BIM
Ireland's Seafood Development Agency

Annual Fisheries Report

A Snapshot of Ireland's Fisheries Sector

2022

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2020 RESULTS AND % DIFFERENCE FROM 2019

1,391 (-8%)

Active Vessels

183,958kW (-1%)

Total Vessel Power

60,328 GT (0%)

Total Vessel Tonnage

TOTAL EMPLOYMENT 2,928 (-5%)

FULL-TIME EQUIVALENTS (FTEs) 2,684 (-3%)

DAYS AT SEA

67,460 (-16%)

FISHING DAYS

56,894 (-17%)

ENERGY CONSUMPTION

101m LITRES (-35%)

FUEL CONSUMPTION

462 MILLION LITRES PER TONNE LANDED (-22%)

€312m

+2%

LANDINGS BY WEIGHT
218,600 TONNES (+5%)

LANDINGS BY VALUE
€264 MILLION (-8%)

Gross Value Added (GVA)
€161M
+2% Growth

Gross Profit
€66.5M
+2.5% Growth

Net Profit
€32.3M
-20% Growth

Gross Profit Margin
21%
+4% Growth

Net Profit Margin
10%
-3% Growth

Return on Fixed Tangible Assets
7%
-1% Growth

PROFITABILITY FOR 2020

Slight increase from 2019

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 provides insights and trends for the financial and operational performance of the Irish fishing fleet and the potential drivers behind them based on the economic data for 2020 operations. In terms of structure, the report presents economic estimates at a macro national level and at main fleet segment level. This is followed by an overview of key drivers influencing economic performance of the Irish fleet from 2020- 2022 based on industry feedback including COVID-19, Brexit and inflation, rising costs, and the Russian invasion of the Ukraine. Future projections for economic performance in 2021 and 2022 are presented in the closing section.

As part of the NSS, all active vessels are requested to submit economic and operational details for their previous year's activity. There is a time lag reporting these data because for an accounting period ending on 31 December 2020, the financial return must be filed by September of the following year (i.e., September 2021). BIM collected economic data for 2020 from October 2021 to January 2022 and submitted national totals to the EU in March 2022 (refer to Annex 2 for specific methods employed and Annex 6 for a copy of the annual survey).

Results for 2020 indicate the following:

- Profitability of the Irish fleet has increased since 2019. Revenue increased by 2%, amounting to €312 million; Gross Value Added (GVA) €161 million (+6%), gross profit €65 million (+24%) and net profit decreased to €32 million (-20%). These represent increases in GVA and gross profit from 2019 but a marked reduction in net profit[1] due in part to Covid-19.
- The capacity of the national fleet has remained stable since 2008. In 2020, there were 1,938 registered vessels (excluding those registered in the aquaculture segment). The estimated total number of inactive vessels was 547 and 81% of these are in the less than 10 metre segments.
- An estimated 1,391 Irish fishing vessels were active (down 8% from 2019) with a total capacity of 60,328 GT and 183,958 kW. Around 81% of these vessels were under 12 meters in length and mainly operate in inshore waters.
- The Irish fishing fleet spent 77,460 days at sea, of which 84% were fishing days representing a decrease of 16% and 17% respectively from 2019.
- Energy consumption decreased by 35% over the same period reflecting this decrease in effort.
- In 2020, the fleet landed over 218,600 tonnes valued at €312 million, an increase of 5% from 2019 in live weight and an increase of 2% in landed value (€306.5 million). In 2020, most ports saw a decline in the volume and value of landings with Killybegs experiencing a 9% decline in volume and 8% in value. Castletownbere landings declined by 16% in volume and 20% in value. In 2021, the fleet landed 233,000 tonnes, an increase of 7% from 2020.

1. Limited survey returns from certain fleet segments may have affected the estimation of key variables in the calculations of GVA, gross profit and net profit. A full list of terms and definitions are provided in Annex 3.

- Overall, the cost structure of the fleet in 2020 remained relatively stable with a slight increase in all costs except non-variable costs (e.g. insurance, loan interest, depreciation etc). Operating costs totalled €255 million in 2020, a slight increase of 1% from 2019 with energy costs increased by approximately 10%. When capital costs are included, the total cost of operating the national fleet rose by 4% since 2019 to €278.5 million.

- Direct employment generated by the sector in 2020 was estimated at 2 928 jobs corresponding to 2684 Full-Time Equivalents (FTEs). These values follow a similar trend to capacity indicators over the past decade.

- The average annual wage for the entire fleet (per FTE) was estimated at €35,639 which is lower than the overall average national annual earnings in Ireland of €50,076 reported by the Central Statistics Office (CSO). However, there are variations in the average wage depending on the size vessel the way crew are employed (i.e., share fishermen or PAYE employee) and the fishery the vessel operates.

- Based on feedback from industry, restrictions associated with COVID-19, quota changes resulting from Brexit, and more recently, the impact of the Russian invasion of the Ukraine on inflation and rising fuel costs were the main driving forces influencing the economic performance of the Irish fleet from 2020 to June 2022.

1. Profile of the Irish fishing Fleet

The Irish national fishing fleet is highly diversified with a broad range of vessel types across the Small-Scale Coastal Fleet (SSCF) and Large-Scale Fleet (LSF), targeting different species or species groups often in mixed fisheries (Table 1). 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).

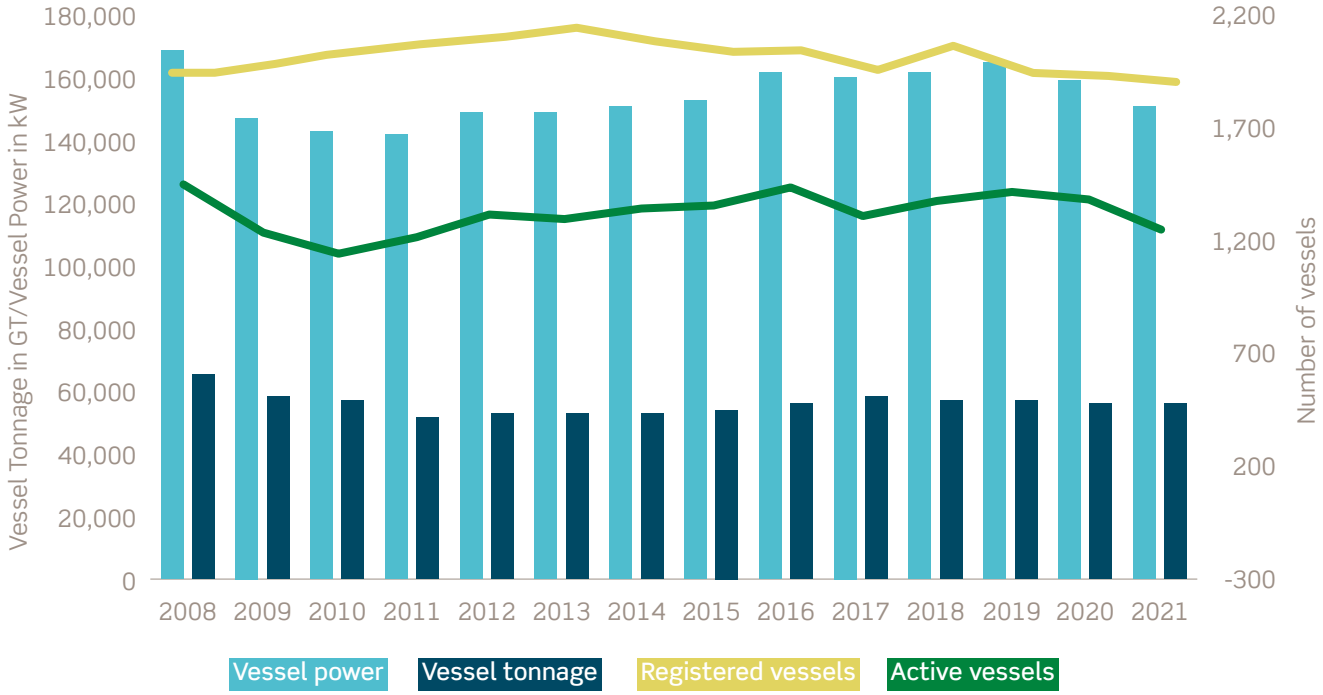


Figure 1: Trends in the fleet summary: 2008-2021.

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 2020, there were 1,938 registered vessels (excluding those registered in the aquaculture segment) with a total capacity of 60,328 GT and 183,958 kW. The estimated total number of inactive vessels in 2020 was 547, the majority of which (81%) are in the less than 10 metres segments. The estimated number of active vessels in 2020 for all segments was 1,398.

Regulation (EU) No 1380/2013 on the Common Fisheries Policy 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 is to remove up to 60 vessels of 8,000 GT and 21,000 KW (refer to section 3.2 for further details).

1.2 Fleet structure

Nationally, the fishing fleet is divided into five segments (Table 1) in accordance with Ministerial Policy Directive 2 of 2003, as amended by Policy Directive 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).

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, there are a total of 84 fleet segments (Annex 5). 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 5.

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 .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.

1.3 Landings

In 2020, landings by weight increased 5% from 2019 (218,600 tonnes) valued at €312 million (up 3% on 2019). In 2021, landings increased year-on-year by 6% in weight and 6% in value (Figure 2) as a result of a 9.5% increase in fishing days and changes in quota availability compared to 2020.

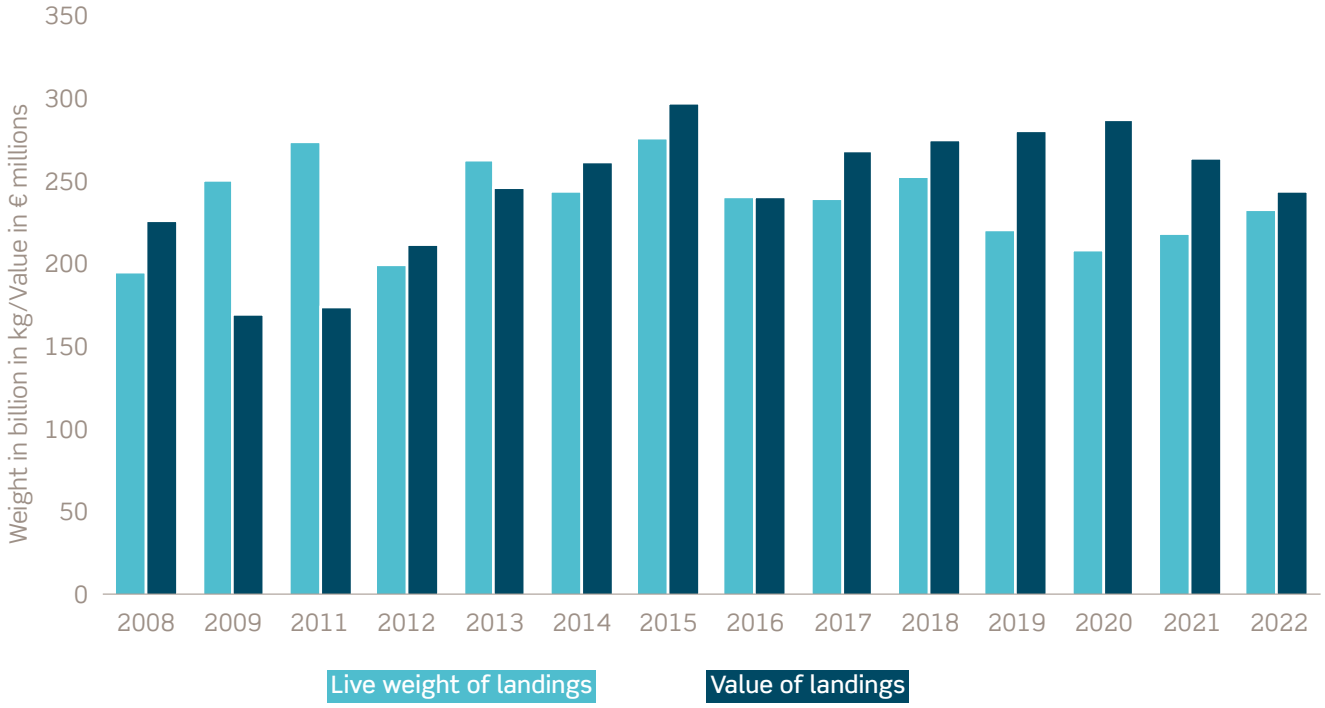


Figure 2: Trends in landings by weight and value: (2022 data is projected).

