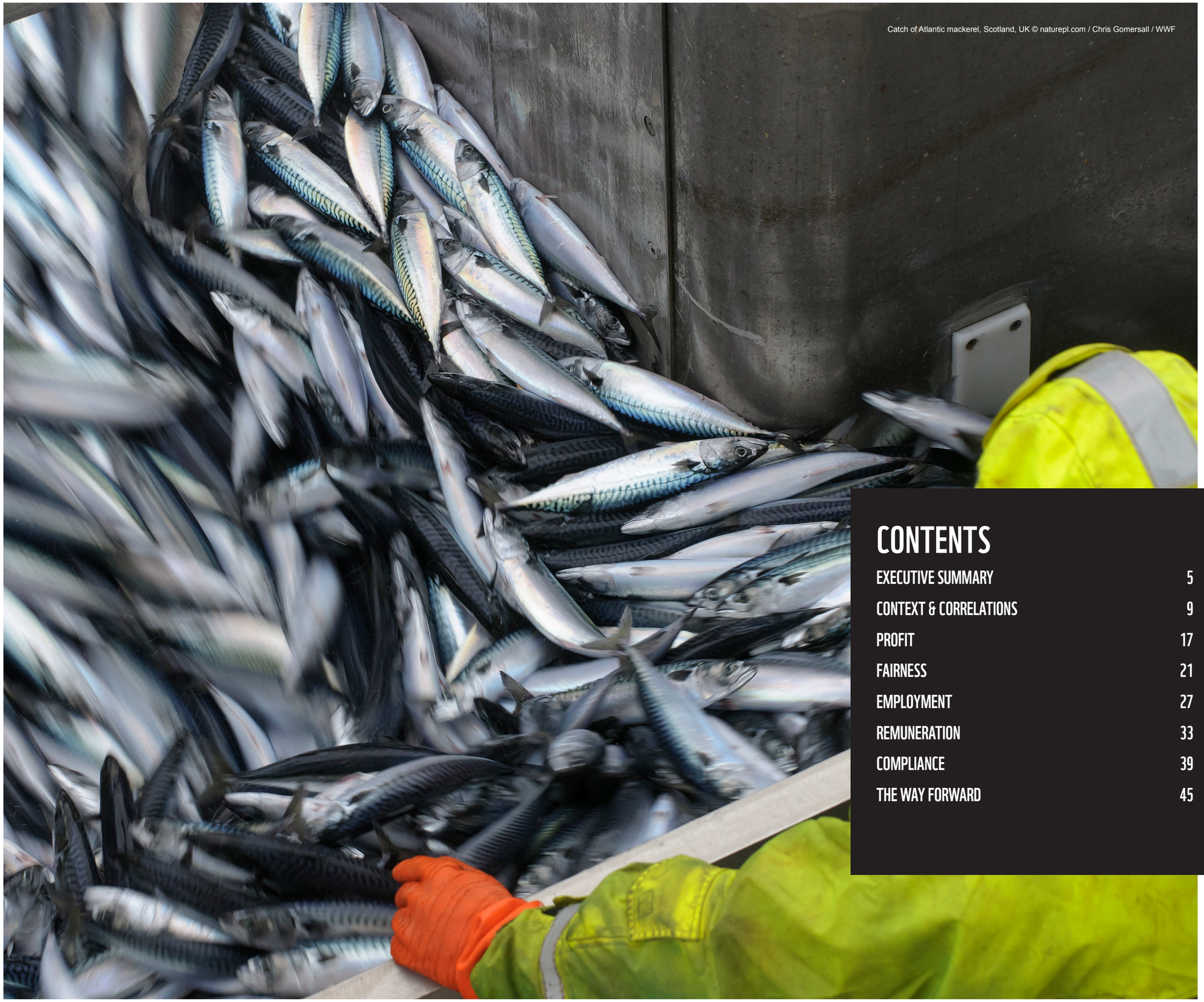
Catch of Atlantic mackerel, Scotland, UK © naturepl.com / Chris Gomersall / WWF

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Atlantic blue fin tuna, Malta, Mediterranean © Wild Wonders of Europe / Zankl / WWF

# EXECUTIVE SUMMARY

The European Union (EU) has a long-established Common Fisheries Policy (CFP). This critical piece of EU legislation governs all fisheries activities that occur in the waters of EU Member States (MS), as well as the activities of the EU fishing fleet in international waters and in the exclusive economic zones of non-European States through fishing agreements. With active fishing in every ocean and as the world's largest seafood market, the EU has a key role to play in leading the way to securing sustainable fisheries.

Despite socio-economic issues featuring in the CFP's objectives – committing to economic viability of the industry, a fair standard of living for those who depend on fishing activities, an efficient and transparent internal market, and the promotion of coastal fishing activities[1] –, the socio-economic dimension of EU fisheries is generally overlooked. In the context of the evaluation of the CFP beginning in 2021, this study aims to assess the socio-economic performance of the EU fishing fleet and to provide guidance to EU policymakers on how it can be both better understood and improved within the existing CFP structure, without the need for reform. This would support a level playing field across the EU fleet through a socio-economic lens.

The analysis in this report shows that, to date, the transition to sustainable fishing alongside securing quality livelihoods and economic efficiency in fishery operations is incomplete. Socio-economic performance is highly variable across fishing fleets (e.g. by fishing gear, by MS) and, on some socio-economic issues, performance is low across the entire EU fleet. Achieving the CFP's socio-economic objectives requires the development of performance metrics with more robust data, together with more clearly defined socio-economic outcomes.

Overall, **socio-economic conditions linked to the CFP need to be better understood by policymakers and stakeholders to guide policies that will restructure the EU fishing fleet.** Despite the overall reduction in the number of vessels since the 1970s, average engine power in many fleets has increased[2] and many stocks remain overexploited.[3] How the EU's fisheries policies and other policies linked to the capture fisheries sector evolve must be in line with wider environmental objectives. This approach will guide how best to make financial support available for the sector's evolution and fair transition to lower-impact practices via the European Maritime, Fisheries and Aquaculture Fund (EMFAF) for the period of 2021-2027.

Fishing lines, Marine National Park of Zakynthos, Greece
© Claudia Amico / WWF Mediterranean / FishMPABlue

Adequate support for enforcement services is crucial for compliance with the CFP. Today, the use of prohibited fishing gear and the failure to report catches are the most significant issues of non-compliance with the CFP across MS in domestic waters. Overseas, it is noteworthy that half of EU vessels which have been reported as engaging in illegal, unregulated and unreported (IUU) fishing employ towed bottom-contacting fishing gear, which devastate marine ecosystems. Both at home and abroad, a lack of reporting and transparency on EU fleet activities exposes crucial gaps in knowledge about the extent of non-compliance and, as a consequence, the implications for life in our seas and the very resources fisheries' depend on. **Improved recordings and reporting of infringements, both within and outside of EU waters, are critical for ensuring the accountability of the EU fleet, wherever it is active.**

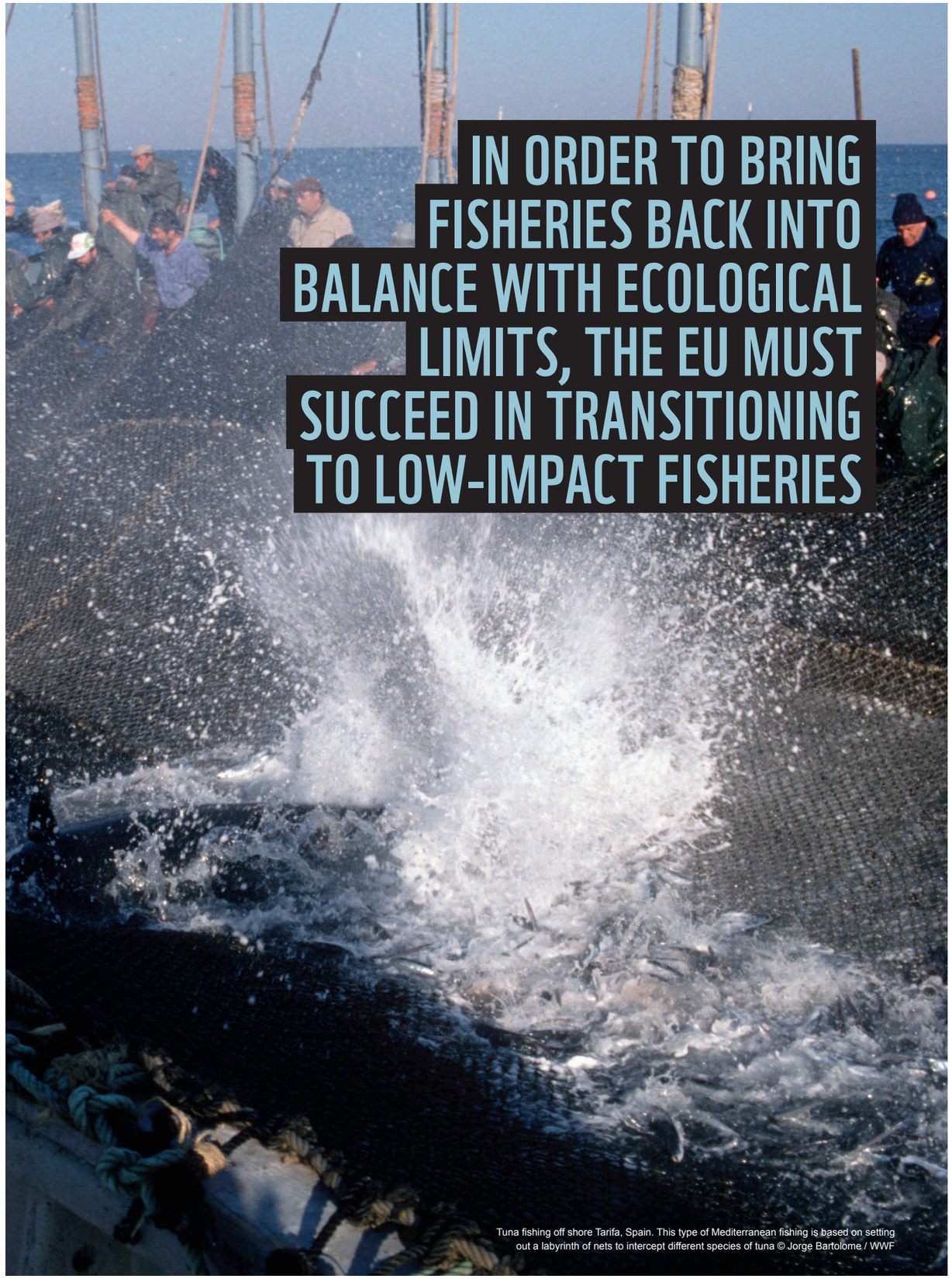
The absence of a harmonised framework across MS to provide fair access to fishery resources, together with the absence of systems to assess progress towards such equitable access, bear direct implications for the future of fishers in the EU. The capture fisheries sector already faces disparities in levels of employment across MS and, in the majority of MS, is not seeing a younger generation of fishers come aboard. Better understanding of the social and ecological landscape behind employment in EU fisheries, as well as of the opportunities for alternative livelihoods for MS coastal communities, is important if further changes in fleet capacity are to deliver positive socio-economic results. EU reporting on fisheries' economic performance would benefit from a **focus on profit and wages as a combined indicator for the small-scale coastal fleet** (e.g. gross value added per full-time equivalent employee), rather than separating the two sources of income. This would reduce the potential for errors or shortcomings in the calculation of profits and wages across EU capture fisheries – especially when the distinction between owners and operators is not made – to improve how wage performance is assessed and strengthen evaluations on unequal distributions of wealth. **Socio-political attention must also be given to the forces driving fisheries workforce engagement** to ensure a vibrant sector in balance with the marine environment and thriving coastal communities.

The EU must eliminate harmful fishing subsidies – those which use public money in a manner that incentivises overfishing and practices which damage the marine environment. Such **subsidies must urgently be redirected to facilitate a transition to low-impact fishing that supports a fair standard of living across all vessel segments.** The EU fleet's overall high profitability, explored in this analysis, indicates that the EU fishing industry is in a good financial position to weather such a transition.

Beyond the potential for redirected subsidies, greater economic incentives are needed to move towards low-impact fisheries in the EU, which will secure sustainable livelihoods for fishers and wider coastal communities in the long term. MS have not achieved most of the CFP's sustainability objectives, whether exceeding the fishing threshold of maximum sustainable yield and thus putting fish populations at risk, or failing to establish clear and transparent socio-economic criteria for fishing allocation systems to favour the most sustainable fishing practices.[4] Continuing with "business as usual" scenarios will perpetuate the existing negative environmental impacts of certain fisheries, leaving the EU without any strategy for how to transition towards new or alternative economic opportunities. This puts the communities who rely on marine resources in jeopardy. For the EU and MS to fully achieve the objectives of the CFP, they must give due consideration to the human dimension of fisheries.

Further, as the European Commission expressed in its Biodiversity Strategy, the full implementation of the CFP is essential to ensure the sustainable exploitation of marine resources. The CFP must thus align closely with the EU's environmental objectives, such as the Marine Strategy Framework Directive's key objective of securing Good Environmental Status (GES) in all European seas, achieving the ten targets of UN Sustainable Development Goal 14, and fulfilling its commitment to protect at least 30% of the EU marine area.

WWF wishes to ensure legislative consistency between measures to conserve marine biological resources and a high degree of socio-economic performance, as more resilient ecosystems also deliver better opportunities for sustainable livelihoods. The CFP objectives for the long-term sustainability of fisheries are achievable, but limitations in its implementation thus far require urgent action. Protecting and restoring nature must benefit both people and planet.



