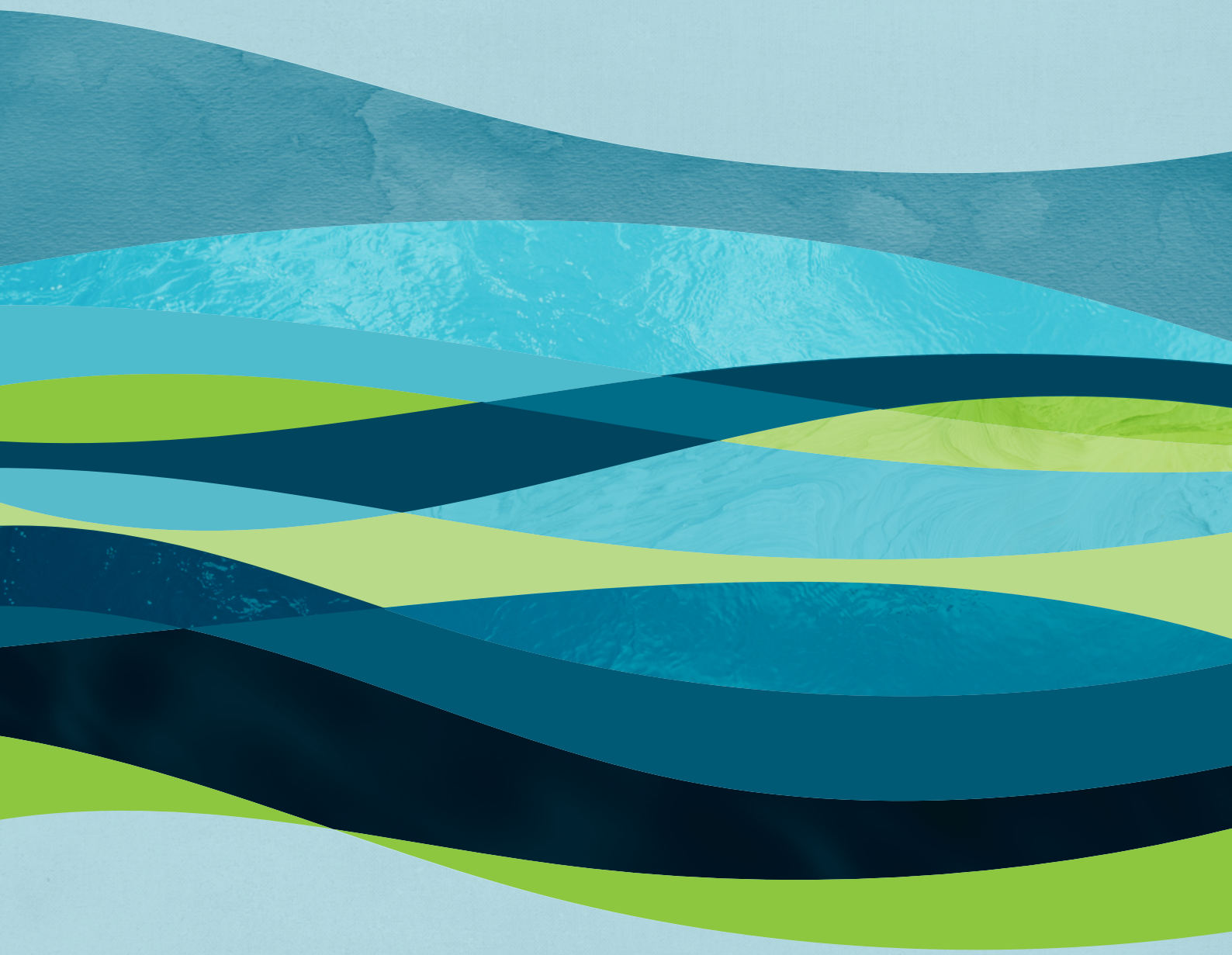
BIM
Ireland's Seafood Development Agency

Annual Aquaculture Report:

Socio-economic performance in 2024



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The Annual Aquaculture Report: Socio-economic performance in 2024 reports on 2024 data collected by the 2025 National Seafood Survey and **supercedes all previous reports.**

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Contents

Executive summary

In 2024, the Irish aquaculture sector demonstrated resilience and adaptability in the face of diverse and growing challenges. Total output reached over 38,000 tonnes, generating €210 million in sales value and contributing €73 million in Gross Value Added (GVA) to the Irish economy. National employment in the sector decreased by 6% to 1,835 persons, driven primarily by losses in the shellfish segment, with many of these jobs concentrated in coastal and rural communities.

The sector's performance was heavily influenced by a strong year for farmed Atlantic salmon, which accounted for the majority of growth in both volume and value. Salmon output rose by 49% and generated €138 million in sales, reversing the downward trend of previous years. Employment in the salmon segment increased by 41%, with gains seen across full-time, part-time, and casual positions.

In contrast, the shellfish segments experienced a more difficult year. Output and income declined across oysters and suspended rope mussels. Oysters saw a 4% decline in production and a 6% drop in sales value, while employment fell by 10%. Rope mussel production declined by 16%, with employment and profitability also falling. An apparent 50% increase in income for seabed cultured mussels was driven by the selling of reserve stocks by many production units, reflecting serious challenges facing the sector.

Smaller bivalve segments, primarily native oyster production, experienced substantial decreases in both production (23%) and value (17%). Despite only small changes in seaweed output, a 24% decline in sales value was observed. Land-based finfish show gradual development with increasing productivity and income, however overall sales value dropped by 3%.

Rising costs, particularly in wages, feed, and energy, combined with growing pressure from environmental constraints, licensing limitations, and market changes, continue to affect the sector's profitability. While net profit indicators returned to positive values at the national level, this was not the case for all segments.

Looking ahead to 2025, output is expected to remain close to current levels, but the forecast is mixed. A strong salmon harvest is anticipated, but declining shellfish performance may temper national results. Strategic growth opportunities are emerging through innovation in cultivation techniques, diversification in products, and investment in higher-value outputs. These may offer some counterbalance to the operational and environmental constraints currently faced by many producers.

The aquaculture sector remains a vital and evolving part of Ireland's blue economy. Its future performance will depend not only on market dynamics and environmental conditions, but on the ability to invest in technology, improve resilience, increase licencing sites, and adapt production methods to meet both regulatory and ecological expectations.

The Annual Aquaculture Report 2025 is accompanied by an online interactive Aquaculture Industry Dashboard available on BIM's Data Hub.

