Ollscoil na Gaillimhe
University of Galway

Foras na Mara
Marine Institute

Ireland's Ocean Economy

Key Facts & Figures

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Contributors & Acknowledgements

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Socio-Economic Marine Research Unit (SEMRU), University of Galway

SEMRU was established through the Beaufort Award in 2008. Since then, it has developed into the foremost marine economic analysis centre in Ireland. The research of the unit is interdisciplinary in nature and focuses on the economic importance of coastal and offshore marine environments. This involves examining the economic utility of the marine environment and the ecological value derived from the productivity of associated ecosystems.

Marine Institute

The Marine Institute is Ireland's state agency set up under the Marine Institute Act 1991, to undertake, to co-ordinate, to promote and to assist in marine research and development, and to provide government services that inform policymaking, regulation and the sustainable management of Ireland's maritime area and marine resources. The Institute provides support through a range of scientific, advisory and economic development services.

Contents

Introduction

Introduction

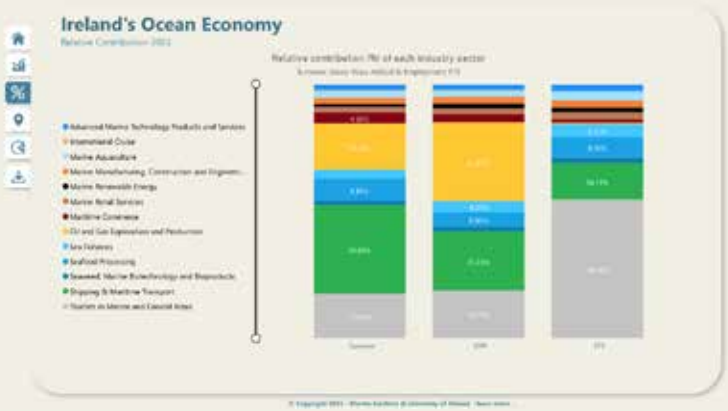
This report provides an update on Ireland's ocean economy across three main economic indicators: turnover, gross value added (GVA) and employment (FTEs), and provides an analysis of trends over the last five years. The report also provides commentary on rates of change over a ten-year timeframe (2012 to 2022), and also analyses any changes pre- and post-Covid (i.e. changes from 2019 to 2022, where evident).

The report is accompanied by an online dashboard, where data trends can be accessed. The 2023 Ocean Economy Report is the seventh in the ocean economy series[1]. The methodology used in compiling this report builds on previous reports allowing for a comparable representation of Ireland's ocean economy. CSO business statistics and other national datasets used in the reporting are generally for 2021 (best available data). As a result, 2022 data is estimated. These estimates are based on a forecasting exercise that combines the latest published economic data from the CSO, BIM, government economic forecasts, information and data obtained from surveys with marine-related businesses, and insights from industry bodies, government departments and agencies. In 2024, a survey of selected industries will be carried out as part of the Bi-Annual National Ocean Economy Company Survey.

Ireland's ocean economy statistics are based on nominal values.
This year's report reviews these values to also provide an estimate of 'real values' to adjust for inflation.

1. An update on Ireland's Ocean Economy was published in 2020 as part of a report outlining key challenges and opportunities for Ireland's major ocean economy industries [Ahearne, A. & Hynes, S. (2020). Challenges and Opportunities for Ireland's Major Ocean Economy Industries]

Figure 1: Ireland's Ocean Economy Dashboard, 2023



Methodology

The methodology developed for Ireland's ocean economy report includes:

- Identifying the marine industry data for which there is publically available data e.g. from the CSO and other national and European statistical programmes such as Eurostat, EC Scientific, Technical and Economic Committee for Fisheries (STECF) & Bord Iascaigh Mhara (fisheries and aquaculture) and the Irish Maritime Development Office (shipping trends and cruise calls);
- Where required, estimating the proportion of economic activity that is marine-based using proxies / weightings;
- Identifying industries and collecting data where alternative data collection methods must be developed, i.e. surveys, company accounts; and
- Reporting on the levels of turnover, gross value-added and employment (FTEs) across 13 industries operating in Ireland's ocean economy.

The CSO census and surveys used for the collation of the data on Ireland's ocean economy include primarily;

- Census of Industrial Production (CIP)
- Annual Services Inquiry (ASI)
- Building and Construction Inquiry (BCI)

The data relating to marine activity from these censuses and surveys is provided at the NACE four-digit level. The NACE code system is a Pan-European classification system that groups enterprises according to their business activities by assigning a unique 2, 3 and 4-digit code to each industry. Issues with confidentiality can often mean NACE codes have to be aggregated, and in some instances the data is not available due to issues with confidentiality. Where data are not available from CSO sources, a business survey is conducted bi-annually (National Ocean Economy Survey). To supplement the data collected, Company Registration Office (CRO) financial data is also used. The last ocean economy survey took place in 2022.

Certain industries are clearly identifiable as fully marine, whereas data on other marine activities can be more difficult to obtain. For example, data on marine engineering, and tourism in marine and coastal areas, cannot be differentiated from general engineering and tourism using the data collected by the Central Statistics Office (CSO). In these instances, these industries require the use of proxies to get a better understanding of the proportion of these industries attributing to Ireland's ocean economy. To work out appropriate weightings (e.g. trade by sea, tourism in coastal areas), other statistical datasets are used e.g. Eurostat trade statistics, National Household Surveys, Census of Population, Fáilte Ireland tourism statistics.

Data on fisheries and aquaculture is provided annually by BIM, and is in line with what is reported at EU level as part of the EC Common Fisheries Policy and the work of the Scientific, Technical and Economic Committee for Fisheries (STECF). This data is a snapshot in time and annually the data is reviewed with BIM and adjusted where data has been updated as part of their work with the EC STECF.

Due to time-lags in the release of national and European statistics, projections are used to estimate the previous year's statistics. This methodology is based on data from the CSO, Eurostat, government and sectoral economic forecasts. The estimates for fisheries and aquaculture are provided by BIM.

IRELAND'S OCEAN ECONOMY 2022

DIRECT IMPACT (NOMINAL VALUES)

33,452
EMPLOYEES (FTEs)

€7.01 BN
TURNOVER

1%
GNI*

€2.85 BN
GVA

DIRECT & INDIRECT IMPACT

74,674
EMPLOYEES (FTEs)

€14.41 BN
OUTPUT

1.9%
GNI*

€5.16 BN
GVA

Ireland's Ocean Industries

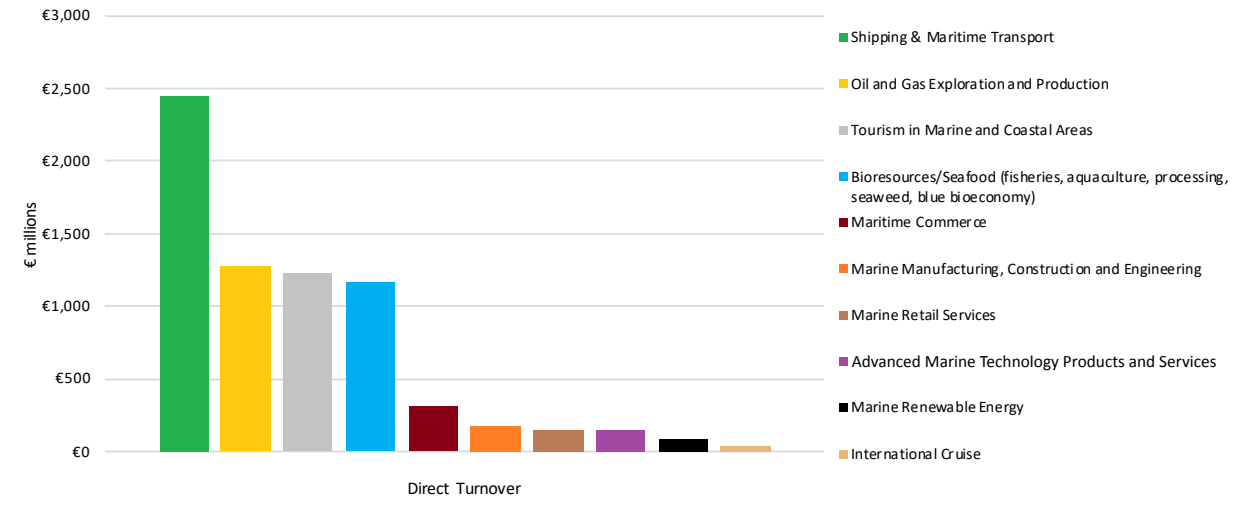
Turnover	GVA	Employment
1. Shipping & Maritime Transport	1. Oil and Gas Exploration and Production	1. Tourism in Marine and Coastal Areas
2. Oil and Gas Exploration and Production	2. Shipping & Maritime Transport	2. Bioresources/Seafood*
3. Tourism in Marine and Coastal Areas	3. Tourism in Marine and Coastal Areas	3. Shipping & Maritime Transport
4. Bioresources/Seafood*	4. Bioresources/Seafood*	4. Marine Manufacturing, Construction and Engineering
5. Marine Commerce	5. Marine Commerce	5. Marine Retail Services
6. Marine Manufacturing, Construction and Engineering	6. Marine Manufacturing, Construction and Engineering	6. Advanced Marine Technology Products and Services
7. Marine Retail Services	7. Marine Retail Services	7. Marine Renewable Energy
8. Advanced Marine Technology Products and Services	8. Advanced Marine Technology Products and Services	8. Marine Commerce
9. Marine Renewable Energy	9. Marine Renewable Energy	9. Oil and Gas Exploration and Production
10. International Cruise	10. International Cruise	10. International Cruise

* Marine Bioresources/Seafood: fisheries, aquaculture, seafood processing, seaweed, blue bioeconomy/biotechnology

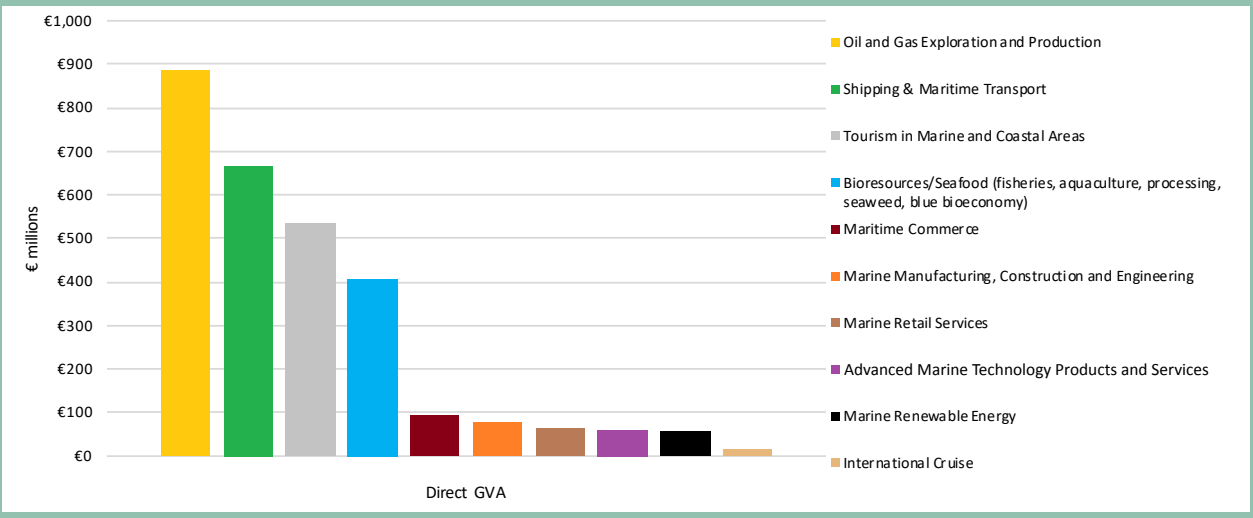
THE OCEAN ECONOMY - DEFINITION

The ocean economy is defined as any economic activity that directly or indirectly uses the sea as an input or produces an output for use in a sea-specific activity.

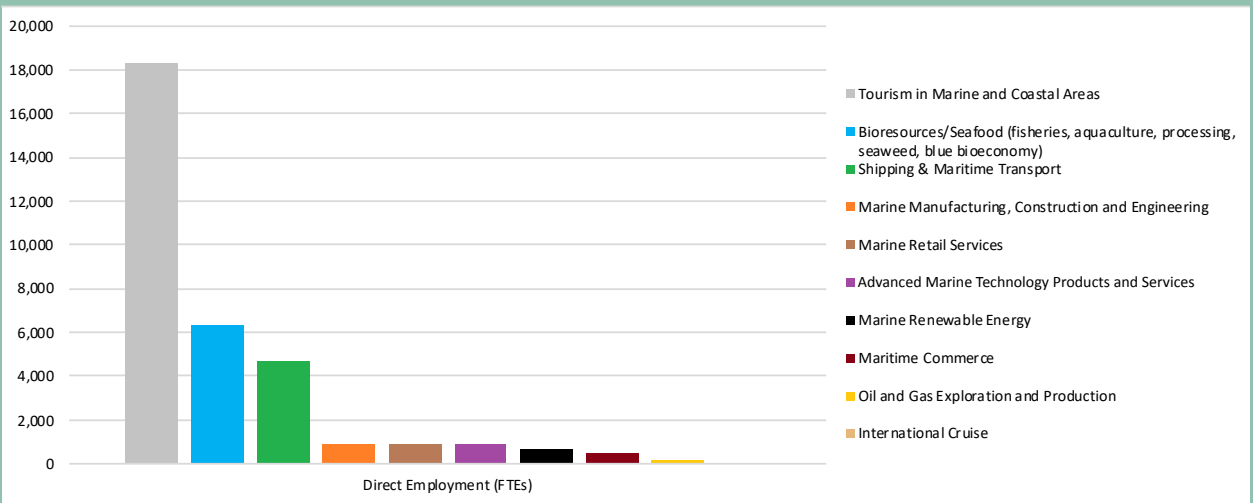
TURNOVER



GVA



EMPLOYMENT



Direct Impact:

Ireland's ocean economy in 2022:

- generates approximately €7.01 billion in turnover;
- has a direct economic contribution, as measured by GVA, of €2.85 billion; and
- employs approximately 33,500 Full-Time Equivalents (FTEs).