**IN ORDER TO BRING FISHERIES BACK INTO BALANCE WITH ECOLOGICAL LIMITS, THE EU MUST SUCCEED IN TRANSITIONING TO LOW-IMPACT FISHERIES**

Tuna fishing off shore Tarifa, Spain. This type of Mediterranean fishing is based on setting out a labyrinth of nets to intercept different species of tuna © Jorge Bartolome / WWF



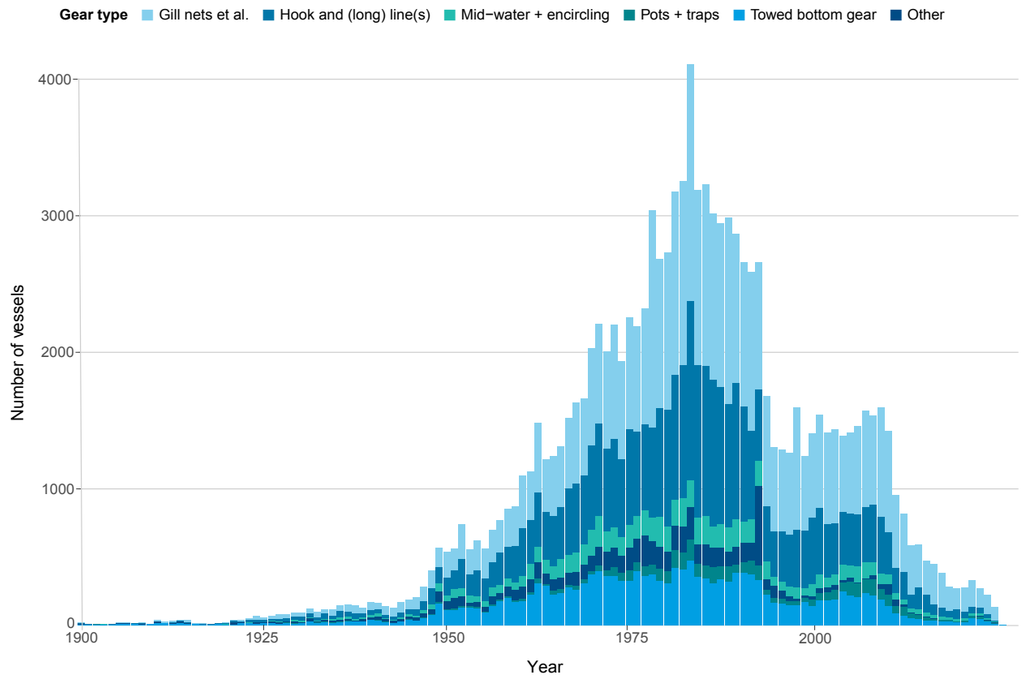
# CONTEXT & CORRELATIONS

Over the course of many decades, fishery resources in European seas have been heavily depleted. This is due not only to the historic volume of active vessels, but to the heavy ecological impacts caused by various types of fishing gear, which has ultimately led to financial problems for many fishers.[5] In order to bring fisheries back into balance with ecological limits, the EU must succeed in transitioning to low-impact fisheries, as laid out in the CFP. It is crucial that this transition occurs collaboratively with the EU fisheries sector, to adopt fair and just policies.

## THE EU FLEET HISTORY

Understanding the socio-economic impacts of EU fisheries policies is particularly pertinent when we consider the evolution of the EU fleet in the last 70 years. This started with rapid growth between the 1950s and early 1970s (Figure 1), but since 1975 the fleet has been in decline. The current capacity of the EU fleet (in terms of vessel numbers, irrespective of gear type) is now at a similar level to the late 1940s, while the overall engine power of the fleet has increased significantly. Opportunities to improve the overall efficiency of the EU fleet will likely come hand-in-hand with decreasing fleet capacity, fair redistributions of quota and alternative livelihood options to sustain and possibly increase the incomes of those who remain in the fisheries sector, while providing new work opportunities for those who leave.

**Figure 1.** The number of EU vessels (active in the EU fleet register) per year coloured by gear type




***NB:*** *the types of gear listed are a simplified, grouped version of the full listing in the fleet register (e.g. "gill nets et al." includes fyke nets, trammel nets, etc).*

**Source:** DG MARE, EU Fleet Register

**Table 1.** Correlations between key socio-economic indicators for the EU fleet in 2018

**Financial risk**
Fleet rate of return on fixed tangible assets (ROFTA)

**Profitability**
= Net profit / revenue

INTERPRETATION

**Higher values in both indicators show better economic performance for fleets.**

**Crew wages**
(i) = Personnel costs / Number of Full Time Equivalents (FTE)
(ii) Ratio of i to MS median wage
(iii) Ratio of i to MS min wage

**Crew earnings**
(i) = Personnel costs / number of crew

INTERPRETATION

**Wages indicate yearly salary but earnings indicate crew payment. These indicators follow the same trends in fleets.**

**Profitability**
= Net profit / revenue

**Value added**
= Gross value added / gross revenue

INTERPRETATION

**Profitability and value added measure the return from fishing with and without labour costs.**

## POSITIVE CORRELATION

| | | |
|---|---|---|
| FINANCIAL RISK | PROFITABILITY | 0.92 |
| CREW WAGES | CREW EARNINGS | 0.85 |
| PROFITABILITY | VALUE ADDED | 0.73 |
| VALUE ADDED | FINANCIAL RISK | 0.63 |
| CREW WAGES | WORKER WELFARE | 0.62 |
| CREW EARNINGS | WORKER WELFARE | 0.60 |
| LONG-TERM CERTAINTY | AFFORDABLE FOOD | 0.50 |

## NEGATIVE CORRELATION

| | | |
|---|---|---|
| VALUED OUTPUT | AFFORDABLE FOOD | -0.87 |
| CREW WAGES | WAGE CERTAINTY | -0.62 |
| CREW EARNINGS | WAGE CERTAINTY | -0.59 |
| CREW EARNINGS | SAFETY | -0.52 |
| CREW WAGES | LOCAL ECONOMIC CONTRIBUTION | -0.52 |
| WORKER WELFARE | LOCAL ECONOMIC CONTRIBUTION | -0.50 |

**Valued output**
= Average landings price for the top species / average price of landings within the MS (Member State)

**Affordable food**
Ratio of average landings value per kg to average consumer price of fish per kg

INTERPRETATION

**The inherent tension between these indicators shows more expensive fish inevitably means less affordable food.**

***NB:*** *Interpretation of correlations (R squared): 0-0.2 = no or very weak, 0.2-0.4 = moderate, 0.4-0.7 = strong, 0.7-1 = very strong*
*Strong correlations are denoted in light green, very strong correlations in dark green.*

## SOCIO-ECONOMIC INDICATORS TO EVALUATE THE EU FLEET

To evaluate the socio-economic status of EU fishing fleets, 28 indicators were identified by reviewing the currently available literature, 20 of which can be measured quantitatively using available data (see Table 2 of the technical annex). It is important to identify correlations between indicators to understand not only which indicators are associated, but whether it would be possible to influence broad change in many by influencing just a few. Correlation measures the strength of association between two variables: a positive correlation indicates that two indicators increase (or decrease) together, whereas a negative correlation indicates that as one indicator increases, the other decreases, and vice versa (see Table 3 of the technical annex).

Significant correlations between indicators show that they are associated. They may not be directly linked but if, for example, high crew earnings are always associated with fleet segments which have high levels of safety and better crew welfare, this may indicate that, for example, crew welfare and safety could be improved by increasing crew earnings. It is therefore possible that the status of multiple indicators may be improved by leveraging single indicators that appear to influence them. Such an idea requires a degree of context-dependency, but understanding that such possibilities may exist for the EU fleet at a broad scale is beneficial when it comes to funding investments, strategic changes in fleet capacity and changes in regulation and subsidies.

Table 1 shows strong and very strong correlations between the 20 indicators identified above and which are consistently associated across the EU fishing fleet; the blue boxes explore the interpretation for each.

Drawing from the indicators with the highest correlation and based on the interpretations of these correlations, this analysis on the socio-economic impacts of the CFP focuses on five key indicators deemed essential for an inclusive and fair transition to low-impact fisheries, and for which quantitative data were available.

## GROUPING THE EU FLEET BY REGION

For the purpose of this analysis, data from the Scientific, Technical and Economic Committee for Fisheries (STECF) has been used to group MS into three distinct geographic regions that denote where each vessel segment is operating. Known as supra regions, they are: the North Atlantic Ocean (NAO), the Mediterranean and Black Sea (MBS) and Other Fishing Regions (OFR).

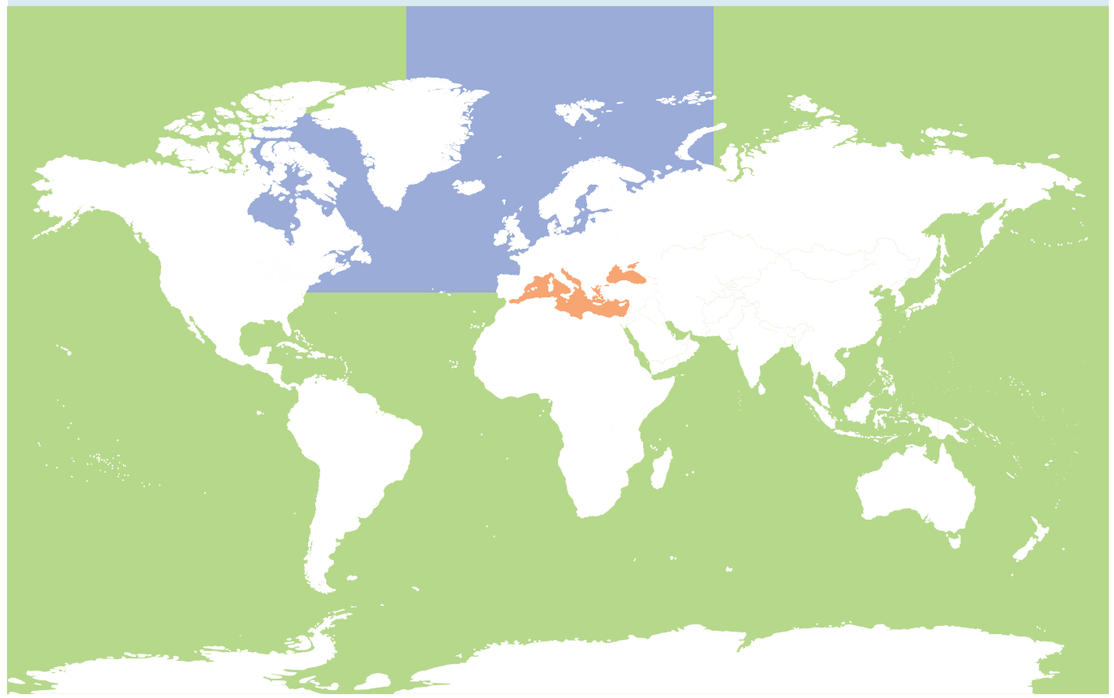
Drawing from the correlations identified in Table 1, the EU's STECF data was employed to investigate which MS group together based on their socio-economic performance. The identification of MS segments with similar socio-economic performance is important for establishing lessons learned which can subsequently be shared with MS of the same group. This approach could radically accelerate how recommendations to improve fleet performance are taken on board. The descriptions below highlight which indicators are prevalent for each of the three groups.

Based on this identification, Figure 3 shows the MS allocated to each cluster by supra region.

Targeting specific geographies of the EU fleet may be beneficial for ensuring the efficient investment of funds, and highlights a clear mechanism by which the EU could make targeted recommendations to specific fleet segments in certain areas. This would, ideally, be followed by national-level policy changes driven by individual MS who may have underperforming fleet segments. In this context, the recommendations given in this report for how efforts are redirected to improve the socio-economic performance of the EU's fishing fleet, being based on the correlation analyses, should be applied across a group of MS rather than individually, to ensure maximum impact. For example, Figure 3 shows generally poor profitability and crew wages and earnings for the majority of the Portuguese fleet (other than their North Atlantic fleet) compared to the consistently high profitability and crew wages and earnings in the Spanish and French fleets irrespective of region. Therefore, Portugal should make efforts to more closely evaluate these poorly performing fisheries at a fleet segment level and work to improve their profitability.

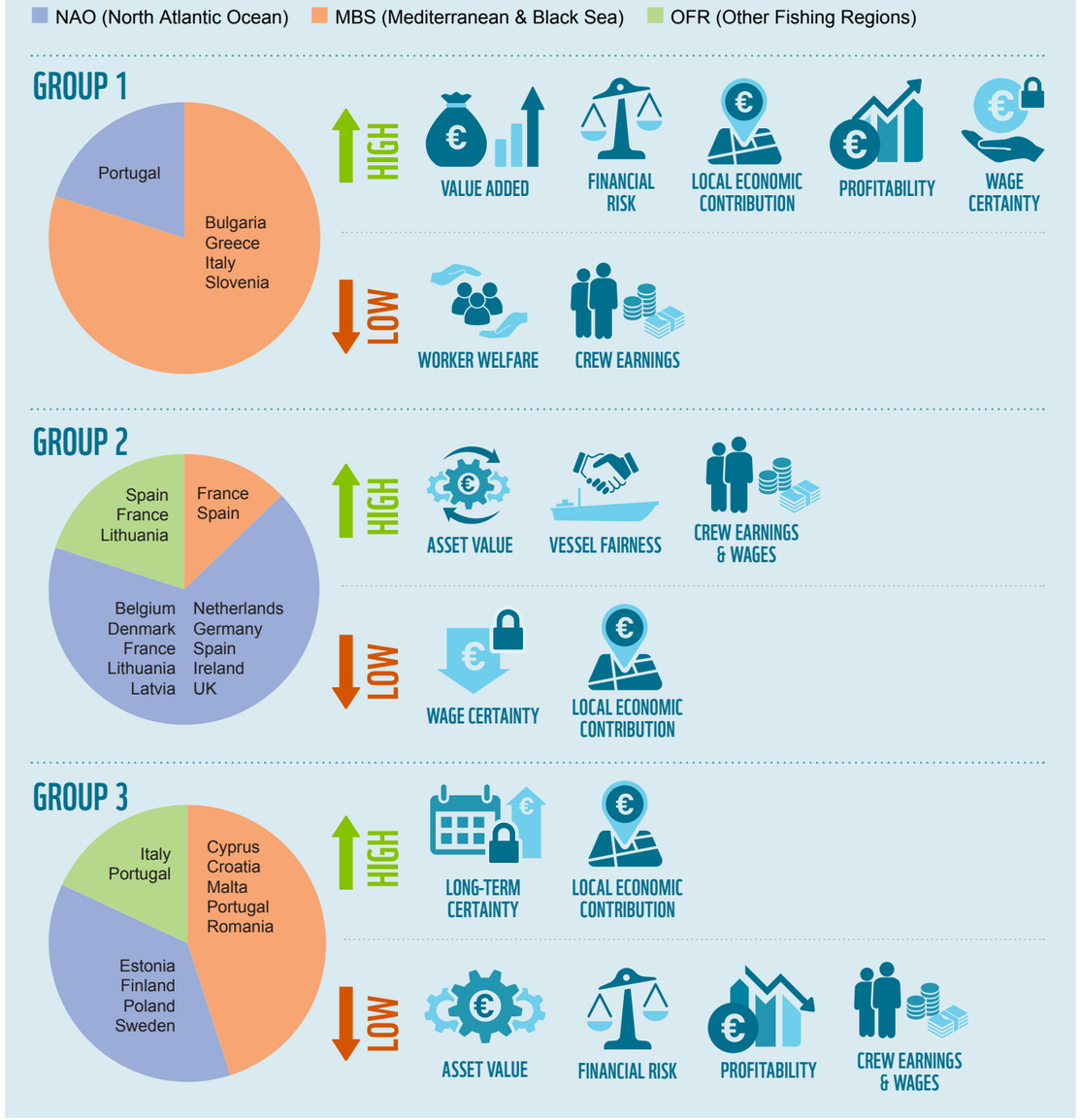
Following the indicator correlations and the subsequent groupings identified above, this report closely examines five key areas that WWF considers essential for understanding the socio-economic impacts of the CFP and for which quantitative data were available. For each of these five areas, recommendations are put forward for how to secure an inclusive and fair transition to low-impact fisheries aligned with the CFP and the EU's environmental objectives while securing the livelihoods of coastal communities for generations to come.