National aquaculture

Scale of operation in 2024

Income

€227m
Total income

€210m
Turnover

€372,389
Subsidies

€17m
Total other income

Expenditure

€214m
Total costs

€44m
Wages and salaries

€13m
Repair and maintenance

€10m
Energy costs

€2.6m
Net financial costs

Raw material costs

€17m
Livestock costs

€61m
Feed costs

€53m
Other operational costs

€12m
Depreciation of capital

Input and output

38,456 tonnes
Total sales volume

Raw material Volume

5,348 tonnes
Livestock

28,109 tonnes
Feed

Employment

1,835
Total employees

1,607
Male employees

228
Female employees

1,131
Full Time Equivalent (FTEs)

Economic indicators

€73m
Gross Value Added (GVA)

€26m
Operating Capital Flow (OCF)

€14m
Earnings Before Interest and Tax (EBIT)

€11.6m
Net profit

Enterprise summary

227
Number of production units

8,131
Hectares

625,951
Number of structures used

1 **Introduction:** Data collection and the National Seafood Survey for Aquaculture

This report details the findings of Ireland's National Seafood Survey, conducted annually by Bord Iascaigh Mhara (BIM). This survey gathers essential social and economic data on Ireland's aquaculture sector, forming a cornerstone of Ireland's obligations under the EU Data Collection Framework (DCF) established under Regulation (EU) 2017/1004[1] implemented through the EU Multiannual Programme (EU MAP). Under the National Seafood Survey, all aquaculture producers are requested to submit economic and operational details for their previous year's activity. In terms of structure, the report presents an overview of the aquaculture sector which sets the scene for economic estimates at a national and segment level. This report presents data for the year 2024, gathered through the 2025 National Seafood Survey.

The National Seafood Survey plays a strategic role in shaping aquaculture management and policy at both national and EU levels. Data gathered through the annual survey is critical to:

- Assess the economic sustainability of the sector
- Document sectoral demographics and structure
- Evaluate the effects of management measures
- Track the sector's response to external pressures, including Brexit, market and environmental conditions, and operational costs

These data not only guides government policy but also serves as the factual basis for industry development strategies and coastal community support measures. Robust, high-quality data is central to providing effective advice on the sector. This data supports evidence-based decision-making and informs conservation and management measures that directly affect the daily operations of aquaculture farmers.

The latest survey, which closed on the 19th of March 2025, received responses from 218 production units, representing 79% of the sector nationally. This high level of participation has enabled BIM to produce a more comprehensive economic assessment of the sector and deepen our understanding of the issues facing individual aquaculture segments. These insights are critical for both short-term management and long-term policy planning.

1 Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

2 National aquaculture

As outlined in the National Strategic Plan for Sustainable Aquaculture Development, sustainable aquaculture plays an important role in delivering public goods, particularly in relation to the provision of nutritious and healthy seafood with a limited environmental footprint, as well as supporting economic development and job opportunities in coastal and rural communities.

Aquaculture in Ireland has evolved from a cottage industry in the 1980s to a significant contributor to national seafood production and food security. This growth has been supported by steady increases in unit value and a growing recognition of product quality. The sector remains largely export-driven and marine-based, with salmon farming historically the most economically important segment. A range of smaller land-based or freshwater segments also contribute to the industry. Most aquaculture segments in Ireland can now be described as mature or maturing, although new entrants continue to emerge in the shellfish sector, and seaweed cultivation remains a relatively new and developing area.

Over the past 20 years, national aquaculture output has declined from a peak of 57,000 tonnes in 2005 to a range of between 35,500 and 45,900 tonnes over the last decade (Figure 1). However, national sales value has increased during the same period, rising from €104 million in 2005 to €210 million in 2024. This reflects a continued emphasis within the sector on improving product quality, differentiation, and marketing. The sector faces several challenges, including competition from large-scale producers in key export markets, limited uptake in the domestic market, and constraints on expansion due to increasing competition for national marine space.

The Sustainable Aquaculture Scheme aims to support the growth and sustainability of aquaculture in Ireland by providing financial aid via the European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the Brexit Adjustment Reserve (BAR). Over €4 million in funding was received by operators in 2023, primarily from the BAR. In 2024 €74,708 from the BAR, and €297,681 from the EMFAF was invested to support the aquaculture sector. These subsidies are not factored into the net profit calculations for 2024.

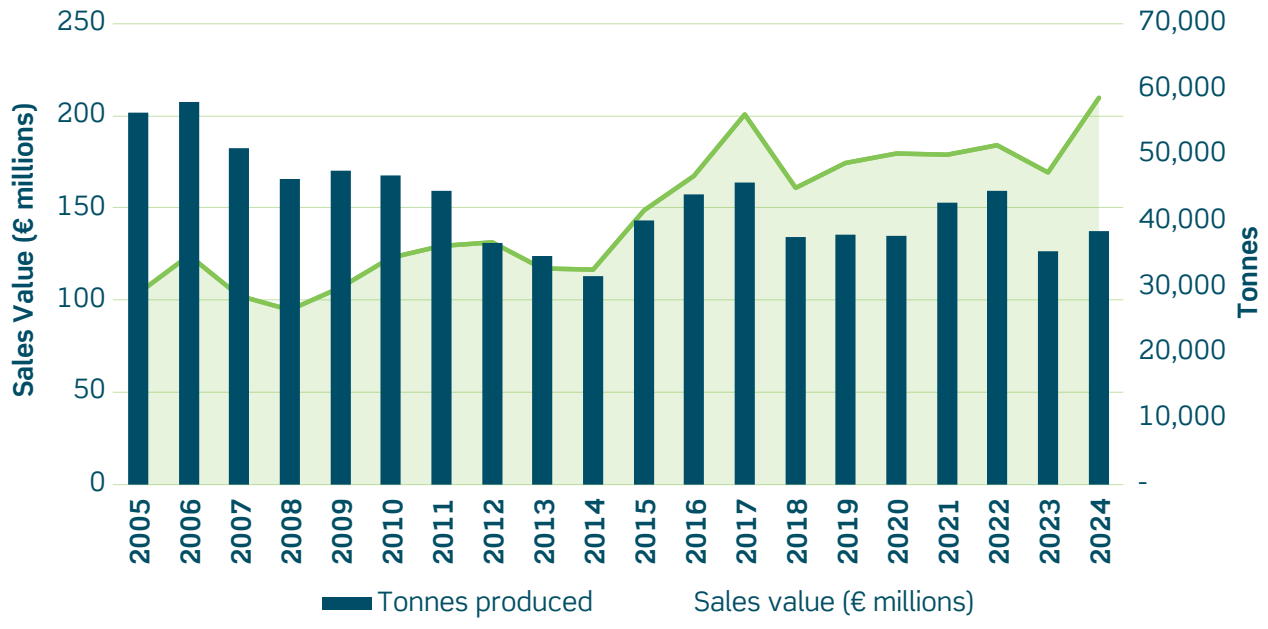

Figure 1: Aquaculture national output 2005-2024

Table 1: Aquaculture output trend by category, 2023 to 2024

	Tonnes			Value (€ million)		
Segment	**2023**	**2024**	**Change**	**2023**	**2024**	**Change**
Farmed salmon	9,289	13,877	49%	€94.8	€138.4	46%
Salmon hatchery*	163	352	116%	€4	€3.7	-7%
Other finfish	488	500	2%	€2.3	€3	31%
Finfish total	**9,940**	**14,730**	**48%**	**€101**	**€145.1**	**44%**
Farmed oyster	9,698	9,268	-4%	€51	€47.8	-6%
Rope mussel	11,218	9,479	-16%	€9.2	€7.6	-18%
Seabed mussel	3,626	4,096	13%	€4	€6.4	61%
Other bivalves	502	388	-23%	€3.3	€2.8	-17%
Shellfish total	**25,044**	**23,231**	**-7%**	**€67.5**	**€64.4**	**-5%**
Seaweed	532	496	-7%	€0.7	€0.5	-24%
National value	**35,516**	**38,456**	**8%**	**€169**	**€210**	**24%**

*Standalone units only

2.1 National output in 2024

In 2024, national aquaculture production totalled 38,456 tonnes, valued at €210 million. This represents an increase of 8% in volume and 24% in value compared to the previous year (Table 1). Growth was driven by higher finfish output, particularly farmed Atlantic salmon, which offset declines in shellfish production, down 7% in volume and 5% in value. The drop in shellfish value reflects reduced unit prices, especially for oysters, where market specifications have become more restrictive.