Table 1 and Figure 2 show the contribution of each industry in terms of turnover, GVA and employment.

Table 1: Direct Turnover, GVA and Employment by industry, 2022

2022 (estimates)	Direct Turnover € 000's	Direct GVA € 000's	Direct Employment (FTEs)
Shipping & Maritime Transport	2,446,006	664,725	4,728
Tourism in Marine & Coastal Areas	1,229,072	535,799	18,325
International Cruise	33,743	13,119	
Marine Retail Services	152,694	64,131	925
Marine Commerce	305,884	91,516	479
Sea Fisheries	239,626	119,904	1714
Marine Aquaculture	186,071	68,000	1170
Seafood Processing	618,010	172,786	2695
Seaweed, Marine Biotechnology & Bioproducts	122,890	47,872	768
Marine Manufacturing, Construction & Engineering	170,523	75,115	937
Oil and Gas Exploration & Production	1,272,297	886,151	160
Marine Renewable Energy	83,859	54,148	642
Advanced Marine Technology Products & Services	151,016	58,896	909
Total	**7,011,691**	**2,852,162**	**33,452**

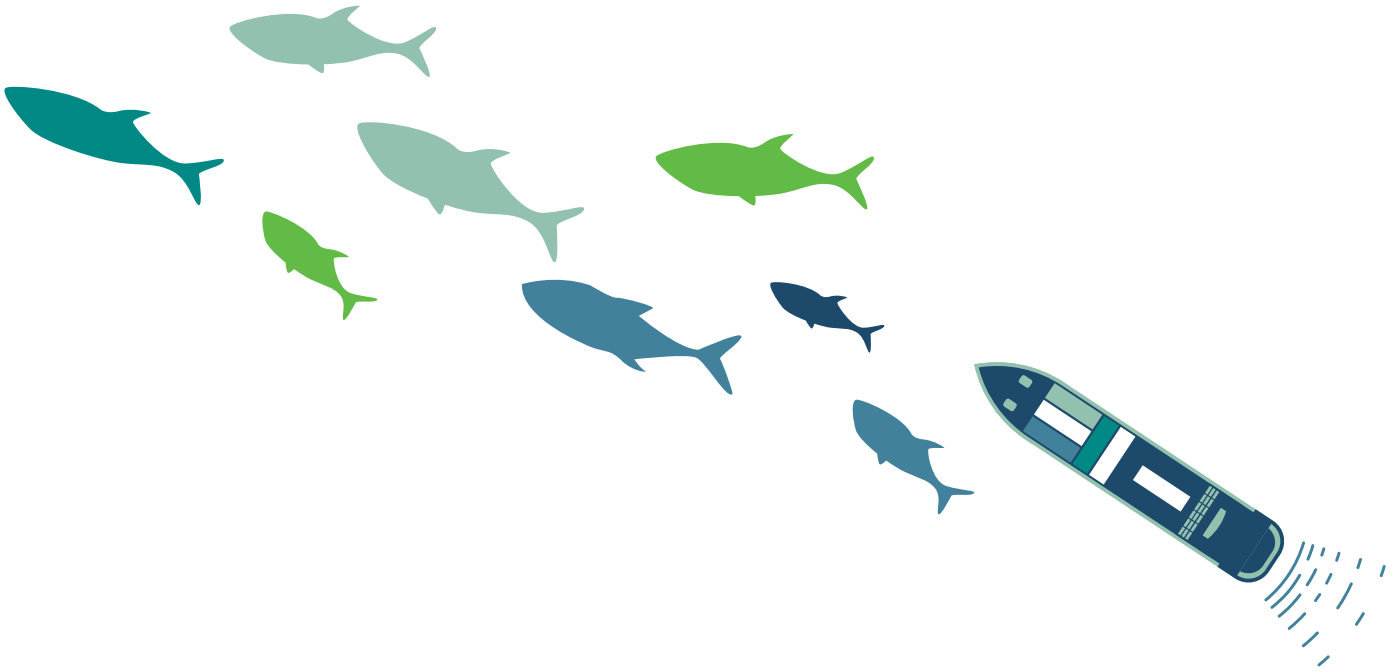
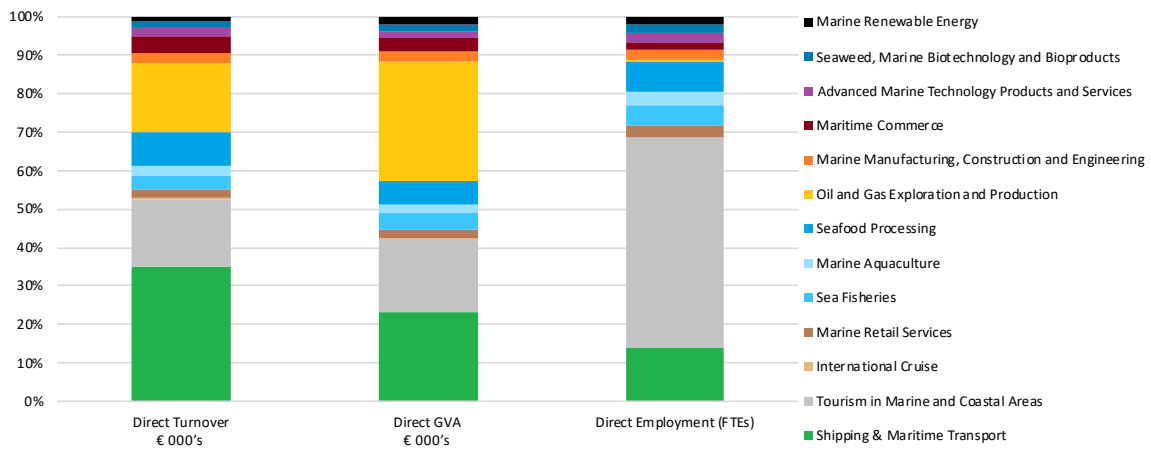


Figure 2: Relative contribution (%) of each industry: turnover, GVA and employment, 2022



Trends in Ireland's Ocean Economy

The methodology used in compiling this report builds on previous reports allowing, in most part, for a complete and comparable representation of Ireland's ocean economy across all industries. The exception to this is Sea Fisheries Employment (FTEs). BIM have advised a new methodological approach for the calculation of FTE's was applied to FTE calculations in 2020 and 2021 and also used to estimate 2022 figures. Due to changes in methodology in fisheries employment, historical time series of FTE pre 2020 remains consistent but cannot be directly compared to 2020, 2021 and 2022 estimates.

Annual Trend 2021-2022:

Over the period **2021-2022** it is estimated that Ireland's Ocean Economy has grown, in nominal terms, by:

- +17% in turnover;
- +19% in GVA; and
- +19% in Employment

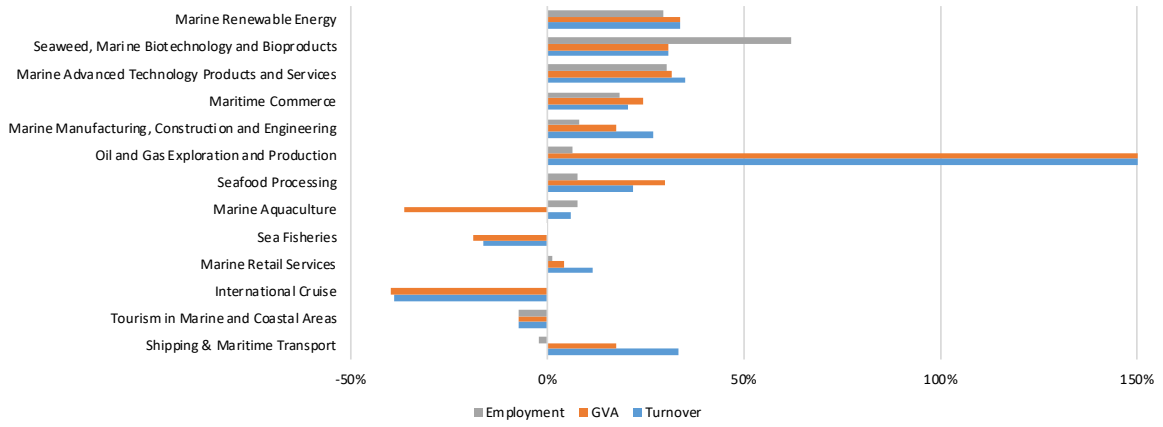
Ireland's Post Covid Ocean Economy

Comparing Ireland's Ocean Economy **2019** data to **2022** (noting 2020 and 2021 were impacted by Covid, and 2021 saw a gradual rebound), Ireland's Ocean Economy has:

- +30% in nominal turnover
- +36% in nominal GVA; and
- -4% in Employment (FTEs)

Figure 3 shows this rate of change in turnover, GVA and employment for all the marine industries in the 2019-2022 period.

Figure 3: Rates of change (%) in turnover, GVA and employment. All Industries, 2019-2022



Five Year Trends

Since 2018, Ireland's ocean economy has seen:

- 13% increase in nominal turnover
- 12% increase in nominal GVA; and
- 4% increase in employment

Annual changes in turnover, GVA and Employment are shown in Table 2.

Table 2: Trends from Ireland's Ocean Economy Time Series, 2018-2022

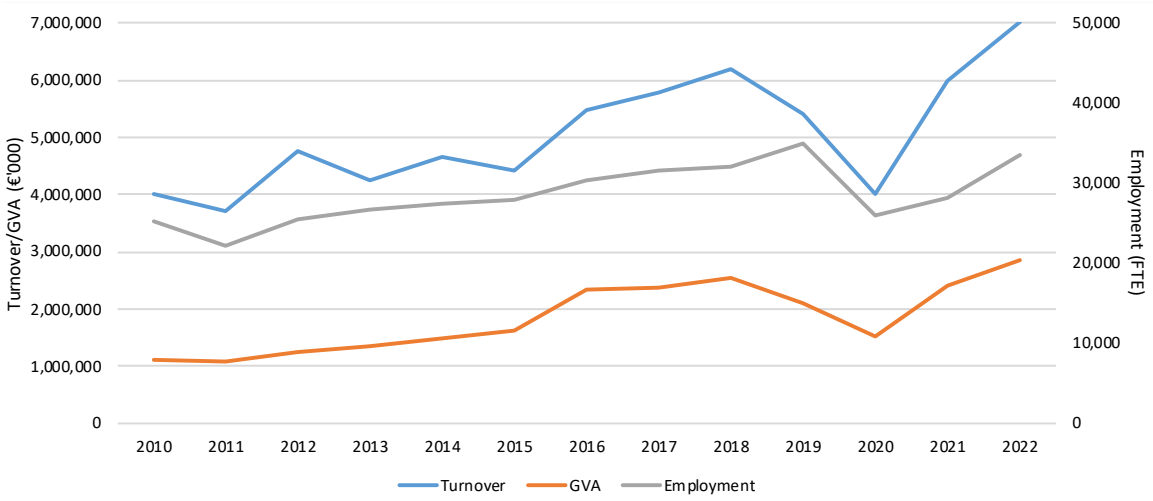
Ocean Economy	2018	2019	2020	2021	2022
Turnover (€mill)	**6,186.45**	5,402.12	3,990.67	5,999.84	**7,011.69**
Turnover Annual Change	6.95%	-12.68%	-26.13%	50.35%	16.86%
GVA (€mill)	**2,555.10**	2,101.89	1,528.42	2,401.99	**2,852.16**
GVA Annual Change	8.41%	-17.74%	-27.28%	57.15%	18.74%
FTEs	**32,024.15**	34,914.00	26,046.77	28,110.28	**33,451.77**
Employment Annual Change	1.79%	9.02%	-25.40%	7.92%	19.00%

Ten Year Rate of Change (2012-2022)

Over the last decade (from 2012 to 2022), Ireland's Ocean Economy (in nominal values) has:

- +48% turnover
- +127% GVA
- +31% Employment

Figure 4: Turnover, GVA and Employment in Ireland's Ocean Economy, 2010-2022. Data is available to view on Ireland's Ocean Economy Online Dashboard



Nominal versus Real Values

The Ireland's Ocean Economy Report series provides a time series of nominal values for ocean economy industries. Nominal value refers to the current value of turnover and GVA without taking inflation or other market factors into account. Real value refers to the value of turnover and GVA after it has been adjusted for inflation. The graph below shows the nominal and real turnover and GVA from 2010 to 2022. Due to the significant increase in gas prices over the last two years, oil and gas nominal values for indicators have been adjusted using the Wholesale Price Index for energy products (base year is 2015). All other industries have been adjusted using the OECD Producer Price Index for all industries (base year is 2015).

Figure 5 shows that nominal and real values for the period 2010 to 2020 are similar and stable due to the low annual rate of inflation. From 2020 onwards, the difference between the nominal and real values starts to increase due to higher inflation and the significant increase in gas prices in 2021 and 2022 in particular.

