BIM
**Ireland's
Seafood
Development
Agency**

Annual Fisheries Report
Findings of the National Seafood Survey 2023

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Fishing Fleet 2021

Profitability for 2021:
Decrease
from 2020 ⌄

Full-Time Equivalents (FTEs):
1,911
(+0.4%) ⌃

Total Employment:
2,776
(+3%) ⌃

Landings by Weight:
207,400
tonnes (-5%) ⌄

Landings by Value:
€294
million (+11%) ⌃

Total Vessel Power:
184,473
kW (+0.2%) ⌃

Total Vessel Tonnage:
63,652
GT (+5%) ⌃

Fishing Days:
42,425
(-25%) ⌄

Days at Sea:
52,763
(-22%) ⌄

Active vessels:
1,351 (+7%) ⌃
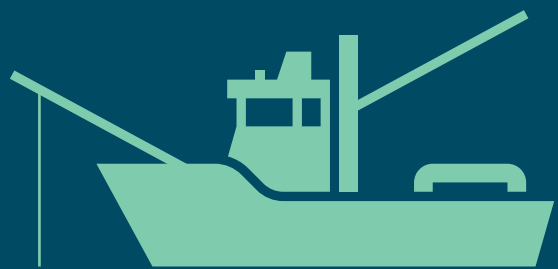
Revenue:
€313
million (-3%) ⌄

Gross Profit:
€87
million (-36%) ⌄

Gross Value Added (GVA):
€177
million (-15%) ⌄

Net Profit:
€63
million (-39%) ⌄
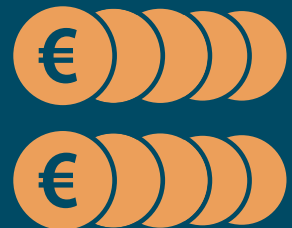
Return on Fixed Tangible Assets:
9% (-42%) ⌄

Energy Consumption:
75.6 ⌄
million litres of fuel (-29%)

Executive Summary

BIM's National Seafood Survey (NSS) provides insights into the status of Ireland's catching sector on an annual basis. It examines the economic performance of the fleet and the social demographics of people employed in the sector.

This report presents a comprehensive analysis of the financial and operational performance of the Irish fishing fleet, shedding light on key insights and identifying notable trends. By examining the economic data for the year 2021, we delve into the factors that potentially drive these trends, providing valuable insights into the industry's dynamics. In terms of structure, the report presents economic estimates at a macro national level and at a micro fleet segment level. This is followed by an overview of key drivers influencing economic performance of the Irish fleet from 2021-2023 based on industry feedback including quotas changes arising from Brexit, inflation, rising costs, and recent developments in Offshore Renewable Energy (ORE) and Marine Protected Areas (MPAs). Projections of economic performance in 2022 and 2023 are presented in section 5.

As part of the NSS, all active vessels are requested to submit economic and operational details for their previous year's activity[1].

Results for 2021 indicate the following:

- Profitability of the Irish fleet has decreased since 2020. Revenue decreased by -3%, amounting to €313 million; Gross Value Added (GVA) €177 million (-15%), gross profit €87 million (-36%) and net profit decreased to €63 million (-39%). These decreases were due in part to quota changes as a result of Brexit and increasing operating costs in 2021.

- The capacity of the national fleet has remained stable since 2008. In 2021, there were 1,963 registered vessels (excluding those registered in the aquaculture segment). The estimated total number of inactive vessels was 612 and 81% of these are in the less than 10 metre segments. As of September 2023, whilst 43 originally accepted, a total of 39 vessels from the Large Scale Fisheries (LSF) fleet have indicated that they will be decommissioned by the end of the year under a voluntary permanent cessation ("Decommissioning") scheme. The purpose of this scheme is to restore balance between fleet capacity and available quotas ensuring the future profitability of the fleet following the quota reductions arising from Brexit.

- An estimated 1,351 Irish fishing vessels were active (up 7% from 2020) with a total capacity of 63,652 GT and 184,473kW. Around 81% of these vessels were under 12 meters in length and typically operate in inshore waters.

- The Irish fishing fleet spent 52,763 days at sea, of which 80% were fishing days representing a decrease in effort of 22% and 25% respectively from 2020.

- Energy consumption decreased by 29% over the same period reflecting the decrease in effort.

- In 2021, the fleet landed over 207,400 tonnes valued at €294 million, a decrease of 5% from 2020 in live weight and an increase of 11% in landed value. In 2022, the fleet landed 175,000 tonnes, a decrease of 17% from 2021.

[1] There is a time lag reporting these data because for an accounting period ending on 31 December 2021, the financial return must be filed by September of the following year (i.e., September 2022). BIM collected economic data for 2021 from October 2022 to February 2023 and submitted national totals to the EU in March 2023 (refer to Annex 2 for specific methods employed).

- Operating costs increased considerably by 21% to €226 million in 2021. Other variable costs which include legal and other fees such as accountancy and insurance attributed 16% (€41 million) to total costs and energy costs represented 13% (€35 million). Despite a reduction in effort, personnel costs increased by 18% to €86.8 million in 2021 from €71 million in 2020 reflecting the easing of Covid-19 restrictions especially in the latter half of 2021 and an overall trend of increased average wages per FTE from 2013- 2021.

- Direct employment generated by the sector in 2021 was estimated at 2,776 jobs corresponding to 1,911 Full-Time Equivalents (FTEs). These values follow a similar trend to capacity indicators over the past decade.

- The average annual crew wage for the entire fleet was estimated at €31,287 per job and €47,353 per FTE compared to the median national annual earnings in Ireland of €41,222 reported by the Central Statistics Office (CSO)[2]. However, there are variations in the average wage depending on the vessel size, the way crew are employed (i.e., shared remuneration systems or PAYE employee), and the type of fishery the vessel operates.

- Based on feedback from industry, increased prices for certain species, quota changes resulting from Brexit, inflation, and rising fuel costs were the main driving forces influencing the economic performance of the Irish fleet from 2021 to June 2023.

- Preliminary data for 2022 demonstrate an overall significant decreasing revenue and profitability driven primarily by the Ukrainian war, rising energy costs, inflation, and quota reductions linked to Brexit. There was a decrease in live weight of landings from 2021 to 2022 (-17%) and in value (-20%). Data projections for 2022 indicate a deteriorating outcome with decreasing revenue (-19%) to €257.7 million and decreasing GVA (-38%) to €120 million. In addition, gross profit in 2022 is predicted to decrease significantly (-42%) to €45 million combined with a decreasing net profit (-42%) to €40.7 million.

- Forecasts for 2023 suggest an overall higher economic performance compared to 2022 driven by a slight increase in landings weight combined with an increase in value of landings.

[2] CSO (2021). Earnings Analysis using Administrative Data Sources 2021.

1. Profile of the Irish fishing fleet

The Irish national fishing fleet is highly diversified with a broad range of vessel types across Small-Scale Fisheries and Large-Scale Fisheries, targeting different species or species groups often in mixed fisheries.

The fleet is dominated by the polyvalent segment; a diverse group including small inshore vessels (netters and potters), medium and large offshore vessels targeting *Nephrops*, mixed whitefish, some pelagic species (including mackerel, herring, and tuna) as well as a range of vessels, from small to large-scale, targeting bivalve molluscs and crustaceans. The Refrigerated Seawater (RSW) pelagic segment targets exclusively pelagic species (i.e., mackerel, horse mackerel, herring, blue whiting, and boarfish).
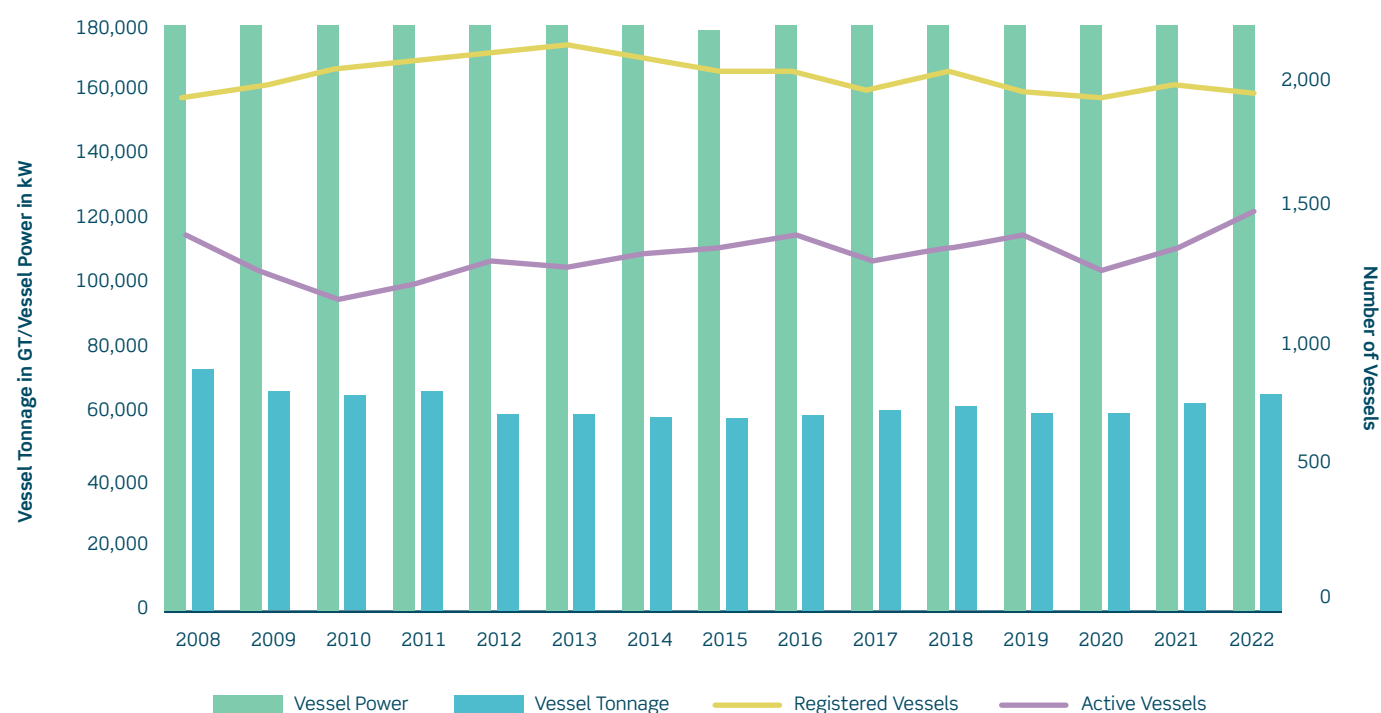
Figure 1 Trends in the fleet summary: 2008-2022. Data source: Department of Agriculture, Food and the Marine (DAFM) Fleet Register.

1.1 Fleet capacity

The capacity of the national fleet has remained relatively stable since 2008 with small temporal fluctuations in vessel numbers (Figure 1).

In 2021, there were 1,963 registered vessels (excluding those registered in the aquaculture segment) with a total capacity of 63,652 GT and 184,473 kW. The estimated total number of inactive vessels in 2021 was 612, the majority of which (81%) are in the less than 10 metres segments. The estimated number of active vessels in 2021 for all segments was 1,351.

Regulation (EU) No 1380/2013 on the Common Fisheries Policy (CFP) requires each Member State to put in place measures to adjust the fishing capacity of its fleet to its fishing opportunities over time, taking into account trends and based on best scientific advice. The objective is to achieve a stable and enduring balance between fleet capacity and fishing opportunities. Fleet capacity may change significantly in the coming years following the recommendation from a high-level Seafood Industry Task Force (in response to Brexit impacts) for a decommissioning scheme targeted at whitefish polyvalent and beam trawl vessels. The target for this scheme was to remove up to 60 vessels of 8,000 GT and 21,000 KW (refer to section 3.1 for further details).

1.2 Fleet structure

Nationally, the fishing fleet is divided into five segments (Table 1)[3]. In addition to the nationally defined fleet segments, for EU economic data reporting purposes in accordance with the Data Collection Framework (DCF) and EU Multi Annual Programme (EU MAP) legislation. In 2021, the Irish fleet consisted of 35 fleet segments. For DCF purposes, a fleet segment is defined by the combination of a particular fishing technique category and vessel length category. Further details are provided in Annex 4.

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[3] In accordance with Ministerial Policy Directive 2 of 2003, as amended by Policy Direcwtive 1 of 2006 and Policy Directive 1 of 2011 and Policy Directive 2 of 2011 (Licensing Authority for Sea-fishing Boats, Department of Agriculture, Food, and the Marine).