The top 10 species landed by the Irish fleet by weight in 2020 are illustrated in Figure 3. In 2020, mackerel was the most valuable species landed by the Irish fleet with over 74,000 tonnes landed. This was an increase in landed weight of 5% from 2019. Landings of *Nephrops* declined by 30% in weight after a difficult year in which many of the main international markets for this species were shut down because of the COVID-19 pandemic.

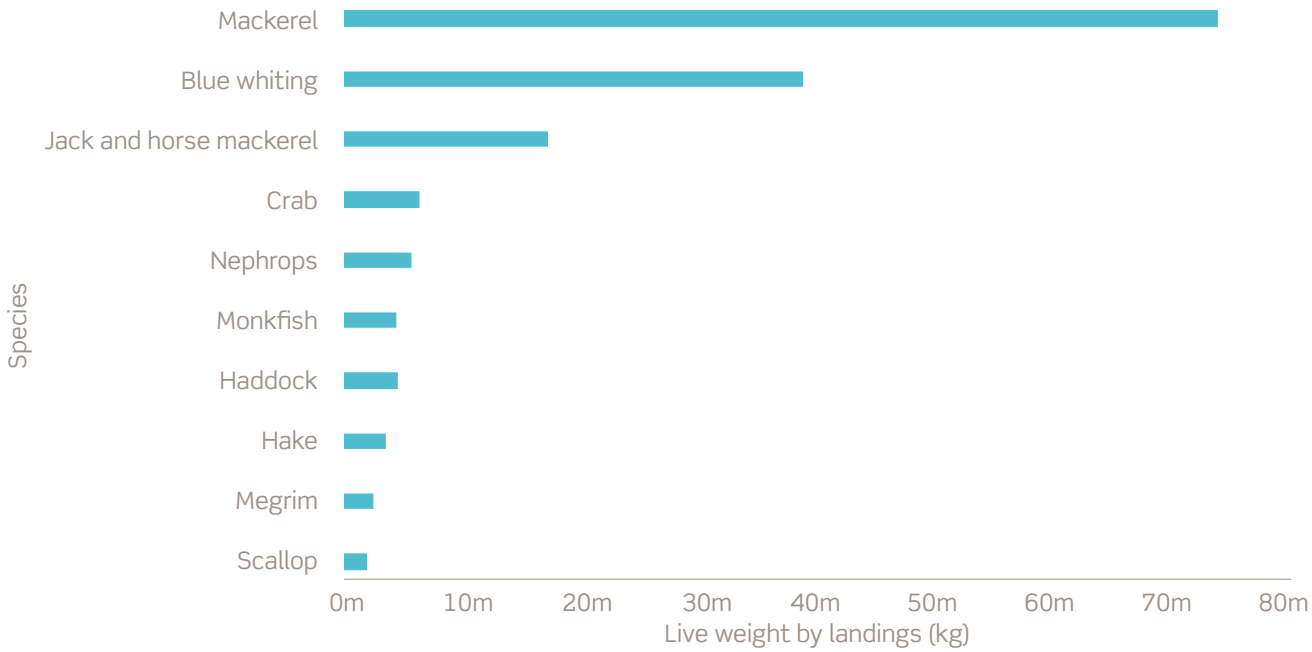


Figure 3: Top 10 species landed by the Irish fleet by weight: 2020

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.

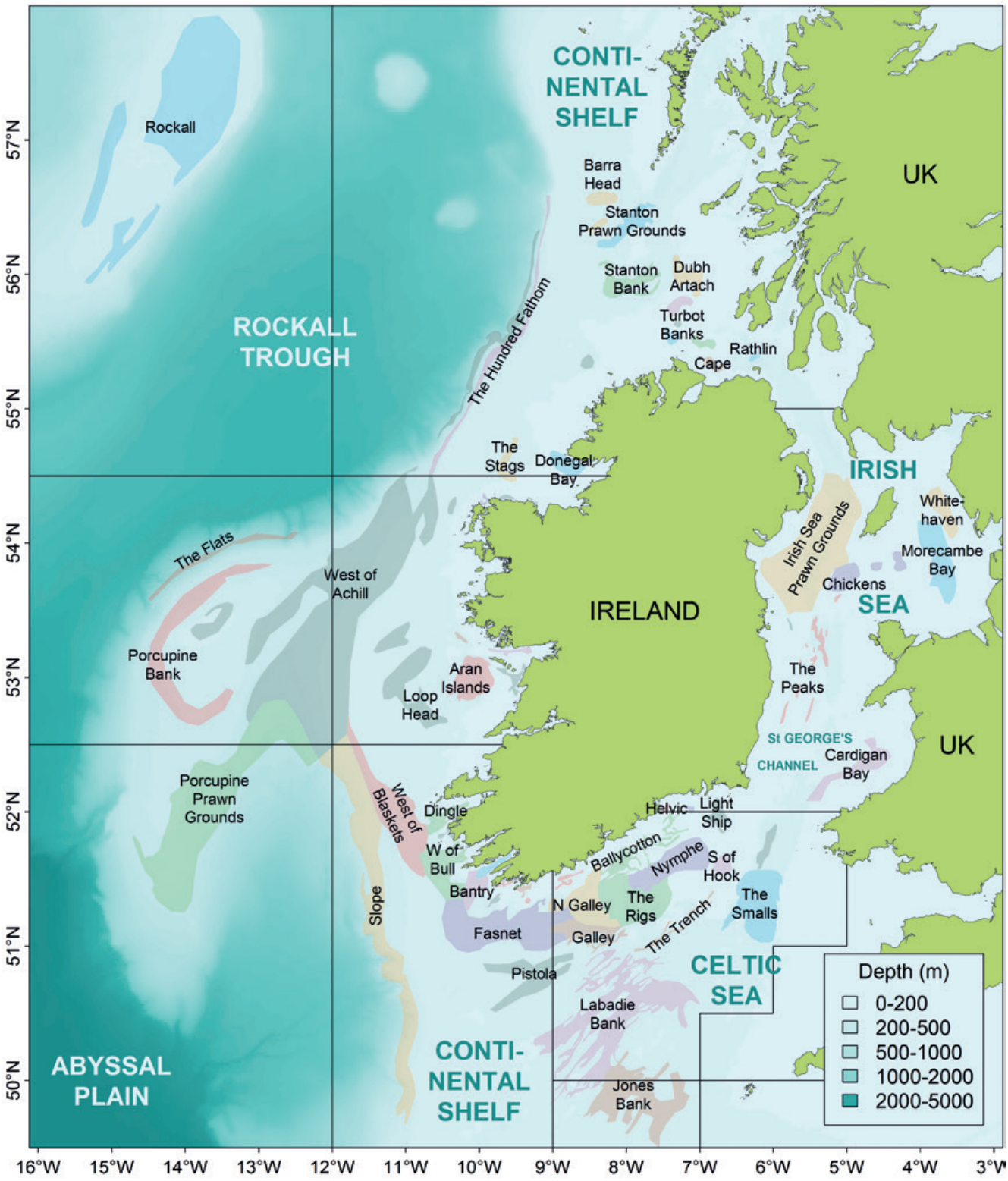


Figure 4: Map illustrating the main fishing grounds of the Irish fleet (*Source: Marine Institute*).

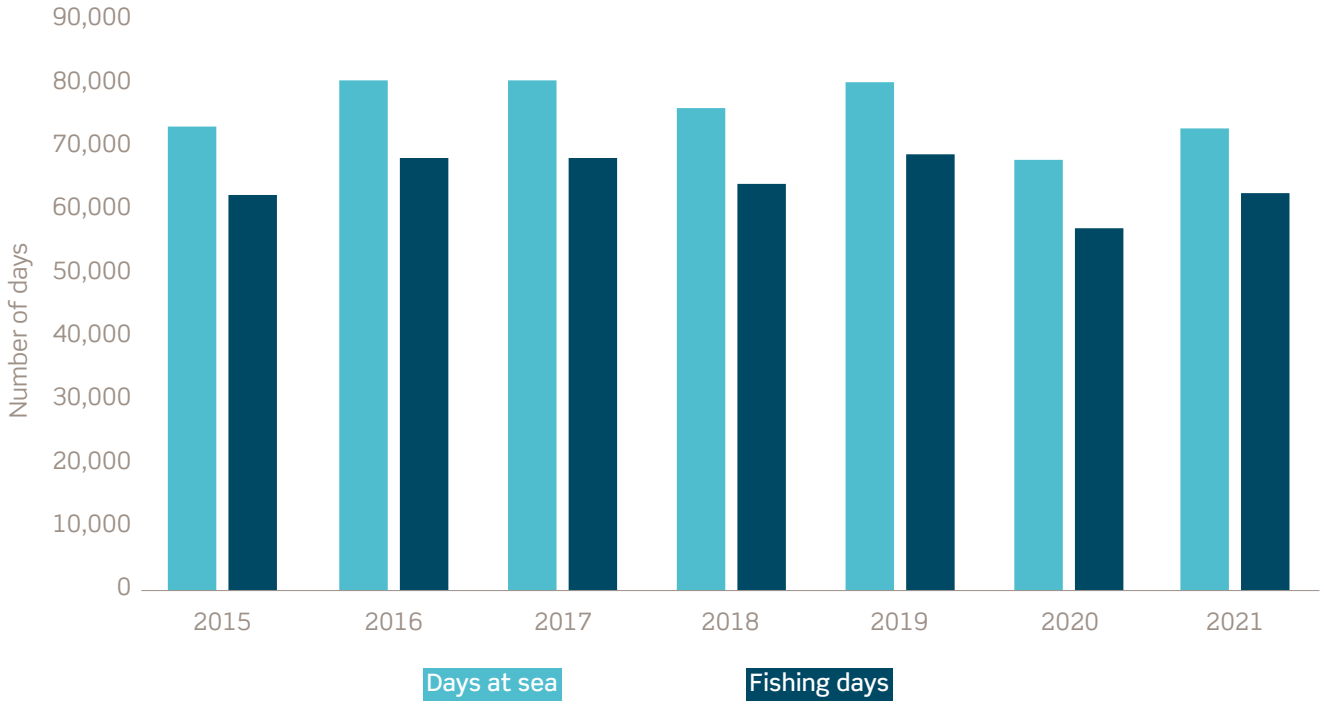


Figure 5: Trends in the effort of the Irish fleet: 2015-2021. (Prior to 2015, not all inshore effort was reported).

1.5 Employment and social demographics

Employment is defined here as all jobs directly related to fishing activity. Of the 2,928 people engaged in 2020, 2,810 (98%) of the people employed were males, equivalent to 98.5% and an estimated 57 (2%) people employed were females. Employment in the Irish fishing fleet consists mostly of Irish nationals (72%), followed by EU nationals (19%), European Economic Area (EEA) workers make up 2% with the remainder approximately 7% being non-EU/EEA nationals (Figure 7). Further insights into the social demographics of the Irish fleet are provided in the figures below. Figure 6 highlights employment trends of the Irish fleet: 2008-2021, Figure 7 illustrates employment by nationality, Figure 8 relates to age distribution and Figure 9 shows levels of education attainment across the Irish fleet.