**Figure 2.** The three groups of Member States with similar socio-economic performance in 2018 and their supra region distributions




**Source:** Joint Research Centre of the European Commission, Data Collection Framework, Supra Regions; Commission Implementing Decision (EU) 2016/1251, Table 5C

**Figure 3.** The three groups of Member States with similar socio-economic performance in 2018 and their supra region distributions



A summary of the fleets for which data was available for this analysis is presented in Table 2 and highlights key data gaps where reporting can be improved.

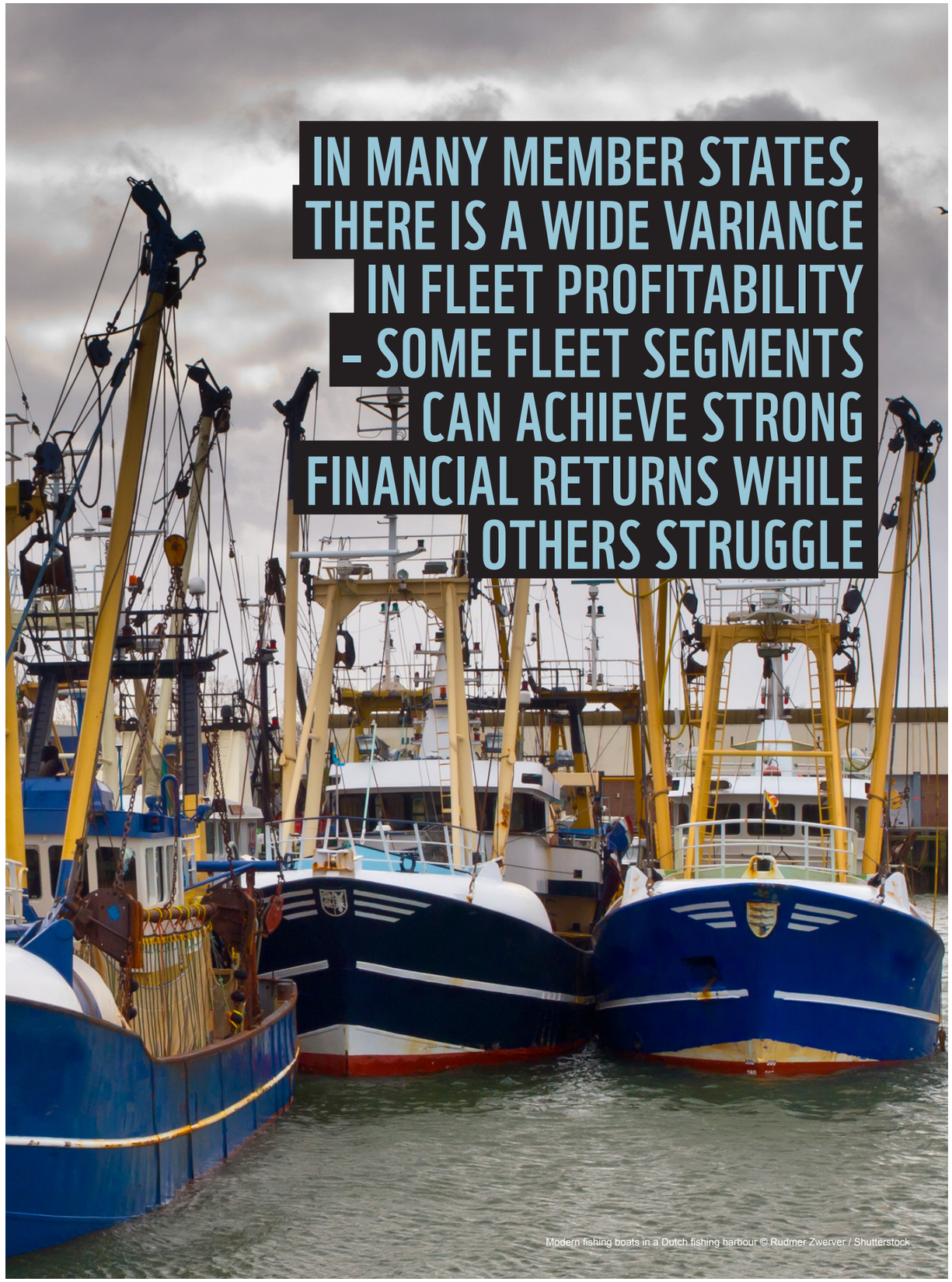
Data availability for the EU fishing fleet is, generally, very good. For reasons of confidentiality (i.e. to ensure that economic data for specific vessels cannot be inferred), MS have not submitted economic data for fleets with fewer than 10 vessels. However, there appear to be fleets with more than 10 vessels for which data is not available. For these fleets, it is difficult to evaluate socio-economic performance and, therefore, to assess how performance could improve.

The European Commission should ensure full reporting by all MS to address this discrepancy and help complete the EU fleet's data framework. Improved reporting and data availability across all socio-economic indicators linked to the CFP will improve how policies can be tailored to national and regional contexts, ensuring more robust outcomes for resilient coastal communities and healthy seas.

**Table 2.** Number of vessels reported and the percentage with complete socio-economic data in 2018

| Member State | Vessels under 12 metres in length | | Vessels over12 metres in length | |
|---|---|---|---|---|
| | No. of Vessels | % Complete | No. of Vessels | % Complete |
| BE | 1 | 0% | 65 | 80% |
| BG | 1,121 | 98% | 84 | 90% |
| CY | 730 | 0% | 39 | 97% |
| DE | 729 | 99% | 253 | 94% |
| DK | 918 | 100% | 338 | 100% |
| ES | 5,746 | 99% | 2,304 | 98% |
| EE | 1,199 | 100% | 31 | 61% |
| FI | 1,277 | 99% | 43 | 91% |
| FR | 4,969 | 79% | 874 | 89% |
| UK | 3,751 | 99% | 841 | 95% |
| EL | 11,2058 | 100% | 753 | 98% |
| HR | 5,675 | 100% | 388 | 97% |
| IE | 1,116 | 100% | 261 | 94% |
| IT | 7,560 | 100% | 3,579 | 100% |
| LT | 64 | 100% | 27 | 70% |
| LV | 194 | 100% | 51 | 100% |
| MT | 681 | 93% | 47 | 64% |
| NL | 193 | 93% | 329 | 91% |
| PL | 624 | 99% | 157 | 92% |
| PT | 3,141 | 100% | 554 | 98% |
| RO | 113 | 100% | 23 | 100% |
| SI | 67 | 82% | 9 | 78% |
| SE | 738 | 45% | 149 | 84% |


Marine National Park of Zakynthos, Greece
© Claudia Amico / WWF Mediterranean / FishMPABlue



Modern fishing boats in a Dutch fishing harbour © Rudmer Zwerver / Shutterstock

# PROFIT

## UNEVEN RETURNS ACROSS THE EU

Profit is the positive financial gain for a business after all costs have been deducted from income. Gross profit refers to income after fixed and variable costs have been deducted, whereas net profit refers to income after capital costs, in addition to fixed and variable costs, have been deducted. Profitability gives an indication of the health of a business or a sector more broadly. In fisheries, profit is also positively correlated to crew remuneration, depending on the extent to which financial gains are shared.

Analysing the available economic data for the EU fleet reveals a wide range of net profit margins within each MS and supra region (Figure 4). In 15 MS, fleets are recording negative gross profit margins (and negative net profit margins), indicating financial losses. While it is common for a business to experience occasional losses, these results are an average of 2012-2018, implying that these losses are persistent. As it is highly unlikely that a business would continue to operate when continually recording losses, this is a surprising result. There is no definitive explanation for persistent losses within a fleet segment, although there are several potential contributing factors, including the possibility that owners who operate their own vessels are paying themselves in wages rather than profits, that vertically integrated companies may sell to themselves at a loss and recuperate these losses elsewhere (e.g. on the processing side of the business), or that subsidies make up a substantial flow of unrecorded income. There is, therefore, some uncertainty regarding the interpretation of the profitability results.

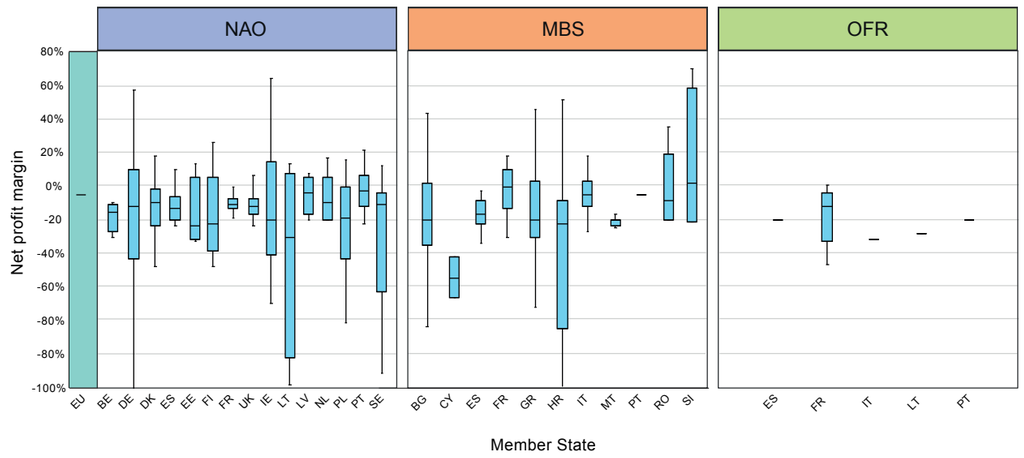
In many MS, there is a wide variance in fleet profitability, indicating that, within the same general policy structure, some fleet segments can achieve strong financial returns while others struggle. The reasons underlying this variance are specific to each MS, but could indicate different market drivers depending on the health of species being harvested, input costs, overcapacity in certain fisheries or even different motivations for fishing (e.g. artisanal fishers may not act as profit maximisers). These variances require further research to support policies that ensure all MS can achieve financial viability across their fishing fleets.


Fishers on a small-scale fishing boat in the Mediterranean Sea © Carlo Gianferro

**Figure 4.** Fleet segment net profit margin by Member State and supra region 2012-2017

The figure shows the level of variability in net profit margin across MS and supra region. For each MS supra region, a horizontal black line indicates the median value. The lower and upper edges of the box correspond to the 25th and 75th percentiles of the data to indicate where half of the fleet segments are situated. The vertical lines projecting from the box above and below indicate the maximum and minimum values.

**NB:** Early data (2012-2017) for Greece was poor quality, which may affect the results for Greece.




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet (STECF 20-06)*

## AN OVERALL PROFITABLE INDUSTRY

A second notable result is that the average profitability for most MS fisheries is at a fairly high level and increasing further (Figure 5a,b,c). Comparing the gross profit margin with other industries reveals that EU capture fisheries are roughly as profitable as other EU industries, and are more profitable than the fish processing or aquaculture sectors.

There are several potential explanations for this high profitability. First, while the existence of profits tends to attract new entry and competition until profits are eroded, this is not possible in EU fisheries for which a limited licensing regime is in place. In terms of the increase in profitability, fish demand, energy costs, policy-induced industry concentration and fish stock recovery are all potential explanations.

The profitability of the entire EU fishing fleet presents an opportunity – while addressing the range in performance – to leverage high profits as a buffer against financial impacts of policy changes that will facilitate the transition to low-impact fisheries. For example, removing fishing subsidies will have an immediate financial cost to the sector,[6] but high profitability suggests that subsidies could be reduced while ensuring that fishing remains financially viable. Chiefly, these subsidies could be redirected to support the EU's goal of fostering a fairer, low-impact fishing sector — efforts which currently remain low with regard to investments in conservation.[7]



**Figure 5a.** Gross profit margin by Member State in the Mediterranean & Black Sea

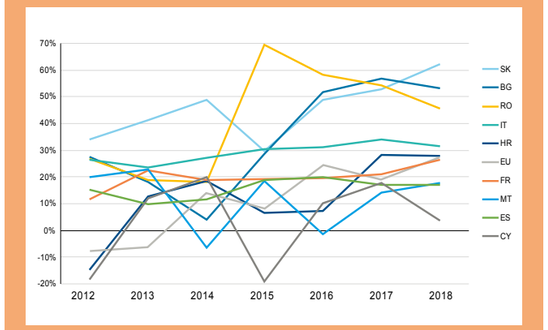



**Figure 5b.** Gross profit margin by Member State in the North Atlantic Ocean

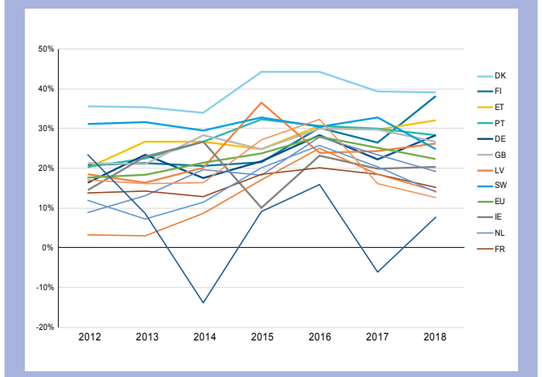
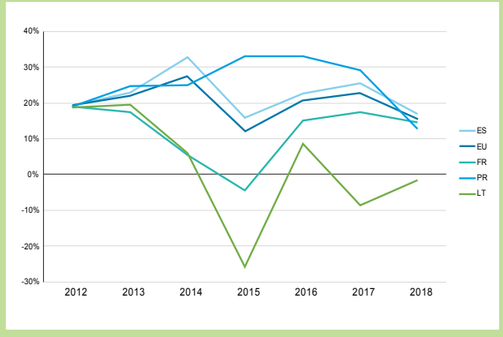