Table 1 Structure of the Irish fishing fleet

Refrigerated Seawater (RSW) Pelagic Segment	Engaged predominantly in fishing for pelagic species (i.e., mackerel, herring, horse mackerel, blue whiting, and boarfish). Vessels in the RSW segment range in size from 23.96m to 64.91m in registered length, from 325GT to 1,988GT in volume and 522kW to 3,460kW in engine power.
Beam Trawler Segment	Vessels dedicated to beam trawling used to catch flatfish species such as sole, turbot, megrim, plaice, monkfish, and rays. They range in size from 23m to 28.05m in length overall, from 83GT to 196GT in volume and 221kW to 474kW in engine power.
Polyvalent Segment	Contains the clear majority of the fleet, these vessels are multi-purpose and include small inshore vessels (netters and potters), along with medium and large offshore trawlers and gillnetters targeting whitefish (e.g., haddock, hake, monkfish, whiting) and prawns, pelagic fish such as mackerel, herring, and albacore tuna on a seasonal basis. Vessels in this segment range from 3.06m to 38m in length overall, from 0.19GT to 469GT in volume and 0kW to 1,119kW in engine power. The segment has four sub-segments: • Vessels under 18m in length overall, • Vessels equal to or over 18m in length overall, • Scallop sub-segment – vessels equal to or over 10m in length overall with qualifying track record in the scallop fishery, as defined in Ministerial Policy Directive 2 of 2003, as amended by Ministerial Policy Directives 1 of 2006, 1 of 2011 and 2 of 2011, • Potting sub-segment – vessels licensed and registered under the "Potting Scheme."
Specific Segment	Vessels permitted to fish for bivalve molluscs and aquaculture species only. There are two sub-segments: • Scallop sub-segment – vessels equal to or over 10m in length overall with qualifying track record in the scallop fishery, as defined in Ministerial Policy Directive 2 of 2003, as amended by Ministerial Policy Directives 1 of 2006, 1 of 2011 and 2 of 2011. • Specific general sub-segment – vessels in this segment range from 5.35m to 35.59m in length overall, from 0.66GT to 135GT in volume and 3.7kW to 560kW in engine power.
Aquaculture Segment	Vessels used exclusively in the management, development, and servicing of aquaculture areas. Vessels in the aquaculture segment range from 4.38m to 49.07m in length overall, from 0.57GT to 561GT in volume and 7.30kW to 748kW in engine power. As the focus of this report is on wild capture fisheries, while on the fleet register, this segment is excluded from this report.

Data source: DAFM.

1.3 Landings

In 2021, landings by weight decreased 5% from 2020 (207,400 tonnes) valued at €294 million (up 11% on 2019). Provisional data for 2022 indicates that landings decreased year-on-year by 17% in weight and 20% in value as a result of a 17% decrease in fishing days (Figure 2).
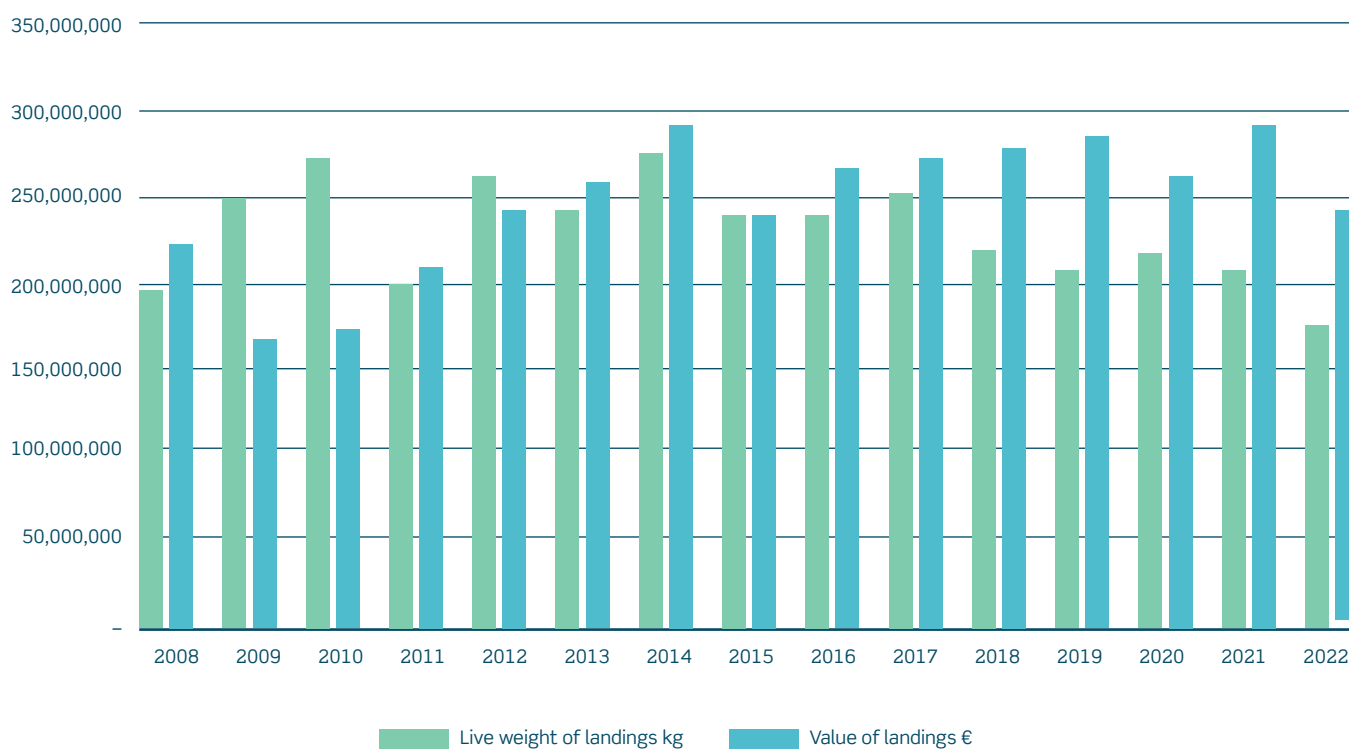
Figure 2 Trends in landings by weight and value: 2008-2022* (*2022 data is provisional).
Data source: Landings by weight provided by Sea Fisheries Protection Authority (SFPA). Landings by value estimated by BIM.

The top 10 species landed by the Irish fleet by weight in 2021 are illustrated in Figure 3. Mackerel remains the most valuable species with close to 75,000 tonnes landed in 2021, a decrease of 19% from 2020 and an increase in value by 38% to €73 million. In 2021, there were increases in landings by weight across other quota species for

Nephrops (28%), haddock (27%), horse mackerel (9%) and hake (85) while landings of blue whiting decreased slightly (-1%). Species with sharp increases in terms of landing values between 2020 and 2021 include lobster (98%), crab (55%), *Nephrops* (39%), haddock (36%) and hake (17%).
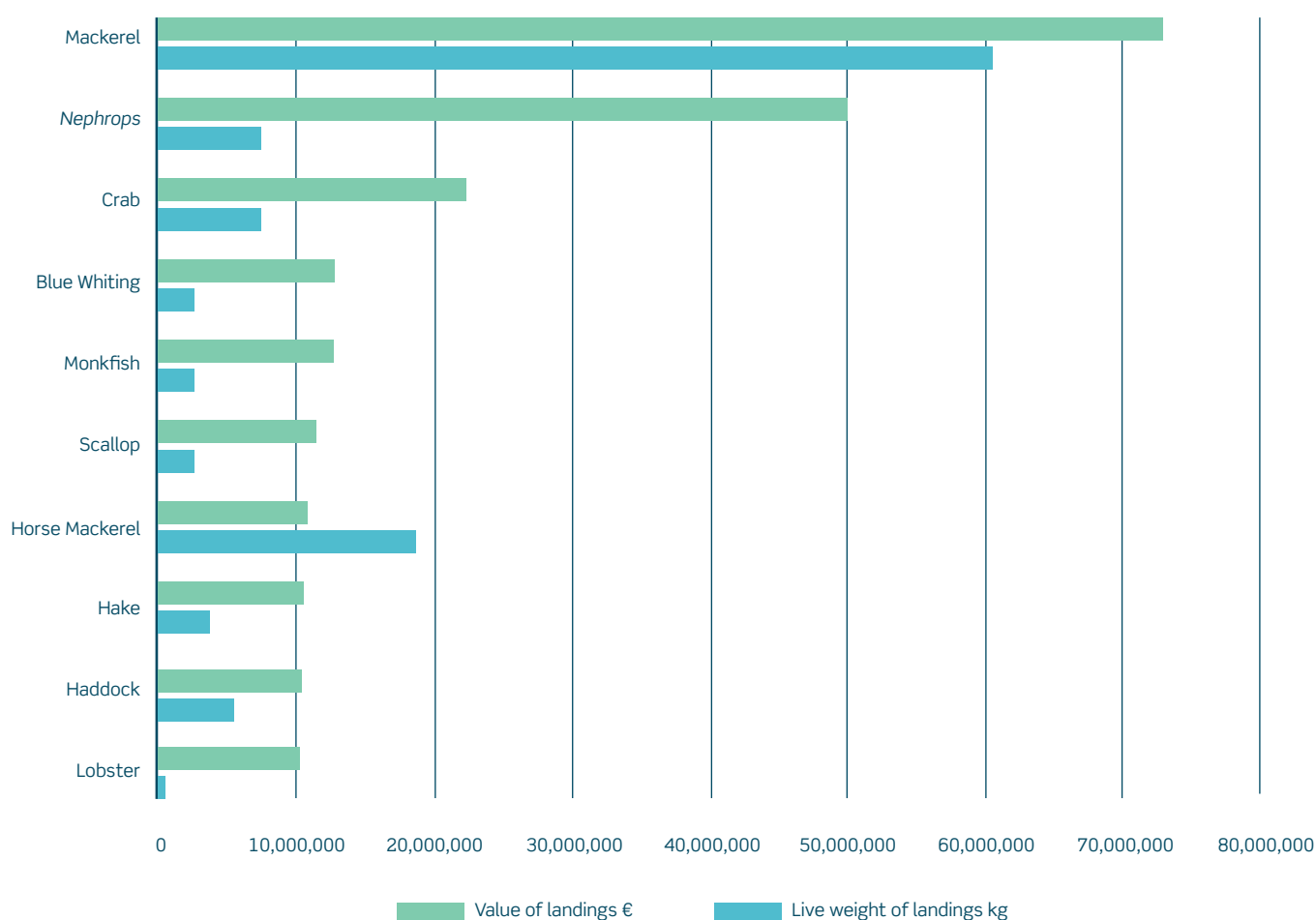
Figure 3   Top 10 species landed by the Irish fleet by value and weight in 2021.
Data source: Landings by value estimated by BIM. Landings by weight provided by SFPA.