OCEAN INDUSTRIES NOMINAL VALUE

€7.01 BN
TURNOVER

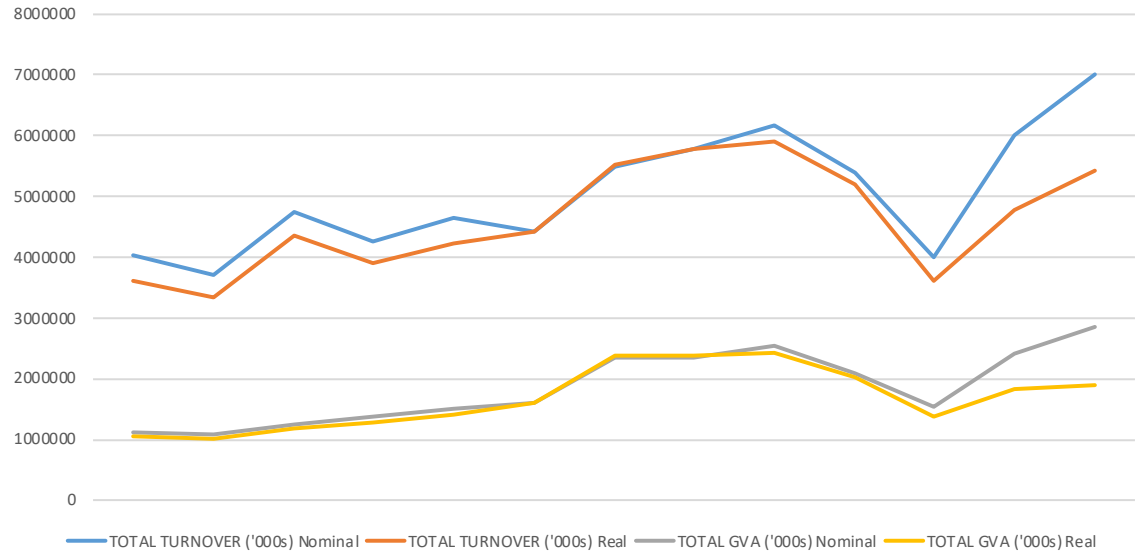
€2.85 BN
GVA

OCEAN INDUSTRIES REAL VALUE

€5.43 BN
TURNOVER

€1.9 BN
GVA

Figure 5: Nominal Values v Real Values Ireland's Ocean Economy 2010-2022



Indirect Impact

The Irish Bio-Economy Input-Output Model[2] is used to trace the flow of activities between ocean and non-ocean industries. The model has provided information on multipliers to estimate the total (direct and indirect) impact of Ireland's ocean economy in Ireland (Table 3).

2. Grealis, E. and O'Donoghue, C. (ed.) (2015). The Bio-Economy Input-Output Model: Development and Uses, Teagasc Publication, Dublin

Table 3: Ocean Economy Multipliers

	Turnover Multiplier	GVA	Employment Multiplier
Shipping & Maritime Transport	1.19	1.42	1.84
Tourism in Marine and Coastal Areas	1.07	0.59	1.27
International Cruise	1.07	0.59	1.20
Marine Retail Services	0.64	0.44	0.50
Sea Fisheries	0.75	0.31	0.45
Marine Aquaculture	1.23	0.39	0.70
Seafood Processing	1.10	1.26	1.52
Oil and Gas Exploration and Production	0.82	0.53	0.47
Marine Manufacturing, Construction and Engineering	0.95	1.03	0.80
Marine Commerce	1.19	0.44	1.00
Advanced Marine Technology Products and Services	1.10	1.03	0.80
Seaweed, Marine Biotechnology and Bioproducts	1.23	1.03	0.80
Marine Renewable Energy	0.79	0.53	0.71

Based on these multipliers, Table 4 provides a breakdown of the direct and indirect contribution of the ocean industries to the wider economy.

Table 4: Direct and Indirect GVA, 2022

2022 (estimates)	Direct GVA	Indirect GVA €000's	Direct and Indirect €000's
Shipping & Maritime Transport	664,725	943,910	1,608,635
Tourism in Marine and Coastal Areas	535,799	316,122	851,921
International Cruise	13,119	7,740	20,859
Marine Retail Services	64,131	28,218	92,349
Sea Fisheries	119,904	37,170	157,074
Marine Aquaculture	68,000	26,520	94,520
Seafood Processing	172,786	217,710	390,495
Oil and Gas Exploration and Production	886,151	469,660	1,355,811
Marine Manufacturing, Construction and Engineering	75,115	77,368	152,483
Marine Commerce	91,516	40,267	131,783
Advanced Marine Technology Products and Services	58,896	60,663	119,559
Seaweed, Marine Biotechnology and Bioproducts	47,872	49,309	97,181
Marine Renewable Energy	54,148	28,699	82,847
Totals	**2,852,162**	**2,303,355**	**5,155,517**

Ireland's Ocean Economy Industries

Shipping and Maritime Transport

- Sea and coastal passenger water transport
- Sea and coastal freight water transport
- Service activities incidental to water transportation
- Cargo handling (maritime transport)
- Renting and leasing of water transport equipment
- Other transportation support activities

Location of activity: The majority of shipping and maritime operations and services occur around commercial ports along the coast of Ireland: Cork, Drogheda, Dublin, Waterford, Dundalk, Dun Laoghaire, Galway, Shannon-Foynes.

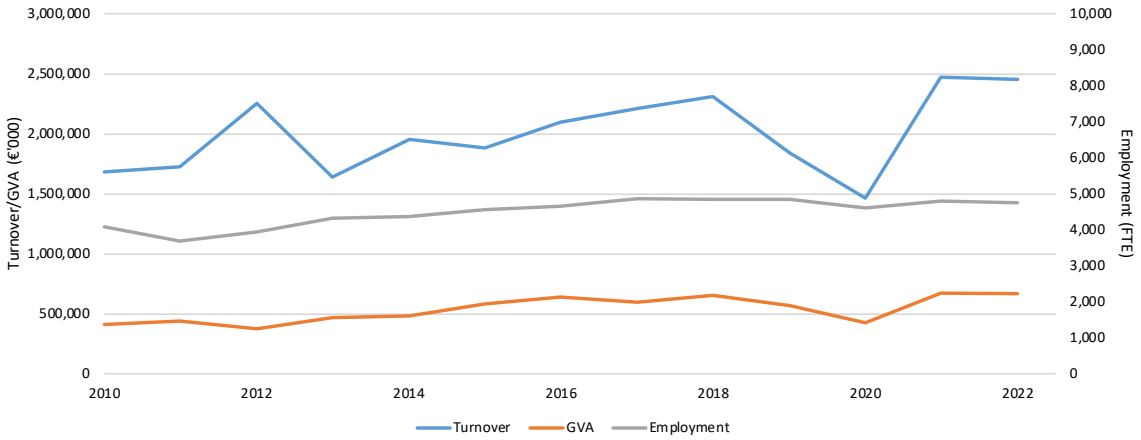
Table 5: Shipping and Maritime Transport turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	2,316,353	1,834,510	1,463,047	2,470,713	2,446,006
GVA €000's	650,716	564,699	421,982	671,439	664,725
Employment FTEs	4,852	4,832	4,616	4,776	4,728
Turnover Annual Change	5%	-21%	-20%	69%	-1%
GVA Annual Change	9%	-13%	-25%	59%	-1%
Employment Annual Change	0%	0%	-4%	3%	-1%

In 2022, shipping and maritime transport recorded a turnover of €2.5bn, GVA of €665m and employment of over 4,720 FTE employees. This is based on an estimated decrease of 1% from the previous year according to the Irish Maritime Development Office (IMDO) iShip index. Previous values for 2021 have been updated following the latest release from the CSO. Updated values for 2021, show that turnover increased by over €1 billion from the previous year to €2.47 billion. This was mainly driven by an increase in turnover in NACE code 52.29 – Other transportation support activities. Turnover and GVA decreased in 2019 and 2020. However, over the five year period 2018 to 2022 there has been a slight overall increase in both indicators. Looking at the longer term ten-year trends, the data indicates that turnover increased by 9% on its 2012 value. GVA has increased by > 70% and employment increased by 20%.

Further information on key statistics for 2022 and the performance of the sector is available in the IMDO's Irish Maritime Transport Economist. This includes statistics on Irish port traffic and international trade by sea. Quarterly statistics on the volumes flowing through Irish ports in 2023 is also available from the IMDO.

Figure 6: Shipping and Maritime Transport turnover, GVA and employment trends, 2010-2022



Methodology:

The data for the Shipping and Maritime Transport industry is obtained from the CSO (Annual Services Inquiry) using NACE Codes 50.10, 50.20, 52.22, 52.24*, 52.29*, 77.34*. The NACE codes include some activities that are not fully marine (*) such as 'Cargo Handling', 'Other transportation support activities' and 'Renting and leasing of water transport equipment'. Proxies are used to account for the percentage of relevant maritime activity, i.e. percentage of trade by sea.

Economic projections for turnover and GVA are based on the performance of the shipping and maritime transport industry reported by the Irish Maritime Development Office (IMDO) in their annual statistical bulletin, the Irish Maritime Transport Economist. Estimates for employment are obtained from the annual growth rate reported by the CSO in their Quarterly National Household Survey (Transport and Storage).

Data Sources

- Annual Services Inquiry, CSO
- Quarterly National Household Survey (Transport and storage), CSO
- Air and Sea Travel Statistics, CSO
- Irish Maritime Transport Economist, IMDO, Marine Institute
- Irish Maritime Office Quarterly Statistics

International Cruise Industry

The ports of call for cruise liners in Ireland in 2022:

- **Cork** (82 ships, 115,062 passengers)
- **Dun Laoghaire** (65 ships, 78,867 passengers)
- **Waterford** (24 ships, 21,275 passengers)
- **Killybegs** (21 ships, 11,145 passengers)
- **Dublin** (23 ships, 8,611 passengers)
- **Galway** (14 ships, 9,521 passengers)
- **Bantry Bay** (9 ships, 4,563 passengers)
- **Shannon Foynes** (3 ships, 1,072 passengers)

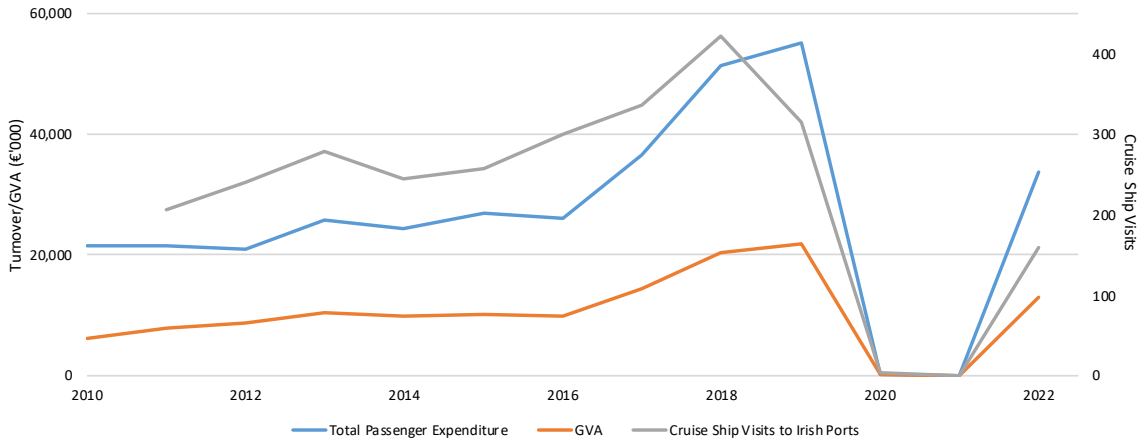
2022 saw the return of the cruise liners to Irish ports, following two years of little or no visits to Irish ports due to COVID-19 restrictions on travel. The 2022 data shows that eight Irish ports and harbours (listed above) provided berths for cruise liners. The top destination in 2022 was Cork Harbour, with over eighty vessels carrying in excess of 115 thousand passengers to the Harbour. Dun Laoghaire has also experienced growth in the number of vessels calling in 2022, corresponding to an increase of 23 times the passenger numbers in 2019 (pre-Covid). Over the same period, Dublin Port has reduced the number of calls resulting in passenger numbers that were 26 times lower than those in 2019.

Over the last decade, cruise liners are now calling to more regional locations such as Killybegs (109 cruise ships), Waterford (148) and Galway (64). Compared to 2012, these three ports have seen an increase of 90% in calls and 180% increase in passenger numbers. Expenditure by passengers and crews in 2022 is estimated to be more than 60% of 2019 figures. 2023 has seen further increases in the number of vessels calling to Irish ports, with increases seen in both port calls and also passenger numbers.

Table 6: International Cruise passengers, calls, expenditure, GVA, 2018-2022

	2018	2019	2020	2021	2022
Number of Cruise Ships Visits to Irish Ports & Harbours	301	315	3	0	240
Passenger Visits to Irish Ports & Harbours	390,069	432,443	1,819	0	250,116
Estimated Passengers & Crew Expenditure €000's	51,439	55,139	201	0	33,743
GVA €000's	20,339	21,849	80	0	13,119
Expenditure Annual Change	40%	7%	-100%		-39% Compared to 2019

Figure 7: International Cruise; Turnover, GVA and Cruise Ship visits to Irish Ports (Number) 2010 – 2022



Methodology:

International cruise data differs from other sectors as it captures expenditure rather than cruise ship turnover. Cruise data on port calls is obtained from the CSO and the IMDO. Passenger and Crew numbers for Ireland's main ports are provided by the Irish Maritime Development Office. Data on other ports of call e.g. regional and fishing ports and harbours, is obtained from cruise schedules of these ports published on websites and also data available in annual financial reports. This information is used in conjunction with an estimate of the average expenditure of passengers and crew based on studies carried out by Fáilte Ireland.

Data Sources:

- Statistics of Port Traffic 2022, CSO
- Irish Maritime Development Office Maritime Transport Statistics
- Port Cruise Schedules

Tourism and Leisure in Marine and Coastal Areas

- **Accommodation in marine & coastal areas (hotels, camping grounds and other short stay accommodation)**
- **Activity businesses (sports & recreation) in marine & coastal areas e.g.**

Watersports

- Sailing at sea
- Boating at sea
- Water skiing/Jet skiing
- Surfing, sail/paddle boarding
- Sea kayaking
- Scuba diving/snorkelling

Seaside/Resort Trips

- Swimming in the sea
- Bird watching in coastal areas
- Whale/dolphin watching
- Visiting coastal natural reserves
- Other trips to the beach, seaside and islands

Angling

- Sea angling from boats
- Sea angling from the shore

Location of activity: Tourism and leisure in marine and coastal areas are offered all along the coast of Ireland. The Wild Atlantic Way, on the southern and western seaboard, is one of Ireland's key tourism offerings.