EMPLOYMENT AND WAGES OF THE IRISH FLEET: 2020

ENGAGED CREW

2,928 (-5%)

FULL TIME EQUIVALENTS (FTEs)

2,684

AVERAGE ANNUAL WAGE PER FTE*

€35,639

AVERAGE NATIONAL ANNUAL EARNINGS

€50,076

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

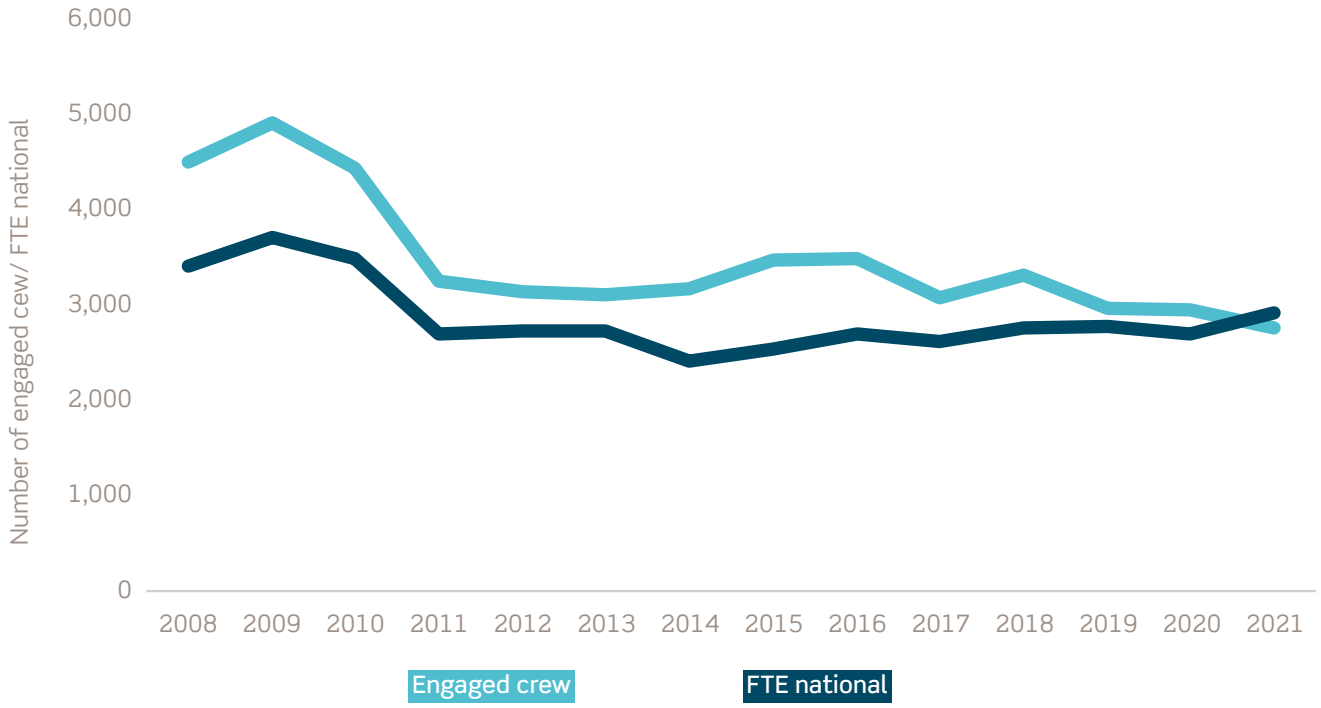


Figure 6: Employment trends of the Irish fleet: 2008-2021.

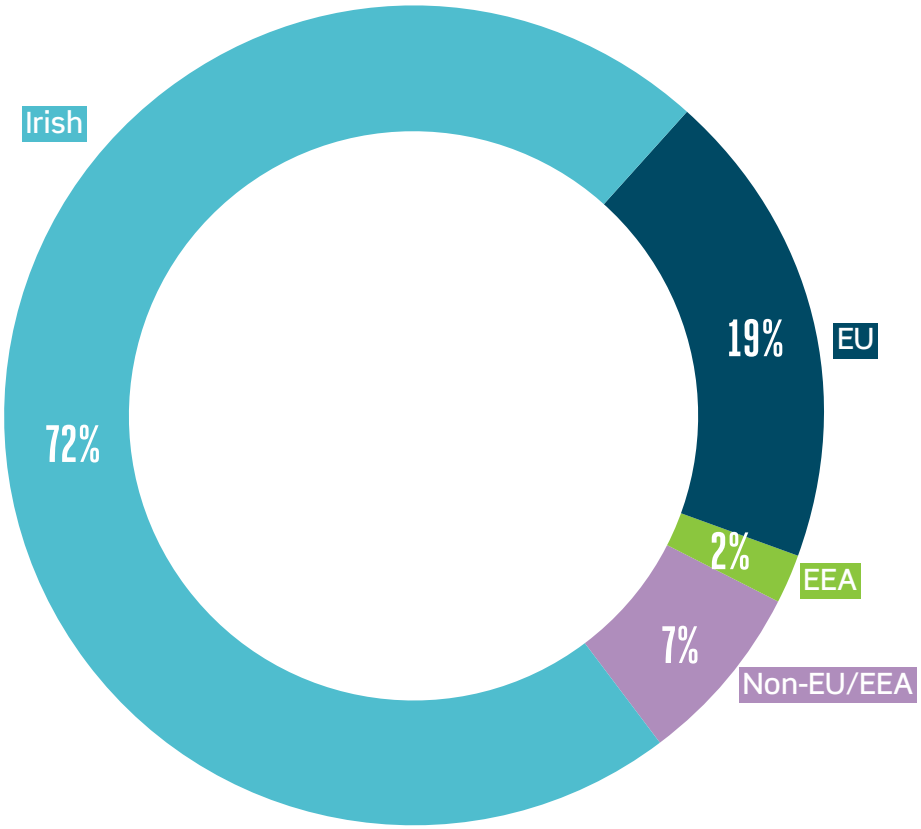


Figure 7: Employment by nationality across the Irish fleet in 2020.

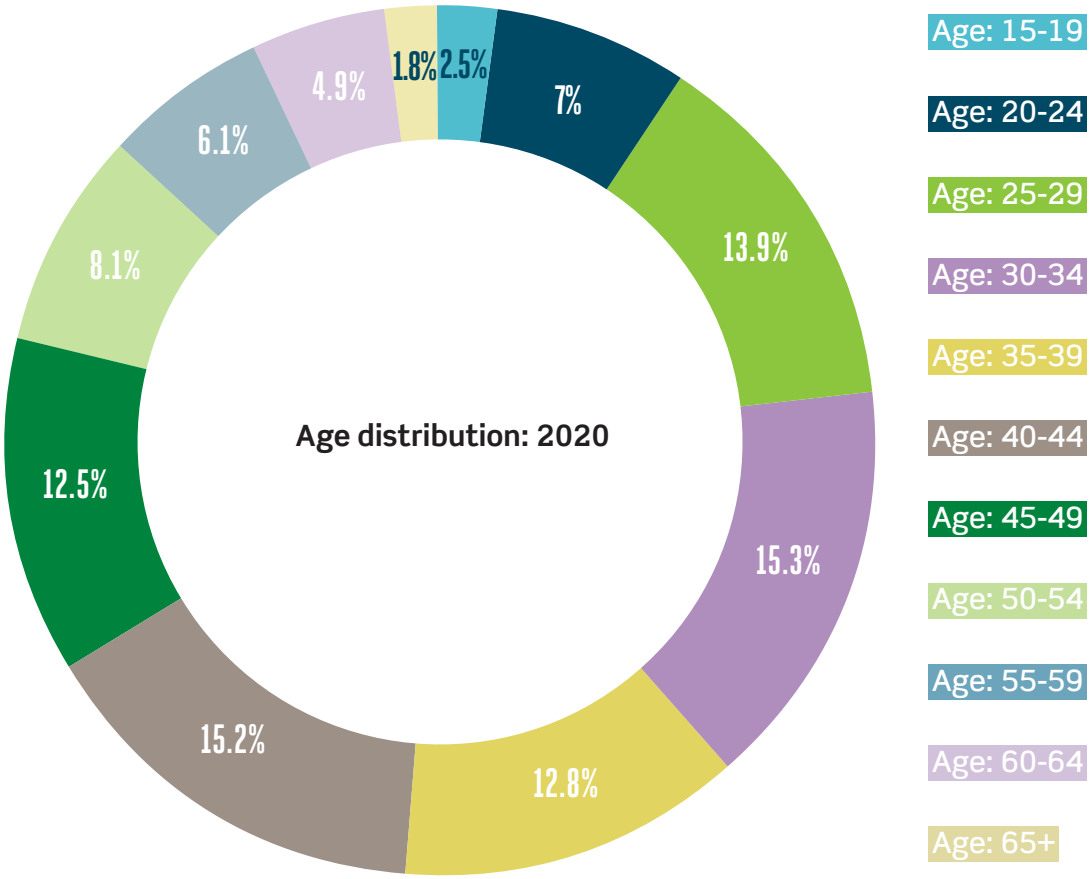


Figure 8: Age distribution of the Irish fleet in 2020.

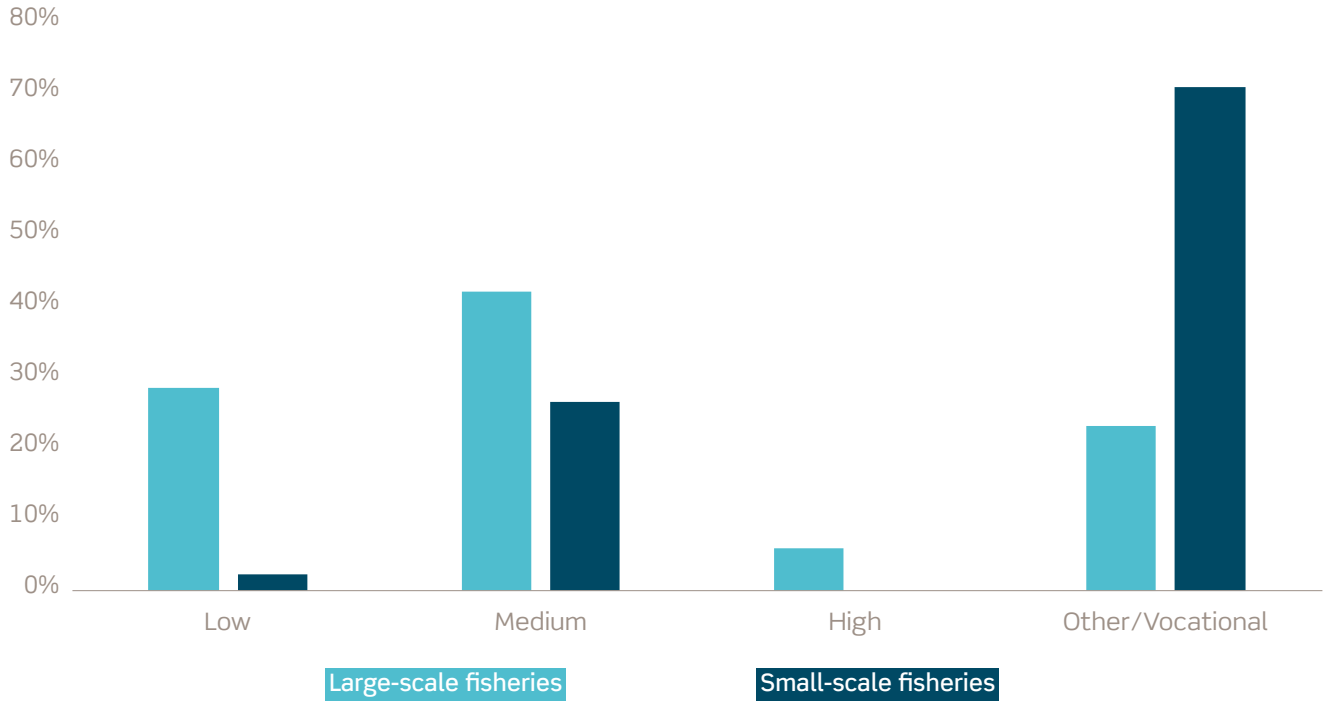


Figure 9: Education levels across the Irish fleet: 2008-2021.