1.4 Effort and fuel consumption

The Irish fleet operates in the Western waters encompassing the Celtic and Irish Seas and the waters to the West of Scotland (Figure 4). Trends in effort of the Irish fleet are illustrated in Figure 5 indicating a steady decrease in both Days at Sea (DaS) and Fishing Days between 2019- 2022.
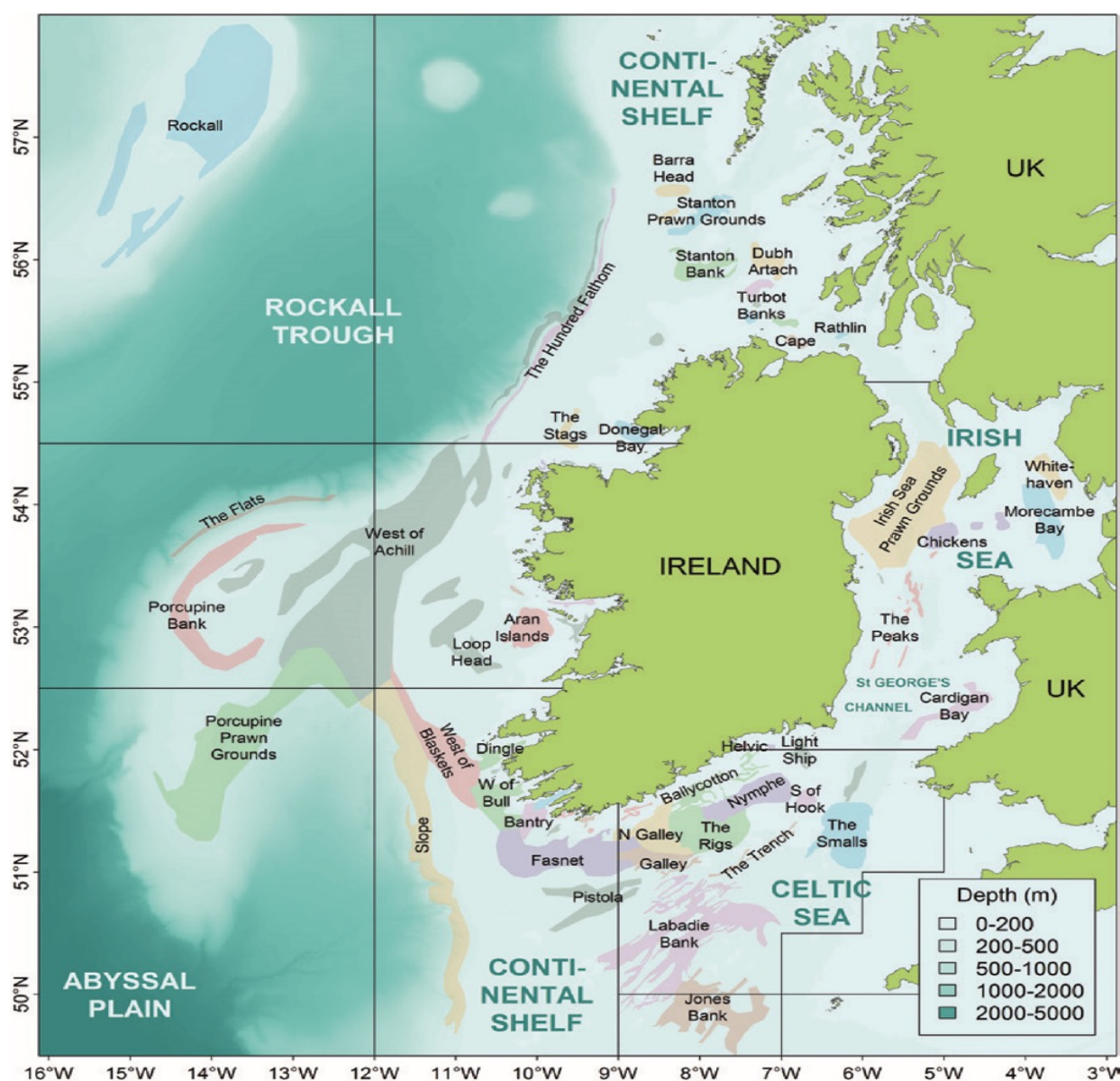
Figure 4 Map illustrating the main fishing grounds of the Irish fleet (Source: Marine Institute).
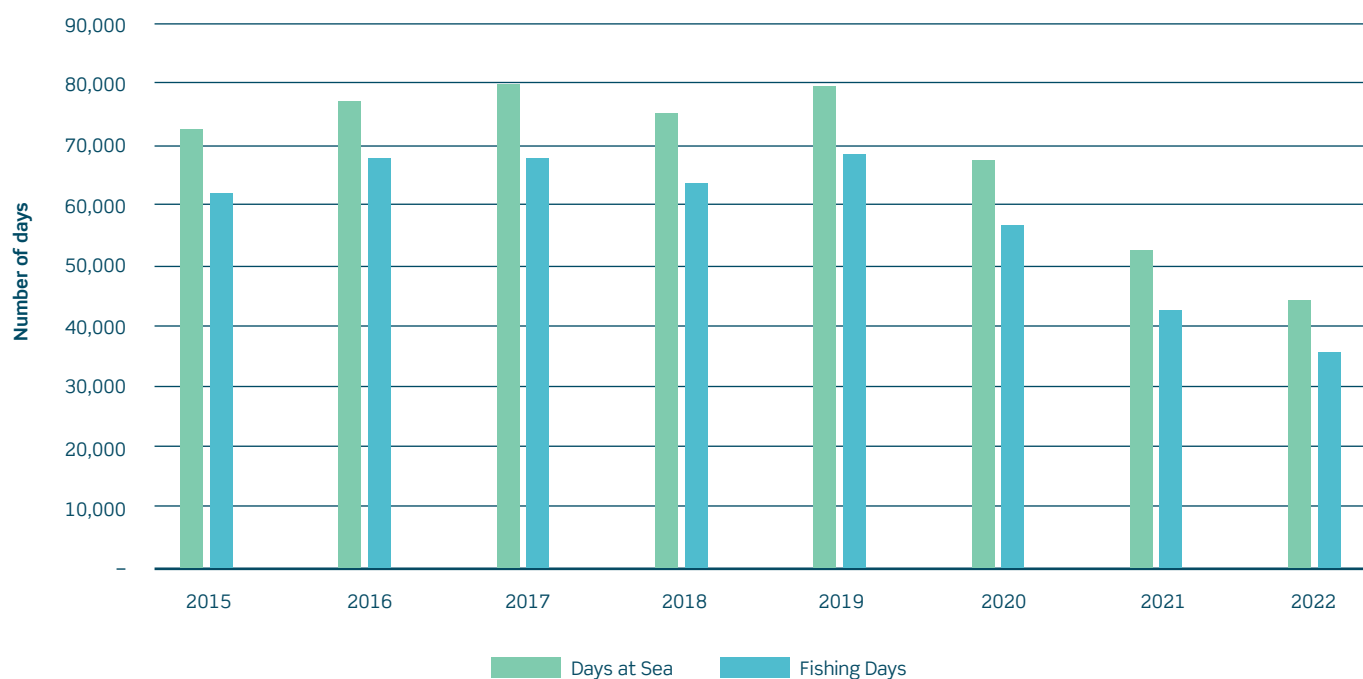
Figure 5 Trends in the effort of the Irish fleet: 2015-2022. (Note: Prior to 2015, not all inshore effort was reported). Data source: SFPA.

1.5 Employment and social demographics

Employment and wages of the Irish fleet: 2021

Engaged Crew	**Full Time Equivalents (FTEs)**
2,776	**1,911**
(+3%) ⌃	
Average annual wage per FTE*	**Median annual national earnings (CSO)**
€47,353	**€41,222**

*Note   There are variations in the average wage depending on the size and gear of the vessel and the systems of crew share.

NSS data indicates that employment in the fishing fleet recovered marginally in 2021 compared to 2020. This may have been driven by the easing of Covid-19 restrictions which occurred in the second half of the year. In 2021, 2,776 jobs were directly supported by Irish fishing activity, representing an increase of 3% on 2020 employment figures (2,688). However, employment remains below pre-Covid-19 levels. In 2019, 2,944 people were employed directly by the fishing fleet.

Direct employment in the Irish fleet was relatively stable between 2011 and 2019 (Figure 6). On average each year over this time period, 3,202 persons were directly employed in fishing activity in Ireland. In 2020 with the outbreak of Covid-19, estimates of employment fell sharply to 2,688 (9%). This decrease in employment was seen across all sectors of the economy. The national employment rate fell from 70% in Q4 2019 to 67% in Q4 2020 (CSO, 2021)[4]. Employment figures for
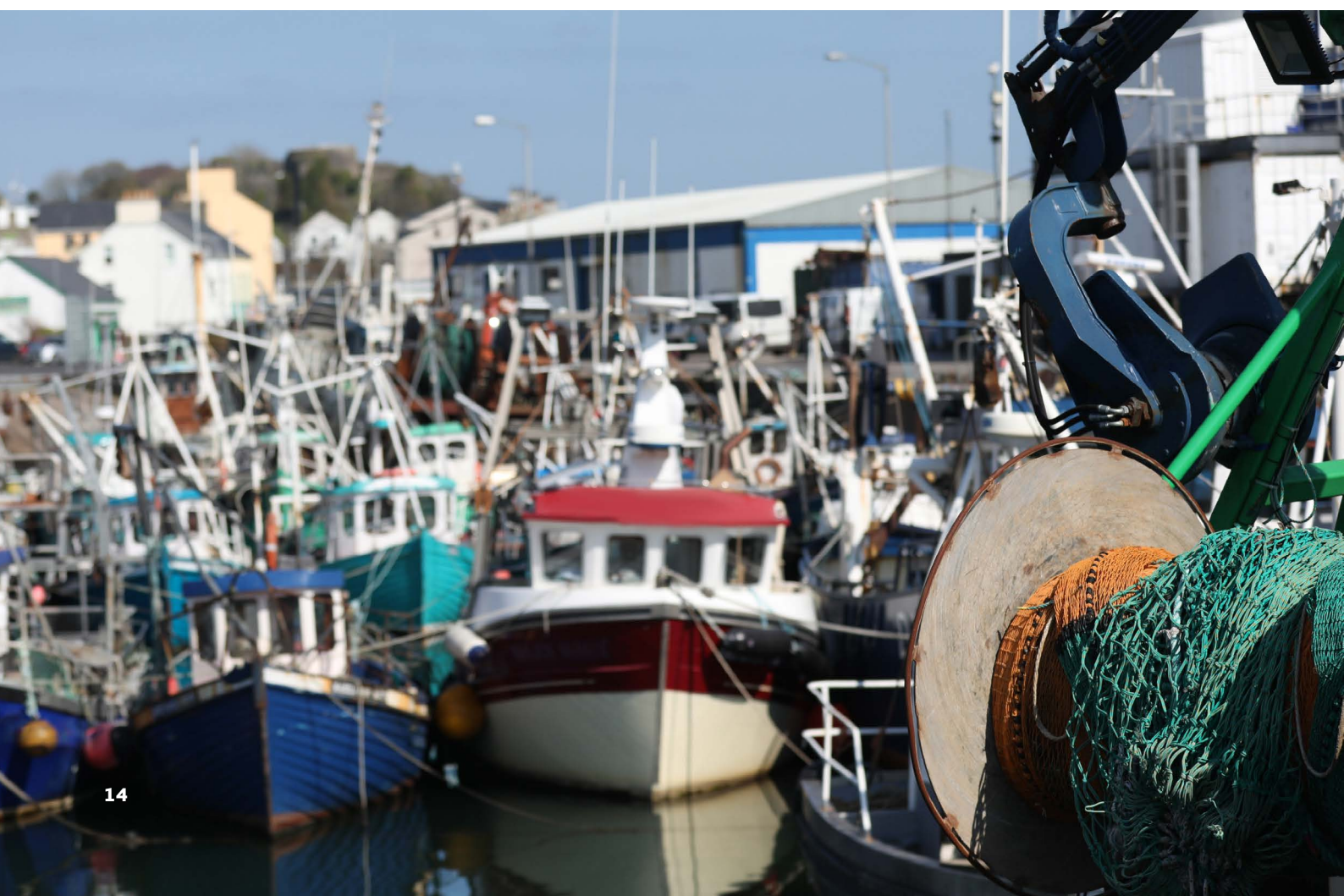
2022 are expected to demonstrate further recovery as the economy continued to rebound from Covid-19 restrictions. However, it remains to be seen if Covid-19 may have a lasting negative impact on the employment rate in the sector.

While total employment in 2021 was 2,776, Full-Time Equivalent (FTE) was estimated to be 1,911 in 2021[5]. FTE is a measure of employment in an industry which takes into account hours worked by employees. A lower FTE relative to total numbers employed indicates that there are large numbers of employees working in a casual or part-time capacity in the fleet. FTE remained relatively stable between 2020 and 2021, increasing only marginally from 1,904 in 2020 to 1,911 in 2021. Both years were heavily impacted by Covid-19 restrictions.

[4] For more information, see CSO statistical release on Labour Force Survey Q4 2021.

[5] Note: The methodology to estimate FTE was revised for 2020 and 2021. Therefore, FTE for these years cannot be compared to previous year's figures and represent a break in the data timeseries.
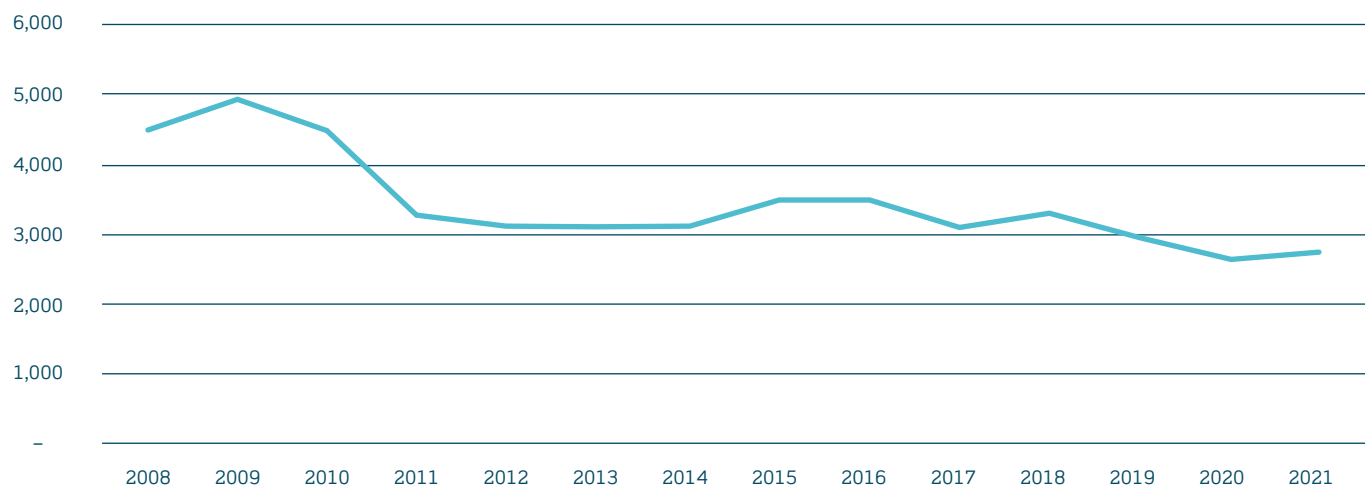
Figure 6 Engaged crew trends of the Irish fleet: 2008 – 2021.