**Figure 5c.** Gross profit margin by Member State in Other Fishing Regions

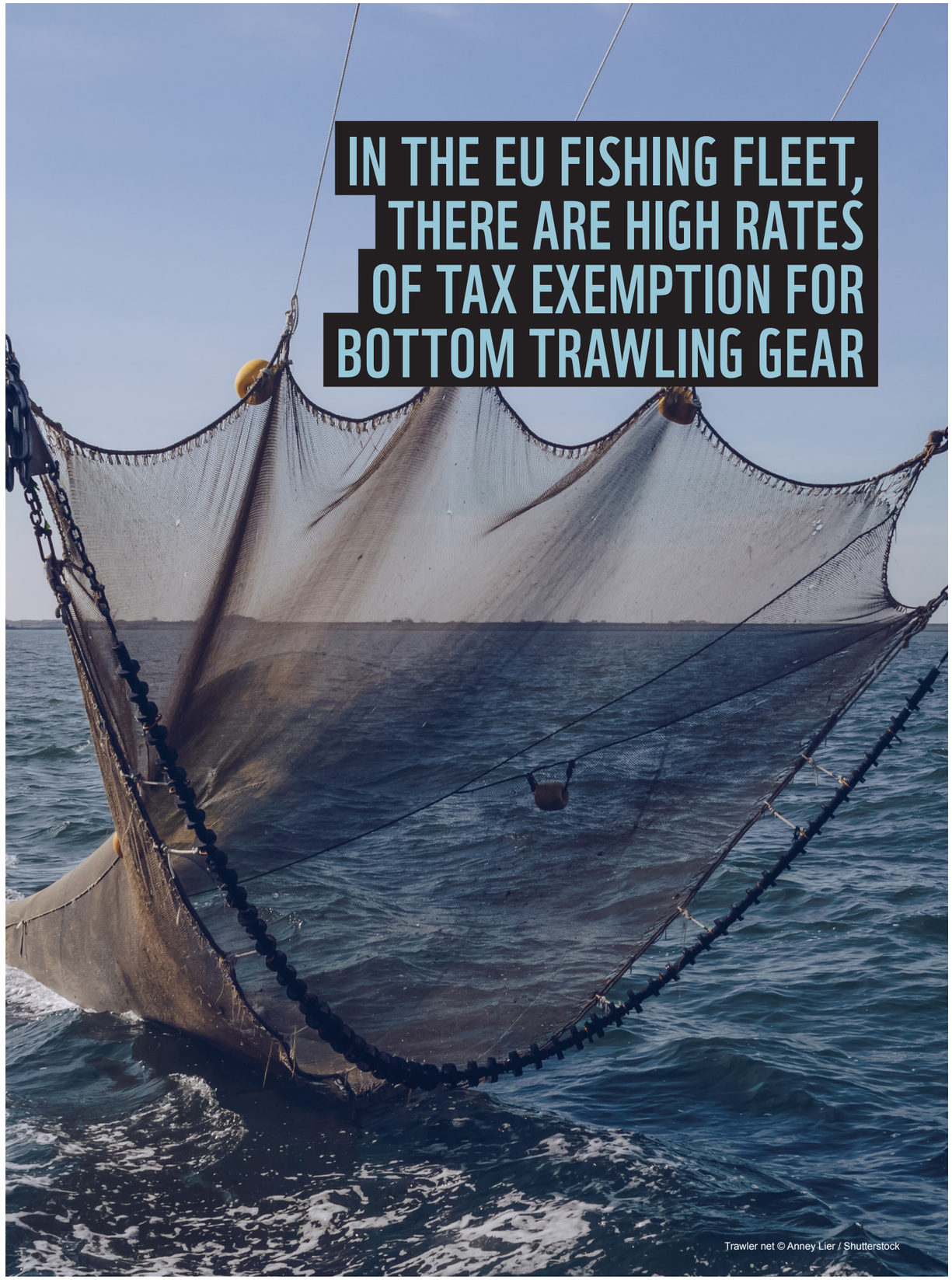



**Source for Figures 5a, 5b and 5c:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet.*

One clear policy implication from these results is that more nuance is required in the consideration of the financial position of the industry. For example, economic impact assessments that accompany policy proposals should disaggregate impacts by fleet segment, as fleet segments in strong financial positions are more resilient than those in weak financial positions to the same impacts. The economic performance of the EU fishing fleet has a wide profitability range and, just as not all fleet segments are struggling, not all are performing well either.

## RECOMMENDATIONS

- More work needs to be done to resolve measurement issues of capital costs and to harmonise the approach used across Member States. The Scientific, Technical and Economic Committee for Fisheries (STECF) should investigate issues at the data collection and data processing stages, **putting capital cost guidelines in place through the data collection framework.** This could have a significant impact on the net profit calculations of EU fisheries, and thus on the overall evaluation of the socio-economic impacts of the CFP.
- **STECF reporting on fisheries' economic performance would benefit from a focus on profit and wages as a combined indicator for the small-scale coastal fleet (e.g. gross value added per full-time equivalent employee) rather than separating the two sources of income.** This would reduce the potential for errors in the calculation of profits and wages due to incorrect distinctions between owners and operators, which would in turn better match financial statistics to the reality of fishing and indicate to policymakers the true financial viability of the fleet.
- The EU and Member States should aim to achieve viable profitability across all fleet segments by **identifying barriers for fleet segments with low profitability.** This should include a consideration of whether fleet segments are, or could be, operating in balance with the environmental limits of targeted fish populations as identified by STECF reporting on balance and capacity, or if there is fleet overcapacity that needs to be reduced.
- **The EU and Member States must eliminate harmful fishing subsidies** — those that use public money in a manner that incentivises overfishing and damage to the marine environment. **Such subsidies must urgently be redirected to facilitate a transition to low-impact fishing that supports a fair standard of livelihood across all vessel segments**. High profitability suggests that the fishing industry is in a good financial position to weather such a transition.



Trawler net © Anney Lier / Shutterstock

# FAIRNESS

The analysis of profits in the EU fishing fleet indicates that there are substantial returns to EU fisheries. How these returns are then distributed is a matter of fairness. In the framework of this report, three indicators of distributional fairness are analysed: between business and society, between different businesses, and within fishing businesses. Analysing fairness in this way ensures that the three areas of tension over how resources are shared are adequately explored and that fishing policies are delivering for vessel owners, fishing crew, and the wider public.

## THE FISH IN OUR SEAS BELONG TO ALL OF US

Fairness between business and society concerns the distribution of financial returns from fishing between these two actors. While issues of business-society fairness are often classified under corporate social responsibility, there is an additional aspect for the fishing industry: the fact that the fish stocks on which fishing businesses rely are not owned by businesses but by society as a whole. Furthermore, the significant management costs for fisheries are paid through government finances, adding a public dimension to the distribution of financial costs as well as the distribution of returns.

While comprehensive information on management costs is difficult to collect and harmonise across MS, one of the most significant management costs, the fuel tax exemption, is easier to quantify as information on the two components, fuel use and fuel tax differentials, are widely reported.

Calculations of the fuel tax exemption by MS and gear type reveal complex outcomes as the results vary across both attributes (Table 3). The interaction between three variables explains the results: the rate of fuel tax exemption, the amount of fuel used, and gross value added – the latter of which contributes to MS economies.

In the EU fishing fleet, there are high rates of tax exemption for bottom trawling gear (e.g. demersal trawl/seine and beam trawl), which use more fuel per unit of catch than other gear types, i.e. they are less fuel efficient (Table 3). The fuel tax exemption thus incentivises one of the most fuel-intensive and ecologically damaging fishing techniques. The continued tax exemption for bottom trawling is completely misaligned with the EU's objectives for Good Environmental Status of its marine waters and the targets laid out in the EU Biodiversity Strategy.[8]


Fisher removing a fish from a net © iStock

**Table 3.** Ratio of fuel subsidy received to gross value added by supra region, Member State and gear type in 2018

**NB:** Higher numbers (indicated in blue) receive a higher fuel subsidy in relation to their gross value added to the economy. The infinity symbol (∞) indicates that gross value added is negative, resulting in a fuel subsidy that is infinitely higher than the value that is generated by the fishery. A blank cell indicates that the fleet does not exist.

| | | Beam trawl | Demersal trawl/seine | Polyvalent passive gear | Pelagic trawl | Active & passive gear | Drift/fixed net | Dredge | Polyvalent active gear | Active gear | Purse seine | Passive gear | Hook & line | Pots & traps | Passive gear |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EU | 0.48 | 0.39 | 0.20 | 0.16 | 0.14 | 0.13 | 0.11 | 0.09 | 0.08 | 0.06 | 0.05 | 0.04 | 0.03 | 0.00 |
| MEDITERRANEAN AND BLACK SEA | BG | 0.16 | | ∞ | 0.17 | 0.09 | ∞ | | | | 0.04 | | 0.49 | ∞ | |
| | CY | | 3.92 | 1.42 | | | | | | | | ∞ | | | ∞ |
| | EE | | 0.07 | 0.01 | | 0.01 | 0.02 | 0.03 | | | 0.01 | | 0.02 | 0.02 | |
| | FR | | 0.57 | 0.06 | | 0.11 | 0.06 | 0.13 | | 0.07 | 0.02 | | 0.05 | 0.05 | 0.05 |
| | HR | | 1.02 | 0.80 | | 0.05 | 0.13 | 0.38 | | 0.04 | 0.12 | | 0.00 | 0.16 | |
| | IT | 0.56 | 0.44 | 0.15 | 0.32 | 0.29 | | 0.11 | | | 0.12 | | 0.20 | | |
| | MT | | 0.45 | 0.36 | ∞ | 0.32 | 1.13 | | | 0.21 | 0.04 | | 0.13 | 0.01 | |
| | PT | | | | | | | | | | | | | 0.11 | |
| | RO | | | 0.22 | | 0.08 | | | | | | 0.12 | | | 0.30 |
| | SK | | 0.13 | | | | 0.03 | | | | 0.01 | | | | |
| NORTH ATLANTIC OCEAN | BE | 0.08 | 0.07 | | | 0.04 | | | | | | | | | |
| | DE | 0.11 | 0.14 | | | | 0.43 | | | | | 0.10 | | | |
| | DK | 0.10 | 0.09 | 0.04 | 0.05 | 0.08 | | 0.03 | | | | | | | |
| | ES | | 0.05 | 0.02 | | 0.01 | 0.03 | 0.02 | | | 0.01 | | 0.02 | 0.02 | |
| | EE | | | | 0.08 | | | | | | | 0.06 | | | |
| | FI | | | | 0.18 | | | | | | | 0.05 | | | |
| | FR | | 0.31 | 0.07 | 0.23 | 0.08 | 0.07 | 0.15 | 0.16 | 0.06 | 0.05 | | 0.09 | 0.07 | 0.03 |
| | UK | 0.13 | 0.05 | 0.04 | 0.02 | | 0.02 | 0.06 | 0.06 | | | | 0.05 | 0.03 | |
| | IE | 2.87 | 0.17 | | 0.10 | 0.73 | 0.11 | 0.09 | | | | | 0.04 | 0.06 | |
| | LT | | 0.33 | | 0.21 | | 0.36 | | | | | 0.06 | | | |
| | LV | | | 0.03 | 0.14 | | 0.95 | | | | | | | | |
| | NL | 0.15 | 0.13 | | 0.20 | | 0.07 | 0.08 | | | | 0.06 | | | |
| | PL | | 0.14 | | 0.12 | | 0.12 | | | | | 0.05 | | | |
| | PT | 0.07 | 0.15 | 0.06 | | 0.06 | 0.05 | 0.08 | 0.04 | 0.04 | 0.05 | | 0.06 | 0.03 | |
| | SE | | 0.23 | | | | 0.17 | | | | | | | | |
| OTHER FISHING REGIONS | ES | | 0.06 | 0.02 | | 0.01 | | | | | 0.04 | | 0.06 | 0.02 | |
| | FR | | ∞ | 0.11 | | | ∞ | | | | 0.24 | | 0.24 | ∞ | ∞ |
| | IT | | 0.90 | | | | | | | | | | | | |
| | LT | | | | 0.42 | | | | | | | | | | |
| | PT | | 0.15 | | | | | | 0.06 | | | | ∞ | | |

**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*




Trawler operating in the Eastern Mediterranean Sea © Isaac Vega / WWF

To support fairness between business and society, a reassessment of fisheries support — both management costs and subsidies — is required, with a view to remove those forms of support which harm long-term fishery sustainability and biodiversity.

## RECOMMENDATIONS

- **To support fairness between business and society, a reassessment by the European Commission of fisheries' financial support is required with a view to remove harmful fishing subsidies, particularly fuel subsidies.** This would incentivise greater fuel efficiency, decrease carbon emissions and promote less ecologically damaging fishing practices while simultaneously redirecting public subsidies to beneficial actions, rather than harmful ones.
- **The EU must take coherent and ambitious actions to remove fuel tax exemptions for fishing vessels from the revised Energy Taxation Directive (ETD), and be ambitious in World Trade Organization (WTO) negotiations along the same line.** To do otherwise would compromise the EU's position in the ongoing WTO negotiations, where it has been actively advocating to end harmful fisheries subsidies that contribute to fleet overcapacity and overfishing globally.
- **The ecological footprint of mobile bottom-contacting fishing gear must be greatly reduced to stop further destruction of bio-productivity and biodiversity, and to halt the degradation of ecosystem services and the ensuing economic losses.** Eliminating the fuel tax exemption under the ETD would greatly reduce the capacity of fuel-intensive and destructive fishing practices, such as mobile bottom-contacting gear. Due consideration must be given to the to the transition to low-impact fisheries, embracing the positive socio-economic impacts from mitigating the current effects of mobile bottom-contacting gear, and the development of less detrimental but nonetheless more feasible alternatives.

## BALANCING OPPORTUNITIES AND INCOME

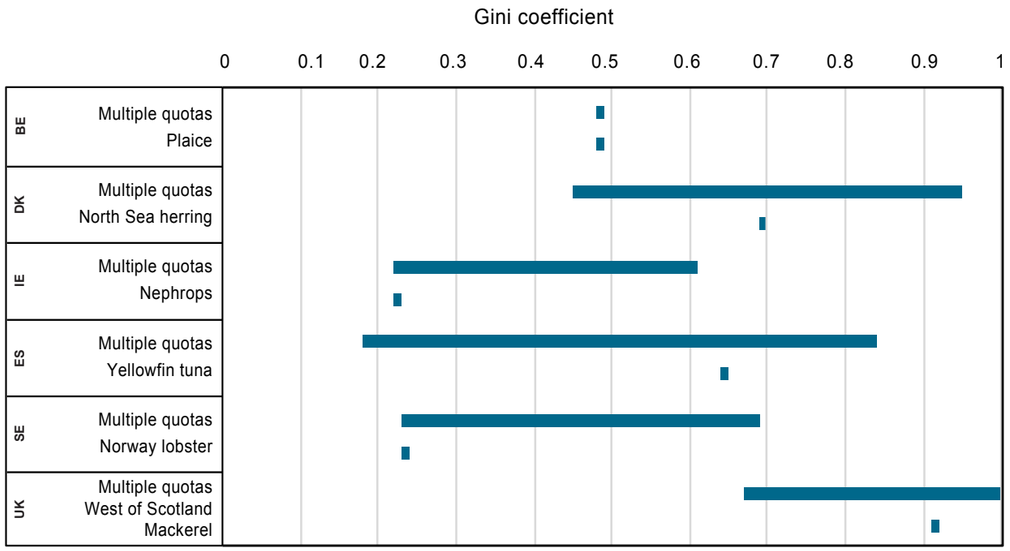
Fairness between businesses relates to the distribution of benefits across the EU fishing fleet. In the framework of this analysis, this has been measured in two ways: the distribution of fishing opportunities across the fishing fleet (i.e. the right to fish) and the distribution of income from fishing across the fishing fleet. While measuring fishing opportunities has the drawback that some fleet segments may not require them for their fishing practices (e.g. some fishers target non-quota species), measuring income is strongly influenced by different types of fishing business (e.g. high-investment and high-income fisheries versus low-investment and low-income fisheries) which is reflective of different types of business choices and fisheries rather than fairness between businesses.

The management of fishing opportunities is an MS competency and national policy differs widely between MS. This analysis focuses on the outcomes that are in part shaped by the actions of fishing businesses, rather than the government policies and procedures themselves.

Information on the management of fishing opportunities in every MS is difficult to compile, but some studies have revealed that quota concentration is very high in most MS (Figure 6), which calls into question the fairness of marine resource allocation within these systems. In general, the concentration of fishing opportunities is higher in systems with individual holdings (e.g. individual vessel quota) than pooled systems (e.g. vessels of a similar type which access a jointly-held quota).