Table 7: Tourism and Leisure in Marine and Coastal Areas; turnover, GVA, employment, 2018-2022

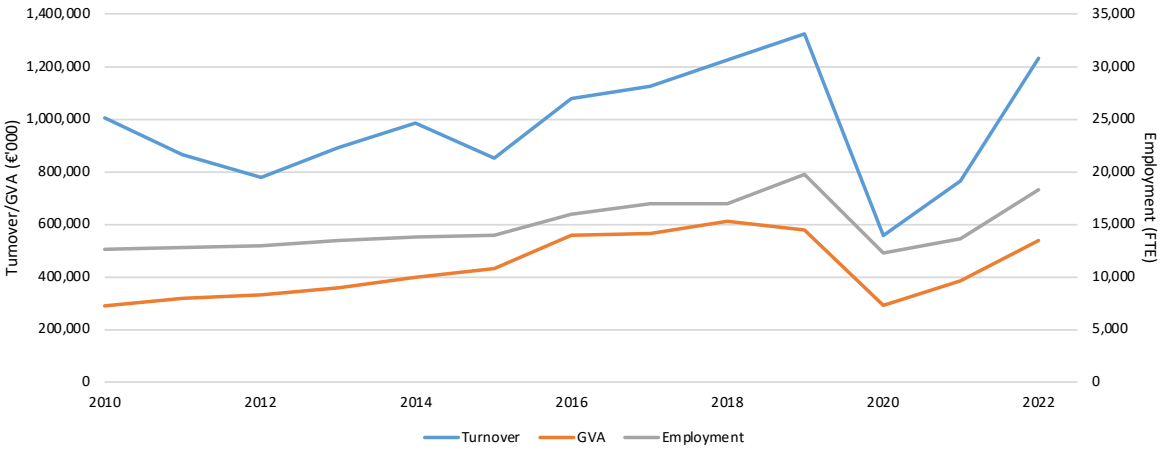
	2018	2019	2020	2021	2022e
Turnover €000's	1,222,052	1,323,711	557,092	762,604	1,229,072
GVA €000's	611,154	577,056	293,424	386,020	535,799
Employment FTEs	16,964	19,736	12,264	13,689	18,325
Turnover Annual Change	9%	8%	-58%	37%	61%
GVA Annual Change	8%	-6%	-49%	32%	39%
Employment Annual Change	0%	16%	-38%	12%	34%

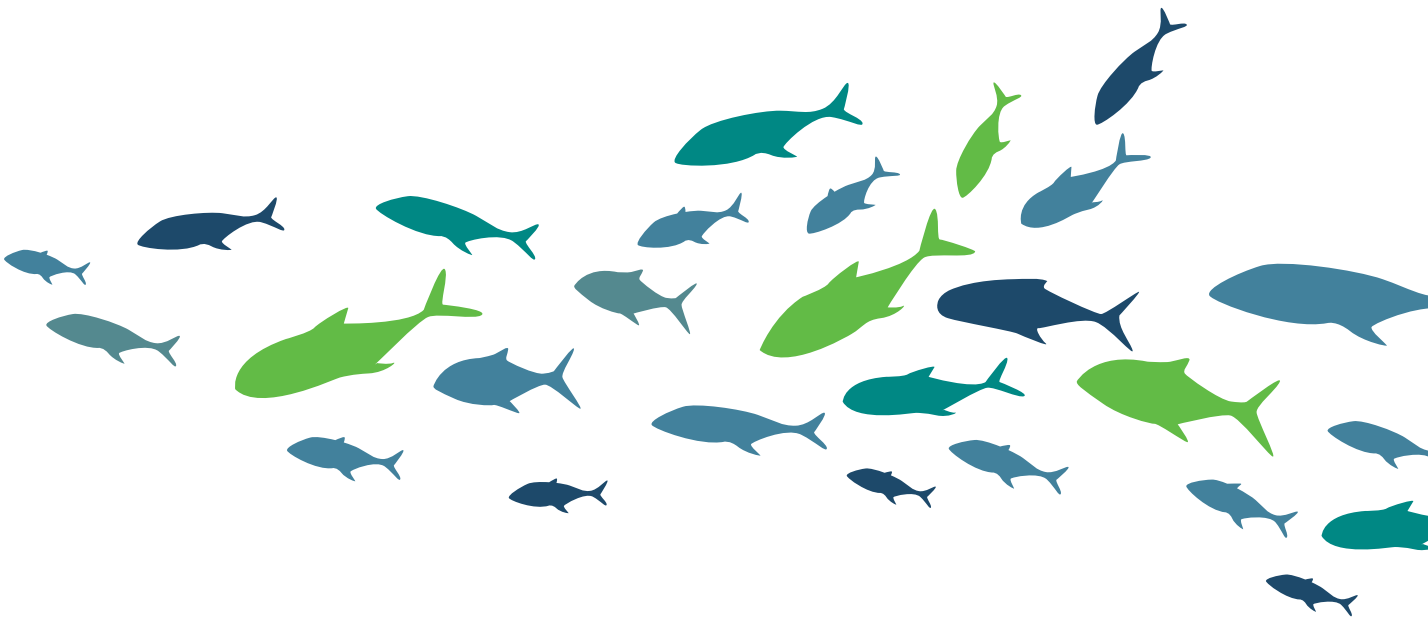
Tourism and leisure is one of the key sectors contributing to Ireland's ocean economy. In 2022, the Tourism and Leisure in Marine and Coastal Areas industry was estimated to have increased by 61% to €1.23 billion. GVA was also estimated to have grown by 39% to €536 million, with an increase in employment of 34% to 18,325 FTEs. These estimates for 2022 are based on growth in the overall tourism industry due to the easing of COVID-19 restrictions and the re-opening of many tourism businesses. Reports from the Irish Tourism Industry Confederation state that overseas tourist numbers in 2022 were at 73% of the pre-pandemic peak in 2019. Similarly, Tourism Ireland stated that tourists arriving into Ireland were at 86% of 2019 levels in 2022. In terms of domestic tourism, Fáilte Ireland report expenditure increasing by 36.5% comparing 2019 to 2022 levels.

The 2022 estimates for turnover, GVA and employment provided for this sector of Ireland's ocean economy are still below pre-pandemic levels (estimated to be at 93% of the pre-pandemic peak in 2019). Over the five-year period 2018 to 2022, while turnover has increased by 1%, there has been an estimated drop in GVA of 12%. This is likely due to higher input costs over this period.

Looking at trends over a ten-year period, turnover has increased by 58%, GVA +70% and employment has increased over 40%.

Figure 8: Tourism and Leisure in Marine and Coastal Areas; turnover, GVA and employment trends, 2010-2022





Methodology:

The tourism and leisure in marine and coastal areas data is compiled using six NACE codes: 5510 - Hotels and similar accommodation, 5520 - Holiday and other short stay accommodation, 5530 - Camping grounds, recreational vehicle parks and trailer parks, 9312 - Activities of sports clubs, 9319 - Other sports activities, 9329 - Other amusement and recreation activities. Each of these codes, and associated data, are considered only partly marine or coastal related. Proxies are used to account for the percentage of relevant marine activity.

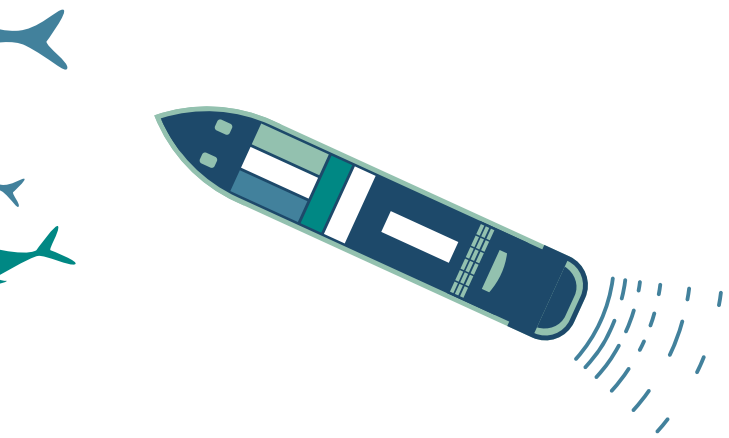
For NACE Codes 5510, 5520 and 5530, the percentage is based on data from Fáilte Ireland's Accommodation Occupancy Survey by examining bed night information broken down between coastal and non-coastal areas (the categories "Cities in coastal areas" and "Towns and suburbs in coastal areas" are not included in the calculation of coastal bed nights).

For the NACE Codes covering activities (9312, 9319, 9329) the percentage of marine activity is based on the share of marine related leisure enterprises in the total number of enterprises recorded for the leisure sector. The percentage is calculated using the Marine Business Directory and the CSO Business Registry.

Economic projections are based primarily on estimates provided by Fáilte Ireland and the CSO in terms of international and domestic tourism numbers, as well as other industry reports e.g. Tourism Ireland, Irish Tourism Industry Confederation, Bank of Ireland Hotels Insights and Outlook. Estimates for employment are obtained from the annual growth rate reported by the CSO in the Quarterly National Household Survey (Accommodation and food service activities).

Data Sources

- Annual Services Inquiry, CSO
- Quarterly National Household Survey (Accommodation and food service activities), CSO
- Business Demography by Activity and County, CSO
- Tourism and travel Statistics, CSO
- Occupancy of Tourist Accommodation Establishments, Eurostat
- Accommodation Facts and Figures, Fáilte Ireland
- Tourism Facts and Figures, Fáilte Ireland



Marine Retail Services

- Chandlery
- Boat sales
- Marine equipment sales
- Retail of seafood in fishmonger specialised stores
- Wholesale of seafood

Location of activity: Marine retail services are located throughout Ireland, both along the coast (urban and coastal towns), and inland e.g. urban areas and also locations that are in close proximity to other waterbodies with water-based activities.

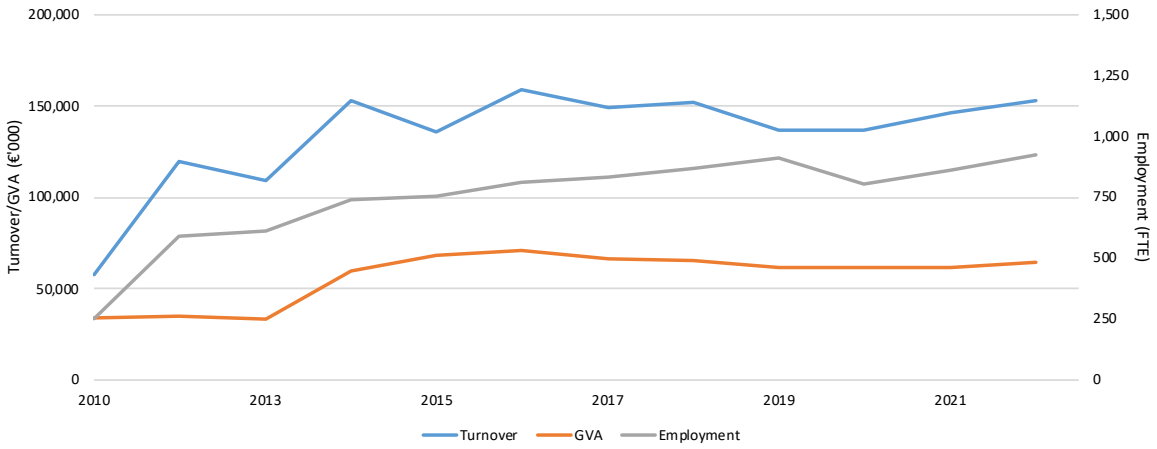
Table 8: Marine Retail Services; turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	152,255	136,857	137,232	146,315	152,694
GVA €000's	65,470	61,586	61,754	61,452	64,131
Employment FTEs	867	915	807	859	925
Turnover Annual Change	2%	-10%	0.3%	7%	4%
GVA Annual Change	-2%	-6%	0.3%	-0.5%	4%
Employment Annual Change	4%	6%	-12%	6%	8%

Both turnover and GVA in Marine Retail Services are estimated to have increased by 4% in 2022 to €152 million and €64 million respectively. Employment is also estimated to have grown by 8% from 2021 levels.

Marine Retail Services turnover and GVA has fluctuated between 2018 and 2022, with turnover and GVA at similar levels to 2018. Employment has increased by 7% comparing 2018 to 2022. Over the longer term period from 2012 to 2022, Marine Retail has seen increases in turnover, GVA, and employment.

Figure 9: Marine Retail Services turnover, GVA and employment trends, 2010-2022



Methodology:

The methodology used to estimate the turnover, GVA and employment in marine retail is a combination of data from the CSO's Annual Services Inquiry, using the NACE Four-Digit Code 47.23, and data collected through company surveys carried out bi-annually by the Marine Institute and the University of Galway. Economic projections are based on data from the CSO's Retail Sales Inquiry and National Household Surveys (Wholesale and retail trade).