1.5.1 Profile of employment in the fishing industry

There are key characteristics which drive the profile of employment across the Irish fleet. As seen in Figure 7, in 2021, the majority of persons employed directly in fishing activities were Irish (82%). A person employed in fishing activities was older with 48% of employees aged 50 or over. Figure 8 shows the age distribution of employees across the sector. Of crew in the Irish fleet in 2021, 87% had attained a second level education or higher.
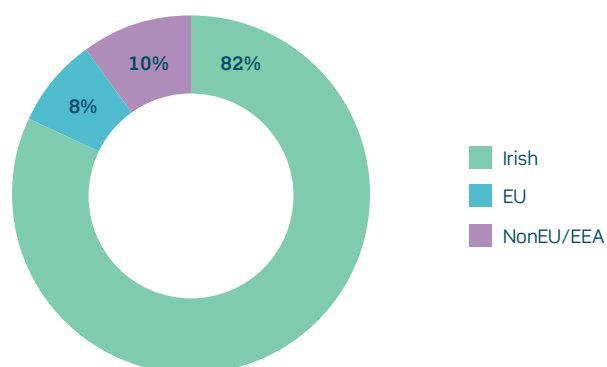
Figure 7 Employment by nationality across the Irish fleet in 2021.
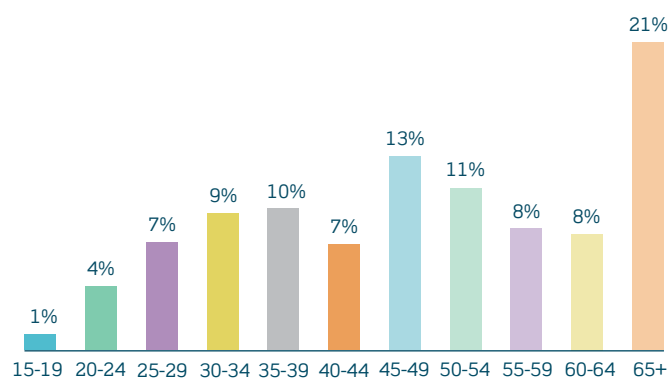
Figure 8 Age distribution of the Irish fleet in 2021.

2. Economic results for 2021

2.1 National fleet performance

Table 2 Key economic results of the Irish fleet 2021

	2021	% change 2020 - 2021
Total income	€313 million	-3%
Total revenue	€313 million	-3%
Operating costs	€226 million	+21%
GVA	€177 million	-15%
Gross profit	€87 million	-36%
Net profit	€63 million	-39%

Table 2 shows key economic indicators for the total fleet in 2021. Operating costs increased considerably by 21% to €226 million in 2021, while revenues declined by 3% to €313 million. This is reflected in gross profit and net profit figures which both fell sharply, decreasing 36% and 39% respectively. GVA, measuring the contribution of the sector to the economy, also fell by 15% to €177 million. However, it should be noted that while economic indicators have deteriorated for the total fleet, this may not reflect the economic performance of certain vessel segments within the fleet. Historically, larger pelagic vessels over 40m/ RSW fleet are a higher earning segment of the Irish fleet. In 2021, estimated revenues for the RSW fleet were over five times the average revenue for other segments in the national fleet. Trends in economic performance of the Irish fleet from 2008-2021 are provided in Figure 9.

In 2021, total costs amounted to €262 million. This represented a 22% increase on 2020 figures (€216 million). In 2020, costs were impacted by Covid-19 restrictions and a corresponding decrease in activity. Costs across all categories have increased from 2020 but still remain below pre-Covid-19 levels. Cost increases in 2021 might be explained, in part, by inflation driven by increased production costs including fuel. However, this increase from 2020 to 2021 is likely due to base effects, as costs fell in 2020 resulting in a natural increase in costs as normal operating activity began to resume.

As can be seen from Figure 10, the distribution of costs has remained relatively stable since 2016. Between 2016 and 2021, personnel costs represented the largest contributor to costs attributing a third (33%) to total costs each year on average. In 2021, other variable costs which include legal and other fees such as accountancy and insurance attributed 16% (€41 million) to total costs and energy costs represented 13% (€35 million).

For a full list of economic indicators for all fleet segments in 2021, please refer to Annex 1. A list of associated concepts, terms and definitions is available in Annex 3.
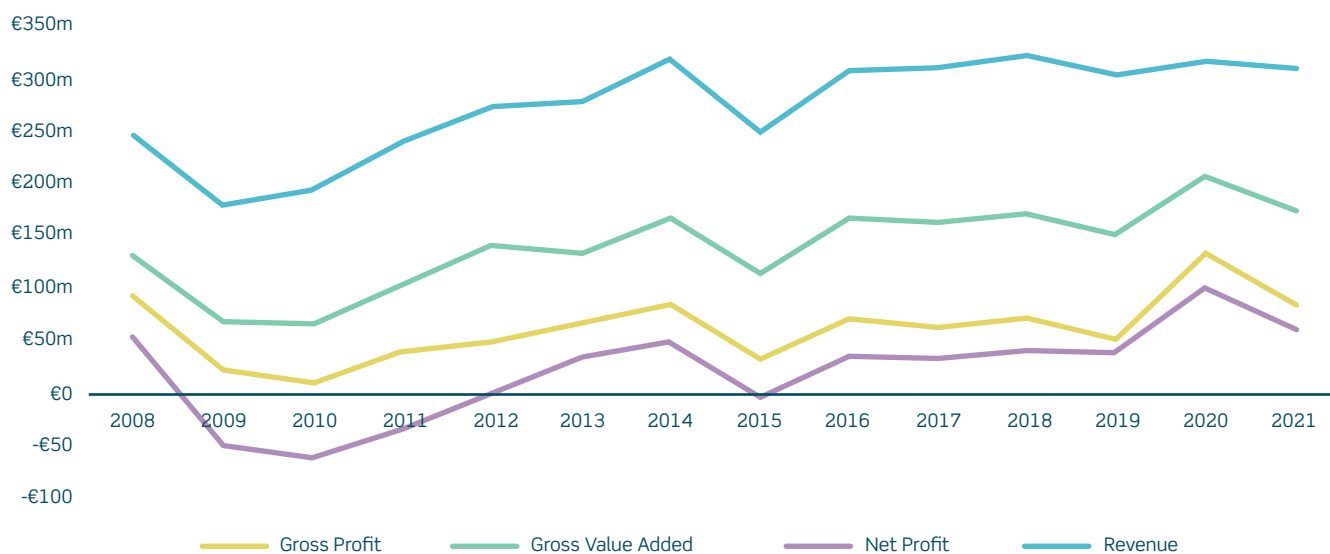
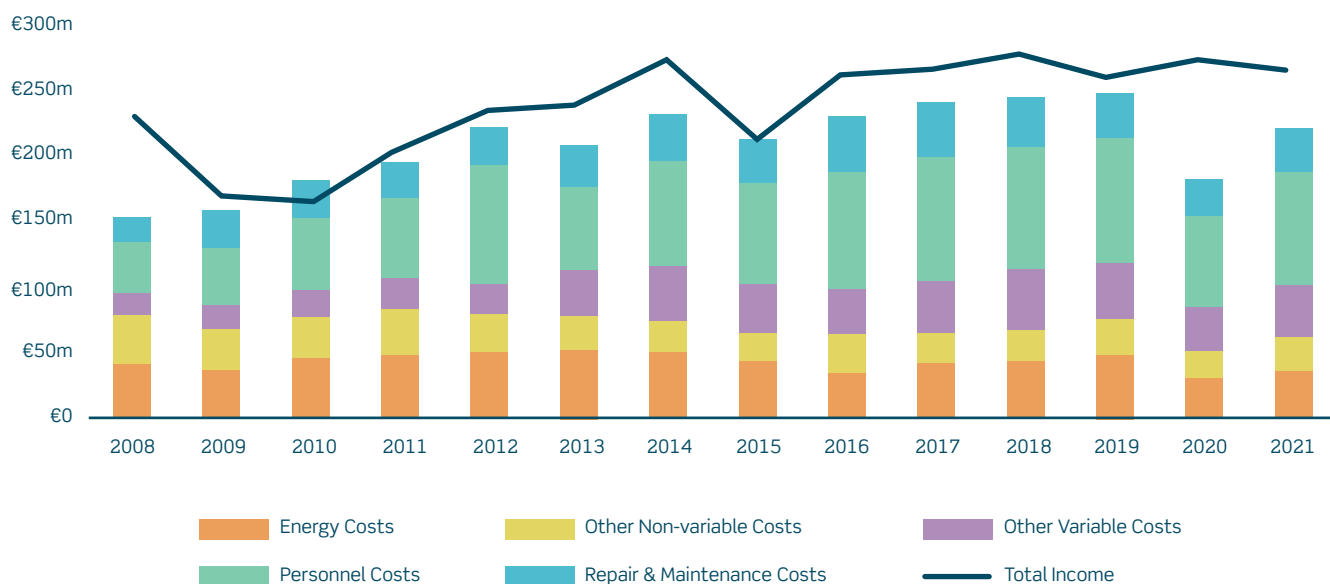**Figure 9** Trends in economic performance of the Irish fleet: 2008-2021.

Figure 10 Trends in the cost structure of the Irish fleet: 2008-2021.

2.2 Efficiency Indicators

The key results in terms of resource productivity and efficiency indicators for 2021 are listed below:

Table 3   Efficiency indicators for the Irish fleet: 2021

	2021	% change 2020 - 2021
Gross profit margin	28%	-34%
Net profit margin	20%	-37%
Return on Fixed Tangible assets (RoFTA)	9%	-42%
Energy consumption	76 million litres	+7%
Energy consumed per landed tonne	365 litres per tonne	+13%
Landed weight per fishing day*	4.9 tonnes per day	+27%
Average price per litre of marine fuel	€0.46/ per litre	+8%

*Note   This average fleet figure may mask performance in specific segments.

2.3 Fish prices

As the economy re-opened post Covid-19 and demand rose, real fish prices globally rose on average in 2021. International fish prices were on average 0.7% higher in 2021 compared to 2020 according to the FAO Fish price index (OCED-FAO, 2021)[6]. Analysing the top 20 species landed by the Irish fleet in 2021, average real landed fish prices of these species rose by 10% on average compared to 2020. However, price changes varied across species (Figure 11).

Average real landed price decreases were reported for some species which attributed significantly to total landed value in 2021. For example, average real landed price of horse mackerel fell 10% from €0.64/kg in 2020 to €0.58/kg. Monkfish also saw a decrease in average real landed price, falling from €3.32/kg in 2020 to €3.12/kg (-6%) in 2021. In contrast, the average real landed price of *Nephrops* which represented 17% of the total value of landings in 2021, increased by €1.62/kg (26%), increasing from €6.21/kg in 2020 to €7.83/kg in 2021.

Average real landed prices of pelagic species such as mackerel, herring and whiting also increased in 2021. Prices for pelagic species have a significant impact on revenues for the Irish fleet as they hold a considerable portion of TAC. According to the Sea Fisheries Protection Authority (SFPA), the average price of mackerel (25% of total value of landings in 2021) maintained at €0.60/kg between 2016 and 2017. Prices rose to €0.70/kg in 2018 and to €0.90/kg in 2019 which offset reductions in income due to decreases in Total Allowable Catch TAC. Average prices for mackerel decreased again in 2020 to €0.71/kg and increased sharply by 69% to €1.20/kg in 2021. Price increases were also noted in non–quota species such as lobster and crab which increased by 33% and 28% respectively in 2021. Lobster prices increased by €13.62/kg to €18.15/kg and crab from €2.29/kg to €2.93/ kg.