2.2 Employment & capacity

In 2024 aquaculture employed an estimated 1,835[2] persons equivalent to 1,131 Full Time Equivalents (FTE) (Table 2). This represents a total decline of 6%, or 126 individuals, driven by a 13% reduction in the shellfish segment, where 215 jobs (71 FTEs) were lost, mainly among part-time staff. This decline reflects reduced shellfish output (down 8%) and ongoing challenges with staff retention. In contrast, employment in finfish operations increased by 31%, with 89 additional staff across both part-time and full-time roles.

The number of active production units fell by 1% in 2024, with three sites (two finfish, one shellfish) becoming inactive. The wider economic impact of direct aquaculture employment remains significant. Each 10 direct aquaculture jobs are estimated to support an additional five jobs in the wider economy, based on a multiplier of 1.5 (BIM Aquaculture Socio Economic Bay Study 2021[3]). These indirect and induced roles include supply chain services such as logistics, processing, equipment maintenance, and local retail. This demonstrates the strategic importance of aquaculture not only as a primary producer but also as an anchor for employment and economic activity in coastal regions.

2 Excluding State run units

3 https://bim.ie/wp-content/uploads/2022/05/BIM-Collective-Bay-Areas-Report-SPREADS.pdf

Table 2: Aquaculture employment and production unit trends by segment, 2023 to 2024[2]

Aquaculture category	2023	2024	Change
Finfish			
Number employed	290	379	31%
Number of FTE	248	301	21%
Number of production units	29	27	-7%
Shellfish/other			
Number employed	1,671	1,456	-13%
Number of FTE	901	830	-8%
Number of production units	251	250	-0.4%
National totals			
Number employed	1,961	1,835	-6%
Number of FTE	1,149	1,131	-2%
Number of production units	280	277	-1%

In 2024, 87% of the workforce were Irish nationals, 8% were from the EU, and 5% from other regions (Figure 2). The age profile is relatively balanced across working-age groups, with fewer individuals over 65 years, as expected due to retirement. Between 2023 and 2024, there was a 23% decrease (123 persons) in workers aged 16–24 and a 10% increase (25 persons) in the 55–64 age group. The workforce is predominantly male (88%), with females accounting for 12%. Initial evidence suggests a higher proportion of women are found in the unpaid workforce, however there is insufficient data for a reliable estimate at this time.

2.3 Markets

The aquaculture sector produces salmon, trout, mussels, oysters, other bivalve shellfish, and seaweed for direct consumption or for further growing to meet market specifications. Shellfish is sold live or processed, while finfish is sold fresh as whole round, head on gutted, filleted, or in other value-added formats. A small but growing seaweed segment supplies ingredients for pet food, nutraceuticals, pharmaceuticals, cosmetics and direct human consumption.

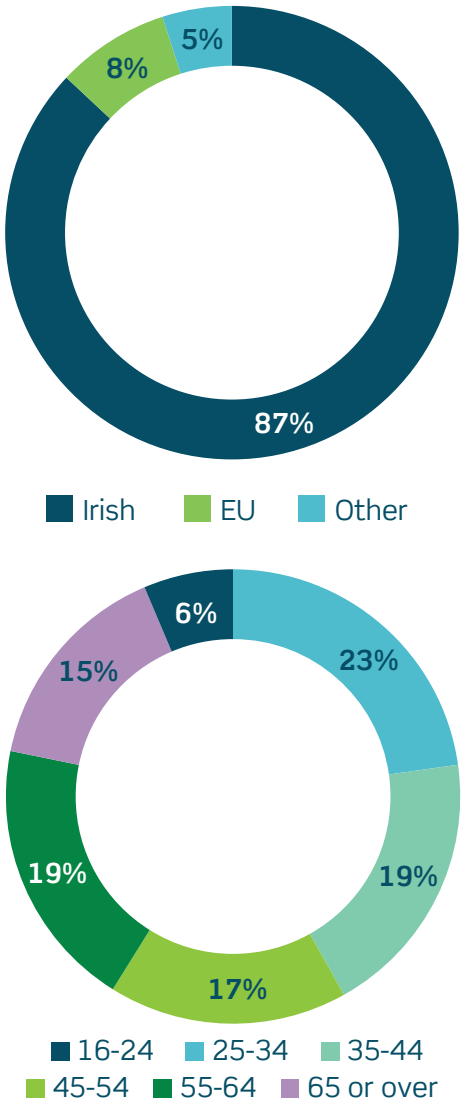

Figure 2: Nationality (top panel) and age distribution (bottom panel) of the aquaculture workforce in 2024

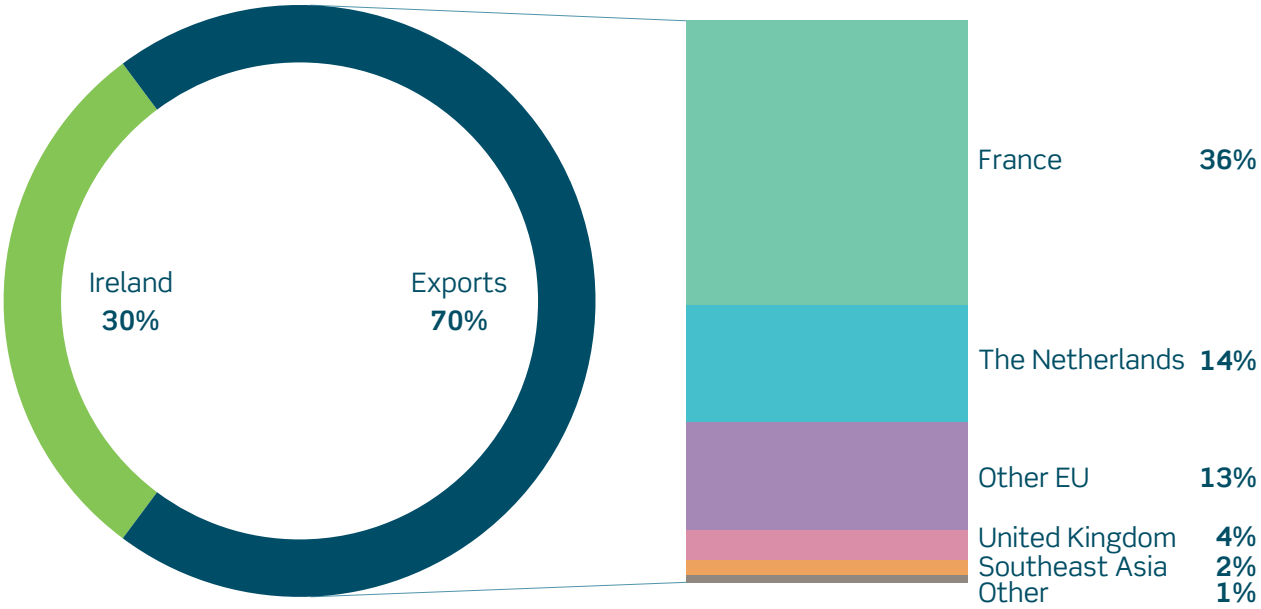

Figure 3: Aquaculture market destinations in 2024

In 2024, export volume was estimated at 27,064 tonnes, accounting for 70% of total production and representing a 7.2% increase on 2023. France remained the top destination, importing 13,722 tonnes or 51% of total exports, although its share declined by 7% compared to 2023. Other EU countries, particularly the Netherlands (21%; 5,616 tonnes), increased their share, collectively accounting for 40% of exports. The United Kingdom also grew its imports significantly, reaching 1,416 tonnes, a 47% rise from 2023. Southeast Asian countries remained key markets for Irish oysters, maintaining a 3% share (738 tonnes) of total exports (Figure 3).