Data Sources:

- Annual Services Inquiry, CSO
- Quarterly National Household Survey, CSO
- Retail Sales Index, CSO
- National Ocean Economy Company Surveys, Marine Institute and University of Galway

Sea Fisheries

Fishing Segments

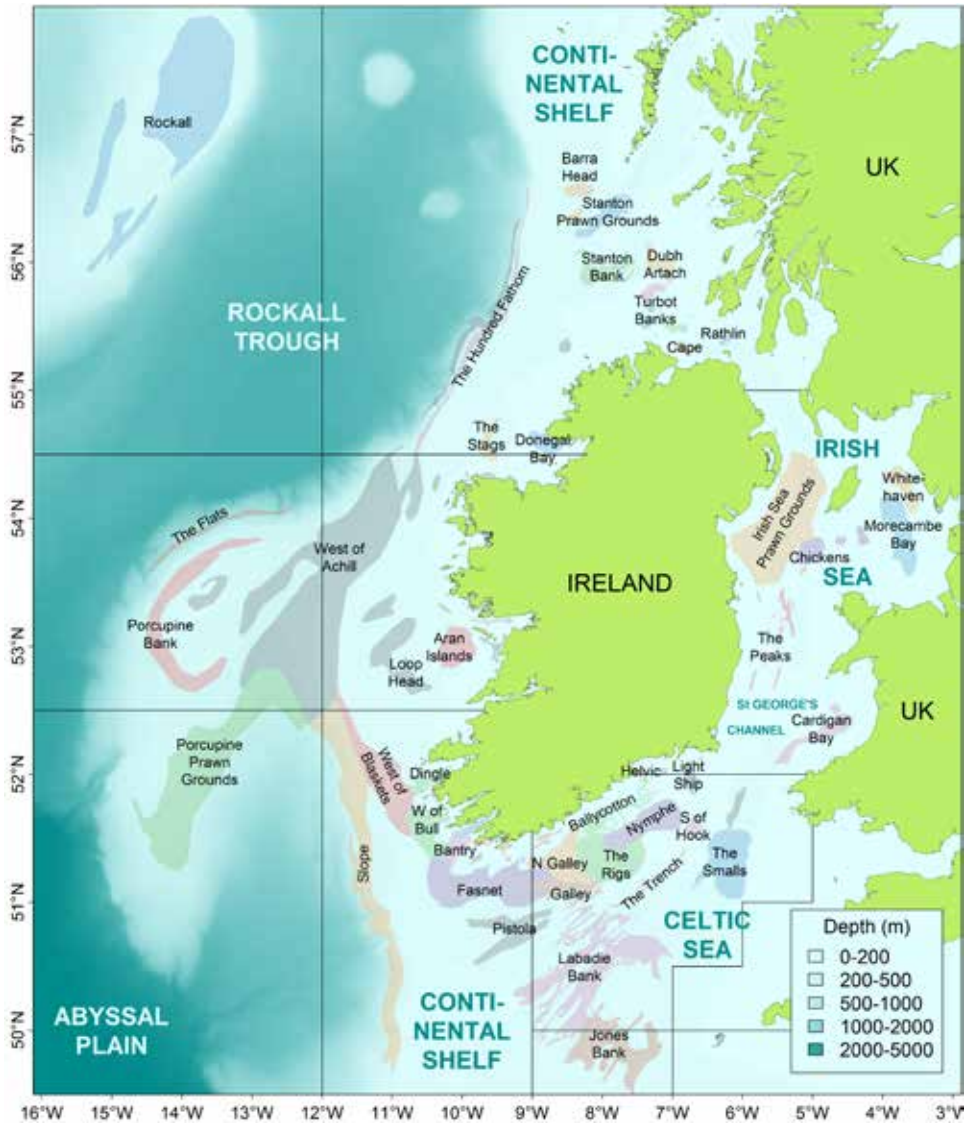
- Polyvalent
- Beam-trawl
- Pelagic
- Specific

Top Ten Species Value (landed by Irish Fleet).
Source: BIM, Business of Seafood 2023

1. Dublin Bay Prawn
2. Mackerel
3. Crab
4. Monkfish
5. Horse Mackerel
6. Haddock
7. Lobster
8. Hake
9. Tuna
10. Blue Whiting

Location of activity: Fishing communities are distributed around the coast of Ireland. The main fisheries ports, in terms of volume of landings (Irish and Non-Irish Fishing Fleet), are: Killybegs, Castletownbere, Dingle, Ros a Mhil, Dunmore East, Clogherhead, Howth, Kilmore Quay, Greencastle, and Union Hall. Source: BIM, Business of Seafood

Figure 10: Main Fishing Grounds of the Irish Fleet (Source: Marine Institute)



Sea Fisheries is an important industry in Ireland's ocean and coastal economies with the waters around Ireland containing some of the most productive fishing grounds in the EU. Based on provisional data for 2022 provided by BIM, it is estimated that there was a decrease of 18% in turnover to €240 million and an estimated decrease of 32% in GVA from the previous year. BIM's Annual Fisheries report notes that this is in part due to a decrease in landings, revenue and profitability primarily caused by the Russian invasion of Ukraine, rising energy costs, inflation, and quota reductions linked to Brexit. In 2022, there were 1,351 active fishing vessels. BIM estimate employment in 2022 decreased by 10% to 1,714 FTEs.

The latest data from the Sea Fisheries Protection Authority (SFPA), shows that the estimated landings from Irish vessels into Irish and non-Irish ports was 175,000 tonnes in 2022 (Table 10). In 2022, there was a reported decrease in landings tonnage of 16%. This corresponds closely to an 18% decrease in turnover in 2022. Despite a decrease in landings of 6% in 2021, there was an increase in turnover of 11% due to strong seafood price growth in 2021 (Business of Seafood, 2022).

Over the five-year period comparing 2018 to 2022, turnover is estimated to have decreased by 15% with an estimated 30% decrease in GVA. This is largely due to a general trend of decreased landings over this period. The larger drop in GVA is due to rising fuel and energy costs and inflation as noted in BIM's Annual Fisheries Report 2023.

Table 9: Sea Fisheries turnover, GVA, employment, 2018-2022

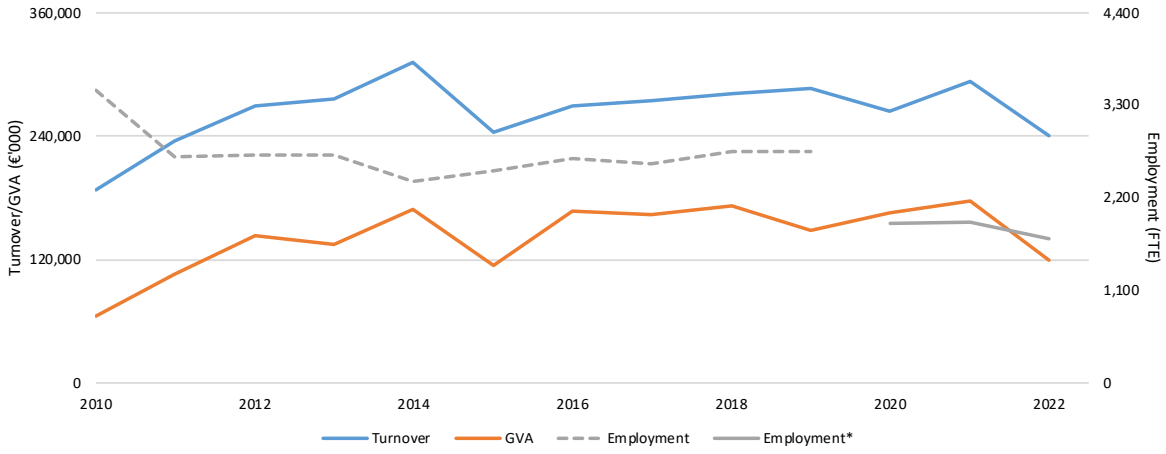
	2018	2019	2020	2021	2022e
Turnover €000's	280,593*	286,790*	263,950	293,759*	239,626
GVA €000's	172,328*	147,675*	165,838*	176,976*	119,904
Employment FTEs	2,745	2,758	1,904*	1,911*	1,714
Turnover Annual Change	2%	2%	-8%	11%	-18%
GVA Annual Change	6%	-14%	12%	7%	-32%
Employment Annual Change	5%	0.5%	*Not comparable due to change in methodology	0.4%	-10%

* Updated figures provided by BIM

Table 10: Landings (tonnage) of the Irish Fishing Fleet into Irish and Non-Irish Ports 2018-2022, SFPA

	2018	2019	2020	2021	2022e
Landings (tonnage)	213,895	187,106	218,827	206,066	175,446
Landings (tonnage) Annual Change		-13%	17%	-6%	-15%

Figure 11: Sea Fisheries turnover and employment trends, 2010-2022



* Note: A new methodology for FTEs was applied by BIM from 2020 onwards. As a result, the data and trends pre 2020 are not comparable with the data 2020-2022.

Methodology:

Statistics for Sea Fisheries are provided annually by BIM with data collected as part of BIM's National Seafood Survey. The methodology and corresponding data collected by BIM is part of a wider data collection programme, the EU Data Collection Framework Annual Economic Report (AER). The data is in line with data reported by Ireland under the European Commission data call and work of the EU Scientific, Technical and Economic Committee for Fisheries (STECF). Historical time series of AER data may change annually and as a result any such changes in data based on the work of STECF is updated and provided by BIM for the annual update on Ireland's ocean economy. Landings data are sourced by BIM from the SFPA.

Methodologies used by BIM are published by the STECF and also are outlined in BIM's Annual Fisheries Reports. This annual report by BIM provides reports on the economic performance of the Irish fishing fleet and associated social demographics of those employed in the Irish fishing sector.

Note: For employment and the calculation of FTEs, a new methodological approach for the calculation of FTE using a time-based threshold approach was applied by BIM to FTE calculation in 2020 and 2021 and used to estimate 2022 figures. This new methodology was initiated in response to changes in data provision from the national seafood survey and to improve data estimations. As a result of this new methodology, historical time series of FTEs pre 2020 is not comparable.

Data Sources

- Seafood Data Collection Framework, Economic & Strategic Services Unit, BIM
- Annual Fisheries Report, BIM
- Statistics on landings in Irish Ports and by the Irish sea fishing Vessels, SFPA
- Scientific, Technical and Economic Committee for Fisheries (STECF)

Marine Aquaculture

Finfish Aquaculture:

- Salmon
- Seawater Trout

Shellfish Aquaculture:

- Rope Mussels
- Seabed Cultured Mussels
- Clams
- Bottom Mussels
- Scallops
- Irish Rock Oysters/Pacific Oysters

Seaweed Culture:

- *Alaria esculenta*
- *Laminaria*
- *Saccarina* species

Location of activity: Shellfish aquaculture activities are widely distributed across the coast of Ireland, with particular concentrations in Co. Donegal, Connemara, Co. Galway, West Cork, Co. Waterford, Co. Wexford, and Carlingford Lough, Co. Louth. Finfish aquaculture is mainly restricted to the Western seaboard in counties Donegal, Mayo, Galway, Kerry and Cork.

Seaweed Culture: Cork, Donegal, Galway, Kerry, Mayo and Sligo

In 2022, BIM estimate an increase of 4% in Marine Aquaculture turnover from €178.8m in 2021 to €186m. The BIM Annual Aquaculture Report 2023 notes that this was due to growth in sales volume and associated turnover, particularly in the shellfish sector which had a strong output volume and a good average unit sales price. However, the sector reported a decrease in GVA of 19% in 2022, largely due to cost increases in energy, repairs and maintenance and feed (BIM Annual Aquaculture Report 2023). Comparing the values pre-Covid (2019) to 2022, turnover and employment have rebounded to similar levels, however, due to increased costs, GVA in 2022 is down 37% on 2019 values.

Comparing 2018 to 2022, turnover has increased by 4%, while GVA has seen a decrease of 38%. The decrease in GVA is due to the cost increases mentioned in the previous paragraph. Employment has increased by 8%.

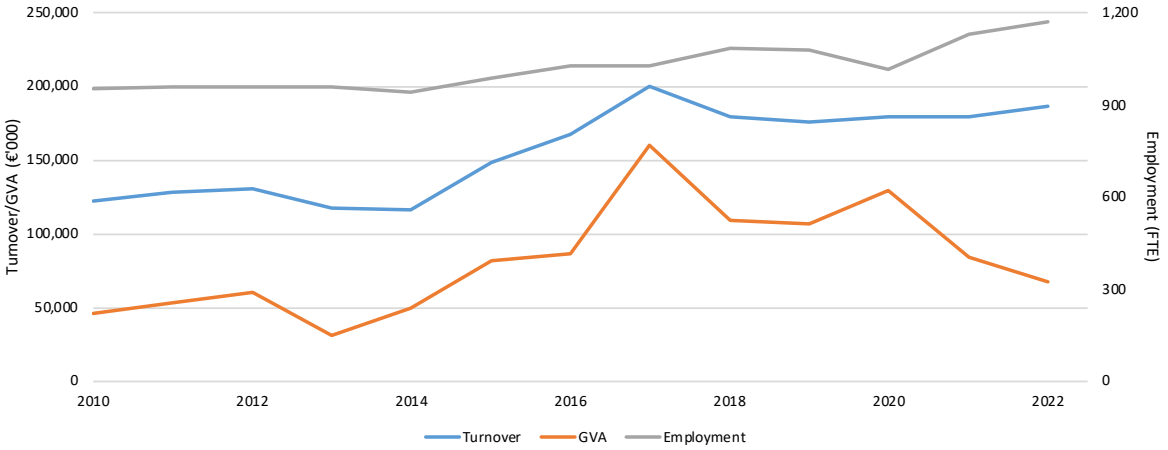
Longer-term, comparing 2012 to 2022, turnover and GVA have increased by 43% and 12% respectively and employment has also increased by 22%.

Table 11: Marine Aquaculture turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	179,456	175,289	179,963*	178,879	186,071
GVA €000's	109,331*	107,264*	128,937*	83,584	68,000
Employment FTEs	1,083*	1,080	1,016	1,128	1,170
Turnover Annual Change	-10%	-2%	3%	-1%	4%
GVA Annual Change	-32%	-2%	20%	-35%	-19%
Employment Annual Change	6%	-0.3%	-6%	11%	4%

* Updated figures provided by BIM

Figure 12: Marine Aquaculture turnover, GVA and employment trends, 2010– 2022



Methodology:

Figures for turnover, GVA and employment are provided by BIM, with data collected as part of BIM's Annual National Seafood Survey. The methodology and corresponding data collected by BIM is part of a wider data collection programme, the EU Data Collection Framework and the work programme of the EU Scientific, Technical and Economic Committee for Fisheries (STECF). While BIM publish an Annual Aquaculture Report, Aquaculture STECF Economic Reports are produced every two years. The data provided by BIM is a snapshot in time. Estimates are recalculated and updated by BIM when more data is available.