2. Economic results for 2020

2.1 National fleet performance

Table 2: Key economic results of the Irish Fleet: 2020	
Total income	€264 million (-8%)
Total revenue	€312 million (+2%)
Operating costs	€278.5 million (+4%)
GVA	€161.6 million (+8%)
Gross profit	€66.5 million (+28%)
Net profit	€32.3 million (-20%)

As demonstrated in Table 2 and Figure 10, in 2020 the Irish fleet recorded a gross profit with increases in GVA and gross profit from 2019 but a significant decrease in net profit[2]. It should be noted that these figures are strongly influenced by the larger pelagic vessels (over 40m) as the highest profitable sector tends to shape the overall Irish profitability trend. The value assigned to this segment's cost structures and capital values along with fish prices can therefore greatly affect their total landings revenue and profit due to the large volumes catches. In years where there are marked differences in annual profitability, it can often be tracked to changing Total Allowable Catch (TAC) for certain species such as mackerel.

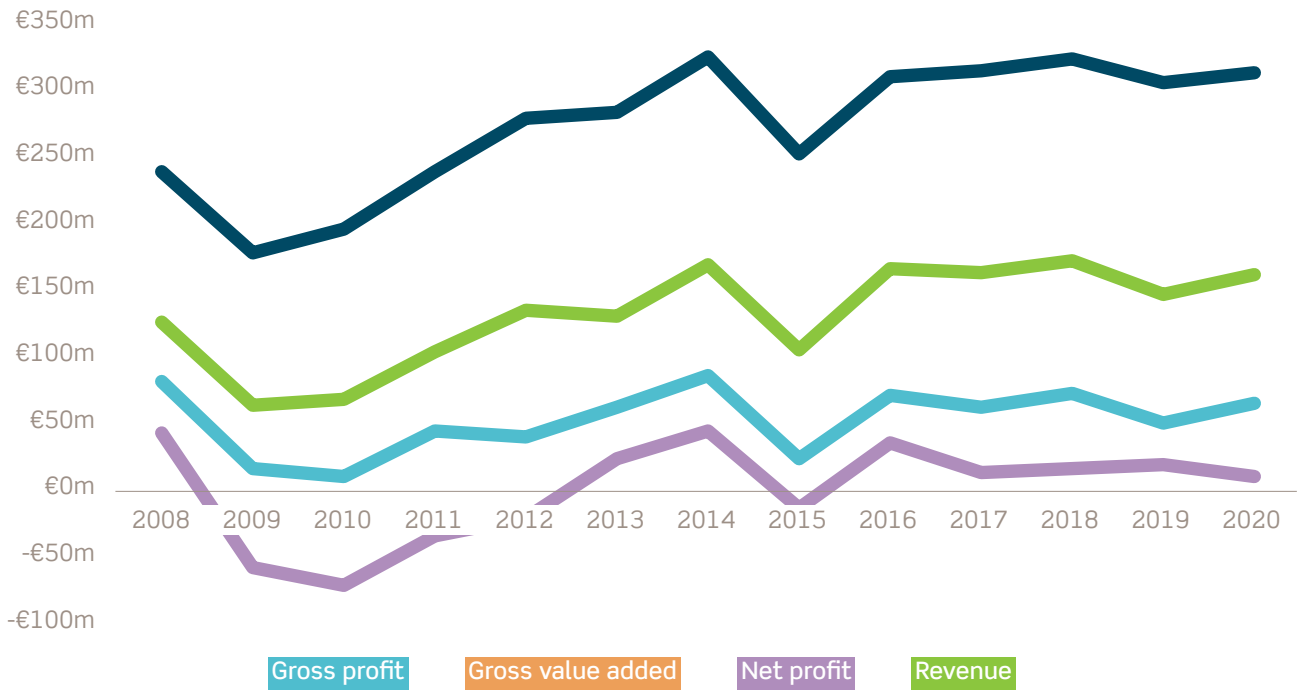


Figure 10: Trends in economic performance of the Irish fleet: 2008-2020.

2. Limited returns from certain fleet segments may have affected the estimation of key variables in the calculations of GVA, gross profit and net profit.

Overall, the cost structure of the fleet has remained stable in recent years with only a slight increase in costs except non-variable costs (e.g. insurance, loan interest, accounting and legal fees) in 2020 (Figure 11). Operating costs totalled €255 million in 2020 (up 1% from 2019) with energy costs increasing by approximately 10%. When capital costs are included, the total cost of operating the national fleet rose by 4% since 2019 to €278.5 million.

For a full list of economic indicators for all fleet segments, please refer to Annex 1.

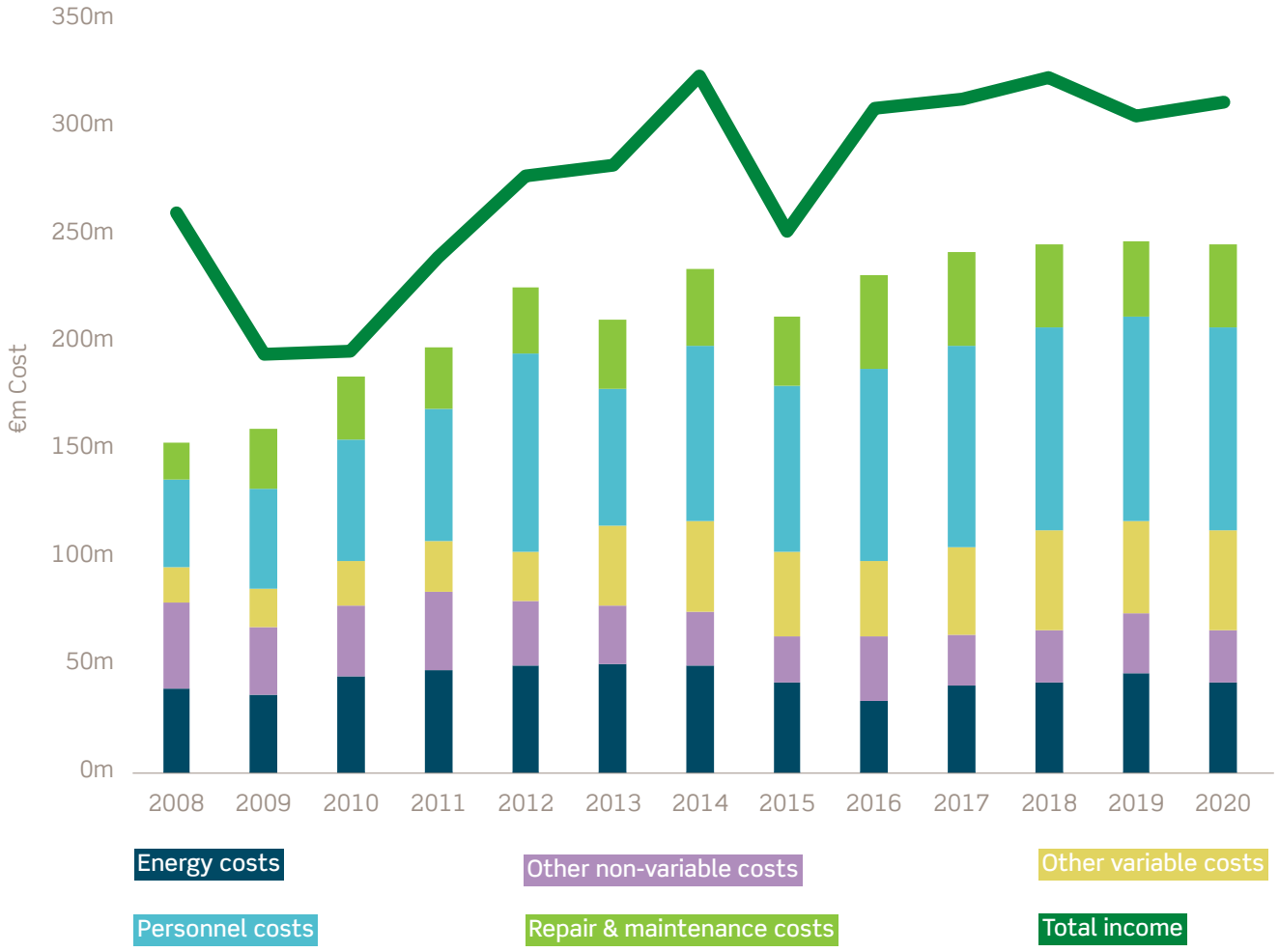


Figure 11: Trends in the cost structure of the Irish fleet: 2008-2020.

2.2 Efficiency indicators

The key results in terms of resource productivity and efficiency indicators for 2020 are listed below:

Table 3: Efficiency indicators for the Irish Fleet: 2020	
Gross profit margin	21% (+4% from 2019)
Net profit margin	10% (-3% from 2019)
Return on Fixed Tangible assets (RoFTA)	7% (-1% from 2019)
Fuel consumption	462 million litres per tonne landed (-22% from 2019)
Energy consumption	111 million litres (-9% from 2019)
Landings per unit of effort (LPEU)*	3.6 tonnes/day (-23% from 2019)
Average price per litre of marine fuel	€0.42 (+10% from 2019)

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

2.3 Fish prices

During 2020, average prices for the main species decreased at varying levels compared to 2019 (Figure 12). *Nephrops* (13% of total value of landings) fell from 9.54 €/kg in 2019 to 8.05 €/kg in 2020 (-16%). Average prices of mackerel (20% of total value of landings) were maintained at 0.90 €/kg between 2016 and 2017. The prices rose to 1.14 €/kg in 2018 and to 1.34 €/kg in 2019 which helped offset the reduced income because of the decrease in TAC. The average price for mackerel decreased again in 2020 back to 1.26 €/kg.

Average prices for scallops were at their lowest in 2012 (1.43 €/kg) and increased each year to 3.16 €0/kg in 2017 (+120%). Since 2017, the value of scallops has decreased year-on-year: -8% in 2018, -14% in 2019 to 1.95 €/kg in 2020 (-22%).

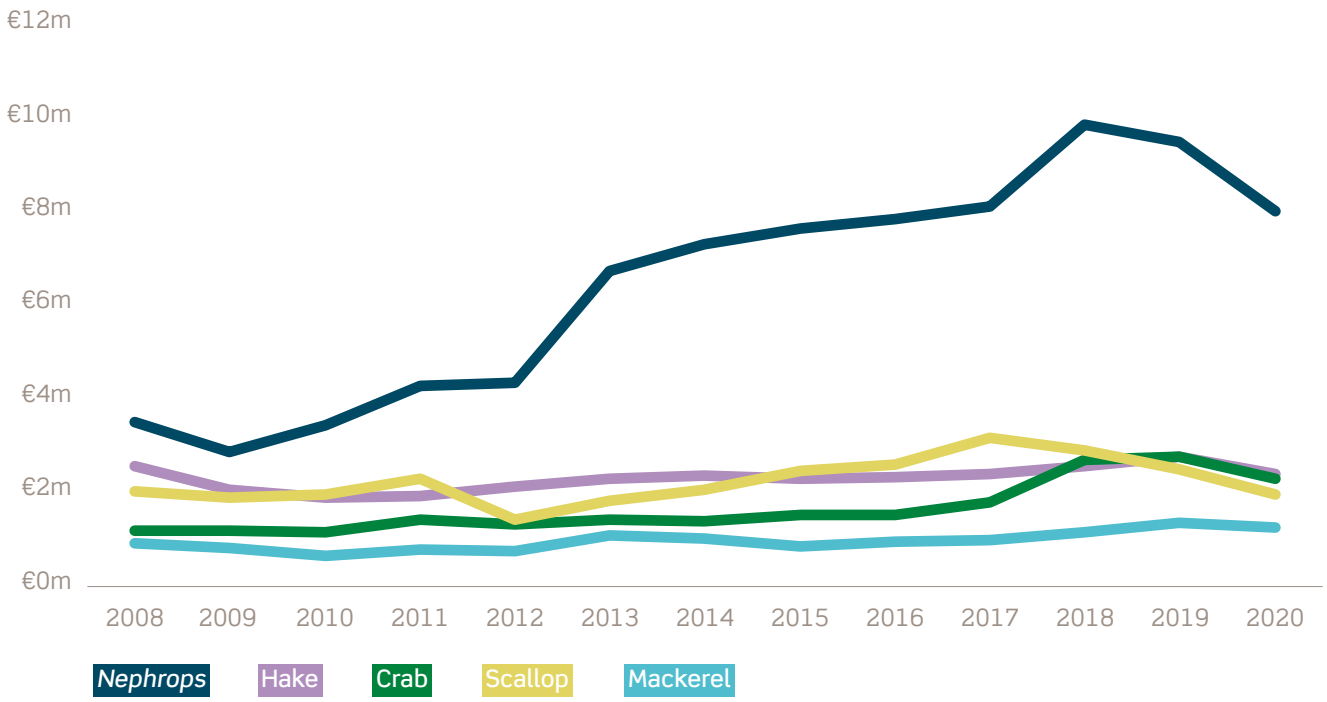


Figure 12: Trends in average prices for main species: 2008-2020.