2.4 Inputs and costs

The sector was profitable in 2024, recording a 9% profit margin. However, overall costs rose by 11%, driven mainly by a 45% increase in feed costs (€19 million), reflecting higher finfish stock levels, and a 26% rise in other operational costs (€11 million; Table 3). In contrast, stock input costs, and repair and maintenance costs fell by 25% (€6 million) and 17% (€3 million), respectively. The drop in stock input costs reflects reduced oyster input in response to weaker sales and lower smolt prices. Depreciation costs declined slightly by 3.3%, supported by increased capital investment, which may also account for lower repair and maintenance costs.

Energy costs, including fuel and electricity, made up 5% of operating costs, unchanged from 2023, but increased by 7% in absolute terms. Electricity costs were more significant for the relatively few land-based sites. Wages and salaries per FTE fell marginally by 1.5%, marking the first decline in several years.

Table 3: Aquaculture production costs 2024

National-level costs (millions €)	2023	2024	Proportion of 2024 cost	Change 2023 to 2024
Total income	€182	€227		25%
Wages and salaries	€41	€40	20%	-1.5%
Imputed value of unpaid labour	€2.6	€3	n/a	19%
Energy costs	€9.4	€10	5%	7%
Stock input cost	€23	€17	8%	-25%
Feed cost	€42	€61	30%	45%
Repair and maintenance	€15.6	€13	6%	-17%
Other operational costs	€41	€52	25%	26%
Depreciation	€12	€11.6	6%	-3%
Total costs*	€186	€207		11%
Cost % of income	102%	91%		

*excluding financial costs

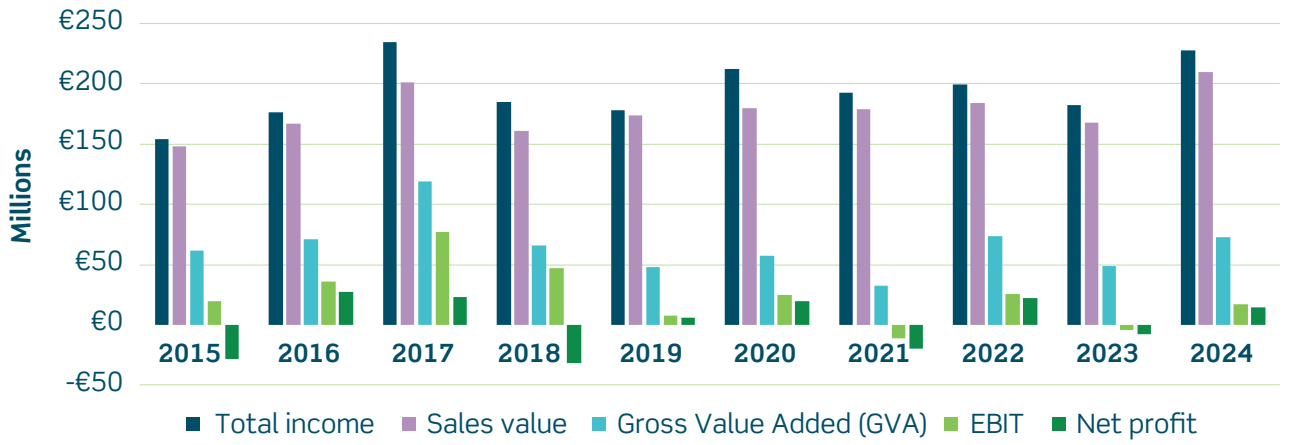

Figure 4: Aquaculture 10-year economic performance

2.5 Economic performance

Economic performance improved in 2024, with total income and sales value rising by 25% compared to 2023. Sales value reached its highest level in a decade, while total income approached 2017 value. These gains contributed to a 48% increase in Gross Value Added (GVA), from €49 million to nearly €73 million. This supported a return to positive figures for Earnings Before Interest and Taxation (EBIT), and Net Profit, recorded at €14 million and €11.6 million, respectively (Figure 4). However, this national-level recovery was largely driven by the rebound in farmed salmon production, highlighting the aquaculture sector's continued dependence on this particular culture for economic performance at national level.

3 Aquaculture regional output

Output and revenue increased in most regions in 2024, with the North, West, Northwest, and Southwest collectively accounting for 76% of national sales value. The North generated the highest regional revenue at €51 million (24% of national value), employing 634 people (34% of total employment) across 65 production units. Declines were recorded in the Northeast (–4%, €268,000) and the South (–23%, €7 million).

Despite revenue increases in the Southeast of 10%, 11% in the West, and 58% in the Northwest, employment fell by 18%, 17%, and 25% respectively. The Southeast region continues to face challenges including oyster and mussel mortality events due to water quality issues in Waterford and Wexford harbours, limited wild mussel seed availability, and challenging market conditions which have caused some businesses to cease production. Revenue increased by 160% in the Southwest to €32 million (15% of national value), with a more modest increase in employment of 4%. The sales surge reflects an alternating organic salmon production management strategy between the Southwest and South regions.