Methodologies used by BIM are published by the STECF and also are outlined in BIM's Annual Aquaculture Reports.

Data Sources

- Seafood Data Collection Framework, Economic & Strategic Services Unit, BIM
- Annual Aquaculture Report, BIM
- Scientific, Technical and Economic Committee for Fisheries (STECF)

Seafood Processing

- Preparation and preservation of fish, crustaceans and molluscs
- Production of fish, crustacean and mollusc products
- Production of fishmeal for human consumption or animal feed
- Production of meals and solubles from fish and other aquatic animals unfit for human consumption
- Activities of vessels engaged only in the processing and preserving of fish

The Irish seafood processing industry is concentrated in the coastal regions of Donegal, Mayo, Cork, Kerry, Galway, the North East and the South East.

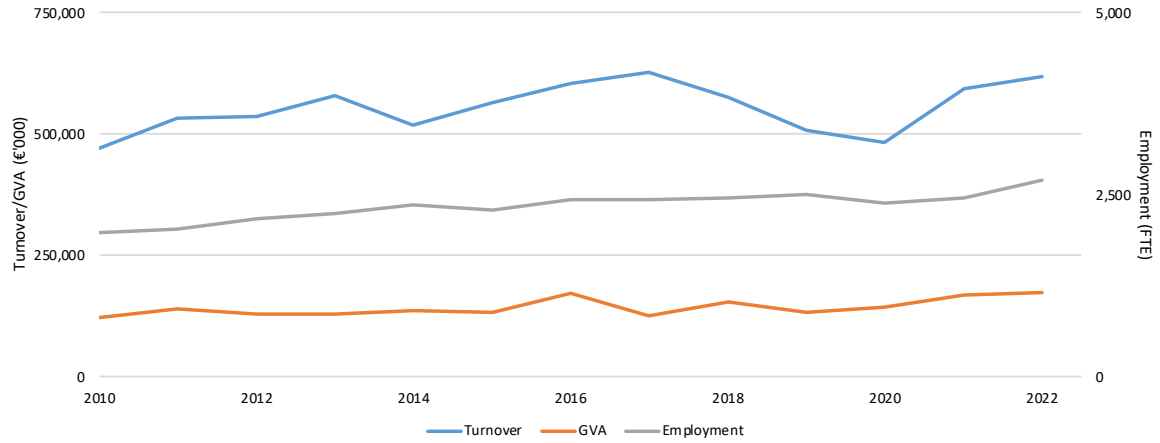
Table 12: Seafood Processing turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	573,000	507,000	483,100	594,240	618,010
GVA €000's	153,000	133,000	144,200	166,140	172,786
Employment FTEs	2449	2504	2371	2455	2695
Turnover Annual Change	-9%	-12%	-5%	23%	4%
GVA Annual Change	21%	-13%	8%	15%	4%
Employment Annual Change	1%	2%	-5%	4%	10%

Turnover generated by Seafood Processing in 2022 is estimated to have increased slightly by 4% to €618 million. GVA for the industry is also estimated to have grown by 4% to €172 million and employment is estimated to have increased by 10% to 2,695 FTEs.

Comparing 2018 to 2022, there has been increases across turnover (8%), GVA (13%) and employment (10%). Over ten years, there have also been increases of 15% in turnover, 36% in GVA and 24% in employment (compared to 2012 values).

Figure 13: Seafood Processing turnover and employment trends, 2010-2022



Methodology:

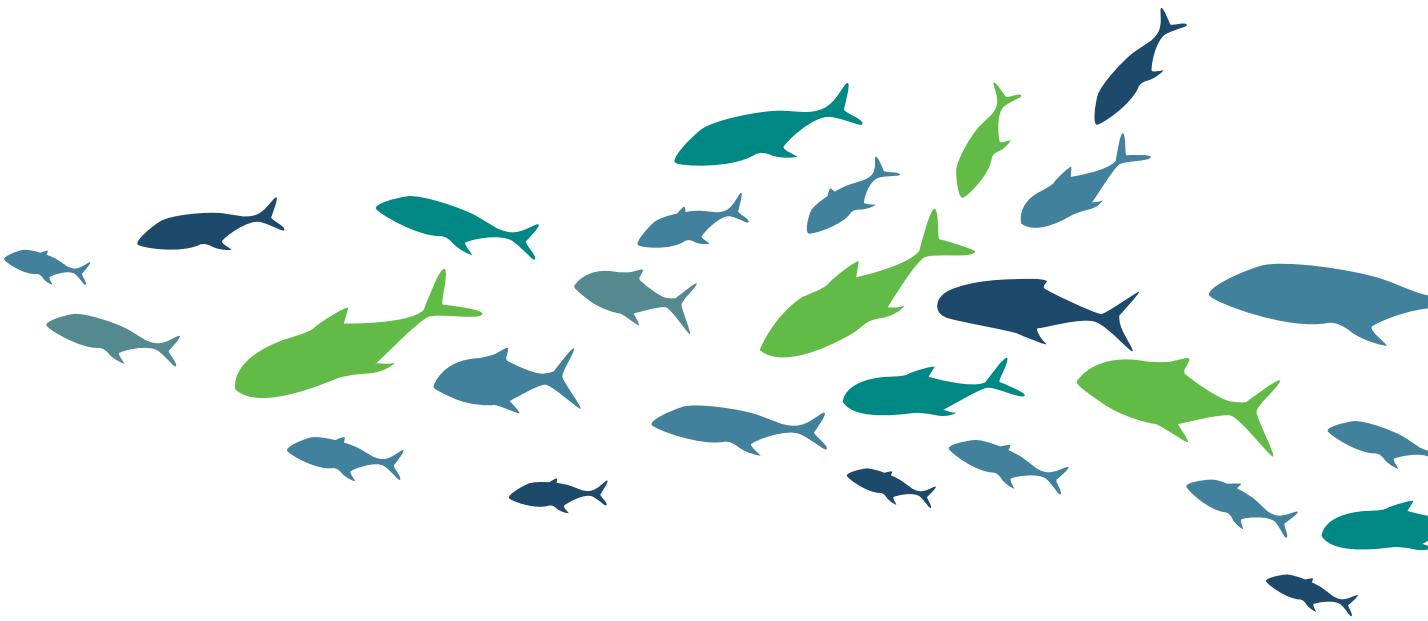
Seafood Processing can be directly identified in the standard NACE classification provided by the CSO. The data is collected under the NACE code 10.20 'Seafood Processing' from the Census of Industrial Production (CIP).

Economic projections for turnover, GVA and employment figures in 2021 are estimated as a function of the level of seafood production reported by BIM.

BIM are looking at the data collection for this sector to see how best to report into the future e.g. including smaller and micro enterprises currently not covered by CSO data.

Data Sources:

- Census of Industrial Production, CSO
- Business of Seafood, BIM



Oil and Gas Exploration and Production

- Extraction of crude petroleum and natural gas (Irish waters)
- Support activities and natural gas extraction, including exploration services

The Location of activity: Production is focused on the Corrib Gas field off the west coast of Mayo.

Ireland's oil and gas industry is focused mainly on the production of gas in the Northwest of Ireland from the Corrib gas field since 2016. The industry had an estimated turnover of €1.27 billion in 2022 which was a significant increase of 59% on 2021. GVA also increased by 58% to an estimated €886 million. It was estimated that employment has remained relatively stable. The main driver for the increase in turnover and GVA is the fact that energy prices increased in 2022 and remained high throughout the year.

Comparing 2018 to 2022, turnover grew by 55% with an increase in GVA of 66%. For the period 2012 to 2022, turnover grew by over five times its initial value with GVA increasing by 30 times its value. This was due to the small size of the industry in Ireland prior to the commencement of natural gas extraction at the Corrib gas field in 2016 and exceptionally high gas prices in 2022.

Table 13: Oil and Gas Exploration and Production turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	819,000	426,290	225,226	800,633	1,272,297
GVA €000's	532,350	229,539	45,505	561,750	886,151
Employment FTEs	159	150	155	155	160
Turnover Annual Change	29%	-48%	-47%	255%	59%
GVA Annual Change	20%	-57%	-80%	1134%	58%
Employment Annual Change	5%	-6%	3%	0%	3%

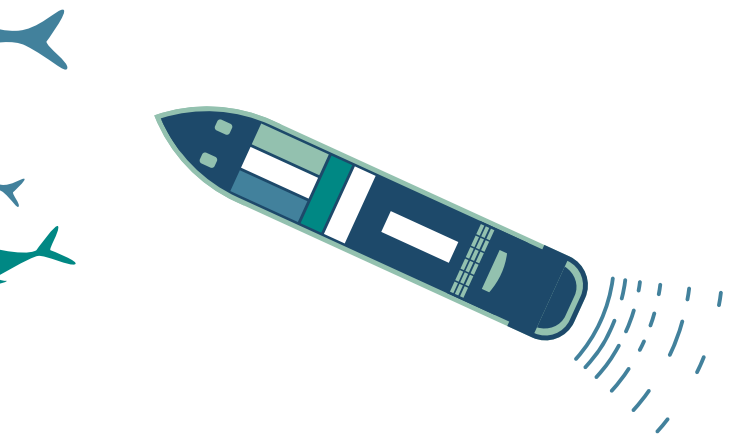
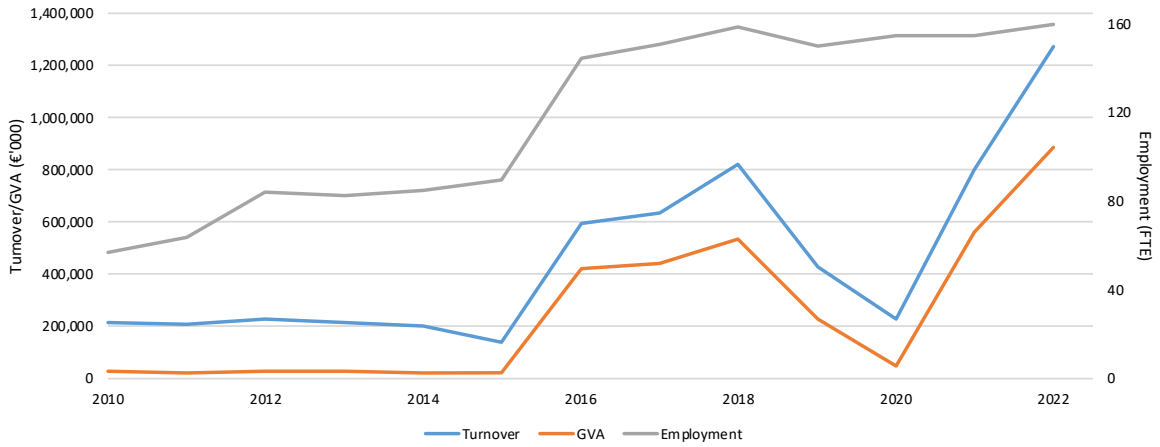


Figure 14: Oil and Gas Exploration and Production turnover, GVA and employment trends, 2010-2022



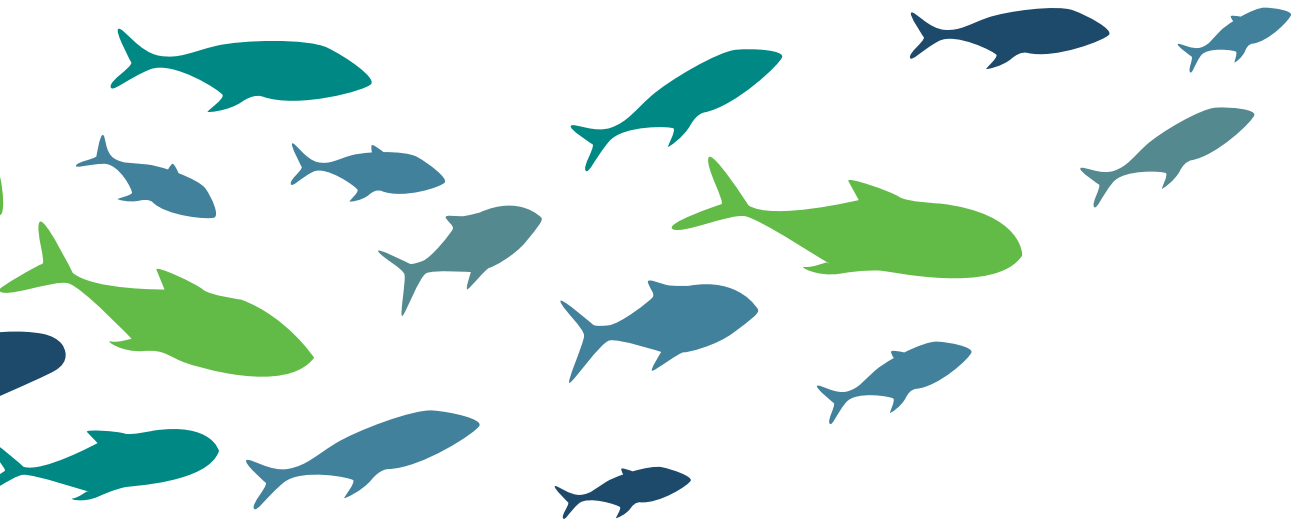
Methodology:

The NACE classification system includes data for the Oil & Gas sector under the following NACE codes: 06.10, 06.20, 09.10, reported though the CSO's Census of Industrial Production. The data is often confidential and not available from the CSO due to the small number of companies operating under these NACE codes.