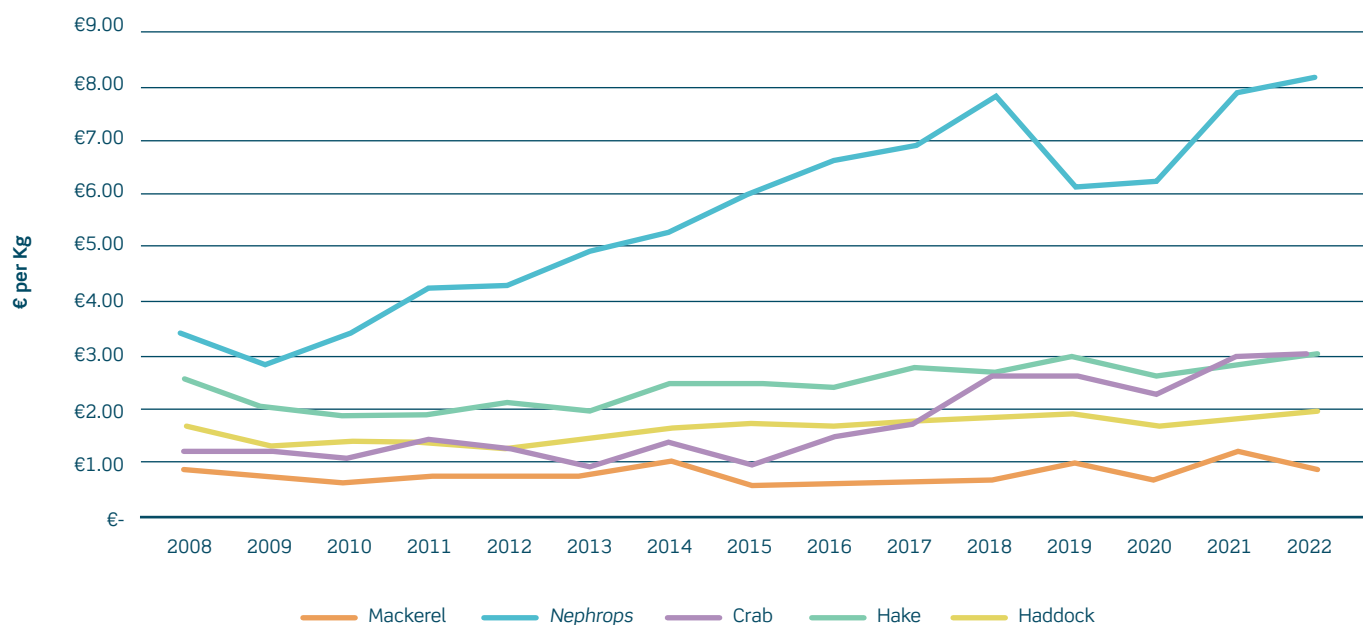[6] OECD- FAO (2021). Agricultural Outlook 2022- 2031.

Figure 11   Average prices for main species: 2008-2022*. (*2022 data is provisional).

2.4 Economic performance of inshore Small-Scale Fisheries (SSF)

At a national level, Ireland's inshore SSF fleet consists of all under-12 metres inshore vessels regardless of gear type[7]. These vessels utilise a variety of different types of passive fishing gear, and often more than one gear on the same fishing trip. The most commonly used gear includes pots and traps, trammel nets, set gillnets, pots and traps, set longlines, and hand lines. The area of operation tends to be close to landing points and within 12 nautical miles from the coast. Vessels are typically owned by a sole owner/operator or small family enterprises. The key figures and economic results for the Irish SSF fleet are listed in Table 4.

Table 4 Small-Scale Fisheries: 2021

	2021	% change 2020 - 2021
Active vessels	1,102	+8%
Full Time Equivalents (FTEs)	971	+21%
Days at Sea	38,236	+31%
Landings by weight (kg)	25,722,986	+102%
Landings by value	€53,960,819	+92%
GVA*	€43,778,930	+146%
Gross profit*	€25,249,057	+84%
Net profit*	€14,889,390	No data available
Revenue	€63,110,862	+51%
Key species landed		Crab, lobster, sprat, whelk, and mackerel
Profitability		High profitability compared to 2020, however this differs across gear types and vessel lengths within SSF.

*Note Survey data for the under 10m segments can be deficient which in turn impacts the estimates of economic indicators for SSF. As survey returns for economic data increase, higher quality estimates of economic variables can be deduced for SSF.

SSF contributed 20% of the total revenue of the Irish fleet in 2021 and is highly important to peripheral, local coastal communities. SSF offer employment (51% of all FTEs at a national level) in often deprived remote areas and bring much needed money to local communities and their hinterlands. In 2021, this fleet of 1,102 under-12 metre vessels made up 82% of the total Irish vessels and in terms of capacity, representing 23% of the total engine power (kW) and 7% of total vessel volume (GT).

[7] This composition of the Irish SSF varies from that of the EU definition. At an EU level, Commission Delegated Decision (EU) 2019/910 defines the Small-Scale Coastal Fleet as "fishing carried out by fishing vessels of an overall length of less than 12 metres and not using towed gear" (as listed in Table 3 of Annex I to Commission Regulation (EC) No 26/2004).

2.4.1 Economic performance of selected SSF segments

This section presents an overview of the available economic data for 2021 for a selection of SSF segments: For some segments in the SSF, survey returns are low which creates challenges for economic analysis.

	Drift and/or fixed netters 0-< 10 m	Drift and/or fixed netters 10-< 12 m	Dredgers 0-< 10 m	Dredgers 10-< 12 m
Active vessels	209	15	99	40
Days at Sea	No data	840	1,371	3,227
Full-Time Equivalents (FTEs)	161	27	43	44
Landings by Weight (kg)	2,045,608	7,822,994	785,982	927,524
Landings by Value	€7,492,955	€6,891,267	€3,683,428	€3,003,050
Gross Value Added	€5,768,049	€5,917,048	€4,846,928	€2,302,611
Net Profit	€4,298,301	€4,890,763	€99,173	€1,680,389
Revenue	€7,492,955	€6,891,267	€8,676,876	€3,038,216
Key Species Landed	Crab, whelk, mackerel	Mackerel, whiting and herring	Razor clams and whelk	Razor clams, cockles, and whelk
Profitability	High. Revenue is 2% of total	High. Revenue is 2% of total	Weak. Revenue is 3 % of total	High. Revenue is 1% of total

Demersal trawlers and/or demersal seiners 0-< 10 m	Demersal trawlers and/or demersal seiners 10-< 12 m	Vessels using Pots and/or traps 0-< 10 m	Vessels using Pots and/or traps 10-< 12 m	Vessels using hooks 0-< 10 m	Vessels using hooks 10-< 12 m
54	9	532	84	46	14
No data	673	23,442	7,994	No data	689
40	18	442	142	34	20
2,685,362	1,103,131	3,548,824	5,633,971	534,550	635,039
€3,006,337	€2,544,946	€11,453,185	€13,847,948	€1,192,661	€845,041
€2,653,317	€2,073,147	€8,812,535	€9,392,991	€1,382,966	€629,339
€1,370,775	€1,788,635	€351,457	No data	No data	€409,897
€3,972,382	€2,607,401	€13,819,349	€13,847,948	€1,919,425	€845,041
Sprat, whelk, and crab	Sprat, *Nephrops* and monkfish	Whelk, crab, and lobster	Whelk and crab	Herring, mackerel, and whelk	Mackerel and crab
High. Revenue is 1% of total	High. Revenue is 1% of total	Weak. Revenue is 4% of total	No data	No data	High. Revenue is 0.3 % of total

2.5 Economic performance of Large-Scale Fisheries (LSF)

Of the 1,326 active vessels in the Irish fleet in 2021, LSF vessels represented 18% (249) of the total fleet in 2021. The majority of the Irish fleet's engine power and tonnage was attributed to LSF vessels with 77% of total engine power and 93% of total tonnage attributed to this section of the fleet. Killybegs and Castletownbere are the two largest home ports for these vessels. Despite key economic performance measures such as gross profit, net profit, revenue and GVA for the total fleet declining in 2021, these indicators were positive for LSF and showed substantial increases on 2020 figures. This is summarised in Table 5.

Table 5 Large Scale Fisheries 2021

	2021	% change 2020 - 2021
Active vessels	249	+4%
Full Time Equivalents (FTEs)	940	-15%
Days at Sea	39,340	+3%
Landings by weight (kg)	181,359,629	-11%
Landings by value	€239,123,723	+2%
GVA	€133,197,067	+287%
Gross profit	€ 61,221,692	+61%
Net profit	€ 44,643,060	+110%
Revenue	€249,431,315	+356%
Key species landed	Mackerel, whiting, sprat, crab, boarfish and *Nephrops.*	
Profitability	Vessels in LSF on average had a positive net profit margin of 23%. RSW fleet vessels (pelagic trawlers >40m) contributed 46% to total net profits for the LSF fleet.	

2.5.1 Economic performance of LSF segments

This section presents an overview of the available economic data for 2021 for a selection of LSF segments.

	Beam trawlers 24-< 40 m	Demersal trawlers and/or demersal seiners 12-< 18 m	Demersal trawlers and/or demersal seiners 18-< 24 m	Demersal trawlers and/or demersal seiners 24-< 40 m
Active vessels	14	26	57	50
Days at Sea	3,115	3,336	11,343	9,917
Full-Time Equivalents (FTEs)	34	49	272	261
Landings by Weight (kg)	2,747,531	3,668,216	11,430,709	14,579,556
Landings by Value	€8,804,018	€7,900,499	€39,157,444	€47,200,737
Gross Value Added	€1,980,133	€5,296,458	€17,377,243	€18,729,496
Net Profit	-€1,078,562	€1,930,503	-€537,089	€2,339,094
Revenue	€8,808,039	€7,900,499	€40,585,111	€50,263,807
Key Species Landed	Monkfish, megrim, and haddock	*Nephrops*, herring and sprat	*Nephrops*, haddock and whiting	Haddock, *Nephrops* and whiting
Profitability	Weak. Revenue is 3% of total	High. Revenue is 3% of total	Weak. Revenue is 13% of total	Weak. Revenue is 16% of total

Drift and/ or fixed netters 18-< 24 m	Dredgers 24-< 40 m	Pelagic trawlers 12-< 18 m	Pelagic trawlers 24-< 40 m	Pelagic trawlers 40 m or larger	Vessels using Pots and/or traps 12-< 18 m
19	7	9	15	21	31
2,931	1,472	525	1,659	1,235	3,807
107	12	20	44	49	92
2,667,413	2,718,356	7,223,663	34,235,685	97,465,705	4,622,795
€6,487,475	€11,554,477	€2,223,196	€22,329,637	€78,668,420	€14,797,821
€4,334,753	€8,868,854	€1,827,510	€11,256,402	€51,051,835	€12,474,383
€1,586,333	€7,409,453	€1,295,438	€1,153,006	€20,724,539	€9,820,344
€6,615,342	€11,556,822	€2,223,196	€23,043,209	€82,948,845	€15,486,446
Hake, haddock, and herring	Scallops and razor clams	Sprat	Mackerel, whiting and sprat	Mackerel and whiting	Crab and whelk
High. Revenue is 2% of total	High. Revenue is 4% of total	High. Revenue is 1% of total	Weak. Revenue is 7% of total	High. Revenue is 27% of total	High. Revenue is 5% of total

3. Industry feedback: Key challenges impacting industry and driving performance 2021- 2023

Whilst Covid-19 restrictions were still in place for part of 2021, based on feedback from industry as part of the NSS, quota changes arising from Brexit, the impacts of inflation and rising operating costs and recent developments in Offshore Renewable Energy (ORE) and Marine Protected Areas (MPAs) were the main challenges reported by industry. The following section provides an overview of these challenges.

Covid-19 restrictions and the impact of the pandemic continued to affect the industry, both locally and globally during 2021.

National lockdowns and restrictions on hospitality businesses had an ongoing impact, particularly in the early part of the year, with exports at low levels with most markets recovering by the second half of the year.

3.1 Quota changes arising from Brexit

In January 2021, the United Kingdom (UK) left the EU following negotiations on the EU/UK Trade and Cooperation Agreement (TCA). The TCA brought a sudden and dramatic shift in the landscape for the entire Irish seafood sector from 2021 onwards. The deal saw quota transfers across EU Member States to the UK, totalling almost €200 million. The Irish fleet lost access to 15% of its annual quota with the largest impact on two key fisheries – Atlantic mackerel and *Nephrops*- which saw quota reductions of 26% and 14% respectively.