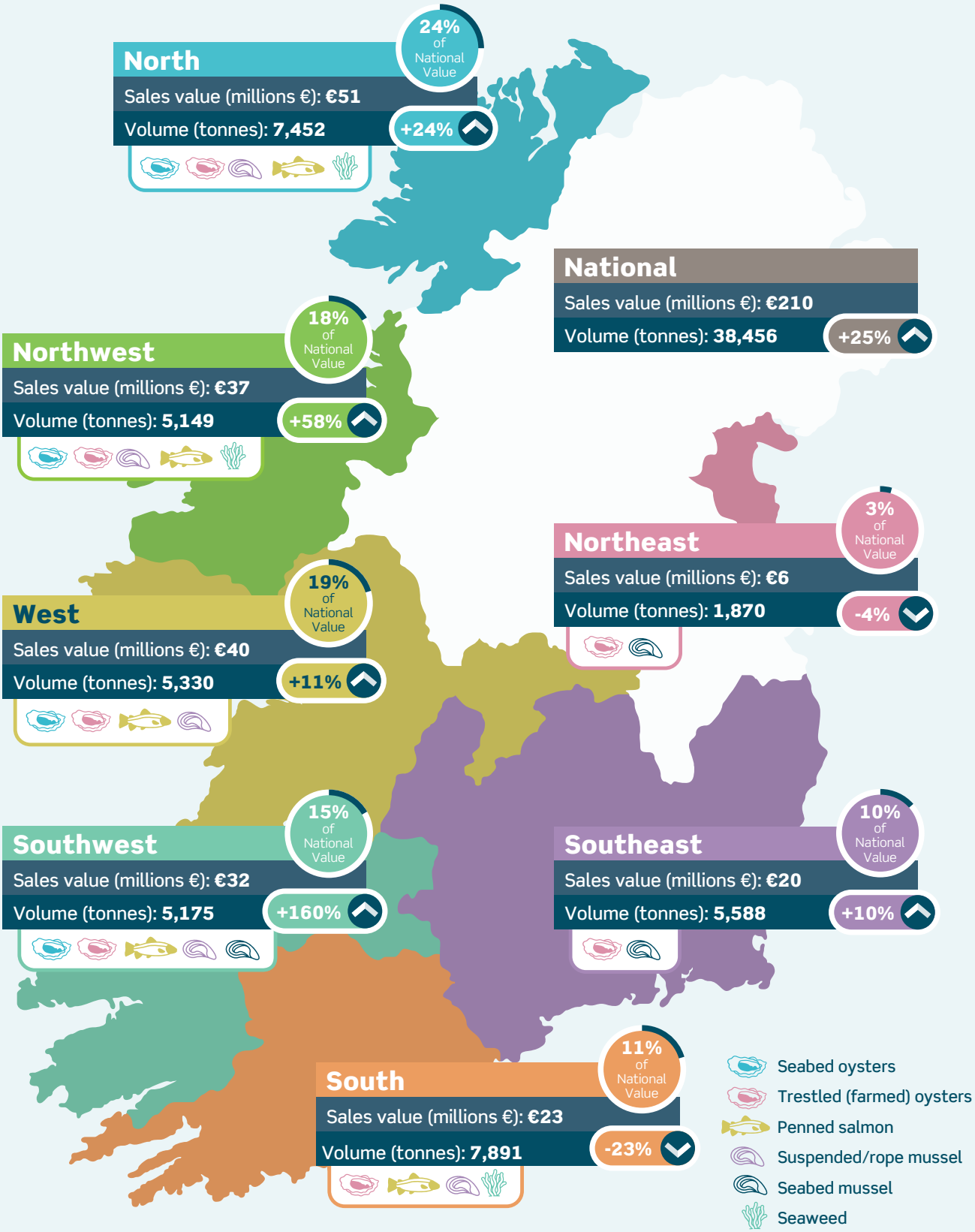

Figure 5: Regional aquaculture production and value in 2024

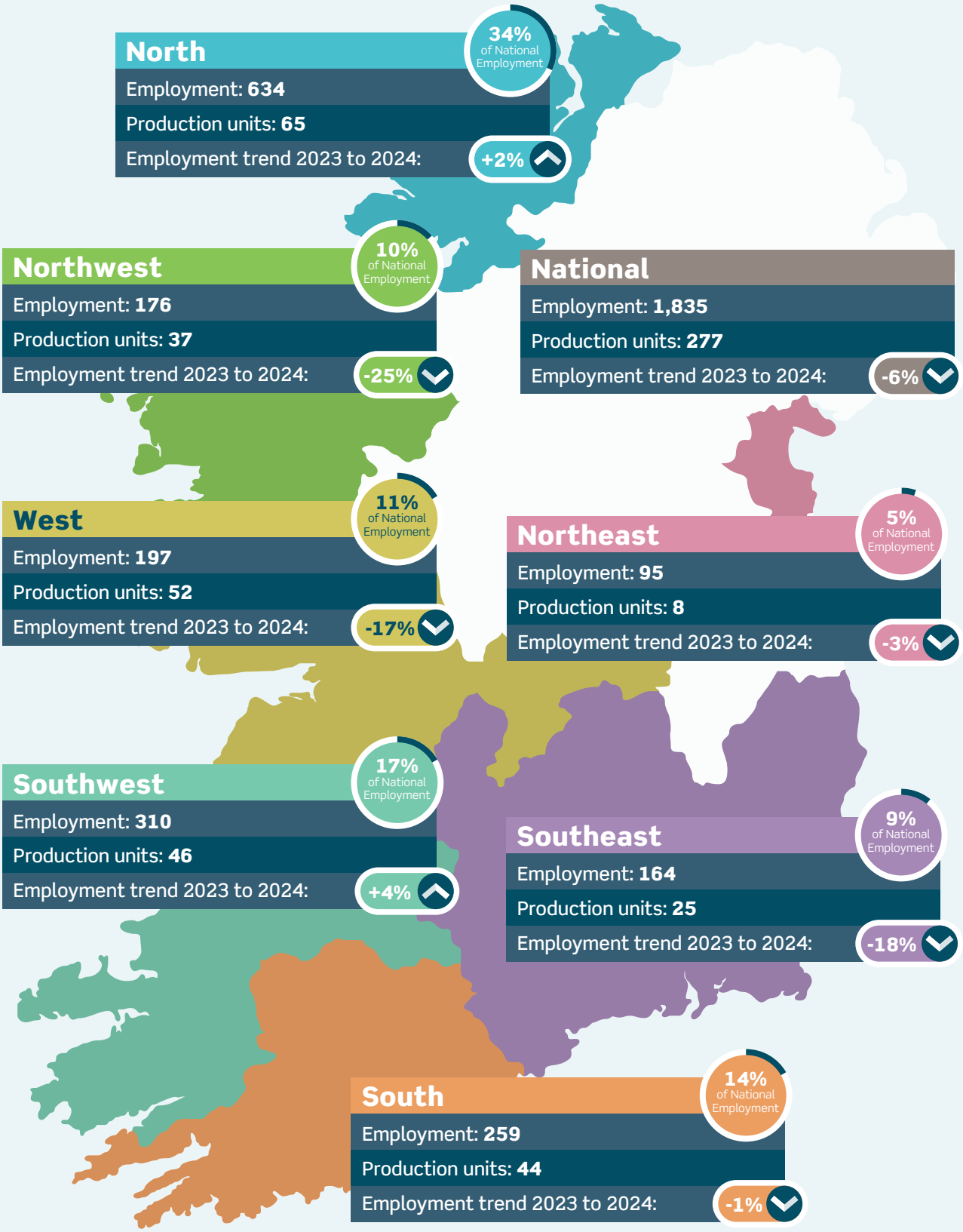

Figure 6: Aquaculture employment and production unit distribution by region, 2024

4 Farmed salmon

Farmed salmon had a strong year in 2024, with output up 49% and sales value rising by 46% to €138 million. Employment in the segment rose by 41%, supporting a total of 337 jobs in 2024 (269 FTEs). GVA to the economy reached €17.8 million, the highest since 2020. Despite this, total costs exceeded income resulting in negative EBIT and net profit values.

The Atlantic salmon *Salmo salar* is the "King of Fish" in Irish folklore and legend. The world's first commercially operated salmon hatchery was started in Galway in 1852 and the first-ever attempt to cultivate this species in sea-cages was undertaken off the Dublin coast two years later. The current industry began in 1974 in Killary Fjord in County Galway. Irish salmon farming conditions are unique with all salmon farmed in Ireland certified organic, meaning they are exclusively fed sustainable organic feed and raised in more spacious pens than traditional farmed salmon.

Farming salmon is a lengthy process. The salmon eggs are hatched inland in freshwater, before being transferred after a year and a half to large sea pens where they spend an average of 18 months and swim the equivalent of 13,000 km before reaching market size.