2.4 Economic performance of the inshore Small-Scale Coastal Fleet

At a national level, Ireland's SSCF consists of all under-12 metres inshore vessels regardless of gear type[3]. Vessels in the Irish SSCF 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 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 SSCF are listed in Table 4.

3. This composition of the Irish SSCF varies from that of the EU definition. At an EU level, Commission Delegated Decision (EU) 2019/910 defines the SSCF 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).

Table 4: Small-Scale Coastal Fleet: 2020 Operations	
Active vessels	1,156 (-0.25%)
Full Time Equivalents (FTEs)	1,327 (+2%) and 49% of all FTEs
Fishing days	29,235 (-18%)
Landings by weight (kg)	1,413,242 (+0.5%)
Landings by value	€28.5 million (-27%)
GVA*	€41.4 million (+23%)
Gross profit*	€26.8 million (+55%)
Net profit*	€4.6 million (+57%)
Revenue	€64.3 million (+16%)
Key species landed	Lobster, crab, *Nephrops*, bivalve molluscs, scallops, mackerel, herring, whiting haddock, megrim.
Profitability for 2020	Increase in profitability compared to 2019.

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

The SSCF contributed almost 21% of the total revenue of the Irish fleet in 2020 and and is highly important to peripheral, local coastal communities. SSCF offer employment (49% of all FTEs at a national level) in often deprived remote areas and bring much needed money to local communities and their hinterlands.

This fleet of 1,156 under-12 metre vessels makes up 83% of the total Irish vessels and in terms of capacity, represents 21% of the total engine power (kW) and 7% of total vessel volume (GT).

2.4.1 Economic performance of selected SSCF segments

For some segments in the SSCF, survey returns are low which creates challenges for economic analysis across the national fleet. This section presents an overview of the available economic data for 2020 operations for a selection of SSCF segments: Potters 0m-10m, and Dredgers 10m-12m.

Table 5: Potters 0m-10m/ Polyvalent vessels: 2020 Operations	
Active vessels	577 (-0.3%)
Full Time Equivalents (FTEs)	605 and 23% of all FTEs
Days at sea	17,790 (-20%)
Fishing days	17,790 (-20%)
Landings by weight (kg)	2,888,344 (%)
Landings by value	€7.3 million (-35%)
GVA	€15.8 million (+35%)
Gross profit	€11.8 million (+49%)
Net profit	No available data
Revenue	€23.4 million (+10%)
Key species landed	Brown crab, lobster, and whelk
Profitability for 2020	Significant increase in profitability compared to 2019.

Table 6: Dredgers 10m-12m: 2020 Operations	
Active vessels	37 (-20%)
Full Time Equivalents (FTEs)	59 (-30%)
Days at sea	2,753 (-22%)
Fishing days	2,753 (-22%)
Landings by weight (kg)	973,744 (+2%)
Landings by value	€2.8 million (-22%)
GVA	€2 million (-29%)
Gross profit	€1.3 million (-7%)
Net profit	€1.2 million (-8%)
Revenue	€2.9 million (-24%)
Key species landed	Razors, whelk, cockles.
Profitability for 2020	Significant decrease compared to 2019.

2.5 Economic performance of the Large-Scale Fleet

Ireland's LSF represents 17% of the total number of Irish vessels, 79% of the total engine power (kW) and 93% of the total vessel volume (GT) of the national fleet. Killybegs and Castletownbere are the two largest home ports for these vessels. Key figures for 2020 LSF operations are listed in Table 7.

Table 7: Large Scale Fleet: 2020 Operations	
Active vessels	235 (-5%) and 17% of the national fleet
Full Time Equivalents (FTEs)	1,357 (-17%) and 51% of all FTEs
Days at sea	38,225 (-13%)
Landings by weight (kg)	14,132,492 (+5%)
Landings by value	€28.5 million (+4%)
GVA*	€120 million (+7%)
Gross profit*	€39 million (+20%)
Net profit*	€6.2 million (-62%)
Revenue	€248.6 million (+0.5%)
Key species landed	Mackerel, herring, blue whiting, haddock, monkfish, hake.
Profitability for 2020	Overall performance was weak with only the RSW fleet (pelagic trawlers over 40 metres) recording profits in 2020.

***Caveat:** No economic data was provided by vessel owners in the Pelagic Trawl over 40m segment for 2020 (or 2019) which is a major proportion of the overall LSF. Estimates for 2020 economic indicators were calculated from a combination of the 2018 cost structures and 2020 landings data. The data must be used with caution.*

2.5.1 Economic performance of selected fleet LSF segments

This section presents an overview of the economic data for 2020 operations for a selection of LSF segments: **Pelagic Trawl/RSW over 40m, Demersal Trawl 18m-24m and Demersal Trawl 24m-40m.**

Table 8: Pelagic trawl over 40m/ RSW segment: 2020 Operations	
Active vessels	20
Full Time Equivalents (FTEs)	225 (8% of all FTEs)
Days at sea	1,247 (-6%)
Fishing days	488 (-17%)
Landings by weight (kg)	116,247,522 (+8%)
Landings by value	€59 million (-12%) contributing 20% of the total income from landings
GVA*	€37.8 million (+38.5%)
Gross profit*	€14 million (+268%)
Net profit*	€2 million
Revenue	€67 million (+2.5%)
Key species landed	Mackerel (65%), blue whiting (17%) and horse mackerel (14%) of the total value of all landings in 2020.
Profitability for 2020	Increase in profitability compared to 2019.

***Caveat:** No economic data was provided by vessel owners in this segment for 2020 (or 2019). Estimates for 2020 economic indicators were calculated from a combination of the 2018 cost structures and 2020 landings data. The data must be used with caution.*

Table 9: Demersal trawl 18m-24m/ Polyvalent vessels: 2020 Operations	
Active vessels	58 (-11%)
Full Time Equivalents (FTEs)	354 (13% of all FTEs)
Days at sea	11,479 (-23%)
Fishing days	8,747(-24 %)
Landings by weight (kg)	12,961,370 (-24%)
Landings by value	€39.4 million (-34%) and contributing 15% of the total income from landings.
GVA	€19.9 million (+15%)
Gross profit	€5.6 million (+87%)
Net profit	€730,000 (-87%)
Revenue	€48.9 million (-9%)
Key species landed	*Nephrops* (48%), monkfish (15%) and haddock (7%) of the total value of all landings in 2020.
Profitability for 2020	Significant increase in profitability compared to 2019.

Table 10: Demersal trawl 24m-40m/ Polyvalent vessels: 2020 Operations	
Active vessels	44 (-8%)
Full Time Equivalents (FTEs)	322 (-11%) and 12% of all FTEs
Days at sea	9,967 (%)
Fishing days	7,762 (-8%)
Landings by weight (kg)	17,690,307 (-8%)
Landings by value	€42.7 million (-17%) and contributing 12% of the total income from landings.
GVA	€18.9 million (-21%)
Gross profit	€4.5 million (-64%)
Net profit	€1.1 million (-86%)
Revenue	€52.1 million (+1%)
Key species landed	*Nephrops* (35%), monkfish (14%), haddock (10%) and hake (7.5%) of the total value of all landings in 2020.
Profitability for 2020	Significant decrease compared to 2019.

3. Key drivers influencing performance: 2020- 2022

Based on feedback from industry, COVID-19, Brexit and latterly the impact of the Russian invasion of the Ukraine, leading to inflation and rising costs were the main driving forces influencing the economic performance of the Irish fleet in the period from 2020 to June 2022.

3.1 COVID-19

The first COVID-19 lockdown in March 2020 had an unprecedented impact on the Irish fleet as traditional markets closed and prices collapsed. The wider fisheries supply chain also encountered challenges. Seafood processors, especially those supplying seafood to export markets or the hospitality sector across Ireland, either reduced or temporarily ceased their operations. Decreased processing operations, particularly in 2020 had knock-on effects for the fishing fleet. According to data from the Sea Fisheries Protection Authority (SFPA), from March to May 2020, only 40% of 164 food processors were operational. By June 2020, the figure increased to 76% albeit at a much-reduced capacity than pre-pandemic times.

Data relating to activity by Irish fishing vessels (over 12m) demonstrates that during this first lockdown from March 2020, the number of active vessels was significantly reduced compared with the same timeframe in 2019 (Table 11). The percentage difference ranges from 15% to 44% down on the same period in 2019. Week 13 (i.e., March 23- 29, 2020) was the most dramatic difference with 167 vessels active compared to 296 during the same week in 2019. This represented a 44% reduction in activity from the previous year.

Table 11: Number of Irish vessels (over 12m) active per week in 2020 compared with the same period in 2019 (Source: SFPA).

	March			April			May		
Week Number	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
2019	281	296	264	259	260	253	295	288	292
2020	223	167	183	189	191	216	208	200	248
Difference in active vessel numbers	-58	-129	-81	-70	-69	-37	-87	-88	-44
Decrease in active vessels %	**-21%**	**-44%**	**-31%**	**-27%**	**-27%**	**-15%**	**-30%**	**-31%**	**-15%**

As demonstrated by Table 12, effort (kW days) by Irish demersal vessels (over 12m) in Irish waters from March to May 2020 compared to 2019 varied in different fishing grounds. Effort in the Biologically Sensitive Area (BSA) off the west, south-west and south of Ireland decreased by 36%, while effort in the Celtic Sea, off the south and south-east coast, off the north-west coast of Ireland and in the Irish Sea increased by 21% and 3% respectively.

Table 12: Demersal effort (kW days) by Irish vessels in various fishing grounds from March to May 2020 compared with the same period 2019 (Source: SFPA)

	ICES V – VI*	ICES VII*	Biologically Sensitive Area (BSA)
kW days recorded March - May 2019	199,424	1,055,020	1,327,910
kW days recorded March - May 2020	241,798	1,094,068	845,191
Decrease in kW days %	21%	3%	-36%

***Note:** A map of the ICES (International Council for the Exploration of the Sea) areas is provided in Annex 4.*

Covid-19: Government support to industry

In May 2020, the Irish government announced a temporary voluntary fleet tie-up scheme for fishing vessels in the Polyvalent, Beam Trawl and Specific segments of the fishing fleet. Eligible vessels were supported to voluntarily tie-up for one, two or three months. The scheme was implemented under Ireland's European Maritime and Fisheries Fund (EMFF) Operational Programme 2014-2020, co-funded by the Government of Ireland and the EU. The scheme was designed to complement the COVID-19 wage supports and loan arrangements already provided by the Government to the fishing sector.