The impact on the fishing fleet of reduced quotas and on the processing sector as a result of less raw material being available is evident and will continue to be a factor for the foreseeable future. Vital seafood trade routes, primarily through the 'UK land-bridge', have been curtailed, particularly since the beginning of 2021. By the end of 2021, a new trading pattern for seafood had emerged with altogether less reliance on the UK markets and a shift to European and further afield market opportunities.

Following the departure of the UK from the EU, the EU Commission established the Brexit Adjustment Reserve (BAR). The BAR aimed to mitigate the economic impacts of the withdrawal of the UK on Member States across multiple sectors including the seafood sector. Ireland was the biggest beneficiary of BAR funding, receiving just over €1 billion, just over 20% of the entire Reserve. Significant funding from the BAR came on stream in the second half of 2022.

At a national level, the Irish Government set up a Task Force in 2021 to examine the implications of the TCA for the fishing industry and coastal communities and to consider initiatives to address those implications. The Task Force recommended a suite of initiatives including 16 funding schemes, with a proposed overall funding requirement of €423 million.

> "Escalating costs and reduced quotas are really impacting us. We need a stronger voice at EU level".

Fleet re-structuring

One of the main schemes launched in 2022 under the BAR was a Voluntary Permanent Cessation ("Decommissioning") Scheme. The purpose of this scheme is to restore balance between fleet capacity and available quotas following the quota reductions arising from the TCA, ensuring the future profitability of the fleet. It was targeted at whitefish and beam trawl vessels and opened for applications in September 2022. The Seafood Taskforce, which recommended this scheme, agreed a target of approximately 60 whitefish and beam trawl vessels with total capacity of 8,000 gross tonnes to ensure the future profitability of the Irish whitefish fleet, with approximately 170 vessels remaining in the fleet. Over 9,000 tonnes of quota fish valued at €30 - €35 million annually will be available for remaining whitefish vessels to catch which will ensure the economic viability of the remaining fleet into the future. Applications to the scheme closed in November 2022 with 57 vessels with total gross tonnes of 8,700 GTs applying to decommission. Whilst 43 originally accepted offers, a total of 39[8] LSF vessels will be decommissioned by the end of 2023.

Voluntary temporary tie-ups schemes

In order to alleviate the economic impacts of rising fuel costs and the reduced access of fishing quotas because of Brexit, the Irish Government put in place voluntary tie-up schemes in 2021 and 2022 to support eligible white-fish vessels in the polyvalent and beam trawl segments impacted by quota transfers to the UK under the TCA. There were different monthly payments for approved applicants according to the size of the vessel ranging from €4,600 to €88,700. The objective of the 2021 scheme was to manage quotas for the final months of the year while keeping continuity of supply to fish processors. A total of 182 applications were approved for the 2021 scheme and temporarily tied between October and December up at a cost of just under €10 million, with 70% of the vessels opting to tie-up for the month of December. In 2022, a further scheme was implemented. Over 200 approved applications availed of the scheme and temporarily tied up for two non-consecutive months between June and November at a cost of €8.2 million.

[8] Figure correct as of September 2023.

3.2 Inflation and the impact of rising operating costs

Increasing energy and wider inflation poses a significant challenge to the fishing sector. In the last number of years Ireland has experienced a period of inflationary change not seen in decades. Between January 2021 and November 2021, Ireland underwent more inflation and price volatility than in the previous 12 years between 2008 and 2020 (Parliamentary Budget Office, 2022)[9]. Inflationary pressures were exacerbated by the outbreak of conflict in Ukraine, resulting in gas supply shortages and increased energy prices worldwide. Other sectors experienced spillover effects from this energy price shock as increased input prices drove core inflation on general prices upwards during 2022 (Central Bank of Ireland, 2023)[10]. In 2022, Ireland experienced the highest inflation rates in decades with an increase of 8%, driven by a 40% increase in energy, 7% in food and 4% in other inflation contributing components (European Commission, 2023)[11]. Increasing energy and wider inflation poses a significant challenge to the fishing sector. The Annual Economic Report on the EU Fishing Fleet estimate that fisheries across the EU will struggle to maintain healthy profits as a result of inflation and rising energy prices (2022)[12]. Energy inflation in particular will have a significant impact on Irish fleet operations.

Fisheries are directly impacted by energy price increases as fuel represents a significant input into operational costs. In 2021, energy costs were €35 million representing 13% of total costs. Fuel prices have increased considerably in the last three years. This is seen in Figure 12. In October 2020, prices began to rise slowly, recovering from a 10 year low of €0.25/litre. In February 2022, prices increased sharply due to the outbreak of the war in Ukraine. Prices peaked in the second half of 2022 but began to fall in 2023, albeit slowly. The graph clearly shows how marine fuel oil prices have fluctuated considerably in the last decade from April 2013 to March 2023.

> **"The main loss to our sector is the Brexit losses but fuel, lubrication and hydraulic prices are seriously affecting the bottom line".**

> **"Rising fuel prices and operating costs have resulted in lower wages for our crew. It will no doubt make it difficult to hold on to our more experienced crew".**

[9] https://data.oireachtas.ie/ie/oireachtas/parliamentaryBudgetOffice/2022/2022-01-13_inflation-issues-for-ireland-2022_en.pdf

[10] https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2023/quarterly-bulletin-q1-2023.pdf

[11] https://economy-finance.ec.europa.eu/economic-surveillance-eu-economies/ireland/economic-forecast-ireland_en

[12] https://oceans-and-fisheries.ec.europa.eu/news/2022-annual-economic-report-eu-fishing-fleet-sector-affected-high-fuel-prices-wake-war-ukraine-2022-10-11_en

Figure 12   Average marine fuel oil prices (€) across the EU: 2008- 2023 Source: EUMOFA. Note: Monetary values are inflation adjusted for 2020 prices.

The energy crisis exposes the vulnerability of the fishing industry to fuel price volatility. This is driven, in part, by its dependency on fossil fuels. To increase resiliency in the sector and safeguard the industry from future energy shocks, the Irish fishing fleet should consider the energy transition of the fishing fleet, in time moving away from fossil fuels. In the short-term, catching in the most efficient way possible will help avoid unnecessary fuel consumption. In the long-term, moving towards viable alternative energy sources when they become available, and a focus on vessel design, electrification, efficient power generation and continued innovation in gear design and construction are essential. In 2021, the Irish fleet consumed 76 million litres of fuel and had a fuel efficiency, reflecting fuel costs as a percentage of landings income, of 12%.

Fuel efficiency of the Irish fleet has been steadily declining in the last decade. In 2013, fuel efficiency of the fleet was 19%. This is shown in Figure 13. Energy consumption and fuel efficiency differ significantly across segment types within the fleet. Some segments are more fuel efficient than others. Pelagic trawlers between 12 and 18 metres in length are the most fuel-efficient segment at 2% in contrast to beam trawlers between 24 and 40 metres which have a fuel efficiency of 27%. This is shown in Table 6.

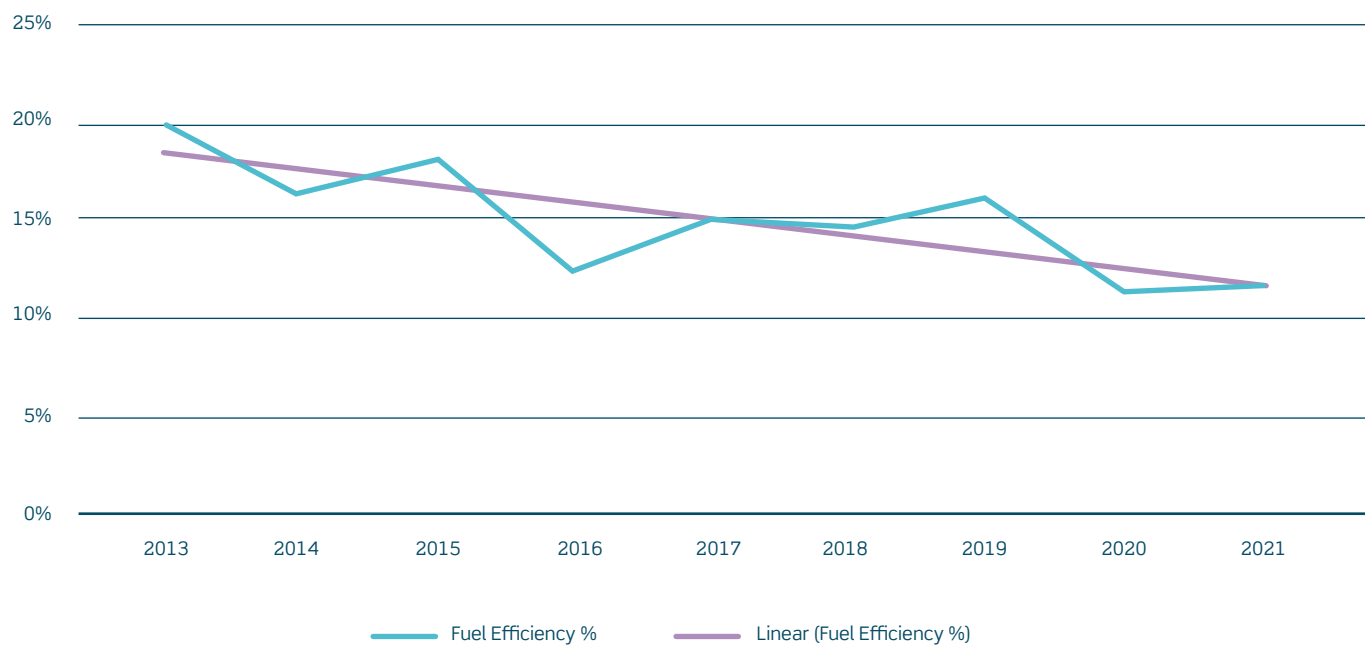"Inflation and increasing costs for everything means less profit for my fishing business".

Figure 13 Fuel efficiency (%) of the Irish Fleet 2013 to 2021.

Table 6 Energy efficiency and energy intensity of the national fleet in 2021

Fleet segment	Fuel Efficiency (%)
Beam trawlers 24-< 40 m*	27.4
Demersal trawlers and/or demersal seiners 0-< 10 m	7.8
Demersal trawlers and/or demersal seiners 10-< 12 m	2.8
Demersal trawlers and/or demersal seiners 12-< 18 m	8.9
Demersal trawlers and/or demersal seiners 18-< 24 m	21.6
Demersal trawlers and/or demersal seiners 24-< 40 m	19.1
Dredgers 0-< 10 m	10.4
Dredgers 10-< 12 m*	7.9
Dredgers 24-< 40 m*	6.4
Drift and/or fixed netters 0-< 10 m	6.5
Drift and/or fixed netters 10-< 12 m	1.8
Drift and/or fixed netters 18-< 24 m*	10.1
Pelagic trawlers 12-< 18 m*	1.7
Pelagic trawlers 24-< 40 m	7.3
Pelagic trawlers/RSW 40 m or larger	7.9
Vessels using hooks 0-< 10 m	18.2
Vessels using hooks 10-< 12 m*	7.1
Vessels using Pots and/or traps 0-< 10 m	6.5
Vessels using Pots and/or traps 10-< 12 m	5.2
Vessels using Pots and/or traps 18-< 24 m*	7.9
GRAND TOTAL	**11.7**

Note Segments are clustered to ensure confidentiality

In addition to energy costs, the Irish fleet has seen substantial cost increases across a number of cost categories in the last number of years as a direct result of rising fuel prices and inflation. While revenue decreased 3% in 2021 compared to 2020, total costs rose by 22%. This was driven by fuel costs which increased 15% in 2021, however, significant cost increases were reported across other operational costs also. Personnel costs increased 23% from €70 million in 2020 to €87 million in 2021. Similarly, repair and maintenance costs grew 22%, variable costs, which include co-operative and other membership fees, harbour dues and cleaning materials grew 23% and other fixed costs which include accountancy fees and insurance costs grew 26%. Fishing activity is a main driver of costs however, despite a reduction in fishing activity in 2021, cost increased sharply for the fleet. Accounting for changes in fishing activity and the impact on costs, costs were higher in 2021. Costs per day at sea have risen substantially from €3,361 per sea day pre-Covid in 2019 to €4,981 in 2021.