Salmon sea farming takes place in bays along Ireland's west coast, from Lough Swilly in Donegal to Bantry Bay in Cork. The 20-year time series (Figure 7) show a cyclical pattern in production, with alternating periods of higher and lower output every 3 to 5 years.

This trend reflects a combination of factors, including limited licensed capacity for hatcheries and on-growing sites, the fallowing practices required under organic certification, and differing stock growth cycles for various markets. Periodic outbreaks of pathogens or harmful algal blooms (red tides) can also disrupt production patterns.

Farmed salmon had a strong year in 2024, with output up 49% (4,588 tonnes) across all regions and sales value rising by 46%, reaching €138 million. This reversed the declining trend of the previous two years (Table 4).

Table 4: Farmed salmon output, 2023 to 2024

Farmed salmon	2023	2024	Change
Tonne produced	9,289	13,877	49%
Sales value	€94,754,000	€138,365,000	46%

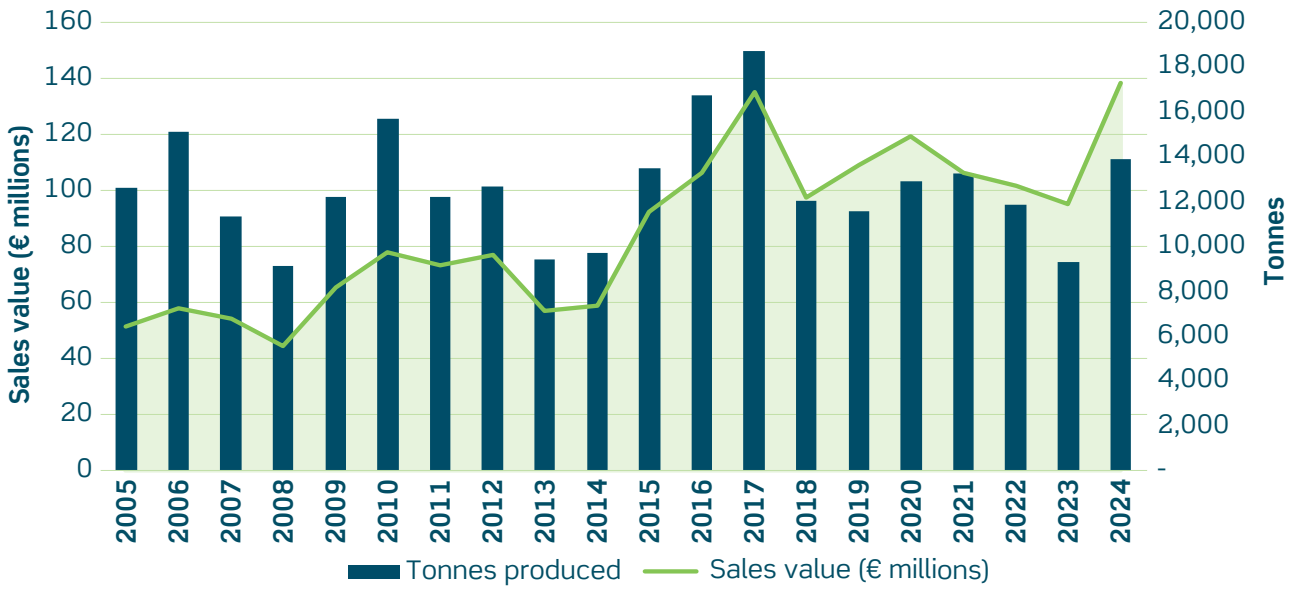

Figure 7: Farmed salmon output, 2005-2024

4.1 Employment & capacity

Salmon farming supported a total of 337 jobs in 2024, equivalent to 269 FTEs. Employment in the salmon farming segment rose by 41% (98 people) in 2024. The largest increases were among part-time staff (up 48% on 2023) and casual workers, whose numbers rose tenfold to 32. Full-time positions increased by 23% and now represent 66% of the segment's workforce (Figure 8). FTE positions rose by 60 (29%). Average wages per FTE were €56,400, a 24% decrease from 2023, possibly reflecting a shift from administrative to production roles.

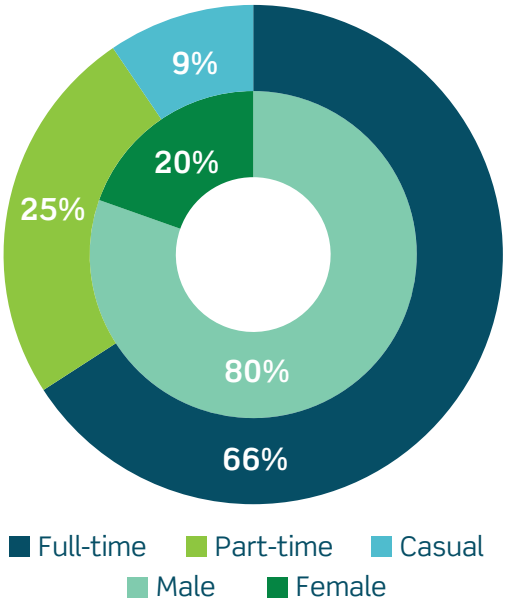

Figure 8: Farmed salmon employment demographics in 2024

Recruitment in 2023 was 56% male and 44% female, helping to improve gender balance. However, the workforce remained predominantly male, with women making up 20%. The rise in female participation in 2024 follows a notable decline in 2023. Employment levels are expected to remain stable in 2025, in line with anticipated strong output. The number of production units remained unchanged at 16, operated by five companies. In 2024, all but one unit employed more than 10 people, a 25% increase on 2023, with an average of 21 staff per unit. The industry operates across 466 pens within 962 licensed hectares. The average sea-site production unit yields 867 tonnes worth €9 million.

4.2 Markets

Approximately 32% (4,490 tonnes) of farmed salmon production in 2024 was sold to Irish consumers or processing units, reflecting similar trends to the previous year. The remaining 68% was exported, primarily to France (32%), other EU countries (29%), and international markets including North America and Asia (6%) (Figure 9).

Most exports are sold fresh, either as whole round or head on gutted. The remainder are processed into fillets or steaks. Irish processing units also export salmon products made from imported fish, helping to meet market demand beyond the capacity of domestic production.