Launched in June 2020, the aim of the voluntary tie-up scheme was to reduce the volume of seafood entering the market (which had been depressed by the COVID-19 pandemic), while at the same time keeping an adequate number of vessels fishing to maintain a food supply. The scheme contributed to the fixed costs incurred by fishing vessels while tied-up. The tie-up scheme was available to a maximum of 66% of the fishing fleet, in the different size categories, in any one month. The voluntary scheme operated over the calendar months of June, July, and August 2020, to coincide with the monthly fisheries quota management periods, to adjust the supply of fish coming onto a currently depressed market and protect quota availability for later in the year. Any vessel not receiving support to tie-up in any particular month was permitted to continue to fish.

Certain conditions were attached to this support scheme. Only vessels which had carried out fishing activities at sea for at least 120 days in total over the calendar years 2018 and 2019, and which made a total, to a minimum value, of €5,000 in the calendar year 2019, by reference to the Irish Sales Note System administered by the SFPA were eligible to apply. In total, 93 vessels (ranging in size from 6 metres to 24 metres) applied to the scheme valued at €203,300. A breakdown of the payments are provided in Table 13 along with how much the payments represented in terms of total revenue for 2020. The amount paid to the vessels represented only a small percentage of overall revenue.

Table 13: COVID-19 tie-up payments in 2020.

No of Vessels	Sum of Paid Grant	% Total Revenue for 2020
57	€59,500.00	0.13%
13	€12,000.00	0.07%
9	€26,800.00	0.09%
9	€69,000.00	0.13%
5	€36,000.00	0.02%

3.2 Brexit

In January 2021, the United Kingdom (UK) left the EU following negotiations on the EU/UK Trade and Cooperation Agreement (TCA). For the fishery sector, this included agreement on quota transfers from the EU to the UK, as well as on reciprocal access arrangements from EU vessels fishing in UK waters and vice-versa. From the TCA Agreements, 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 benficiary of BAR funding, receving just over €1 billion.

The Brexit/TCA deal brought a sudden and dramatic shift in the landscape for the entire Irish seafood sector, in several respects:

- The Irish fleet lost access to 15% of its annual quota, mainly affecting pelagic stocks, *Nephrops* and whitefish stocks such as megrim, monkfish and haddock.
- Irish seafood exports to UK, a key market, worth €80 million pre-Brexit, are impacted.
- Irish seafood imports from UK (worth €219 million in 2018), a key input to the Irish retail and processing supply chain, have been disrupted.
- Vital seafood export routes, primarily the 'land-bridge' via the UK, have been curtailed.
- Established Irish/UK links at scientific and policy levels in EU and ICES have been lost.

Brexit: Government support to industry

Recognising the impacts of the TCA, the Irish Government set up a Seafood Task Force to examine the implications for the fishing industry and coastal communities and to consider initiatives to address those implications. The Task Force delivered its report[4] in October 2021 and recommended a suite of initiatives with 16 support schemes estimated at a total cost of €423 million. The most significant recommendation was the implementation of a permanent voluntary decommissioning scheme for the whitefish fleet at a cost of €66 million, recommended to be funded under the BAR. The TCA quota cuts have had wide-ranging impacts on coastal communities depending on the seafood sector, but most of all they call into question the economic viability of the whitefish fleet as it stands. With lower quotas available post-Brexit which will continue to decline on a phased basis up to 2026, the entire whitefish fleet will be impacted by diminishing economic returns which is unsustainable.

To inform the Task Force on the scale of fleet restructuring required, BIM conducted a profitability analysis. This analysis quantified the number of vessels required to be removed from the fleet in order to return the various fleet segments to the level of profitability prior to the TCA. Following this analysis, the Task Force recommended the decommissioning of 60 whitefish polyvalent and beam trawl vessels of a Gross Tonnage of 8,000 GT and engine power of over 21,000 kW to return these fleet segments to profitability[5]. This equates to 26% of the vessels in number, and 29% in terms of engine power and gross tonnage. Reducing the capacity by this level would potentially free up approximately €38 million of quota.

Another significant recommendation was a temporary voluntary fleet cessation scheme to counter the impact of the reduction in quotas on the whitefish sector with different monthly payments for approved applicants according to the size of the vessel (Table 14). Subsequently, such a scheme was put in place for Q4 of 2021 for polyvalent and beam trawl vessels most impacted by loss of quota because of the TCA. The objective of the scheme was to manage quotas for the final months of the year while keeping continuity of supply to fish processors. 182 applications were approved for the 2021 tie-up at a cost of just under €10 million with 70% of the vessels opting to tie-up for the month of December (Table 15).

Table 14: Monthly payment amounts available for approved applicants according to the size of the vessel under the temporary Brexit tie-up scheme.

Size of vessel	Payment over one-month tie-up period
Under 10m	€4,600
10 < 11.99m	€7,100
12 < 14.99m	€14,200
15 < 17.99m	€24,500
18 < 20.99m	€45,400
21m < 23.99m	€59,000
24m <39.99m	€88,700

4. Report of the Seafood Task Force. Navigating Change The way forward for our Seafood Sector and Coastal Communities in the wake of the EU/UK Trade & Cooperation Agreement October 2021. https://bim.ie/wp-content/uploads/2022/01/Report-of-the-Seafood-Taskforce.pdf

5. Ireland has previously implemented two decommissioning schemes in 2005-2006 and 2008. The 2005-2006 decommissioning scheme led to the permanent withdrawal of 27 polyvalent vessels over 18 metres, with 3,323 GTs removed from the fleet register at a cost of €11.8 million. The 2008 decommissioning scheme resulted in the permanent withdrawal of an additional 46 polyvalent vessels over 18 metres, with 6,914 GTs removed from the register at a cost of €36.6 million. Combined, these two schemes removed 73 vessels with a total capacity of 10,257 GTs and 28,515 kW at a cost of €48.4 million, which represented 71% of the combined target capacity reduction. While the actual valuation of each vessel/ licence was different for each fisherman, which was influenced by a wide range of factors such as the age/condition of the vessel, profitability and fishing patterns, the average premium paid was €4,422/GT.

Table 15: COVID-19 tie-up payments in 2021.

Tie-Up Month	No. of payments	Total Amount
October	27	€1,132,700
November	27	€1,577,000
December	128	€7,244,600
Total	**182**	**€9,954,300**

In May 2022, an additional Brexit Temporary Fleet Tie Up Scheme was announced targeted at eligible polyvalent and beam trawlers vessels impacted by quota transfers to the UK under the TCA. The scheme supports vessels to temporarily cease all fishing activity for two non-consecutive months from June to November 2022 inclusive[6,7]. A total of 67 applicants were approved for the June 2022 tie-up period, 43 for July and 56 for August.

3.3 Inflation, rising costs and the Russian invasion of the Ukraine

According to the Central Statistics Office (CSO), annual inflation in Ireland rose to 9% in June of 2022, the highest since September of 1984. Oil-price depend on the interaction between supply and demand for oil on international markets. Fuel prices have fluctuated greatly between 2020 and 2022.

In 2020, fuel prices fell sharply due to the reduction in demand as a result of the COVID-19 crisis. However, this has been reversed since the Russian invasion of the Ukraine in February 2022. This is driving fleets to operational losses. Since the end of 2021, fuel prices have continually increased month-by-month with annual averages increasing 9% from 2020 to 2021 and 68% from 2021 to 2022 (Figure 13).

> ***Fishing is becoming less and less viable and everything is becoming more expensive, in the long-term this will impact how we live and eat.***

6. Vessels choosing this option must maintain a two- month gap between tie-up months (e.g., June and September or July and October).
7. Applicants must be actively engaged in fisheries for quota species covered by the TCA agreement. The vessel must have registered sales notes on the SFPA database amounting to €5,000 or more in any consecutive two-calendar year periods 2018/2019, 2019/2020 or 2020/2021. The sales notes must relate to quota species covered by the TCA agreement. Sales notes relating to line caught mackerel and North West herring will be excluded. The sales notes must be registered on the SFPA sales note database. BIM will check this with the SFPA.

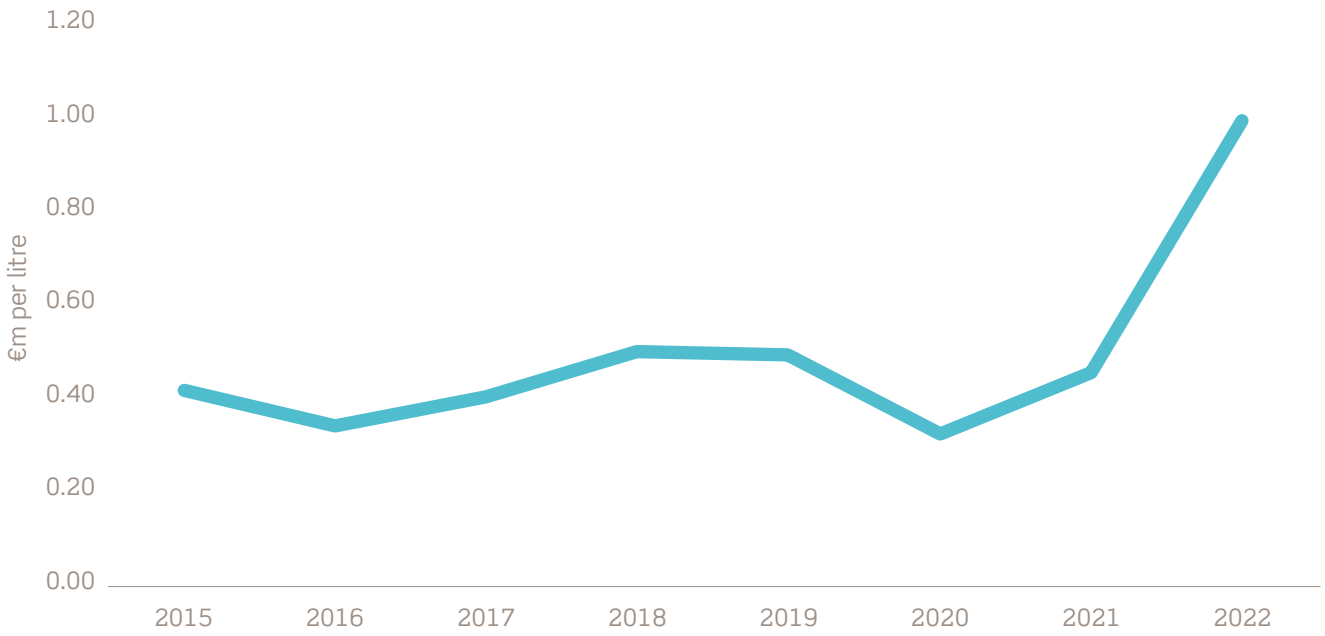


Figure 13: Trends in average fuel prices: April 2015- July 2022 (Source: Industry data).

> ***Fuel costs is impacting decisions where we now fish and where we land.***

In 2020, energy costs for the Irish fleet were estimated at €42.5 million representing 15% of all operating costs. In 2022, this has increased significantly, putting the sector under threat. If fuel prices (and other operating costs such as insurance, repair and maintenance etc.), either remain at the current elevated level (at time of writing, €1.20 in July 2022) or continue to increase further (e.g. €1.30- €1.50 or higher), there is a considerable risk that many fishing fleets will fall into negative operating profits forcing vessels to tie-up. The increase in operational costs is particularly challenging for vessels that have crew shares as there are reduced wages for crew once fuel and other operational costs are removed from any income incurred.

In 2020, average fuel costs per litre were €0.42 whereas average fuels costs per litre in mid-2022 stood at €0.90 representing a 114% increase in cost and the current reported costs of €1.20 per litre represents a 18% increase since 2020. In terms of energy consumption for 2020, the Irish fleet consumed 101 million litres at a total cost of €42.4 million, representing 15% of all operating costs (circa. €26 million). Based on the average fuel price in 2022 (€0.90 per litre), if the Irish fleet were to consume the same volume as 2020, this will cost at least €90.9 million representing 28% of the potential operating costs.