In the coming years, inflationary pressures are expected to ease, driven by falling energy prices. The Central Bank of Ireland forecast that inflation is expected to moderate to 5% in 2023 and 3.2% in 2024 as energy prices decline (2023). While the fall in energy prices will dampen wider prices, the feed through of falling energy prices into wider inflation is expected to happen more slowly. As a result, inflation (excluding energy and food) is expected to remain elevated in 2023 and 2024. This indicates that inflation and higher costs will likely remain a challenge to the Irish fishing industry in the medium term. Furthermore, it is uncertain how rising food prices at a commercial level will impact the industry. Higher fish prices may result in higher profits for the sector. At the same time, higher fish prices may result in decreased demand for product at the consumer level. This inflationary risk and its potential impact on the fishing industry will need to be monitored going forward.

"Quotas are declining, rising fuel costs and labour shortages are major challenges. We need to see an increase in quotas in Irish waters, a reduction in fuel costs and more incentives to work in the industry".

[13] 2019 is compared to 2021 in this instance to highlight the difference between costs per sea day pre-Covid when fishing activity was not impacted by restrictions and 2021 when fishing activity was impacted by restrictions for example through temporary tie-up schemes.

3.3 Increasing competition for marine space: Developments in Offshore Renewable Energy and Marine Protected Areas

With increasing competition for space in the marine environment, Marine Spatial Planning (MSP) has come to the forefront as the main tool to manage the use of our seas and oceans coherently and to ensure that human activities take place in an efficient, safe and sustainable way. However, for the Irish fishing industry, MSP brings significant challenges to the sector. Space required by fishing is in demand for aquaculture, shipping, marine leisure and increasingly from Offshore Renewable Energy (ORE) in recent years. The Irish fishing industry has become increasingly concerned that competition for space, particularly ORE will result in exclusion from traditionally fishing grounds with little recourse.

The generation of offshore renewable energy, particularly offshore wind, is a rapidly growing sector internationally. Under the Government's revised Climate Action Plan[14], there is a target of 7 GW of offshore wind by 2030. This is equivalent to 467 turbines being installed in Irish waters in the next seven years. With the increasing impacts of climate change, there is consensus that these developments are essential for decarbonisation of electricity and electrification of transport and heating sectors to combat the impacts of climate change. The Irish fishing industry recognises the importance of ORE but points to the lack of consultation with the sector as a major issue.

Recognising this, the Government established the Seafood ORE Working Group in 2022 to facilitate discussion on matters arising from the interaction of the seafood and offshore renewable energy industries, to promote and share best practice, and to encourage liaison with other sectors in the marine environment. The Working Group consists of key industry stakeholders across the island of Ireland. The primary focus is to develop a template for communication between the seafood and fisheries sectors and ORE at all stages of the development lifecycle. A Summary Guide on Seafood/ORE Engagement in Ireland was published in 2023 and is intended to provide ORE projects and seafood stakeholders with guidance on how to engage and co-exist in a meaningful and constructive manner throughout the lifecycle of an ORE project. Further consultations facilitated by BIM, industry representative groups and the ORE companies have also been undertaken which have improved relations, further dialogue is needed to ensure the fishing industry is properly consulted and informed on the development of ORE to ensure long-term co-existence.

In parallel with advances in ORE activity, Ireland has committed to protecting 30% of its seas by 2030 in compliance with legal obligations set by the European Commission. In December 2022, the Government approved the General Scheme of a Bill to provide for the designation and effective management of Marine Protected Areas (MPAs)[15] which is to be enacted into Irish law in July 2023. MPAs are geographically defined maritime areas that provide levels of protection to achieve conservation objectives. It is intended that this new legislation will apply to the waters (surface and water column), the seabed and subsoil of Ireland's coastal and intertidal zones; the territorial seas of the State, its exclusive economic zone and continental shelf measured from the baseline to its outer limits.

[14] Climate Action Plan 2023: CAP23. Changing Ireland for the better. Government of Ireland, Version 2.

[15] General Scheme of Marine Protected Areas Bill 2022

Creating an MPA regime will constitute a major change in marine environmental protection in Ireland. With MPA designation it is important to consider the possible impacts on all stakeholders and to analyse each constituent group separately (Marine Protected Area Advisory Group, 2020)[16] . The largest impacts from MPA designation are likely to be felt by the capture fisheries, marine tourism, and aquaculture industries. According to the Marine Protected Area Advisory Group (2020), a large number of studies highlight the possible additional benefits and costs imposed on the fishing industry from MPA designations. Results are varied with some suggesting net benefits and others suggesting net costs. Ultimately, outcomes are case specific and dependent on the fishery involved, the health of the fish stock, and the size of the MPA. Engagement with the fisheries sector in the designation and management process is thus a critical factor in achieving the best possible net outcome.

In the context of the CFP and fishing activity in Ireland's maritime area, there is a clear need to consider together the potential cumulative impacts on the fishing industry of MPAs and ORE. As identified in the report of the Common Fisheries Policy Review Group, established by the Minister for Agriculture, Food & the Marine, Charlie McConalogue T.D., in February 2022, "synergies between developmental and conservation objectives need to be identified and optimised. A multilateral approach to balancing the objectives of the CFP with other national interests and objectives that may or may not compete for space in Irish waters is warranted".

[16] Marine Protected Area Advisory Group (2020). Expanding Ireland's Marine Protected Area Network: A report by the Marine Protected Area Advisory Group. Report for the Department of Housing, Local Government and Heritage, Ireland.

4. Sentinel Vessel Programme: Summary of 2022

This section provides an overview of the Sentinel Vessel Programme (SVP) for 2022[17] which is a joint- project implemented by the Marine Institute and BIM on an annual basis since 2010.

In terms of data availability, good quality data are typically available for fish species which are managed via a quota system. However, less data is available from smaller vessels targeting non-quota species. These vessels account for the majority of pot-fishing inshore fleet targeting crab, lobster, shrimp, and whelks. They also target finfish with gillnets, jiggers, and longlines. The sample population for the SVP is designed to represent the diverse inshore fisheries sector in Ireland and address this data gap. Specific fisheries are targeted that represent gear usage, target species, and geographical location. The list of participants is reviewed annually to ensure that it remains representative of the small-scale fisheries.

Vessels under 10m are not required to transmit Vessel Monitoring System (VMS) data or to record their catches in logbooks. Vessels 10-12m are not required to transmit VMS data but must maintain logbooks. In accordance with Article 12(3) of Regulation (EU) 2017/1004[18], vessel owners participating in the SVP record their daily landings, effort, and price data in a 'Sentinel logbook', specifically designed to capture these data, for a full calendar year. Logbooks are provided to participants every January and completed logbooks are collected by BIM in December

each year. Daily logbook entries record target species, effort, landings, and prices by species. Weekly logbook entries record biological data of the catches (i.e., length composition) and discard information. Logbooks are collected at the end of the year by BIM and data is entered and checked by the Marine Institute. In addition to the logbook data, SVP participants are obliged to provide economic and employment data by completing the National Seafood Survey for their vessel. Vessel owners are remunerated annually for their time to record the data in the SVP logbook.

In 2022, there were 64 participants in the SVP from 11 coastal counties (Figure 14). In terms of national segments, 49 were Polyvalent [<18m LOA], 12 were Polyvalent [Potting] and four were Specific [General]. 70% of SVP participants have vessel crews of one person[19]. 90% have between one and three crew members. In 2022, the average age of a crew member on a vessel participating in the SVP was 42[20]. As the number of participants has decreased in recent years, in 2023, the number of participants has been increased to 75 to ensure representation across gear usage, target species, and geographical location.

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[17] A more comprehensive report of the biological data collected under this programme is published annually by the Marine Institute and BIM in the Shellfish Stocks and Fisheries Review. The most recent publication is the Shellfish Stocks and Fisheries Review 2022.

[18] Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast): 'The masters of Union fishing vessels may refuse to accept on board the scientific observers operating under the at-sea monitoring scheme only on the basis of an obvious lack of space on the vessel or for safety reasons in accordance with national law. In such cases, data shall be collected through alternative data collection methods which are set out in the national work plan and designed and controlled by the body in charge of the implementation of the national work plan'.

[19] These figures are based on an analysis of 94% (60) vessels participating in the SVP which provided crew level data in 2022.

[20] This analysis is based on an SVP response rate of 91% (58) for age of crew.

Total 64

Donegal 14

Mayo 4

Louth 4

Dublin 3

Galway 7

Wicklow 1

Clare 3

Wexford 7

Kerry 4

Waterford 6

Cork 11

Figure 14   Map showing geographic distribution of the vessels in the Sentinel Vessel Programme 2022.

5. Outlook for economic performance: 2022-2023

Preliminary data for 2022 demonstrate an overall significant decreasing revenue and profitability driven primarily by the Ukrainian war, rising energy costs, inflation, and quota reductions linked to Brexit.

There is a decrease in live weight of landings from 2021 to 2022 (-17%) and a decrease in value of -20%. Data projections for 2022 indicate a deteriorating outcome with decreasing revenue (-19%) to €257.7 million and decreasing GVA (-38%) to €120 million. In addition, gross profit in 2022 is predicted to decrease significantly (-42%) to €45 million combined with a decreasing net profit (-42%) to €40.7 million.

Forecasts for 2023 suggest an overall higher economic performance compared to 2022 driven by a slight increase in landings weight combined with an increase in value of landings. In terms of economic indicators, revenue is predicted to decrease (-6%) with increases in gross profit (23%), net profit (11%) and GVA (6%), driven primarily by fish prices and a reduction in energy costs compared to 2022.

6. Annexes

Annex 1
Economic indicators for all segments in the Irish fleet: 2021

Segments	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue
				Ltr/T	Kg	€	€	€	
Drift and/or fixed netters 10 -12 m	209	161	No data	489	2,045,608	7,492,955	7,492,955	5,768,049	77
Drift and/or fixed netters 10-12 m	15	27	840	21	7,822,994	6,891,267	6,891,267	5,917,048	86
Drift and/or fixed netters 18-24 m	19	107	2,931	572	2,667,413	6,487,475	6,615,342	4,334,753	66
Dredgers ‹10m	99	43	1,371	1,590	785,982	3,683,428	8,676,876	4,846,928	56
Dredgers 10-12 m	40	44	3,227	486	927,524	3,003,050	3,038,216	2,302,611	76
Dredgers 24-40 m	7	12	1,472	598	2,718,356	11,554,477	11,556,822	8,868,854	77
Demersal trawlers/Seiners ‹10 m	54	40	No data	157	2,685,362	3,006,337	3,972,382	2,653,317	67
Demersal trawlers/Seiners 10-12 m	9	18	673	165	1,103,131	2,544,946	2,607,401	2,073,147	80
Demersal trawlers/Seiners 12-18 m	26	49	3,336	419	3,668,216	7,900,499	7,900,499	5,296,458	67
Demersal trawlers/Seiners 18-24 m	57	272	11,343	2,065	11,430,709	39,157,444	40,585,111	17,377,243	43
Demersal trawlers/Seiners 24-40 m	50	261	9,917	1,323	14,579,556	47,200,737	50,263,807	18,729,496	37
Potters ‹10 m	532	442	23,442	275	3,548,824	11,453,185	13,819,349	8,812,535	64
Potters 10-12 m	84	142	7,994	234	5,633,971	13,847,948	13,847,948	9,392,991	68
Potters 12-18 m	31	92	3,807	324	4,622,795	14,797,821	15,486,446	12,474,383	81
Hooks ‹10m	46	34	No data	478	534,550	1,192,661	1,919,425	1,382,966	72
Hooks 10-12 m	14	20	689	208	635,039	845,041	845,041	629,339	74
Beam trawlers 24-40 m	14	34	3,115	1,687	2,747,531	8,804,018	8,808,039	1,980,133	22
Pelagic trawlers 12-18 m	9	20	525	9	7,223,663	2,223,196	2,223,196	1,827,510	82
Pelagic trawlers 24-40m	15	44	1,659	118	34,235,685	22,329,637	23,043,209	11,256,402	49
Pelagic trawlers/RSW over 40 m	21	49	1,235	119	97,465,705	78,668,420	82,948,845	51,051,835	62

Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2021)	Economic development trend	As a % of total revenue
€	%	€	%	€/FTE	€	%			
4,756,729	63	4,298,301	57	6,281	35,826	No data	High	Improved	2%
5,075,203	74	4,890,763	71	31,441	220,992	239	High	No data	2%
2,088,436	32	1,586,333	24	20,972	40,469	53	High	Improved	2%
1,583,961	18	99,173	1	76,476	113,600	No data	Weak	No data	3%
1,680,635	55	1,680,389	55	13,999	51,825	No data	High	No data	1%
7,524,539	65	7,409,453	64	112,026	739,071	No data	High	Improved	4%
1,581,772	40	1,370,775	35	26,578	65,812	No data	High	No data	1%
1,810,369	69	1,788,635	69	14,615	115,300	69	High	No data	1%
3,291,219	42	1,930,503	24	41,328	109,161	20	High	No data	3%
2,331,017	6	-537,089	-1	55,223	63,779	-3	Weak	No data	13%
5,792,268	12	2,339,094	5	49,523	71,696	1	Weak	No data	16%
2,548,558	18	351,457	3	14,172	19,939	No data	Weak	Improved	4%
5,391,172	39	No data	No data	28,235	66,273	No data	No data	No data	4%
10,009,396	65	9,820,344	63	26,850	135,879	448	High	Improved	5%
405,581	21	No data	No data	29,029	41,076	No data	No data	Deteriorated	1%
415,078	49	409,897	49	10,499	30,838	No data	High	No data	0%
-911,247	-10	-1,078,562	-12	85,211	58,356	-19	Weak	No data	3%
1,346,532	61	1,295,438	58	23,541	89,447	No data	High	Deteriorated	1%
4,004,369	17	1,153,006	5	166,634	258,644	-0	Weak	No data	7%
25,745,163	31	20,724,539	25	513,308	1,035,511	4	High	No data	27%

Annex 2
Methods

Data collection is essential for the implementation of the Common Fisheries Policy (CFP), as a basis for founding it on the best possible scientific advice. Primary biological, technical, ecological, and socioeconomic data are collected to evaluate the state of fish stocks, the profitability of the different segments of the sector and the effects of fisheries and aquaculture on the ecosystem.