**Figure 6.** Fishing quota holdings by owner for the largest quota by value in 2018

The Gini coefficient is a statistical measure of distribution across a population (e.g. the distribution of income across households). A high Gini coefficient suggests a high degree of concentration (i.e. uneven distribution).




**Source:** MRAG, AZTI, NEF (2019), Study on ownership and exclusive rights of fisheries means of production, Final report to the European Commission

The concentration of fishing opportunities is lower when a specific fishing opportunity or species is analysed than when combining all fishing opportunities or all species together, as some species are significantly larger in weight and value than others (Figure 6). The results at the aggregate level may therefore overstate the degree of concentration in fishing opportunities. Further analysis of the distribution of fishing opportunities requires disaggregated analysis at the species or fishery level (i.e. a combination of species caught by similar vessels) to establish policies which ensure the fair distribution of fishing opportunities.

To support fairness between fishing businesses, it is necessary to gain a better understanding of the situation in most MS. This is also required to assess whether MS are providing a transparent and objective allocation system as required by Article 17 of the CFP.

## RECOMMENDATIONS

- **To gain a better understanding of the situation in Member States, mandatory publication of a public quota register as well as the allocation rules used by national fishing administrations is needed.** This would ensure transparency and objectivity as required under Article 17 of the CFP.
- To secure a better understanding of the distribution of fishing opportunities after initial distribution by governments, **producer organisations, which often manage fishing opportunities on behalf of their members, should be required to publish their rules for how quotas are allocated.** This would increase transparency around how fishing opportunities are distributed, thus promoting improved fairness across the EU fleet.
- **Member States should implement a system of criteria-based allocation of fishing opportunities to incentivise fishing practices in pursuit of social and environmental objectives.** Some Member States already use aspects of this practice and, with greater transparency, these best practices can be shared.

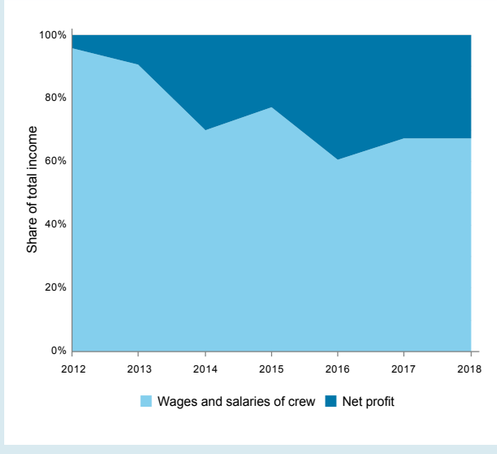


# INCREASING WAGES NOT ON PAR WITH INCREASING PROFITS

Fairness within businesses concerns the distribution of returns from fishing between the owner of the business and the workers. For the owner, financial returns take the form of profits while, for the crew, financial returns take the form of wages. The ratio between profits and wages may change over time as the vessel owner bears the fixed and capital costs alone, the number of crew changes (and shares are paid on an individual basis), and because crew shares are dynamic and set by agreement (sometimes informally) between owner and crew.

As fishing income in the EU has increased slightly over the past decade, so has the amount paid in crew share (the wage distributed among crew after a fishing trip), in rough proportion with income. Further, as other costs of fishing have remained stable, due in part to low fuel prices (energy costs) and interest rates (capital costs), the increase in profits has been much larger and the proportion of financial returns to fishing in the form of profit compared to wages has risen dramatically (Figure 7). Taken together, the picture is one where an increasing share of the financial returns are distributed as profits to vessel owners, i.e. net profit has increased proportionally more than crew wages.

**Figure 7.** Composition of costs and profit for the EU fishing fleet




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

With a declining share of returns to labour, the fishing industry is following a larger economic shift in the EU regarding the distribution of income between labour and capital which increases economic inequality and social pressures. To combat this trend, new labour arrangements to increase worker power, such as unionisation and a change to the dominant crew share model, should be explored.

To increase fairness within fishing businesses, changes in vessel labour practices should be considered, including alternative payment models and worker representation for fishing crews. These changes could take many forms, such as the income guarantees provided by a fishers' cooperative that receives fishing wages and distributes monthly payments. The 'correct' model depends greatly on the context of each MS and even on the different fisheries within them. Central to any change to be considered is an increase in worker power should there be a shift in the distribution of returns and fairness within businesses. Undoubtedly, larger economic shifts that transcend the fisheries sector are also at play and policies outside of fisheries management should also be considered.

## RECOMMENDATIONS

- **To support fairness within fishing businesses, Member States should look at possible changes in vessel labour practices, including alternative payment models and worker representation for fishing crews.** Best practices have been documented in Belgium and in France, with details on these available in the Remuneration section below, as well as in the Fairness section of the technical annex.
- **Member States must ensure that migrant workers receive the same minimum working standards and wages as domestic workers**, and that ILO 188 for protecting worker rights is being enacted across all fishing businesses.
- **Means to enhance worker bargaining power should be reviewed by the EU and implemented in Member States.** These could include universal basic income and unionisation.
- **Only EU-flagged vessels should be eligible to receive EU subsidies.**


Strunjan Landscape Park, Slovenia © Darko Mihalic / WWF Mediterranean / FishMPABlue



# EMPLOYMENT

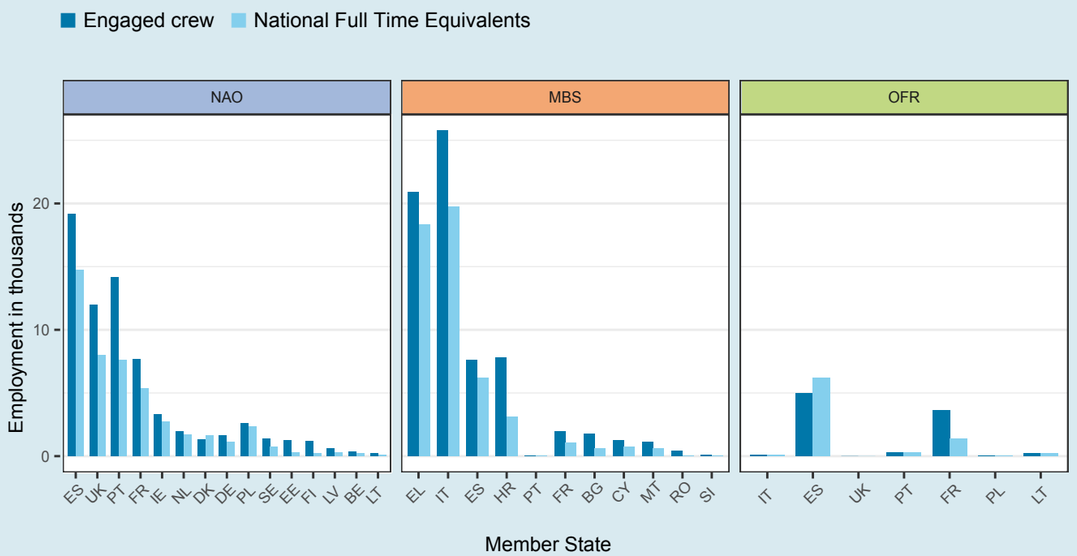
In some coastal communities of the EU, the fisheries sector can make significant contributions to both social and economic sustainability. Assessing employment in terms of full-time versus part-time employment, which fleet segments create the majority of jobs and how the workforce is ageing has implications for how policies to ensure positive long-term socio-economic benefits should be designed and enforced.

## FULL-TIME VERSUS PART-TIME EMPLOYMENT

The uneven distribution of employment across MS and regions is predominantly a reflection of geographical location and the coastline area. In 2018, 80% of fisheries sector employment occurred in Spain, Italy, Greece, Portugal, France and the UK (Figure 8). Three countries, Spain, Italy and Greece, accounted for just over half (53%) of all EU fisheries sector employment, with Italy and Greece accounting for 68% of employment in the Mediterranean and Black Sea region (MBS).

These figures indicate which MS are most significant in terms of fisheries sector employment. In this context, it is essential to gather further and more detailed data on the socio-economic dimension of employment distribution for regions whose data is lacking. This will facilitate how policies are adapted to meet the environmental and social objectives of the CFP.

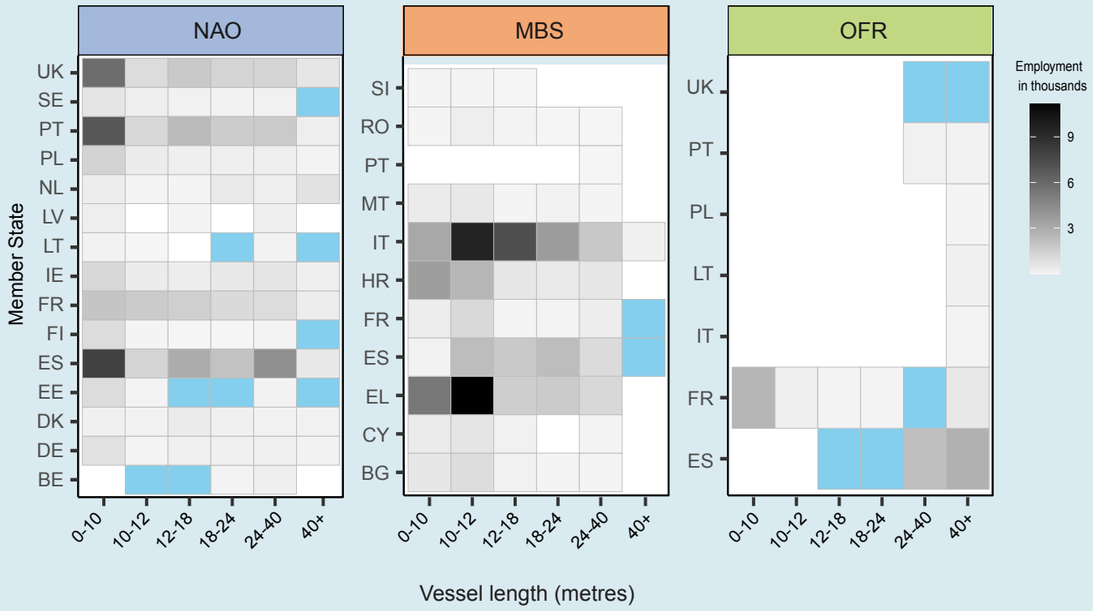
**Figure 8.** Capture fisheries employment by Member State and sea basin in 2018




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

**Figure 9.** Employment by vessel length by Member State and sea basin in 2018

Blue cells denote missing data, while empty cells indicate that the specific combination between Member State, vessel length and sea basin categories does not occur.




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

Determining whether a relatively high part-time ratio has positive or negative implications depends largely upon the extent to which individual fishers may need or desire supplementary employment, along with the extent to which it is available. A potential benefit of part-time employment is that it can provide flexibility, and employment in some seasonal fisheries can also be lucrative. However, where wage performance is low and sufficient alternative employment opportunities are not available, high levels of part-time employment may result in poor socio-economic outcomes for the fishers involved.

From a management perspective, the observation that large proportions of employment are concentrated within a relatively small set of MS and fleet segments may indicate the opportunity for management interventions or policy reform tailored to these high-employment fleet segments to deliver results at scale. This is particularly relevant given the observation that a number of these segments, especially those for vessels less than 12 metres in length, are performing poorly with respect to wages (see *Remuneration* in the technical annex).

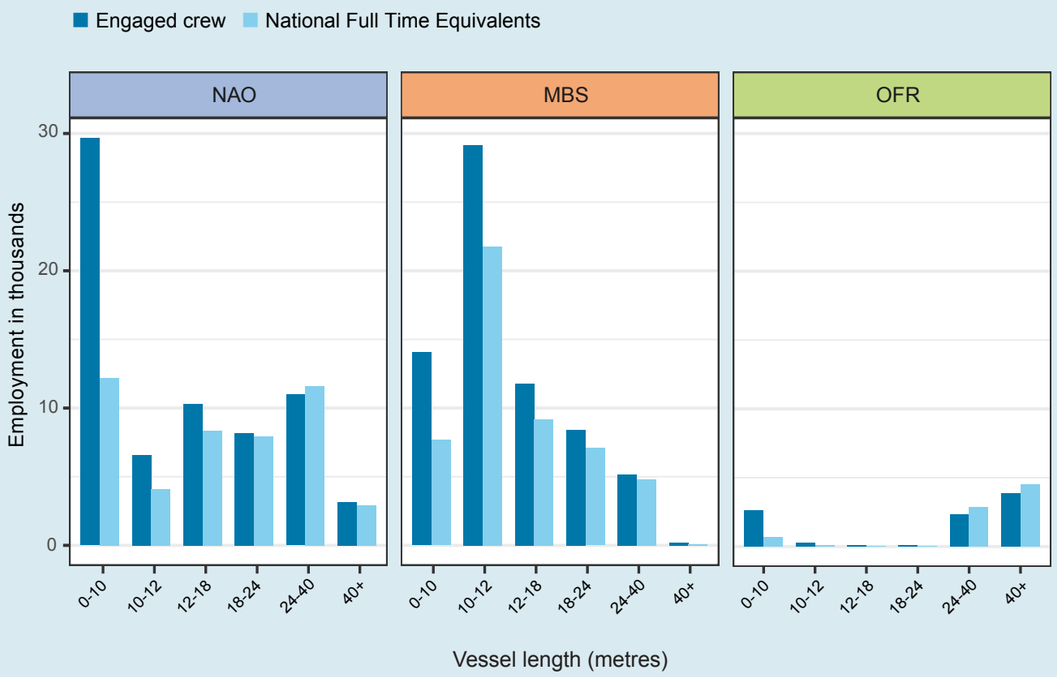
## SMALL BOATS MAKE UP THE MAJORITY OF EMPLOYMENT

Capture fisheries employment is relatively concentrated, meaning a comparatively small number of MS account for the majority of employment at both the EU level and by major fishing region. Further, most capture fisheries employment (56%) is aboard vessels of less than 12 metres in length (Figure 9). This situation is most pronounced in the MBS.

In 2018, a small number of individual fleet segments accounted for a relatively high proportion of EU capture fisheries employment, with the top 10 fleet segments by employment accounting for 30% of total fisheries employment in the EU — nine of these fleet segments were vessels under 12 metres in length. The significance of small vessels as employers highlights the need for a better understanding of the quality of the employment they provide and the importance of authorities taking action in cases of poor performance.