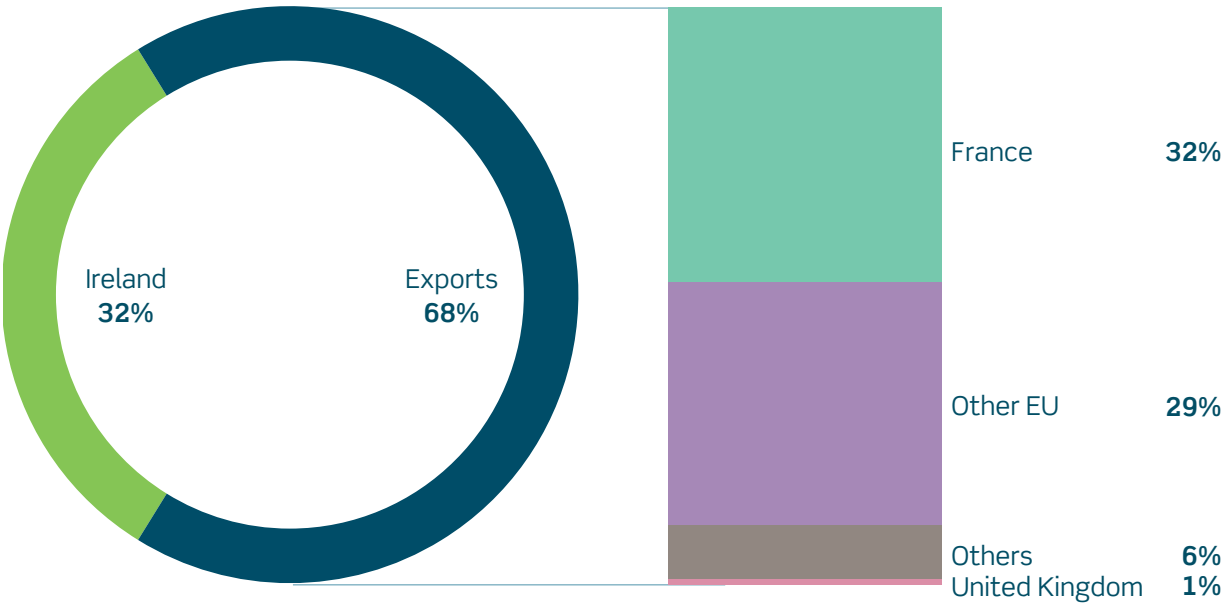

Figure 9: Farmed salmon market destinations in 2024

4.3 Inputs and costs

In 2024, the most significant operational costs in salmon farming were feed inputs at 40% and other operational costs at 30% (Table 5). Feed costs have risen steadily since the Covid 19 pandemic disrupted supply chains for raw materials. The 45% increase in 2024 also reflects higher stock levels and increased production experienced in 2024. Other operational costs include a broad range of overheads and service expenses.

Wages and salaries rose slightly by 3%, accounting for 10% of total costs. This segment is fully professionalised, with no unpaid labour reported. Energy costs increased by 17% due to higher production and fuel use but still represented only 5% of total costs. Repairs and maintenance accounted for 6% of costs, down 13% from 2023 due to more efficient servicing strategies. Depreciation rose by 3%, now making up 4% of total costs.

4.4 Economic performance

Total income in the farmed salmon segment rose to €144 million in 2024, a 48% increase on 2023 and the highest recorded since 2017 (Figure 10). GVA to the economy reached €17.8 million, the highest since 2020. However, profitability was not evident in survey estimates, as total costs exceeded income (Table 5), resulting in negative EBIT and net profit figures (Figure 10). At the operational level, increases in output, sales revenue, and employment reflect a mixed but generally improving economic outlook for the segment.

Table 5: Farmed salmon production costs 2023 to 2024

Farmed salmon culture costs	2023	2024	Proportion of 2024 cost	% Change, 2023 to 2024
Total income	€97,096,000	€144,111,000		48%
Wages and salaries	€14,802,000	€15,178,000	10%	3%
Imputed value of unpaid labour	€0	€0	n/a	-
Energy costs	€6,318,000	€7,392,000	5%	17%
Stock input cost	€12,136,000	€6,282,000	4%	-48%
Feed cost	€40,644,000	€59,130,000	40%	45%
Repair and maintenance	€10,957,000	€9,565,000	6%	-13%
Other operational costs	€30,812,000	€43,981,000	30%	43%
Depreciation	€5,882,000	€6,043,000	4%	3%
Total costs	€121,551,000	€147,572,000		21%
Cost % of income	125%	102%		