> ***The war in the Ukraine is affecting much more than diesel, we're faced with increased costs of productions, transport, electricity, and gas.***

Figure 14 presents an analysis of the baseline data from 2020 and current cost structures at a fuel price up to €1.50 per litre that the national fleet could drop into a negative operating profit and may not be able to cover their operating costs. Table 16 highlights the varying projected fuel price points whereby certain fleet segments could drop into a negative operating profit and may not be able to cover their operating costs. These projections are not intended as precise predictions. The analysis does not factor in changes to quota or possible operational changes such as vessles participating in the state-funded monthly tie-up schemes, fishing closer to the coast to save on fuel or reduction of crew numbers or crew share to mitigate against increasing fuel costs.

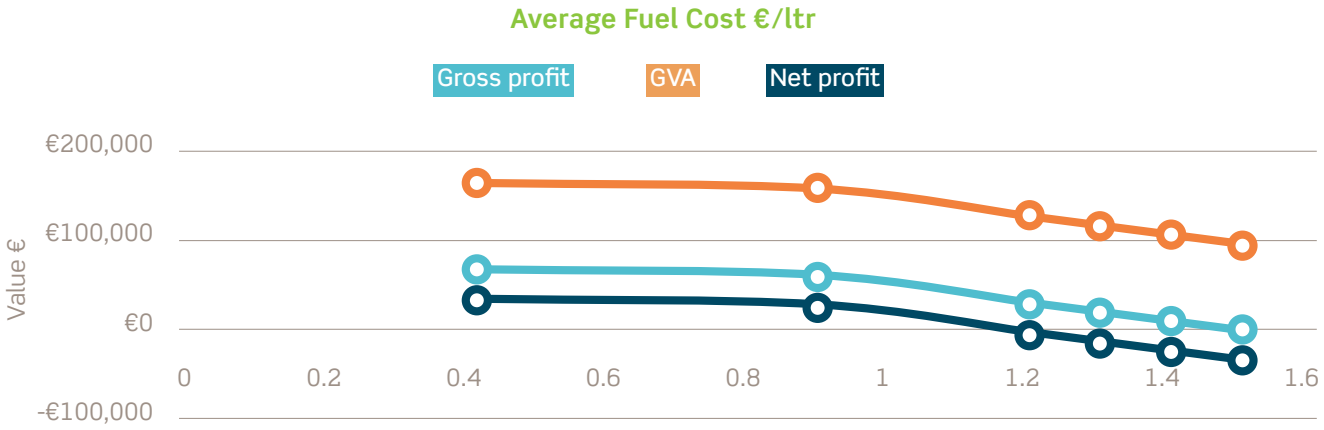


Figure 14: Fuel price point at which gross profit, net profit and GVA cross into a negative value.

> *I'm now fishing a lot closer to home because of the current diesel prices.*

> *Even though we know it's no longer sustainable to keep fishing, we're only going to sea to keep our crew.*

Table 16: Projected fuel price point at which gross profit and net profit become negative

	Gross Profit	Net Profit
National Fleet	€1.55	€1.08
Selected Segments		
Pelagic trawl over 40m/ RSW vessels	€1.86	€0.45
Demersal trawl 18m-24m/ Polyvalent vessels	€1.03	€0.68
Demersal trawl 24m-40m/ Polyvalent vessels	€0.85	€0.68

4. Outlook for economic performance in 2021-2022

Preliminary data for 2021-2022 indicates a significant decrease in revenue and profitability for the Irish fleet. This is despite an increase in landings by weight from 2020 to 2021 (+6%) and a decrease in value of landings (-7.5%) due to decreasing fish prices. Data projections for 2021 indicate a deterioration with decreasing revenue (-9%) to €283 million and decreasing GVA (-26%) to €120 million. In addition, in 2021 gross profit is predicted to decrease significantly (-58%) to €27.6 million combined with a decreasing net profit (-75%) to €8.1 million.

Forecasts for 2022 suggest a further decrease in economic performance compared to 2021 driven by decreases in both landings weight and rising operational costs. In terms of economic indicators, revenue and net profit are predicted to increase with GVA and gross profit decreasing, driven primarily by rising inflation and unprecedented energy costs. It is anticipated that the tie-up schemes (discussed in section 3.2) running from June-November 2022 will mitigate these projected outcomes and allow the industry to absorb the impacts of rising fuel costs for some segments of the fleet and the reduced access of fishing quotas as a result of Brexit. In the long-term, decommissioning will help to bring fleet capacity back in balance with available quotas and improve the profitability for vessels remaining in the Irish fleet.

Annex 1: Economic indicators for all segments in the Irish fleet: 2020

Segments	Number of vessels	FTE national	Days at sea	Live weight of landings	Value of landings	Revenue
Pelagic trawl/RSW over 40 m	20	225	1,247	116,247,522	58,863,849	66,962,196
Demersal trawlers/Seiners 24-40 m	44	322	9,967	17,690,307	42,700,223	52,092,666
Demersal trawlers/Seiners 18-24 m	58	354	11,479	12,961,370	39,433,958	48,870,921
Potters <10m	577	605	17,790	2,888,344	7,345,250	23,399,407
Pelagic/Polyvalent Pelagic 24-40m	14	95	1,668	33,051,621	20,408,868	19,119,802
Dredgers 24-40 m	7	38	1,375	2,249,808	21,471,015	18,119,846
Demersal trawlers/Seiners 12-18 m	31	88	3,909	5,544,401	5,440,398	14,188,836
Potters 12-18 m	24	99	3,299	4,911,930	30,847,351	12,719,507
Potters 10-12 m	80	137	6,086	3,787,588	7,272,666	12,383,920
Demersal trawlers/Seiners <10 m	45	50	No data	1,334,007	1,694,716	9,509,413
Beam Trawlers 24-40 m	14	50	2,896	2,419,038	7,808,265	8,132,539
Drift and/or fixed netters <10m	192	206	No data	1,643,217	4,634,346	6,454,358
Dredgers <10m	130	145	942	600,443	2,229,821	5,341,673
Drift and/or fixed netters 18-24 m	15	60	1,961	1,648,737	4,220,456	4,706,375
Pelagic 12-18 m	8	26	424	6,366,267	3,476,182	3,654,265
Dredgers 10-12 m	37	59	2,753	973,744	2,815,003	2,872,372
Hooks <10m	57	61	No data	340,776	440,930	1,945,035
Drift and/or fixed netters 10 - 12 m	12	13	512	578,192	674,810	1,056,408
Drift and/or fixed netters 10-12 m	10	24	747	398,289	816,736	747,040
Pelagic 10-12 m	5		122	1,423,963	431,002	349,733
Hooks 10-12 m	11	27	283	163,929	165,844	238,619

Gross Value Added	Gross profit	Net profit	Return on fixed tangible assets	Profitability	Economic development trend	As a % of total revenue
37,795,638	14,084,544	-1,976,215	-0.5	Weak	No data	21.40%
18,885,637	4,514,623	1,147,051	2.6	Weak	Deteriorated	16.65%
19,912,760	5,633,288	729,561	1.7	Weak	Improved	15.62%
15,837,435	11,863,661	No data	No data	No data	No data	7.48%
10,025,459	1,818,972	- 2,736,975	-3.8	Weak	Improved	6.11%
16,945,923	16,025,341	15,981,027	281.2	High	Improved	5.79%
5,041,948	-975,201	-3,345,870	-19.2	Weak	Deteriorated	4.54%
6,092,401	-1,403,752	-1,597,176	-30.3	Weak	Deteriorated	4.07%
7,387,373	4,315,716	3,824,337	46.3	High	Improved	3.96%
6,052,267	4,945,198	No data	No data	No data	No data	3.04%
1,844,340	-895,925	-1,031,998	-35.8	Weak	No data	2.60%
4,632,828	3,622,671	No data	No data	No data	No data	2.06%
3,860,372	2,048,476	No data	No data	No data	No data	1.71%
1,737,290	-360,026	-839,182	-14.9	Weak	Deteriorated	1.50%
1,788,055	607,601	-92,741	No data	Weak	No data	1.17%
2,024,889	1,266,829	1,226,191	34.8	High	Improved	0.92%
1,431,937	1,181,305	No data	No data	No data	No data	0.62%
151,699	-340,880	-417,944	-269.6	Weak	Deteriorated	0.34%
560,999	344,719	No data	No data	No data	No data	0.24%
-541,630	-2,429,833	No data	No data	No data	No data	0.11%
No data	No data	No data	No data	No data	No data	0.08%

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 an annual basis..

The survey asks a series of questions about the financial and operational performance of fishing vessels and the demographics of the crew (copy of the survey available in Annex 6). It is an opportunity for industry to report how they have navigated challenges and changes such as the impacts of Brexit, COVID-19 and increasing fuel 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 economic and operational details for their previous year's activity. There is a time lag reporting these data because for an accounting period ending on 31 December 2020, the financial return must be filed by September of the following year (i.e., September 2021). BIM collected economic data from October 2021 to January 2022 and submitted the results to the EU in March 2022.

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.

While traditionally the NSS was conducted by a postal survey, in 2021 BIM began transitioning to an online portal to make the process of providing data easier and more secure. However, this change of survey format impacted the response rate and composition of the sample of vessel owners who participated. Data presented in this report reflects a limited number of surveys received by the end of February 2022. Following feedback from industry, in May 2022 a supplementary paper-based survey was circulated to all vessel over 12 metres to address the data gaps for 2020 operational data resulting from the low uptake of the online survey. The economic results of this supplementary survey are not included in this report but will be submitted to the EU to augment the low returns received last year.

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 isusing 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 is 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, 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 (Return 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.