**Figure 10.** Employment by vessel length and sea basin in 2018




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

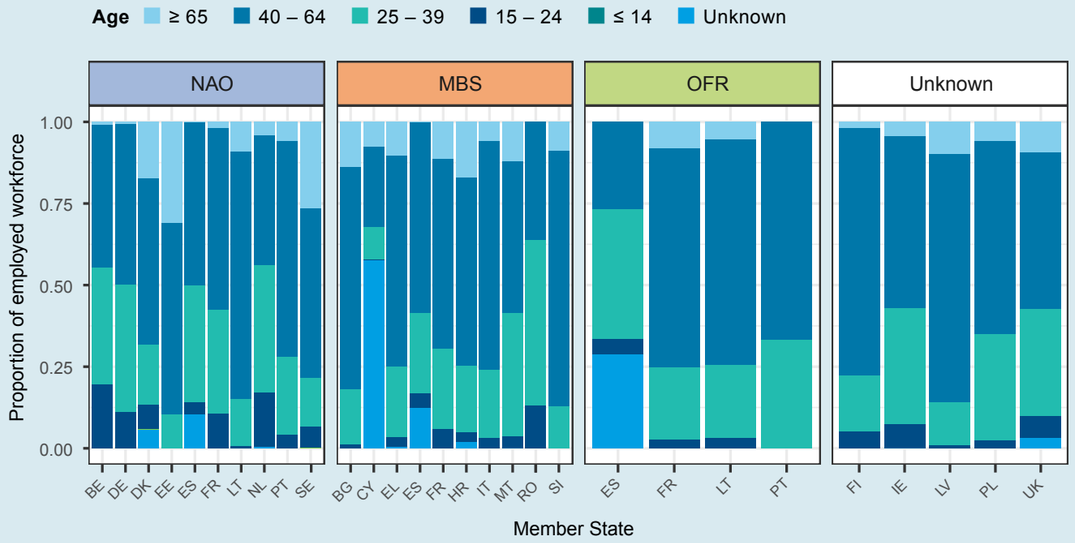
A further observation is that despite employing the largest numbers of fishers, vessels less than 12 metres in length also have the highest ratios of part-time employment (Figure 10) when compared to larger vessels. This is especially pronounced in the shortest vessel categories, i.e. those less than 6 metres in length in the MBS and less than 10 metres in length in the NAO.

While total employment has gradually been trending downwards across the EU fleet over the last decade,[9] this is not the case in all MS, with the MBS seeing the largest proportional increases in employment for vessels under 12 metres in length. It is possible that these increases are due to the fact that smaller vessels require less upfront investment than larger vessel segments, generally speaking. Investments in small-scale fisheries can, therefore, ultimately lead to increased employment, although such assumptions would require further investigation on a national level.

The drivers of change in employment at the individual fleet segment level is unclear, but some relatively large shifts have been observed. One example of substantial growth in both employment and vessel quantity occurred in Croatia for vessels under 12 metres and in the 'polyvalent passive gear only' (PGP) segment (i.e. using more than one non-mobile gear), between 2012 and 2018, which saw the quantity of vessels in this category increase from 36 in 2012-13 (two year average) to 3,583 by 2017-18. It is known that upon entering the EU, the Croatian administration moved all small-scale subsistence fishers who were using trammel nets as a recreational tool into the commercial category instead of the recreational one, an action that may explain this increase. However, WWF has observed that the PGP segment didn't use any non-mobile gear for more than half of the time at sea during the year. As substantial growth is counter to the more general EU-level trend, it may be beneficial to more clearly understand how this has occurred, especially as average wages were below minimum wage in these segments in 2018.

**Figure 11.** Proportion of fisher age by Member State and operating area in 2017

**NB:** The "Unknown" category refers to Member States that are not classified to any of the supra regions included in this assessment, i.e. the North Atlantic Ocean (NAO), the Mediterranean and Black Sea (MBS) and Other Fishing Regions (OFR).




**Source:** Scientific, Technical and Economic Committee for Fisheries, Social data in the EU fisheries sector.

## AN AGEING WORKFORCE

The age group most commonly employed in the EU fishing fleet in 2017 was 40-64 years (58%), indicating that the age of workers in the sector is, to some extent, skewed towards older individuals. While the proportion of fishers over the age of 65 is generally low, e.g. 1% of the fishing population in Belgium and Germany, and 2% in Finland, it is much higher in some MS, e.g. 31% in Estonia (Figure 11). The proportion of fishers below the age of 40 is generally lower in the MBS compared to the NAO or OFR, and particularly in the MS that account for the majority of employment in that area (i.e. Greece, Italy).

Age distributions skewed towards older fishers can be perceived to be a negative sign, given that the mean age can increase only so much before it becomes a possible threat to the sector's long-term viability. An ageing workforce potentially signifies either a lack of desire by younger workers to enter the industry due to poor perceptions of the employment it provides, or an inability to enter the sector due to barriers that might include limited and/or high licensing costs, access to quotas, or generally high start-up costs. As such, where age distributions are observed to be skewed towards older fishers, identifying whether the driving factors are most closely related to fishery performance or licensing is a first step to understanding if economic or cultural barriers need to be removed, or if wider ecological issues (e.g. overfishing, ocean warming) are putting the sector at risk. In the latter case, an ageing population could be an opportunity to decrease fleet capacity. In any case, the technical and historical knowledge of fishers who are retiring should be preserved.

A clearer understanding of fishery employment, along with how it differs between fleets, areas, demographics and level of engagement, allows their relative magnitude and performance to be compared. The common constraint to the employment-related findings presented above is that associated factors of significance, such as the specific policies under which fisheries operate, must also be understood in order to identify the socio-economic drivers and appropriate actions that might be taken to improve the situation for fleets or countries where performance is poor. For example, the poor profitability, crew wages and earnings for the majority of the Portuguese fleet (other than their North Atlantic fleet) must be addressed with Portugeuse-specific changes in policy that are also fleet-segment-specific to facilitate practicable change.



## RECOMMENDATIONS

- **Determining whether a relatively high part-time ratio has positive or negative implications depends largely upon the extent to which individual fishers may need or desire supplementary employment, along with the extent to which it is available. To make this determination, Member States need to undertake assessments and design policies that look beyond the fisheries sector to account**, for example, for other potential employment opportunities and specific regional circumstances. Being able to identify the need for, and subsequently develop supplementary or alternative employment outside of, the capture fisheries sector would improve agreed livelihoods for all involved in fishery-dependent communities.

- An ageing workforce is often considered a negative sign, potentially signifying either a lack of desire or possible barriers to younger workers or newcomers entering the industry. Where deemed necessary, Member States should address this issue by identifying whether driving factors are most related to fishery performance (with potential links to ecological changes) or licensing. **A more detailed analysis of the age distributions of fishers should be conducted to help identify whether differences exist across specific segments of the industry (e.g. for vessels under 12 metres in length, specific fishing gear) and which situations are of concern.**

- **Where substantial increases in fleet capacity and employment have occurred within specific fleet segments, Member States should identify the drivers and consequent outcomes and assess these in the context of any associated policy goals.** This is especially the case when outcomes are observed to be poor in terms of factors such as economic productivity, remuneration or sustainability.

Danish fisher © Jonas Lysholdt Ejderskov


Italian fishing vessel © Vincenzo Iacovon / Shuterstock

# REMUNERATION

One criterion for determining the quality of employment, also identified by the UN Food and Agricultural Organization (FAO) as a priority dimension crucial to achieving Decent Rural Employment (DRE[10]), is that it provides an adequate living. Financial stability is a key concern across the self-employed workforce in the EU, and is particularly acute for those who are lower paid. This vulnerability has further come into sharp focus in the Covid-19 pandemic and financial crisis, which has left many without an income.[11]

In this context, this analysis has considered how the remuneration received from capture fisheries employment has compared with national minimum and median wages, as the national minimum wage provides a baseline from which to determine whether remuneration in the sector provides the recipient with sufficient income to stay out of poverty. This approach also provides a standardised and consistent approach for comparing levels of remuneration between different MS. Adequate wages are an essential component of sustainable livelihoods.

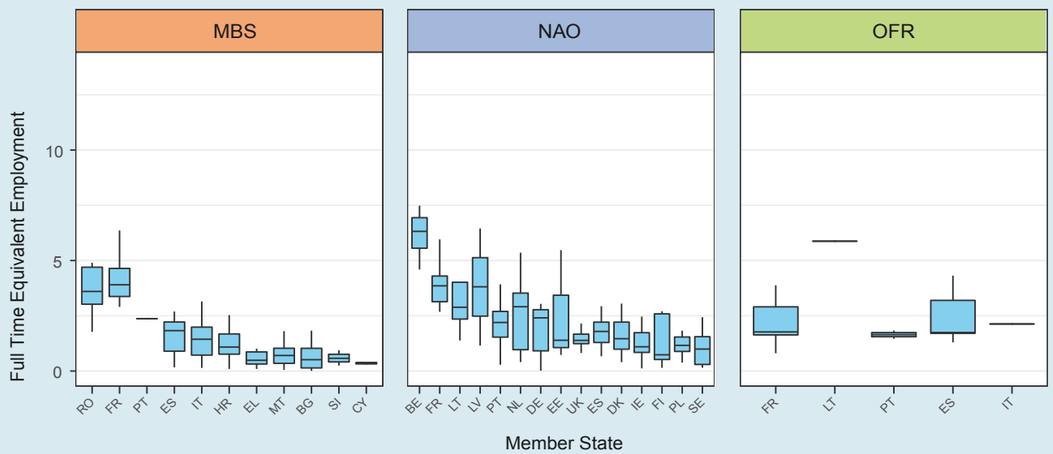
## REGIONAL CONTEXT

Levels of remuneration relative to national minimum wage vary substantially both across and within MS (Figure 12). In 2018, several fleet segments performed well when wages were assessed against the national minimum and median wage, suggesting that the level of financial compensation associated with employment within these segments was adequate. However, average wages in the fleet segments that account for the greatest levels of employment in both the NAO and MBS were observed to be below minimum wage for the same period. At the MS level, relative wages were generally lowest and overwhelmingly below the minimum wage for fleets from Bulgaria, Malta, Slovenia, Greece and Cyprus, who operate their vessels exclusively in the MBS. The situation in Bulgaria is particularly noteworthy given that the minimum wage is one of the lowest in the EU.

Where wage performance is observed to be poor, it raises questions not only about the quality of employment in the fisheries sector, but also about the health of the fish stocks which may not be providing the associated fishers with a sustainable livelihood. This points to a need for MS to better assess issues of fisheries overcapacity within particular regional contexts.

**Figure 12.** Remuneration at the fleet segment level relative to national minimum and median wages by Member State and sea basin in 2018

The figures show the level of variability in median wage across fleet segments within each Member State. In each figure, a horizontal black line indicates the median value. The lower and upper edges of the box correspond to the 25th and 75th percentiles of the data to indicate where half of the fleet segments are situated. The vertical lines projecting from the box above and below indicate the 'maximum' and 'minimum' wages.




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

Another way to look at this topic is to assess the relationship between the relative level of fisher remuneration and the distribution of returns from fishing (the latter being fairness within fishing businesses), because changing how the returns of fishing are distributed may provide a means to improve overall remuneration in cases where fleets are profitable. For example, Italian vessels under 12 metres in length and part of PGP fleets rank highly in terms of profitability, but perform poorly in terms of both relative remuneration and the indicator assessing vessel fairness.

At MBS level, wage performance has changed little in recent years, on average. In this region, the proportion of employment where average wages were below the national minimum wage was relatively high over the period observed, at 62% in 2012-13 and 63% in 2017-18, indicating little overall change in wage performance. Socio-economically, this has a negative impact on long-term livelihood stability and the security of coastal communities, while also suggesting that policy efforts in this region have failed to improve outcomes for fishers.

The situation was markedly better in the NAO, where employment associated with average wages that fell below the minimum wage was already considerably lower in 2012-13 (38%) and fell consistently until 2017-18 (32%), coinciding with a substantial increase in the proportion of employment with average wages exceeding the national median.

However, while average crew earnings, i.e. the money fishers actually received, also improved in the NAO, they did not keep pace with the wage increase, with earnings below minimum wage falling from 55% to 53%, as the part-time nature of employment increased over the same period in this region.

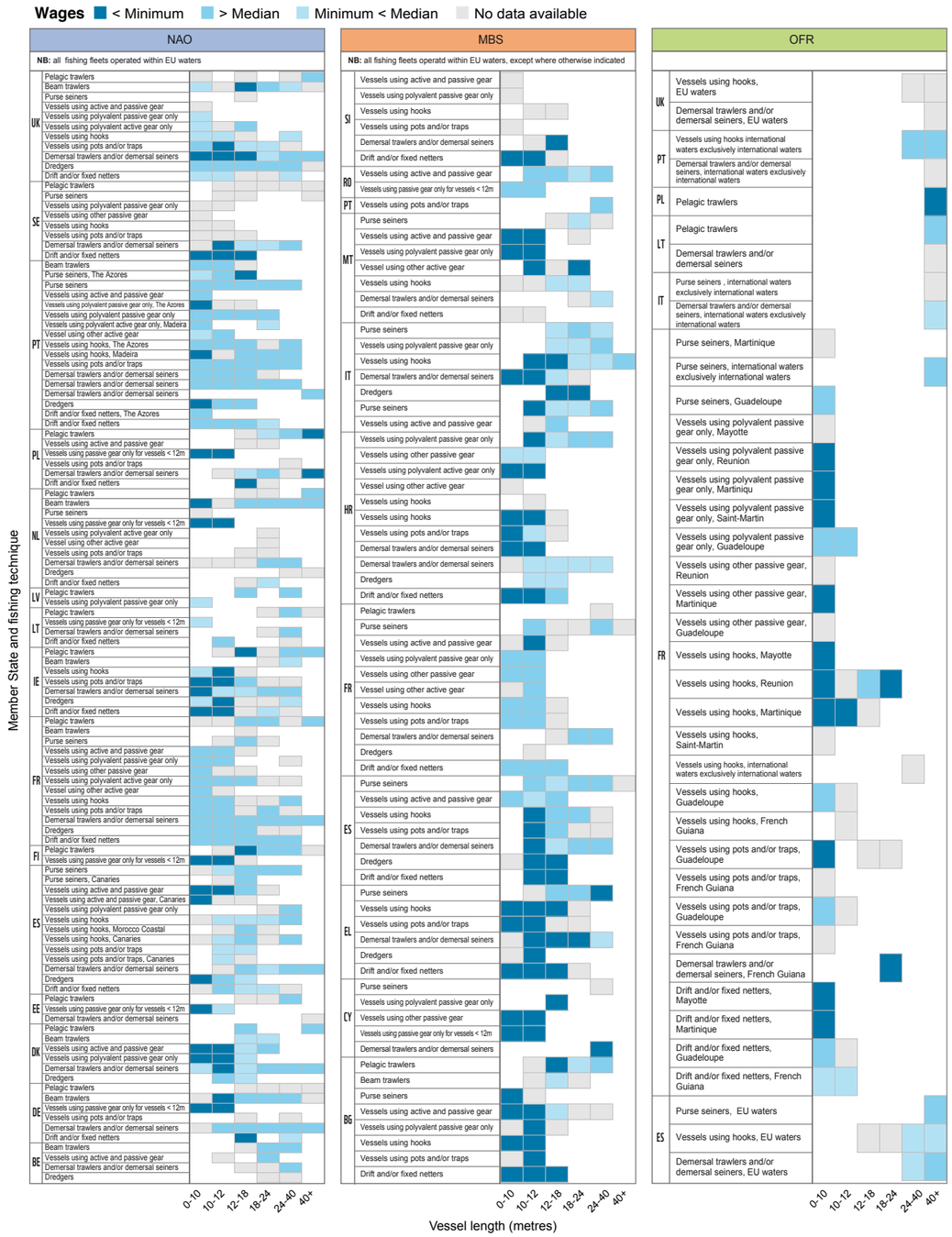
The increase in wage performance in the NAO over these periods is potentially related to general improvements in fishing opportunities and fleet economic performance, and a likely consequence of more effective fisheries management in this region. Further, if catch rates have risen and thus require less fishing effort, this could be a contributing factor to the slight increase in part-time employment and to the diminished increase in earnings performance. If this is the case, and depending on the model used to pay crew, it could again indicate how a failure to reflect improved economic fishery performance in the distribution of benefits can penalise crew.