The annual data sources used to collect economic and social data from the Irish fleet segments are:

1. Sales notes data for landing income for vessels under 10m.

2. Logbook data for effort and landing income for vessels over 10m.

3. Voluntary questionnaire information returned by vessel owners targeted in the NSS for all economic and social variables.

4. Face-to-face/phone interviews with vessel owners to clarify any issues arising with economic and social variables from questionnaire.

5. Mandatory economic and social questionnaire information returned by vessel owners applying for EU/National grant aid.

6. Sentinel Vessel Programme collecting operational, landing, and economic data from a sample of the inshore fleet.

The annual National Seafood Survey (NSS) of the fishing fleet is a major piece of research into the status of Ireland's catching sector. It examines the economic performance of the fleet and the social demographics of people employed in the sector. This allows BIM to better understand the social and economic impact the industry has on coastal communities. The results of the survey help both industry and policy makers to understand the challenges and opportunities vessel owners face, as well as the impact of fisheries management measures such as Total Allowable Catch (TAC) and quota allocation. It also forms the basis for the justification for national and European funding programmes, which are focused on the support of the industry and coastal communities, under the Common Fisheries Policy. Creating an accurate picture of the industry relies on consistent support and good will from skippers and vessel owners to provide data on annual basis.

In October 2022, BIM hosted a series of National Seafood Survey information sessions for vessel owners and skippers around the coast in the ports of Killybegs, Greencastle, Castletownbere and Dingle. These events included discussions about the importance of returning the annual survey and demonstrations on how to register for and complete the online survey. It is intended that these outreach events will occur annually each autumn and the locations will rotate around the coast.

The survey asks a series of questions about the financial and operational performance of fishing vessels and the demographics of the crew. It is an opportunity for industry to report how they have navigated challenges and changes such as the impacts of Brexit and increasing operating costs . All data and information shared with BIM as part of the survey returns are treated in the strictest confidence and stored in a protected and secure database with limited access. Data is anonymised and no figures relating to any individual or specific vessel are revealed in any outputs.

As part of the annual NSS, vessels are requested to submit operational details and economic data for their previous year's activity. There is a time lag reporting these data because for an accounting period ending on 31 December 2021, the financial return must be filed by September of the following year (i.e., September 2022). For this report, BIM collected economic data from October 2022 to February 2023 from vessel owners and submitted the results of the NSS to the European Commission in March 2023 as part of Ireland's EU regulatory requirements.

All data received is combined with other vessel information within the same fleet category, based on LOA (overall length) and primary fishing gear. The information is submitted in aggregated format to the EU up until 2021 in accordance with Commission Implementing Decision (EU) 2019/909 of 18 February 2019 and Commission Delegated Decision (EU) 2019/910 of 13 March 2019. From 2022, all data is submitted in accordance with new legislation; Commission Implementing Decision (EU) 2021/1168 of 27 April 2021 and Commission Delegated Decision (EU) 2021/1167 of 27 April 2021.

Annex 3
Concepts, terms, and definitions

Revenue – the value of production (sale of landed seafood products) and income generated from the use of the vessel in other, non-commercial fishing activities, such as recreational fishing, transport, tourism, oil rig duty, research, etc., may also include insurance payment for gear damage/loss /vessel.

Income – from direct subsidies and fishing rights are excluded.

Gross Value Added (GVA) – net output of a sector after deducting intermediate inputs from all outputs. It is a measure of the contribution to GDP made by an individual producer, industry, or sector.

GVA to Revenue ratio – indicates the share of revenue that contributes to the economy through factors of production (returns to labour and returns to capital). Indicator is calculated as the ratio between GVA and revenue and expressed as a percentage.

Gross profit – the normal profit after accounting for operating costs, excluding capital costs. Also referred to as gross cash flow, i.e., the flow of cash into and out of a sector or firm over a period of time.

Gross profit margin (%) – a measure of profitability that can be used to analyse how efficiently a sector is using its inputs to generate profit. Calculated as the ratio between gross profit and revenue. Expressed as a percentage. Gross profit margin indicates the normal profitability of a firm and is of most interest to fishers as it represents the share of income they are left with at the end of the year. For managers, it may be used as an indication of the viability of an industry in terms of its commercial profitability by measuring the share of cash coming in and out of an industry. A high gross profit margin indicates that the sector has a low-cost operating model; reflects efficiency in turning inputs into outputs. A low percentage value can indicate a low margin of safety, i.e., a higher risk that declines in production or increases in costs may result in a net loss, or negative profit margin.

Net profit – is the difference between revenue and explicit costs and opportunity costs. Explicit costs include all operational costs, such as wages, energy, repair, and other variable and non-variable costs. Net profit differs from gross profit in that it includes depreciation and opportunity costs of capital. It measures the efficiency of a producer in society's view by evaluating the total costs of inputs (excluding natural resource costs) in comparison to outputs or revenue. Economic profit is the primary indicator of economic performance and is often used as a proxy of resource rent in fisheries. Economic profits emerge as the excess of revenue over the opportunity cost of producing the good. Also referred to as supernormal or abnormal profits. Abnormal profits in a sector are an incentive for other firms to enter the industry (if they can). Zero or a negative profit margin may indicate high competition in the sector and can be used as one of the indicators of overcapacity.

Net profit margin (%) – a measure of profitability after all costs have been accounted for and reflects the percentage of revenue that a sector retains as profit. It measures the relative performance of the sector compared to other activities in the economy and provides an indication of the sector's operating efficiency as it captures the amount of surplus generated per unit of production.

Labour productivity (GVA/FTE) – defined as output per unit of labour. Calculated as GVA (measure of output) by full-time equivalent (FTE) employment (unit of labour input). Labour productivity can be used as a measure of economic growth, competitiveness, and living standards within a sector. An increase in labour productivity indicates that a unit of input labour is producing more output or that the same amount of output is being produced with fewer units of labour. Labour productivity may also provide an indicator of worker's wellbeing or living standards, assuming that increases in productivity are matched by wage increases.

Capital productivity – the return of the investment divided by the cost of the investment, also referred to as ROI (Rate on Investment). It measures profits in relation to capital invested, i.e., indicates how profitable a sector is relative to its total assets. The higher the return, the more efficient the sector is in utilising its asset base. As data on intangible assets (e.g., fishing rights, natural resource) are not always available in fisheries, the Return on Fixed Tangible Assets (ROFTA) is used as an approximation of ROI.

Full Time Equivalent (FTE) – Unit expressing the number of employees converted into full-time workers. The estimation of FTEs uses a threshold representing the total number of hours worked, on a standard and yearly basis, by a full-time worker in the sector.

For economic performance calculations the following formulas were used:

Total Income:
Total Revenue = Income from landings + income from fishing rights + other income + direct subsidies

Revenue:
Revenue = Income from landings + other income

Gross Value Added (GVA)
GVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs

Net Value Added (NVA)
NVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs – depreciation cost – opportunity cost of capital

Gross Profit (GP)
GP = Income from landings + other income – crew costs – unpaid labour - energy costs – repair and maintenance costs – other variable costs – non variable costs

Net Profit/Loss
Net Profit = Income from landings + other income – crew costs – unpaid labour - energy costs – repair costs – other variable costs – non variable costs – depreciation cost – opportunity cost of capital

Rate of Return on Fixed Tangible Assets (RoFTA)
RoFTA = (net profit + opportunity cost of capital)

Annex 4
EU fleet segments in accordance with EU MAP Data Collection Framework

Fishing Technique:

DFN = Drift and/or fixed netters

DRB = Dredgers

DTS = Demersal trawlers and/or demersal seiners

FPO = Vessels using pots and/or traps

HOK = Vessels using hooks

MGO = Vessel using other active gears

MGP = Vessels using polyvalent active gears only

PG = Vessels using passive gears only for vessels <12m

PGO = Vessels using other passive gears

PGP = Vessels using polyvalent passive gears only

PMP = Vessels using active and passive gears

PS = Purse seiners

TM = Pelagic trawlers

TBB = Beam trawlers

Vessel Length Classes:

VL0010 = Vessel between 0 meters and 10 meters in length.

VL1012 = Vessel between 10 meters and 12 meters in length. **For Supra region 1 and 3 only.

VL1218 = Vessel between 12 meters and 18 meters in length. All regions.

VL1824 = Vessel between 18 meters and 24 meters in length. All regions.

VL2440 = Vessel between 24 meters and 40 meters in length. All regions.

VL40XX = Vessel greater than 40 meters in length. All regions.

Irish fleet segmentation under DCF/EU MAP 2021

Segment	Code	Total vessels
Beam trawlers 18-< 24 m	TBBVL1824	5
Beam trawlers 24-< 40 m	TBBVL2440	9
Demersal trawlers and/or demersal seiners 0-< 10 m	DTSVL0010	54
Demersal trawlers and/or demersal seiners 10-< 12 m	DTSVL1012	9
Demersal trawlers and/or demersal seiners 12-< 18 m	DTSVL1218	26
Demersal trawlers and/or demersal seiners 18-< 24 m	DTSVL1824	57
Demersal trawlers and/or demersal seiners 24-< 40 m	DTSVL2440	50
Dredgers 0-< 10 m	DRBVL0010	99
Dredgers 10-< 12 m	DRBVL1012	36
Dredgers 12-< 18 m	DRBVL1218	4
Dredgers 18-< 24 m	DRBVL1824	2
Dredgers 24-< 40 m	DRBVL2440	5
Drift and/or fixed netters 0-< 10 m	DFNVL0010	209
Drift and/or fixed netters 10-< 12 m	DFNVL1012	15
Drift and/or fixed netters 12-< 18 m	DFNVL1218	11
Drift and/or fixed netters 18-< 24 m	DFNVL1824	7
Drift and/or fixed netters 24-< 40 m	DFNVL2440	1
Pelagic trawlers 10-< 12 m	TMVL1012	3
Pelagic trawlers 12-< 18 m	TMVL1218	5
Pelagic trawlers 18-< 24 m	TMVL1824	1
Pelagic trawlers 24-< 40 m	TMVL2440	15
Pelagic trawlers 40 m or larger/ RSW	TMVL40XX	21
Vessels using hooks 0-< 10 m	HOKVL0010	46
Vessels using hooks 10-< 12 m	HOKVL1012	12
Vessels using hooks 12-< 18 m	HOKVL1218	2
Vessels using Pots and/or traps 0-< 10 m	FPOVL0010	532
Vessels using Pots and/or traps 10-< 12 m	FPOVL1012	84
Vessels using Pots and/or traps 12-< 18 m	FPOVL1218	28
Vessels using Pots and/or traps 18-< 24 m	FPOVL1824	1
Vessels using Pots and/or traps 24-< 40 m	FPOVL2440	2
Inactive 0-< 10 m	InactiveVL0010	511
Inactive 10-< 12 m	InactiveVL1012	80
Inactive 12-< 18 m	InactiveVL1218	16
Inactive 18-< 24 m	InactiveVL1824	2
Inactive 24-< 40 m	InactiveVL2440	3

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