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

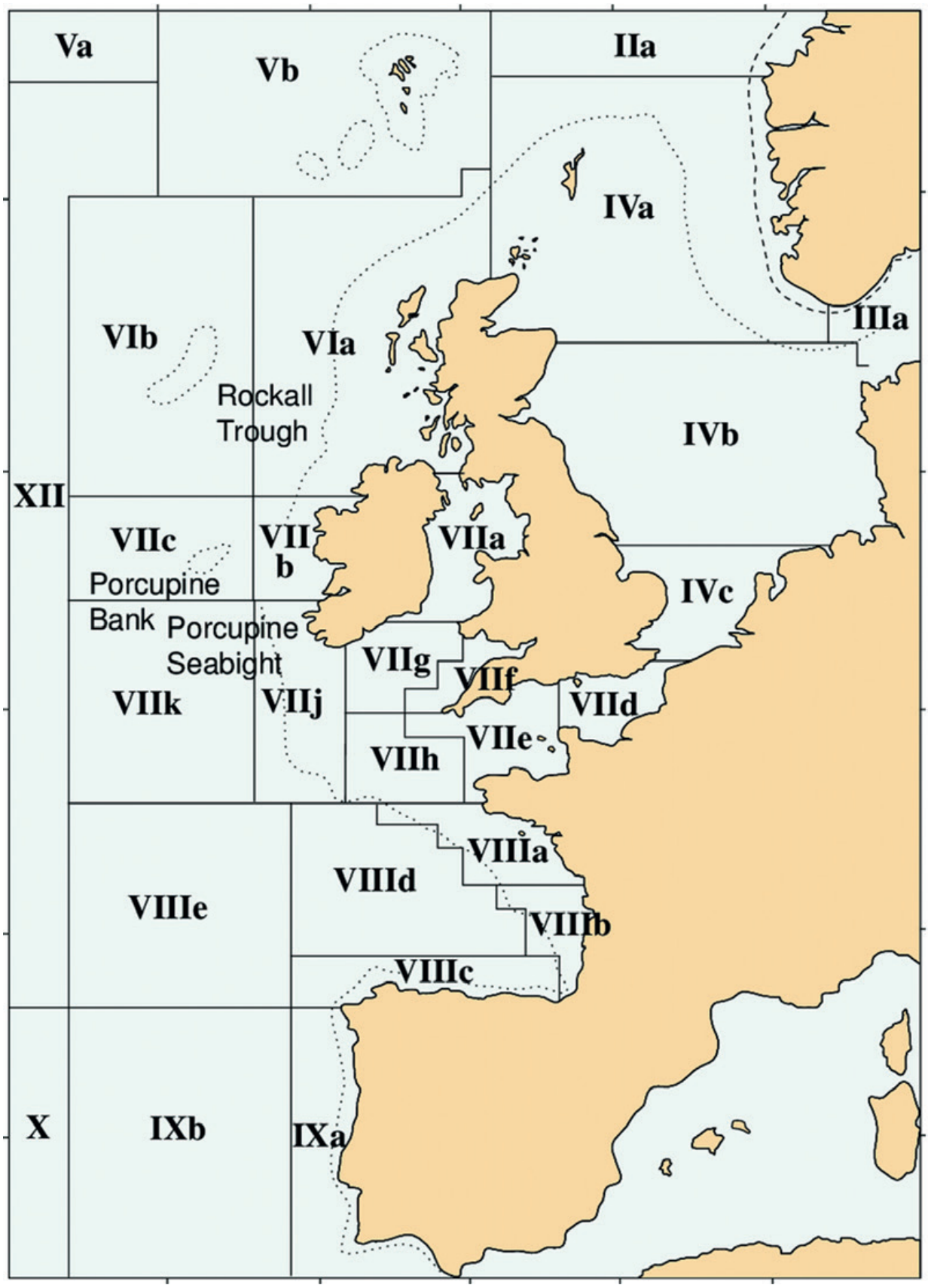
Net Profit/Loss

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: Map of the ICES areas



Annex 5: EU Fleet Segments in accordance with Data Collection Framework/ EU MAP

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 or 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. **For Supra region 1 and 3 only.

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

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

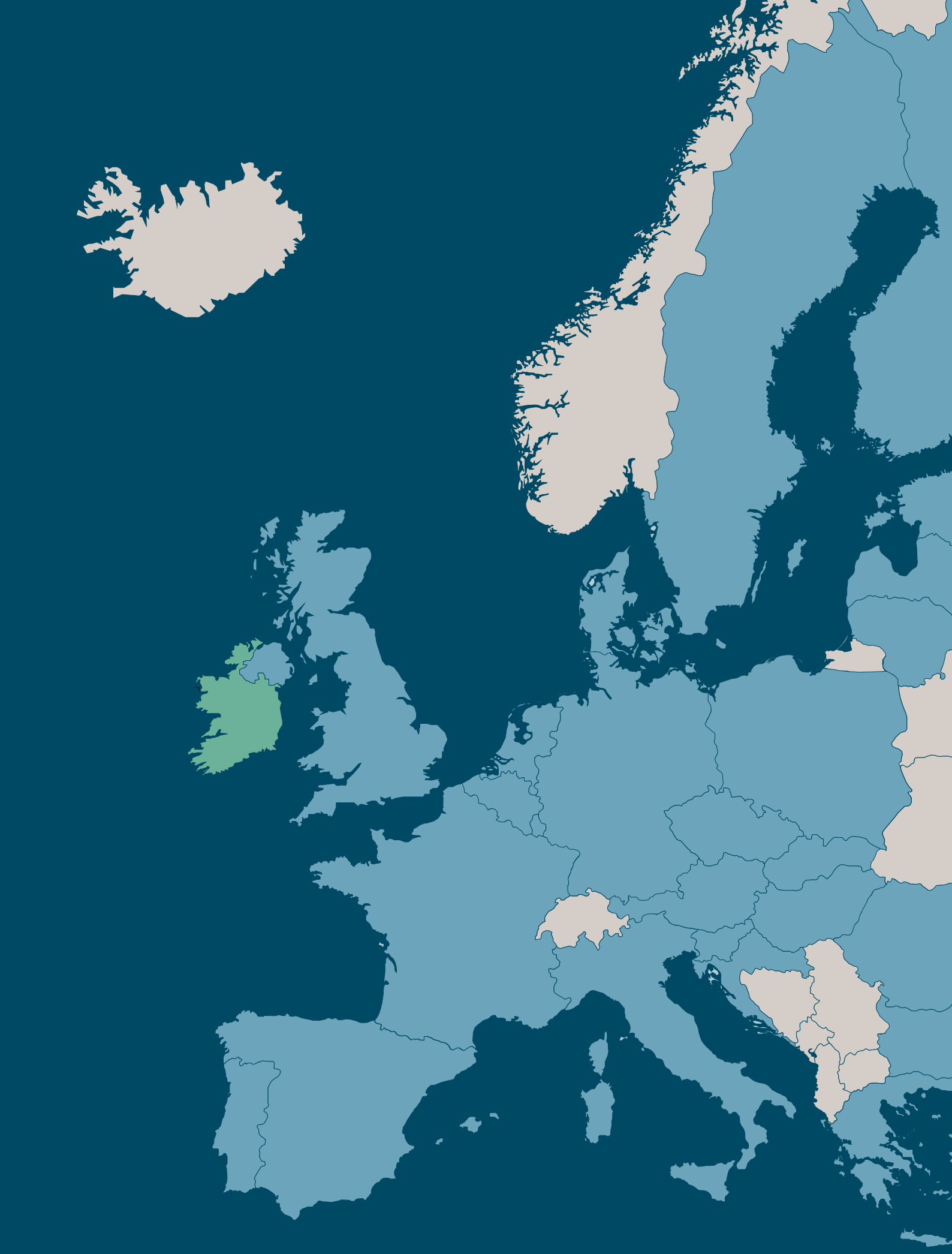
VL1824 = Vessel between 18 meters and 24 meters in length. All regions.

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: 2020

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	45
Demersal trawlers and/or demersal seiners 10-< 12 m	DTSVL1012	12
Demersal trawlers and/or demersal seiners 12-< 18 m	DTSVL1218	31
Demersal trawlers and/or demersal seiners 18-< 24 m	DTSVL1824	58
Demersal trawlers and/or demersal seiners 24-< 40 m	DTSVL2440	44
Dredgers 0-< 10 m	DRBVL0010	130
Dredgers 10-< 12 m	DRBVL1012	31
Dredgers 12-< 18 m	DRBVL1218	6
Dredgers 18-< 24 m	DRBVL1824	2
Dredgers 24-< 40 m	DRBVL2440	5
Drift and/or fixed netters 0-< 10 m	DFNVL0010	192
Drift and/or fixed netters 10-< 12 m	DFNVL1012	10
Drift and/or fixed netters 12-< 18 m	DFNVL1218	7
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	5
Pelagic trawlers 12-< 18 m	TMVL1218	5
Pelagic trawlers 18-< 24 m	TMVL1824	3
Pelagic trawlers 24-< 40 m	TMVL2440	14
Pelagic trawlers 40 m or larger	TMVL40XX	20
Vessels using hooks 0-< 10 m	HOKVL0010	57
Vessels using hooks 10-< 12 m	HOKVL1012	10
Vessels using hooks 12-< 18 m	HOKVL1218	1
Vessels using Pots and/or traps 0-< 10 m	FPOVL0010	577
Vessels using Pots and/or traps 10-< 12 m	FPOVL1012	80
Vessels using Pots and/or traps 12-< 18 m	FPOVL1218	21
Vessels using Pots and/or traps 24-< 40 m	FPOVL2440	2
Inactive 0-< 10 m	InactiveVL0010	431
Inactive 10-< 12 m	InactiveVL1012	91
Inactive 12-< 18 m	InactiveVL1218	18
Inactive 18-< 24 m	InactiveVL1824	4
Inactive 24-< 40 m	InactiveVL2440	3



Annex 6: National Seafood Survey 2020- Fisheries

National Fisheries Seafood Survey

It is a legal requirement to complete and return this form (S.I. No. 132 of 2010)
Thank you for taking the time to complete the National Seafood Survey

Section 1 - Vessel and Crew Survey

1. Owner and Vessel Details

Vessel Details

Vessel	
Reg Code	
Homeport	
Email	

Financial Year 2020

Owner	
Address	
Phone	

2. Employment

2.1 Please provide details of all individuals employed on your vessel based on position, gender, age, nationality, education, average hours per day, total days at sea per year and payment type (i.e., salary or share)

Position (Skipper/ Deckhand/ Administration)	Gender	Age	Nationality	Highest Education level	Highest Vocational Training	Average Hours per day	Total Days at sea per year	Payment type

2.2 Vessel Owner and Family Employment Details

Do you or any member of your family spend time ON YOUR VESSEL in an **unpaid capacity**? (e.g., accounts, deliveries, crew transfers, stores, gear/vessel maintenance etc.)

If **YES**, please state their **gender** and provide an estimate of the total **NUMBER OF DAYS** (full working day) in the year.

☐ Yes ☐ No

Male	Female

Do you or any member of your family **work ASHORE in a PAID capacity**? (e.g., mending gear, boat maintenance, deliveries etc.)

If YES, please state their **gender** and provide an estimate of the total **NUMBER OF DAYS** (full working day) in the year.

☐ Yes ☐ No

Male	Female

3. Fuel Details

Fuel Usage: Please indicate the **total litres of vessel and motor fuel** used in the year and the **average price of fuel** (cents per litre):

Vessel Fuel (litres)	Motor Fuel (litres)
Average Price of vessel fuel (€ per litre)	Average Price of Motor Fuel (€ per litre)

Section 2 - Economy Survey

1. Income and Operating Costs

The following questions relate to the **value of fishing income** (i.e., fish landings sold during the year) and **non-fishing income** (e.g., fuel duty refunds, grants, insurance payments for damage/loss of vessel or gear etc).

The questions relating to **overhead fixed costs** include insurance, loan interest, administration, professional fees etc. and **overhead variable costs** include wages, fuel costs, electricity, ice, bait repairs and maintenance etc.

Please provide as much details as possible in **EURO**.

Income Details

Fishing Income in €

Category	Amount
Gross value of landings	€

Non-Fishing Income in €

Category	Amount
Operating subsidies	€
Fuel duty refunds	€
Grants for daily operations	€
Subsidies on investments	€
Grants for long term investments	€
Other income	€

Expenditure Details

Fixed Overhead Operating Costs in €

Category	Amount
Insurance	€
Loan interest	€
Accountancy and audit costs	€
Legal cost	€
Other fixed costs	€
Depreciation	€

Variable Overhead Operating Costs in €

Category	Amount
Wages and salaries	€
Repairs and maintenance	€

Energy costs:

Vessel fuel	€
Motor fuel	€
Electricity (onshore for vessel/ refrigeration/ heating and lights in offices etc.)	€

Other costs:

Cleaning and hygiene	€
Filters/lube oil	€
Ice	€
Bait	€
Memberships	€
Dues and levies	€
Other variable costs	€

2. Assets

In this section, we are trying to calculate the capital value of the fleet. Please answer the questions as best you can:

Asset	Year of Purchase	New or Second-hand	Purchase Price	Purchase of Additional Assets	Sale/Scrapping of Assets	Depreciation Rate %
Vessel			€	€	€	%
Vessel Equipment and Fittings			€	€	€	%
Engine Replacement			€	€	€	%
Tonnage (GTs)			€	€	€	%
Plant and machinery			€	€	€	%
Property (related to fishing)			€	€	€	%
Other			€	€	€	%

3. Economic challenges facing the sector

3.1 What are the main issues facing your sector and what can be done to address these issues?

3.2 How has the increasing cost of fuel affected your operations?

3.3 Have your fishing patterns or target species changed? If YES, please provide details.

3.4 Has the number of people you employ been impacted? If YES, please provide details.

Statement: I declare the information provided in this form is true and accurate to the best of my knowledge

Signature:

Date:

How to cite this report:

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