## VESSEL SIZE MATTERS

Across the EU, average wages for Full Time Equivalents (FTE) are often below the national minimum wage on smaller vessels. This is especially the case for vessels under 12 metres in length in the MBS and vessels less than 10 metres in length in the NAO. In 2018, 43% of EU capture fisheries employment was assessed as being associated with fleets where the average wage was below the national minimum, but this number increased to 70% for vessels under 12 metres in length. This situation is not isolated to a few major fleet segments: for example, nine of the top 10 EU fleet segments for employment utilise vessels under 12 metres in length and the average wage was below the national minimum in 2018 for seven of these segments.

Given that vessels under 12 metres in length provide most of the employment in the EU (Figure 13), especially in the MBS, and that smaller vessels typically have closer direct economic links to the coastal communities from where they operate,[12] the finding that relative wage performance is poor in most cases potentially indicates either that policy objectives are not being achieved or that payment to the crew, especially on smaller vessels, is made directly without being formally reported. A better understanding of fleet segments that appear to counter the general trend for vessel length versus wage, such as those in France and Portugal (Figure 13), together with how their individual situations make them stand out, may offer insights into how performance can be improved elsewhere.

**Figure 13.** Full-time engagement wages vs national minimum and median wages by fleet segment in 2018




**Source:** Scientific, Technical and Economic Committee for Fisheries (2020) *The 2020 Annual Economic Report on the EU Fishing Fleet*

Danish trawler fishing in the North Sea © Quentin Bates / WWF

## WAGES, FAIRNESS & PROFITABILITY

In the absence of comprehensive information on the specific ecological (stock status) and economic situations faced by each individual fleet segment, it is not possible to draw precise conclusions from the observed differences in relative crew wages. However, positive correlations between the indicators of crew wages, fairness within businesses and profitability suggest areas for consideration, as described in Table 1. For example, the French and Portuguese fleets that perform well with respect to wages also perform well with respect to profitability, while fleets that perform poorly with respect to wages also perform poorly with respect to profitability (e.g. Greek vessels under 12 metres using drift/fixed nets) or to vessel fairness (e.g. Italian vessels under 12 metres using PGP).

Where instances of objectively poor wage performance are observed in combination with high levels of employment, a fishery's ability to meaningfully contribute to the local community is also questionable. This is a concern for communities with a high economic and social dependency on the fishing sector,[13] as fisheries with persistently poor economic performance will struggle to deliver positive social and economic outcomes. Instead, they may potentially condemn fishers and associated communities to a cycle of poor economic activity with less secure livelihoods, where wages could be generated via undeclared catches, i.e. illegal, unregulated and unreported (IUU) fishing.[14]

Unprofitable fisheries do not support social objectives well. This highlights a likely opportunity to reduce fleet capacity, whereby stocks are less pressured and catches are shared between fewer vessels. Under such scenarios, theoretically, profitability and, with it, minimum wage can also increase, as they are correlated.

The importance of fisheries to local communities and a commitment to actively promote growth and improve employment opportunities in coastal fisheries to achieve social sustainability as part of a broader ecosystem-based approach pervades the CFP. In fact, a stated aim is to "foster a dynamic fishing industry and ensure a fair standard of living for fishing communities". Assessing and tracking sectoral wage performance would provide one means of qualifying whether the latter of these aims is being achieved across the EU, as well as for determining how efforts can be improved.

In the context of high levels of poorly remunerated employment and the probable underlying conditions of these situations, policy ambitions to both promote growth (fleet profitability and revenue) and improve employment opportunities in coastal fisheries are potentially difficult to achieve without substantial change. The local situation is key, but in areas where, for example, too many vessels are chasing too few fish, actions such as fleet rationalisation (the evaluation and subsequent redesign of a fleet or sector to improve efficiency, usually economic efficiency) and associated reductions in levels of capture fisheries employment would likely be necessary if economic performance and employment opportunities (when taken to mean quality of employment) are to be improved. In these situations, management objectives and policy need to reflect reality.

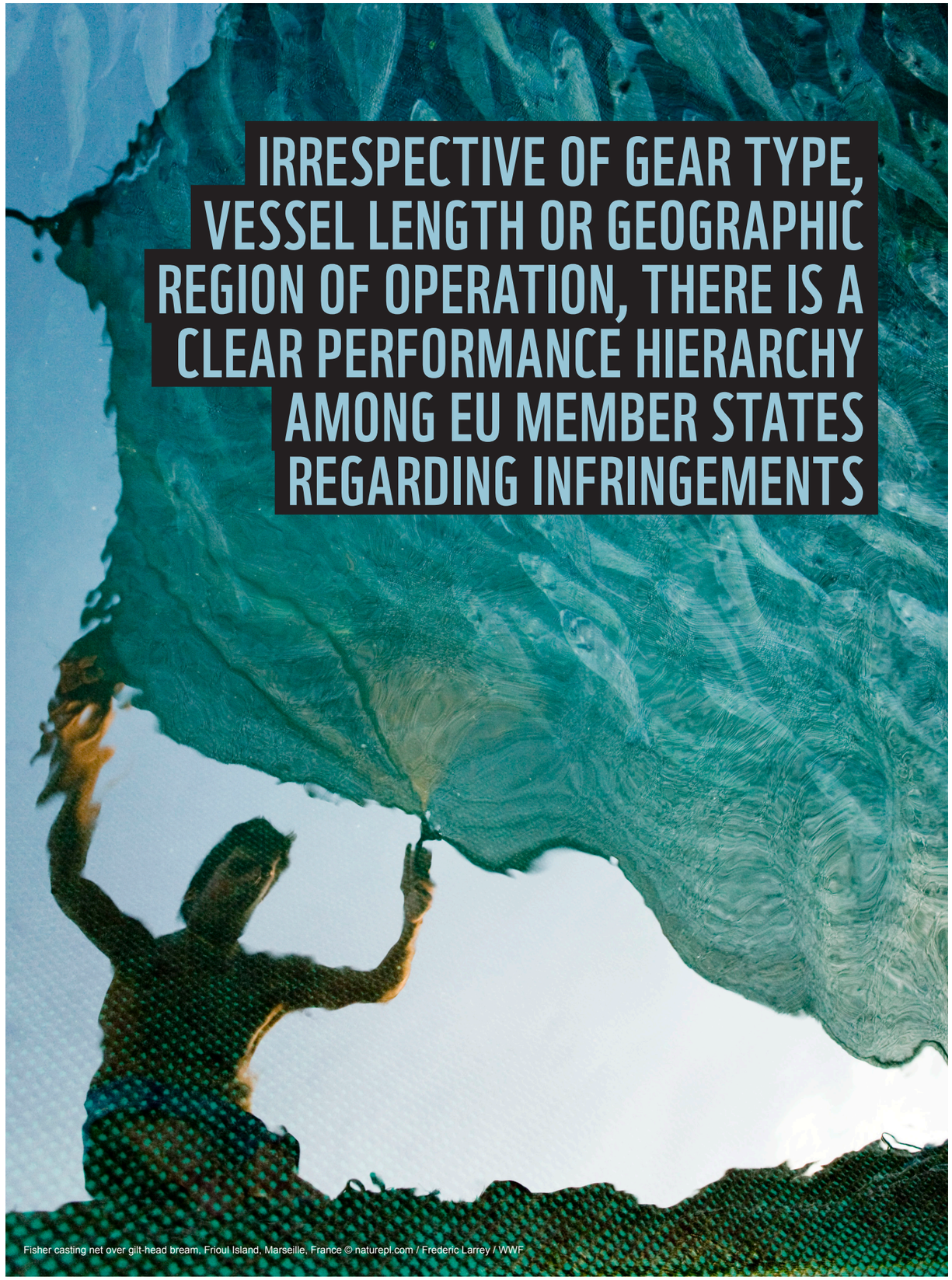
Fewer but better paid jobs in the capture fisheries sector is likely to be a more socially sustainable situation than the perpetuation of many poorly paid ones, but this requires policies whose mandates reach more broadly than this sector alone. Such policies must also account for and influence the wider economic system, including alternative forms of employment in coastal communities as a whole. Best-practice examples include France and Belgium: generally, French fleets offer high crew wages compared to the national minimum wage, likely due to France's more robust social security requirements compared to other MS.[15] Belgium, on the other hand, passed a law in 2003 to guarantee a minimum pay level for each fishing trip taken[16] which has resulted in Belgian crew wages being nearly double that of any other MS, in absolute terms.[17] These examples show that a safety net can be provided for fishers in times of little or no income to combat financial vulnerability. This, in turn, enables them to make mid- and long-term financial plans, including investments in more selective harvesting techniques.

## RECOMMENDATIONS

- To assist with determining whether specific fleet segments are providing an adequate source of employment and that policy goals around social sustainability are being met, **Member States need to track wage performance. This will identify where wages are poor and allow further investigation of the driving factors in each specific case. No fishery should have wages below the national minimum, as sustainable livelihoods are key for societal well-being and to meet the CFP objectives.**

- **To ensure that crew are adequately paid, Member States need to consider changes to vessel labour practices. This could include alternative payment models and worker representation for fishing crews.** Being economically productive is not sufficient if the benefits are not appropriately shared with the crew, and instead accrue with vessel or licence owners. An unequal distribution of wealth does not promote ideas of either fairness or sustainability.

- **To contribute to the evidence base for discussions on alternative payment models for crews, Member States should gain a better understanding of how improved fishing opportunities can affect effort and employment.** For example, if profitability increases as required effort falls, but the part-time ratio increases as a result, do existing payment models appropriately distribute improved financial returns between vessel owners and crew? Understanding how these elements interact would assist with ensuring a fairer distribution of income.



Fisher casting net over gilt-head bream, Frioul Island, Marseille, France © naturepl.com / Frederic Larrey / WWF

# COMPLIANCE

## IN EU WATERS

Compliance means conforming to a rule, such as a specification, a policy, regulation, standard or law. For the activities of the EU fishing fleet, the European Fisheries Control Agency (EFCA) is the EU agency that coordinates the national operational fishery activities and assists an MS in their application of the CFP. The agency's mission is to promote the highest common standards for control, inspection and surveillance under the CFP.

Measuring compliance is important as it allows regulatory agencies to understand the good versus bad players within the EU fleet in order to help ensure a level playing field of CFP implementation across MS. In cases of non-compliance, an infringement is the act of breaking a specification, a policy, regulation, standard or law. More infringements generally mean higher non-compliance. The number of different infringements, however, is determined by the number of different specifications, policies, regulations, standards or laws. Due to the "out of sight, out of mind" nature of many fisheries, it is extremely difficult to accurately quantify infringements and non-compliance because so many instances likely go unnoticed. Herein, we rely on the EFCA annual report (2018) to highlight MS infringements and incidents of non-compliance. To evaluate compliance in this analysis, the following methodology has been adopted:

$$\text{BREACHES OF COMPLIANCE IDENTIFIED BY ENFORCEMENT SERVICES} = \frac{\text{NUMBER OF INFRINGEMENTS}}{\text{NUMBER OF INSPECTIONS}}$$

The lower this number, the better. For example, an MS with a low number of infringements but a high number of vessel inspections would indicate that the vessels of that MS consistently perform well under inspection, i.e. not breaking the rules set out in the EU IUU fishing Regulation and the EFCA monitoring, control and surveillance (MCS) guidelines. This indicator does capture situations in which multiple infringements may take place in one inspection.

## MEMBER STATE PERFORMANCE

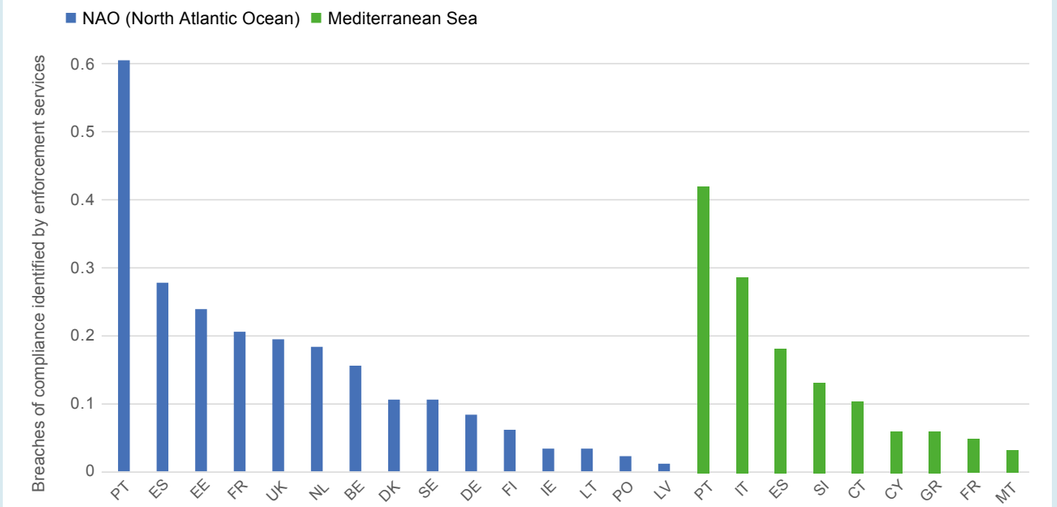
EFCA data indicates that, irrespective of gear type, vessel length or geographic region of operation, there is a clear performance hierarchy among MS regarding infringements recorded during inspections in 2018. Overall, the three worst offenders are Italy, Portugal and Spain, with 22, 14 and nine infringements per 100 inspections, respectively. Conversely, the top three performing MS were Ireland, Lithuania, and the UK with only two, five and six infringements per 100 inspections, respectively. It is noteworthy that not all MS have appropriate data for this comparison, with Bulgaria, Romania and Slovenia all lacking sufficient data in the EFCA databases.

When looking at the compliance performance of MS fishing in the NAO and in the Mediterranean Sea, it is clear that some perform worse than others (Figure 14). This is significant because recommendations on improving MCS can be better targeted and adapted when directed at certain regions and countries versus EU-wide initiatives that may not be as crucial in certain areas. If EU-wide initiatives do not take spatial variations in performance into account, MCS funds could be misdirected, leading to ineffective results. It is also clear that if an MS appears in more than one fishery region, that MS generally performs similarly across all regions in which it fishes. For example, Portugal operates in both the NAO and in the Mediterranean Sea and, in both, it shows the highest number of infringements per number of inspections.

**Figure 14.** Number of infringements per number of inspections per Member State in 2018

Higher values indicate more instances of non-compliance (more infringements).