To address these data gaps, economic figures for turnover, GVA and employment are estimated on the basis of published company financial data e.g. from shareholder annual financial information for companies involved in the Corrib Gas field, in addition to CRO financial accounts for companies within the sector. The companies operating in this sector are surveyed bi-annually by the Marine Institute and the University of Galway.

Data Sources

- Census of Industrial Production, CSO
- Companies Registration Office (CRO) financial reports
- National Ocean Economy Company Surveys, Marine Institute and University of Galway



Marine Manufacturing, Construction and Engineering

- Boat and Related Equipment Manufacturing
- Boat Manufacturing
- Boat and Ship Repair
- Net Manufacturing
- Water Construction
- Marine Industrial Engineering
- Other Marine Manufacturing
- Marine and Environmental Consultancy
- Safety & Security Services

Location of activity: Companies involved in marine manufacturing are found throughout Ireland, both along the coast and inland. Clusters of particular marine product manufacturing can be found in certain areas, particularly in Co. Donegal (marine industrial engineering), Cork Harbour, and counties Galway and Cork (boat building).

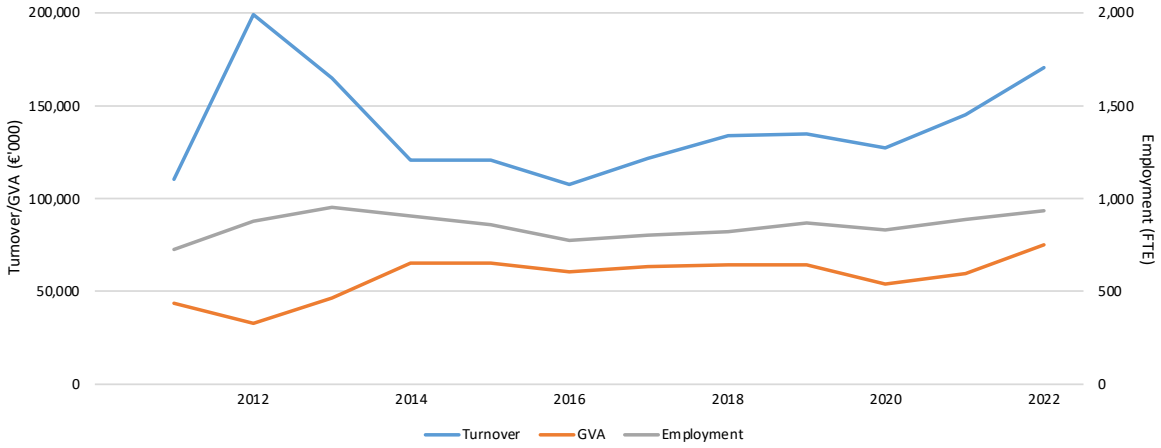
Table 14: Marine Manufacturing, Construction & Engineering; turnover, GVA and employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	133,703	134,462	126,969	144,772	170,523
GVA €000's	63,891	63,880	54,115	59,301	75,115
Employment FTEs	821	867	832	892	937
Turnover Annual Change	10%	1%	-6%	14%	18%
GVA Annual Change	1%	0%	-15%	10%	27%
Employment Annual Change	2%	6%	-4%	7%	5%

Ireland maintains a sizeable marine construction, manufacturing and engineering industry providing products and services across a range of sectors in Ireland's ocean and coastal economies. This includes new entrants in the offshore services sector (multinationals and SMEs) as the Government sets out its long-term vision for offshore renewable energy in Ireland to meet ambitious renewable energy targets.

In 2022, it is estimated that turnover increased by 18% to €170 million and GVA increased by 27% to €75 million. There was also an estimated increase in employment of 5% in 2022. Comparing 2018 to 2022, turnover grew by 28%, GVA increased by 18% and employment increased by an estimated 14%. Over the longer term, comparing 2012 to 2022, turnover decreased from a peak of €199 million in 2012 by 14% to its current value in 2022. Over this period, GVA and employment increased (Figure 15).

Figure 15: Marine Manufacturing, Construction and Engineering; turnover, GVA and employment trends, 2010-2022



Methodology:

The marine manufacturing, engineering and construction sector data is collected primarily from the Census of Industrial Production and the Building and Construction Inquiry, CSO. The NACE Four-Digit Codes used are: 30.11, 30.12, 33.15, 42.91. As data reported by the CSO includes onshore and offshore activities, a survey is also administered bi-annually to companies in this sector in order to provide an estimate of the proportion of activities that are marine.

Economic projections for turnover, GVA and employment in 2022 are estimated on the basis of trends in the sector and overall trends in general manufacturing and construction from the CSO.

Data Sources:

- Buildings and Construction Inquiry, CSO
- Quarterly National Household Survey (Industry), CSO
- Census of Industrial Production, CSO
- Industrial Production and Turnover Indices, CSO
- Production in Building and Construction Index
- National Ocean Economy Company Surveys, Marine Institute and University of Galway

Marine Commerce

- Marine Financial Services
- Marine Legal Services
- Marine Insurance
- Ship Surveyors

Due to NACE classification system and CSO business surveys, ship leasing/ broker activities are captured under Shipping & Maritime Transport

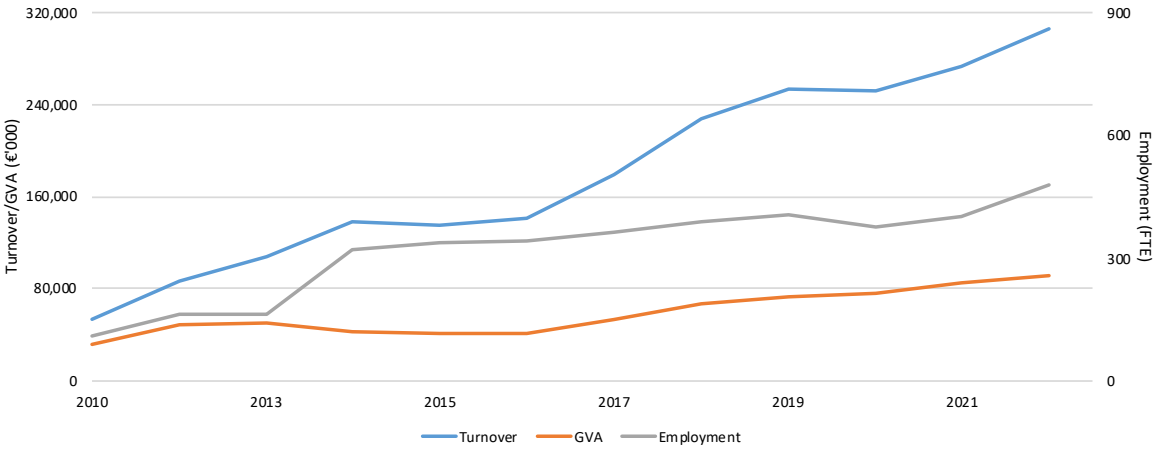
Spatial Distribution: Companies that provide marine commerce financial services are primarily located in Dublin, Cork and Galway. Other services are located in close proximity to maritime hubs such as regional ports and harbours.

Table 15: Marine Commerce turnover, GVA and employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	228,146	253,698	252,430	272,624	305,884
GVA €000's	67,700	73,572	75,729	84,513	91,516
Employment FTEs	389	405	377	401	479
Turnover Annual Change	27%	11%	-0.5%	8%	12%
GVA Annual Change	27%	9%	3%	12%	8%
Employment Annual Change	7%	4%	-7%	6%	19%

It is estimated that companies working in the marine commerce industry in 2022 had a turnover of almost €306 million, GVA of €91.5 million and employment amounted to an estimated 479 FTEs. This represents annual increases of 12%, 8% and 19%, respectively. Comparing 2019 (pre-Covid) to 2022, the sector has seen approximately 30% increase in turnover, GVA and employment. The industry has grown significantly in Ireland since 2012 as can be seen in Figure 16.

Figure 16: Marine Commerce turnover, GVA and employment trends, 2010-2022

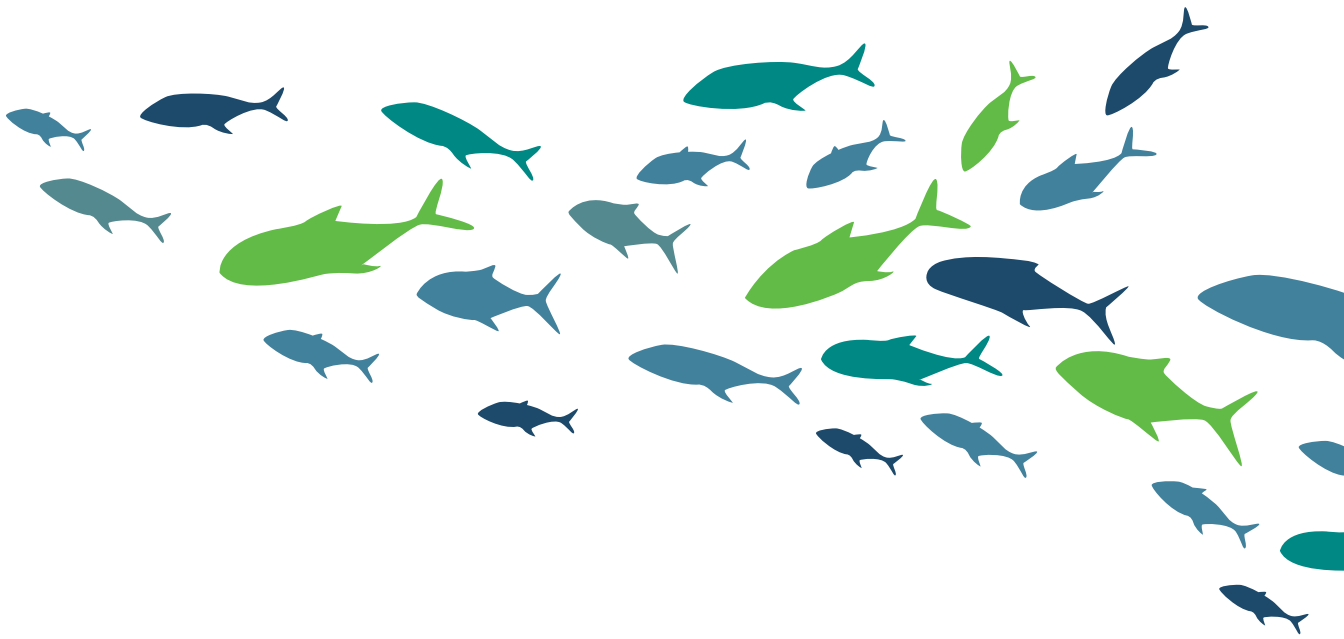


Methodology:

The companies operating in this sector are surveyed bi-annually by the Marine Institute and the University of Galway. Projections and estimates are based on industry trends and general growth trends in the Irish economy (provided by the CSO).

Data Sources

- National Ocean Economy Company Surveys, Marine Institute and University of Galway
- Annual Services Inquiry and associated Services Index, Structural Business Statistics, CSO



Advanced Marine Technology Products and Services

- Sensors
- Marine Instrumentation
- Meteorological Consultancy, Products & Services
- Marine Technology Development/ Solutions
- Aquaculture Technology
- Geo-Informatics Services
- Yacht Design
- Software

Location of activity: Technology companies are located across Ireland, both on the coast and inland. However, the majority of companies are located within the larger cities, primarily Galway, Cork and Dublin.

Table 16: Advanced Marine Technology Products and Services; turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	96,452	111,884	123,072	141,533	151,016
GVA €000's	41,868	44,754	49,229	55,198	58,896
Employment FTEs	683	697	687	708	909
Turnover Annual Change	-2%	16%	10%	15%	7%
GVA Annual Change	-2%	7%	10%	12%	7%
Employment Annual Change	12%	2%	-1%	3%	28%

In 2022, turnover is estimated to have been over €151 million, GVA €58.9 million and employment amounted to over 900 FTEs. It is estimated the sector grew by over 30% across each of the three economic indicators since 2019, demonstrating strong recovery in the sector post-Covid.

Over the ten-year period 2012-2022, it is estimated that turnover and employment have each grown by more than 110%, while GVA has increased by an estimated 53%.