**NB:** data for Other Fishery Regions (OFR) and the Black Sea are not available.




**Source:** European Fisheries Control Agency (EFCA) (2021) 2019 – A year in review

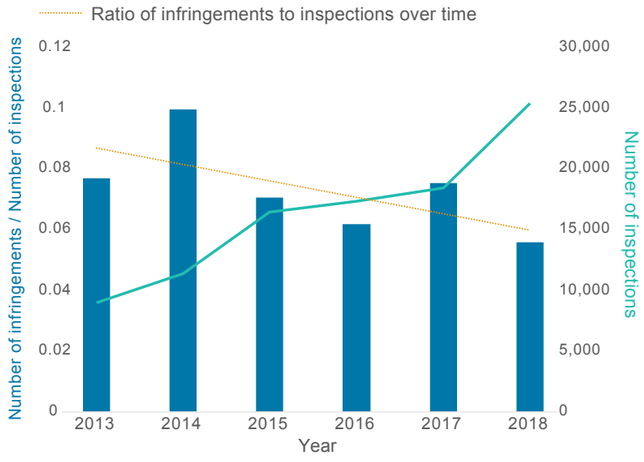
## COMPLIANCE OVER TIME

When looking at the number of infringements per inspection over time between 2013 and 2018, the total number of infringements per MS has decreased (Figure 15 blue bars and line). This could indicate that effort invested by MS in MCS has improved compliance (Figure 15 green line).

## TYPES OF INFRINGEMENTS

By looking at the type of violations, it is clear that an overwhelming majority of them are based around failures to report catches and the continued use of prohibited fishing gear (Figure 16). The NAO had a higher number of infringements per inspection compared to the Mediterranean Sea while, by MS, the majority of infringements came from Portugal, Spain and Italy during the same period.

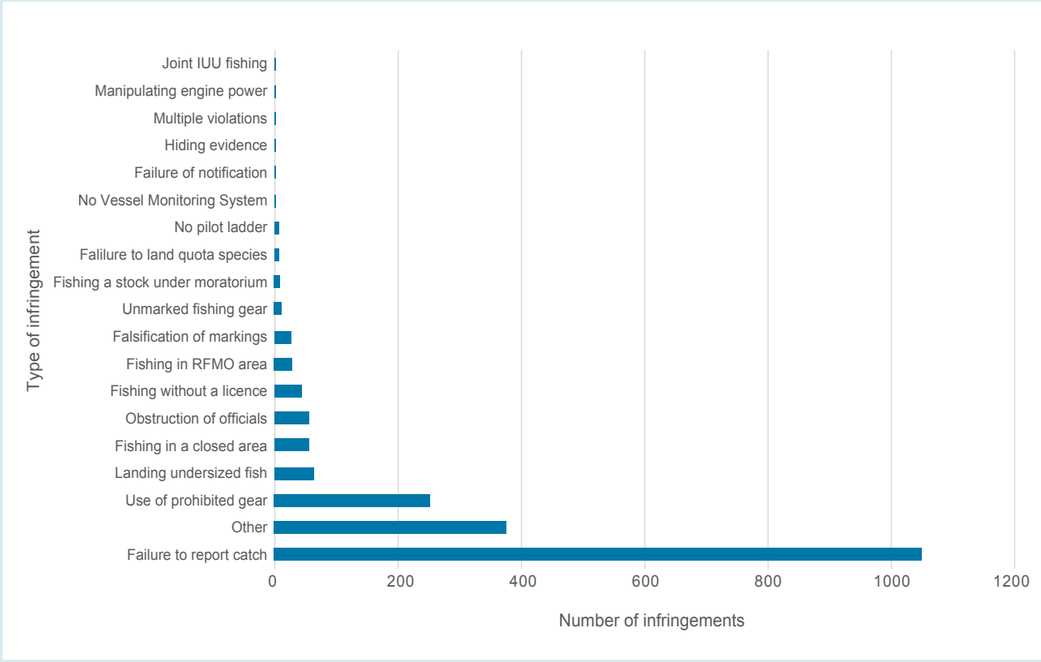
**Figure 15.** The number of enforcement infringements per number of inspections per year




**Source:** European Fisheries Control Agency (EFCA) (2021) 2019 – A year in review



**Figure 16.** Number of infringements per number of inspections per Member State in 2018




**Source:** European Fisheries Control Agency (EFCA) (2021) 2019 – A year in review

These characteristics highlight that although MS are on the right track with enforcement to improve compliance, greater efforts are still needed. Regarding the lack of reporting and the use of prohibited gear, remote electronic monitoring (REM) is one possible solution to improve monitoring of what is being caught and accountability across fisheries.[18] More broadly, REM serves to not only improve documentation of instances of bycatch, but to provide better fisheries data to improve EU fisheries management and stock assessments and, crucially, compliance with the rules of the CFP.

It should be noted that under the previous EU fisheries Control Regulation, vessels under 12 metres in length were exempt from many MCS requirements. Under the revision of the EU fisheries control system, this may change, which would improve fisheries catch reporting and location tracking, as well as the overall seafood traceability system in the EU.[19]

## RECOMMENDATIONS

- **The European Fisheries Control Agency (EFCA) must address the current lack of data available on inspections and infringements for some Member States, such as Bulgaria, Romania and Slovenia.** Improved data coverage across all EU Member States will support more accurate analyses for how to reinforce capacity for better implementation of the CFP.
- **The EFCA must report its inspection and infringement data per gear type and vessel length to support the development of more robust recommendations for improvements in monitoring, control and surveillance measures, as well as enforcement.** This will help tailor specific recommendations to fleet segments rather than only to Member States.
- **The EFCA must record its data using the same geographic areas as the Scientific, Technical and Economic Committee for Fisheries (STECF).** For analyses such as those herein, the two data sets could be harmonised based on geographic operating region, as this would facilitate comparison of socio-economic performance and compliance.

**Figure 17.** Proportion of EU-constructed vessels currently listed on the IUU fishing list, per EU Member State (as of July 2021)

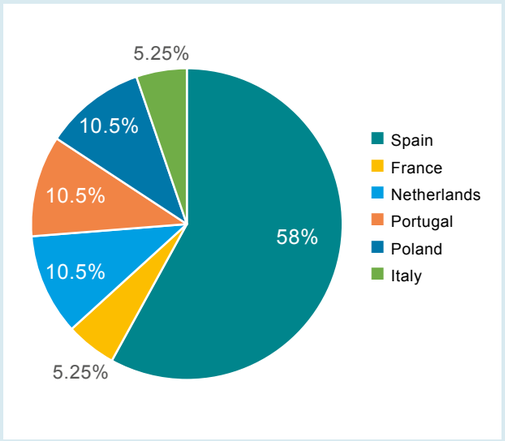
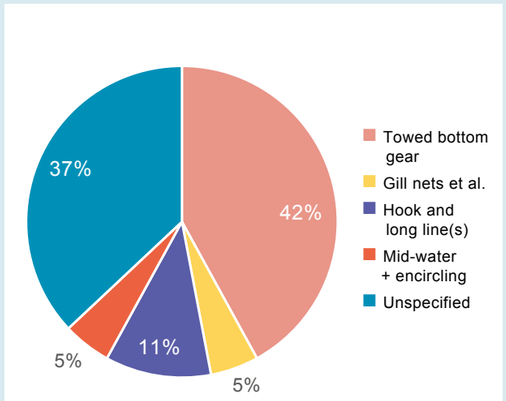



**Figure 18.** Proportion of gear types used by EU-constructed vessels on the IUU fishing list (as of July 2021)




## IN WATERS OUTSIDE MEMBER STATES' NATIONAL JURISDICTIONS

The IUU fishing lists compiled by Regional Fishery Management Organisations (RFMOs) are useful tools to analyse compliance pertaining to fleets fishing outside of the national jurisdictions of their own countries, i.e. on the high seas or in the exclusive economic zones of third countries. The EU has an extensive external fleet of approximately 700 vessels that are regulated by the CFP's external dimension.[20]

For this analysis of the EU external fleet's compliance with RFMO conservation and management measures, data from Trygg Matt Tracking's 2021 "combined IUU fishing list"[21] (hereafter referenced as "the IUU list") has been consulted, as it combines reports from RFMOs on illegal fishing activity into one centralised database.

As of July 2021, there are 19 EU-constructed (and assumed owned) vessels noted on the IUU fishing list. Spain owns 11 of these vessels, followed by the Netherlands, Poland and Portugal who have two vessels each, and finally France and Italy who each have one (Figure 17).

It is also important to account for the total number of active vessels that each of these Member States has operating externally, outside of EU waters: 350 for France, 241 for Spain, 170 for the Netherlands, 58 for Portugal, four for Poland and one for Italy. Comparing the number of IUU fishing infringements alongside the size of the external fleets of each Member State can tell an important story about a given Member State's capacity to control their external fleet activities. For example, the 11 Spanish vessels listed on the IUU list represent 4.6% of Spain's total external fleet, compared to 0.29% of France's external fleet appearing on the IUU list. For two large external fleets to have such different proportions of vessels on the IUU list shows that the behaviour of Member State fleets varies greatly. This indicates the need for some Member States to reinforce MCS and national sanctioning schemes, as current policies are not dissuasive enough.

Almost half of the 20 infringements by EU vessels on the IUU fishing list are from vessels using towed bottom-contacting fishing gear, i.e. trawls or dredges (Figure 18). This identifies the fisheries whose gear types are at a higher risk of non-compliance with EU policies and where MCS efforts must be reinforced to ensure that RFMO conservation and management measures are respected.

When looking at the countries to which EU vessels are flagged, it is noteworthy that 14 out of 20 have unknown flags. This emphasises the need for the EU to investigate the issue of beneficial ownership, as this allows authorities to identify where vessel responsibility lies, to in turn tackle IUU fishing. Flags of convenience and reflagging of vessels is a key issue when it comes to overcoming IUU fishing, as international fishing operators carry out their activities under the flag of a country with particularly lax rules on monitoring and control, and then potentially re-flag to another country to conceal their past activities.[22]

Of the known flags of EU vessels on the IUU fishing list, all but two are flagged to African countries, highlighting the EU's external influence in waters where it has Sustainable Fishery Partnership Agreements (SFPAs). The EU currently has six active SFPAs with West African countries: Cabo Verde, where 69 vessels are active, Mauritania with 83 vessels, Senegal with 45 vessels, The Gambia with 41 vessels, Guinea-Bissau with 41 tuna vessels (plus mixed trawl quota) and Côte D'Ivoire with 36 vessels.[23] The prevalence of EU vessels in African waters reflects the need to reinforce MCS in these regions as well as to improve SFPAs to ensure that capacity building focuses on partner countries being able to effectively use MCS tools, ensuring EU vessels in third-country waters do not overexploit resources.

In general, data for the EU's external fleet behaviour is sparse and measuring compliance currently depends on the readily available RFMO lists or on reporting by coastal nations that interact with the EU's fleet through SFPAs. The latter is often unavailable or difficult to synthesise and use robustly. Those nations that are experiencing data collection deficiency do not have robust recording information on compliance, which undermines the accurate assessment of any "surplus" fishery resources identified as being available for distant water fishing nations and which the EU exploits. This, in turn, undermines the sustainable livelihoods of coastal communities and their food security, as they rely heavily on seafood as a primary source of protein.[24]

## RECOMMENDATIONS

- **The EU should record data for its external fleet following the same guidelines as for the Scientific, Technical and Economic Committee for Fisheries (STECF), i.e. the internal fleet.** At present, the lack of easy comparison between data sources means that evaluations of external fleet activity and performance are far less comprehensive than those of internal activity and performance. These two datasets should be harmonised so that there is one centralised repository for socio-economic data from all EU vessels, both internal and external.
- **The EU should push RFMO contracting parties to provide more detailed vessel listings for IUU fishing with regard to the type of vessels implicated in illicit activities (e.g. processing and bunker vessels).** This would support better targeting of enforcement activities, which can subsequently be directed specifically at fishing and/or fishery support activities, depending on the compliance issues at play.
- **The EU, when necessary, should put forward infringement procedures to reduce instances of non-compliance by the Member States' external fleets.** This will ensure the EU is fishing sustainably outside its own waters and not creating more vulnerability for coastal communities in terms of food security.
- **Certain vessel types, such as trawl vessels, must enforce stronger monitoring, control and surveillance measures due to the large number of infringements documented compared to other fleet segments.** It is noteworthy that spatial violations (i.e fishing in restricted areas) are likely more prevalent on lists of reported infringements because they can be detected remotely via satellite, with the Automatic Identification System (AIS), Vessel Monitoring Systems (VMS) and other monitoring systems, and are therefore easier to catch than other violations such as gear type and reporting, which can benefit instead from mandatory REM.
- **The EU should improve data and information transparency of its external fishing activities by making data collected readily available to facilitate evaluation of the CFP's external dimension.** This data collection and publication should be based on the same principles and standards as those applicable in EU waters, while promoting a level playing field for EU operators vis-à-vis third-country operators. Such a publicly accessible database should include harmonised data sets of vessels operating under fisheries agreements, as well as records of their landings and the ports to which they land, with details of the specific, per-vessel operations (e.g. crew employed, funds received from EU subsidies, etc.).


Local fishers pulling in their net, Porto Moniz, Madeira, Portugal © Ceri Breeze / Shutterstock



# THE WAY FORWARD

While this report contributes to a framework for evaluating socio-economic performance and preliminary analysis in the key areas of profit, fairness, employment, remuneration and compliance, it is clear that more work is required to identify actionable policies. The tremendous scope of socio-economic issues requires a multidisciplinary research approach in order to advance new policies, and further insights into some of these diverse areas of study are explored in the technical annex. This research effort must work closely with stakeholders in the fishing sector to understand the leading dynamics that explain current socio-economic performance, as well as the barriers to and opportunities for improvement.

Given the need for stock recovery to meet the objectives of the Common Fisheries Policy, establishing a better understanding of how socio-economic performance interacts with environmental sustainability is essential. High economic returns in the short term will likely come at the expense of environmental sustainability. By instead embracing the view that long-term economic returns are dependent on environmental sustainability, the sector could function in a positive feedback cycle of greater sustainability and higher economic returns. Identifying whether the objectives of the CFP are in conflict with or mutually support this vision is crucial for determining whether these goals can be successfully delivered and how.

In order to urgently deliver on the CFP's objectives of ensuring the long-term sustainability of fisheries, and within the wider context of the EU's environmental and social commitments, the European Union must tackle the gaps and shortcomings in the implementation of the CFP framework. WWF reiterates that reviewing and addressing current and past shortcomings in implementation must be of critical priority before any future revision of the Policy is considered.

Similarly, the EU must embrace the interconnected nature of fisheries with other sectors, such as offshore renewable energy, as these have direct implications for the future of Europe's seas and the communities connected to them. Maritime Spatial Planning, when following an ecosystem-based approach and according due consideration to the socio-economic impacts of maritime industry development, is one of the essential tools for secure fisheries stakeholder engagement and integrated management of European seas.

WWF calls upon the EU to ensure legislative consistency between measures to conserve marine biological resources and a high degree of socio-economic performance, as more resilient ecosystems also deliver better opportunities for sustainable livelihoods. Protecting and restoring nature must benefit both people and planet.

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Fishing nets, Marine National Park of Zakynthos, Greece
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