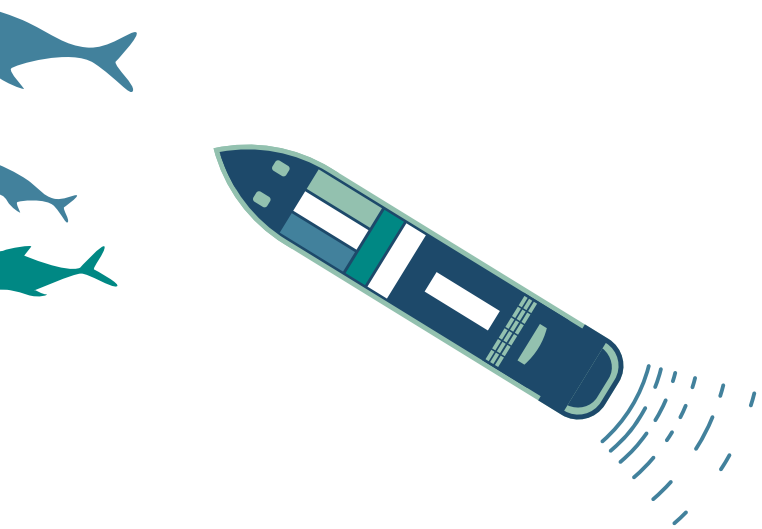
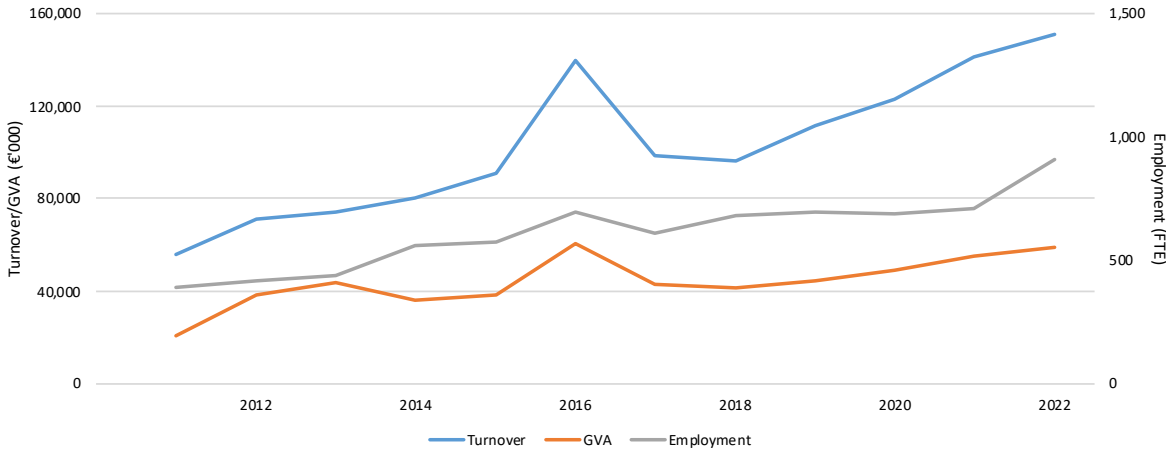


Figure 17: Advanced Marine Technology Products and Services; turnover, GVA and employment trends, 2010-2022

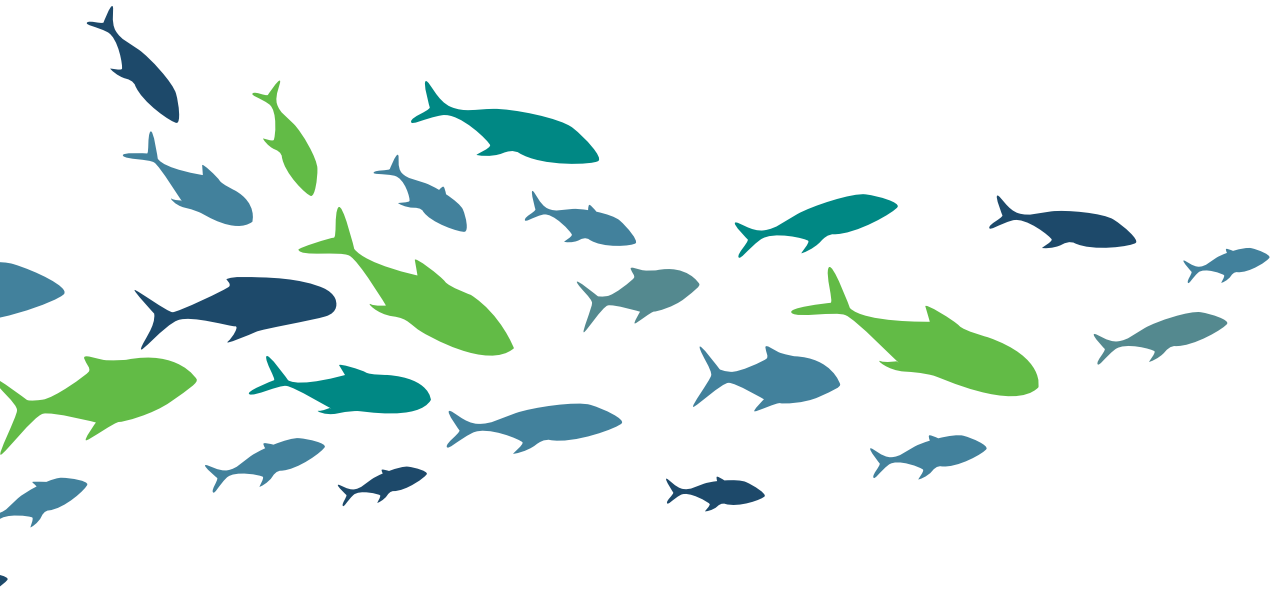


Methodology:

The companies operating in this sector are surveyed bi-annually by the Marine Institute and the University of Galway. Economic projections for turnover, GVA and employment in 2022 are estimated on the basis of trends in the sector and overall trends in industrial production from the CSO.

Data Sources

- National Ocean Economy Company Surveys, Marine Institute and University of Galway
- Industrial Production and Turnover Indices, CSO



Seaweed, Marine Biotechnology and Bio-products

- Seaweed Harvesting (note seaweed culture is captured under aquaculture)
- Whole or unprocessed foods and processed foods for consumption
- Industrial texturants, including foods, toothpaste and paints
- Plant fertilisers in agriculture
- Animal feeds in agriculture and fish feeds in aquaculture
- Bioactives and biostimulants for health, medicine and cosmetics

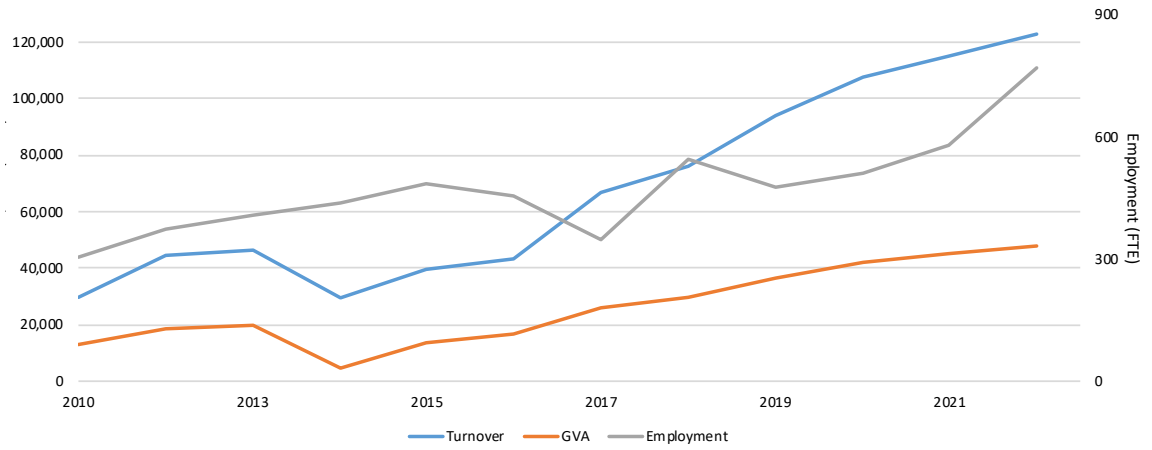
Location of activity: Seaweed harvesting takes place around the coast of Ireland, with particular concentrations in Co. Galway, Co. Donegal, Co. Sligo, Co. Kerry and Co. Cork. Other activities in this industry are not confined to coastal counties and have a wide geographical distribution across the country.

In 2022, it is estimated that the Seaweed and Biotechnology sector had a turnover of €123 million, GVA of €48 million and employed an estimated 768 FTEs. The annual change in FTEs in the sector in 2022 is quite significant with a 33% increase shown. The industry has experienced steady growth in the last 10 years. More recently, turnover and GVA have both increased by 61% since 2018 and employment has grown by 41% in the same time period.

Table 17: Seaweed, Marine Biotechnology and Bio-products turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	76,409	93,830	107,579	115,174	122,890
GVA €000's	29,767	36,552	41,908	44,866	47,872
Employment FTEs	545	474	509	578	768
Turnover Annual Change	14%	23%	15%	7%	7%
GVA Annual Change	14%	23%	15%	7%	7%
Employment Annual Change	58%	-13%	7%	14%	33%

Figure 18: Seaweed, Marine Biotechnology and Bio-products turnover, GVA and employment trends, 2010-2021



Methodology:

The companies operating in this sector are surveyed bi-annually by the Marine Institute and the University of Galway. In 2021/2022, MTU surveyed the seaweed sector as part of a broader study commissioned by the Marine Institute for the Department of Housing, Local Government & Heritage. Additional surveys, commissioned as part of the National Ocean Economy Company Surveys were carried out by MTU in 2022. Projections and estimates are based on industry trends and growth trends in the Irish economy (provided by the CSO).

Data Sources

- Socioeconomic Study of Seaweed Harvesting Along the West Coast of Ireland, MTU
- National Ocean Economy Company Surveys, Marine Institute and University of Galway
- Industrial Production and Turnover Indices, CSO

Marine Renewable Energy*

- Offshore Wind Energy (Offshore Renewable Energy Production in Ireland's Maritime Area)
- Pre-Commercial Ocean Energy Production and Services

Location of activity: Currently Ireland's only wind farm is located off the east coast and the Irish and Celtic Seas are where most activity is expected in the short-term, moving to the Atlantic coast using floating wind turbines in the longer term.

***Note:** Other offshore services provided to the offshore renewable energy industry (ancillary services in the supply chain) are captured under **Marine Manufacturing, Engineering & Construction.** In 2024, additional survey work will be required to understand the linkages across other segments of Ireland's ocean economy.

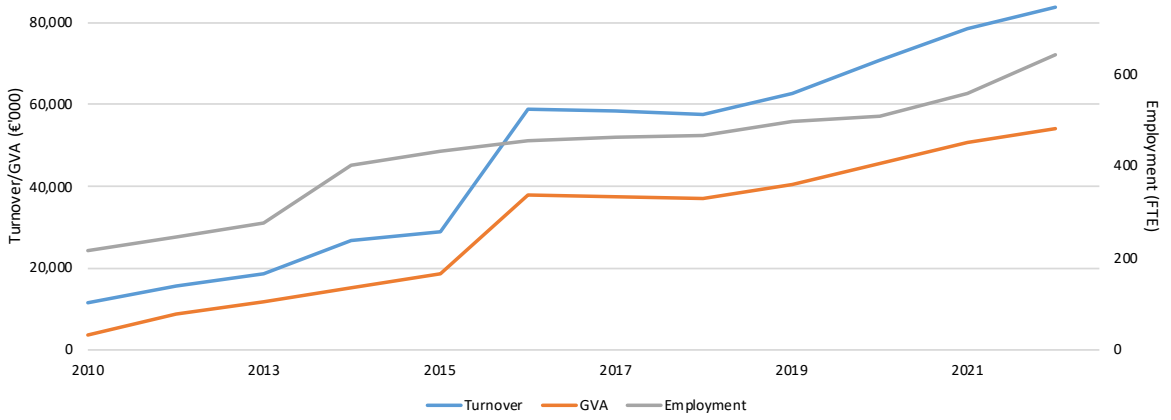
Table 18: Marine Renewable Energy turnover, GVA, employment, 2018-2022

	2018	2019	2020	2021	2022e
Turnover €000's	57,591	62,659	70,805	78,593	83,859
GVA €000's	37,187	40,459	45,719	50,748	54,148
Employment FTEs	467	496	509	558	642
Turnover Annual Change	-1%	9%	13%	11%	7%
GVA Annual Change	-1%	9%	13%	11%	7%
Employment Annual Change	1%	6%	3%	10%	15%

Overall, it is estimated that the industry in 2022 had a turnover of €84 million, GVA of €54 million and employed an estimated 642 FTEs. Over the five-year period (2018-2022), turnover and GVA have increased by approximately 46%, with employment increasing by 37%. Over the ten-year period, employment has increased by an estimated 160%. The marine renewable energy industry in Ireland is currently dominated by the generation of power from offshore wind. Although there have been significant policy developments in the area, the estimates presented are to 2022 and this time lag does not allow for the most up to date economic situation. Additional survey work will be required into the future to get a more accurate estimate on the level of investment into Ireland's offshore. This includes an analysis of the other segments of Ireland's ocean economy and their cross linkages with this emerging industry. An Industrialisation Strategy for Offshore Wind is due to be published by the Irish Government in 2024, which will assist with guiding the future data collection and reporting on the sector.

In 2023, the Irish Government launched a public consultation on Ireland's next Offshore Renewable Energy Development Plan (OREDP II) – Ireland's new national spatial strategy for our offshore renewable energy future. The OREDP II is part of the State's Enduring Regime – Ireland's long-term vision for offshore renewable energy in Ireland. The South Coast Designated Maritime Area Plan (DMAP) Proposal, was also published in 2023, which proposes a geographical area off Ireland's south coast within which future offshore renewable energy development may take place.

Figure 19: Marine Renewable Energy turnover, GVA and employment trends, 2010 -2022



Methodology:

The companies operating in this sector are surveyed bi-annually by the Marine Institute and the University of Galway. Projections and estimates are based on industry trends and growth trends in the Irish economy (provided by the CSO).

Data Sources

- National Ocean Economy Company Surveys, Marine Institute and University of Galway
- Industrial Production and Turnover Indices, CSO
- South Coast Designated Maritime Area Plan (DMAP) Proposal (www.gov.ie)
- Offshore Renewable Energy Development Plan II (OREDP II) (www.gov.ie)

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Glossary of Acronyms/Terms

AER	Annual Economic Report
BCI	Building and Construction Inquiry
BD	Business Demography
BIM	Bord Iascaigh Mhara
CIP	Census of Industrial Production
CRO	Companies Registration Office
CSO	Central Statistics Office
DHLGH	Department of Housing, Local Government and Heritage
EU	European Union
FTE	Full Time Equivalents
GDP	Gross Domestic Product
GNI*	Modified Gross National Income
GVA	Gross Value Added
ICT	Information & Communication Technology
IMDO	Irish Maritime Development Office, Marine Institute
ITIC	Irish Tourism Industry Confederation
MTU	Munster Technological University
NACE	Statistical classification of economic activities in the European Community
SEMRU	Socio Economic Marine Research Unit
SFPA	Sea Fisheries Protection Authority
SME	Small or Medium Sized Enterprises
STECF	Scientific, Technical and Economic Committee for Fisheries

Ollscoil na Gaillimhe
University of Galway

Foras na Mara
Marine Institute