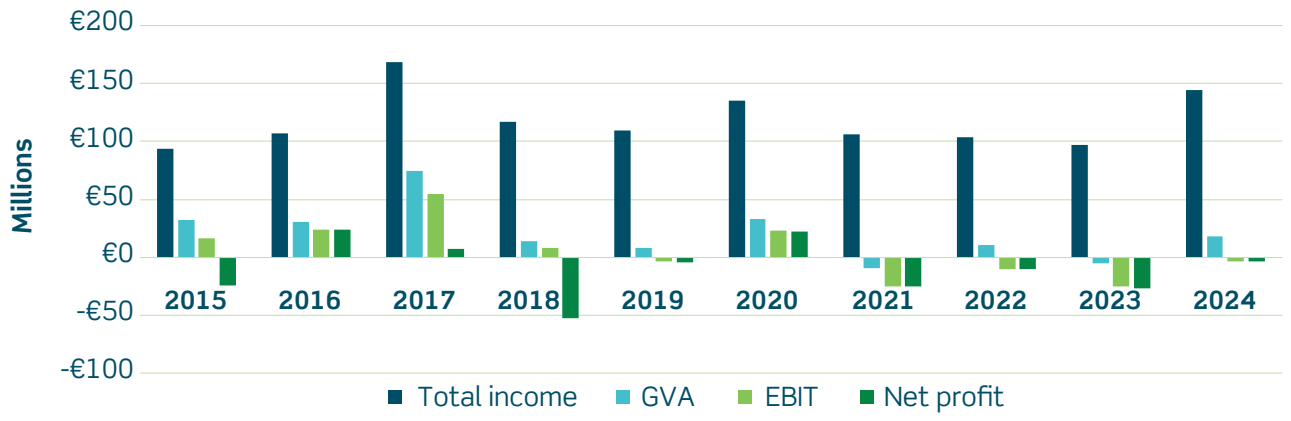

Figure 10: Farmed salmon 10-year economic performance trend to 2024

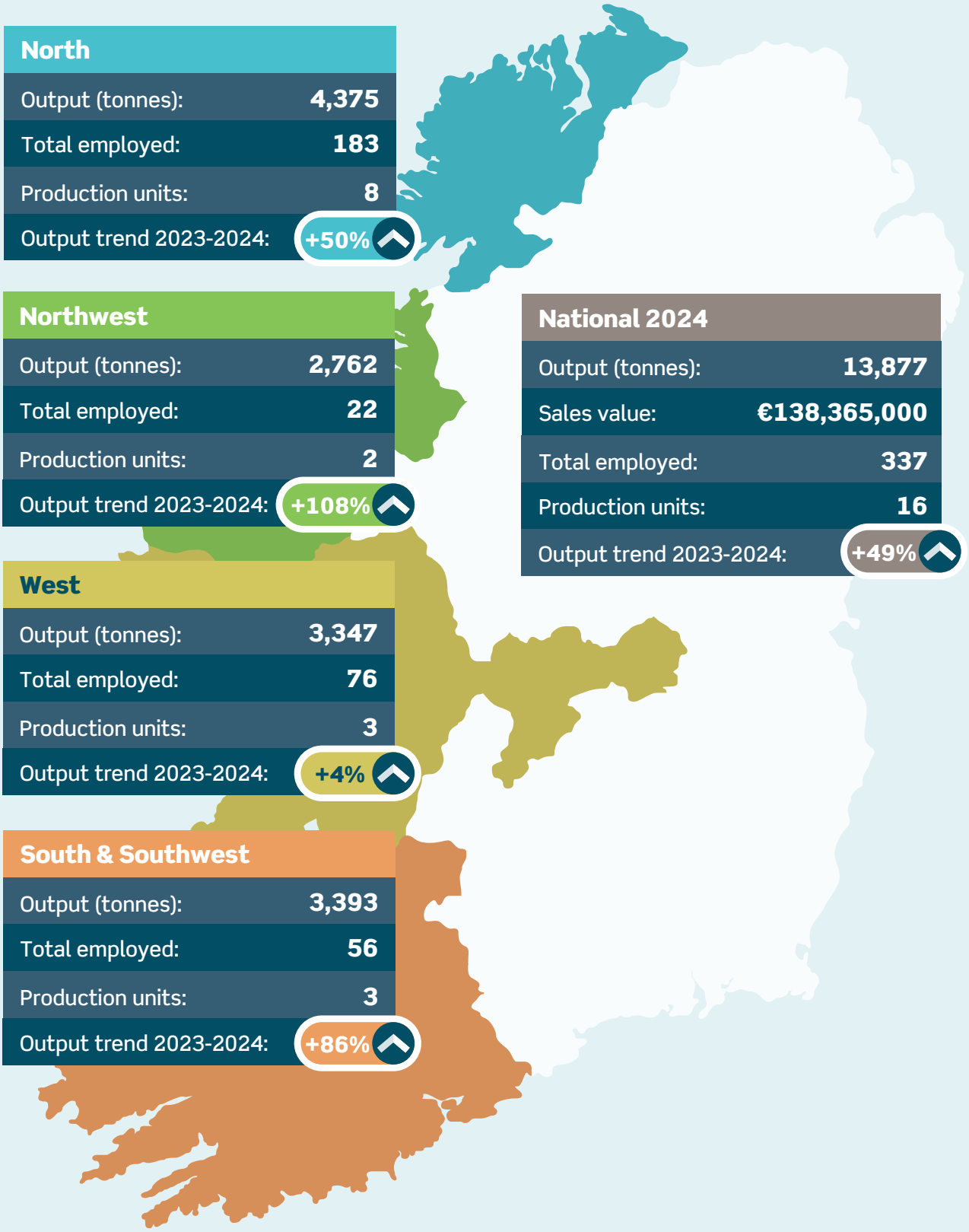

Figure 11: Farmed salmon output and employment by region in 2024

5 Farmed Pacific oyster

In 2024, a total of 9,268 tonnes of mixed grade Pacific oysters were sold, generating €48 million in revenue, a decline of 4% in volume and 6% in value compared to 2023. Employment in the segment declined by 10% in 2024, to 906 jobs. All regions bar the Southwest showed declining outputs and sales value in 2024. Despite this, the oyster segment remained profitable in 2024 with key indicators remaining positive despite substantial declines.

Oyster cultivation in Ireland dates back to the 13th century, with many modern growers still using traditional methods. Two oyster species are now farmed: the native European flat oyster *(Ostrea edulis)* and the introduced Pacific oyster or Irish rock oyster *(Magallana gigas,* formerly *Crassostrea gigas)*, which became the dominant culture species following its introduction in the late 1970s (see Section 8.1 for details on native oyster aquaculture).

Pacific oyster

Often marketed in Ireland as Irish rock oysters, Pacific oysters are generally cultivated in bags on trestles along the shore, accessible only at low tide. Harvesting involves lifting bags or selecting mature oysters during low tide exposure. Successful cultivation depends on high quality broodstock. Oysters are typically harvested after three to four years. The location and grow-out methods influence the oyster's taste, appearance, and quality.

Before market, oysters are graded by size: grade 0 is largest, grade 4 the smallest. Oyster farming takes place in nearly all aquaculture bays with suitable intertidal zones along the coast. Irish oysters are recognised internationally for their quality. They also confer environmental benefits by contributing ecosystem services through filtering action. From 2005 to 2020, output and sales value increased steadily until disrupted by the Covid 19 pandemic, which caused a significant decline (Figure 12).

In 2024, a total of 9,268 tonnes of mixed grade Pacific oysters were sold, generating €48 million in revenue (Table 6). Around 80% of product was sold as consumer ready, with the remaining 20% supplied to finishing units. The majority of oysters produced (90%) were triploid, meaning that they have been bred to have three sets of chromosomes instead of the usual two (diploid). This genetic difference results in sterile oysters which grow faster and produce a better meat quality, as the oyster doesn't expend energy on reproduction. Consumer-ready stock achieved an average price of €5.19 per kg, with premium grades reaching €6.30 per kg. Half-grown stock sold for €2.93 per kg, while diploid oysters averaged €3.52 per kg (Table 7).

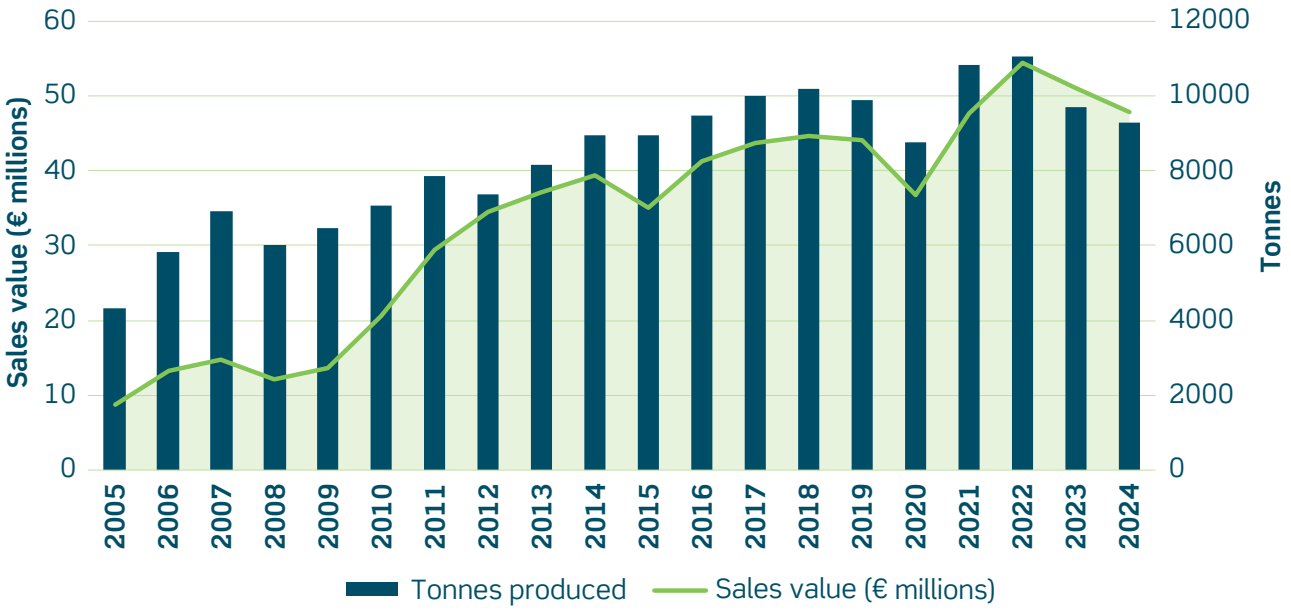

Figure 12: Farmed Pacific oyster output, 2005-2024

Table 6: Pacific oyster output 2023 to 2024

Pacific oyster	2023	2024	Change
Tonnes produced	9,698	9,268	-4%
Sales value	€51,009,000	€47,766,000	-6%

All regions bar the Southwest and Northeast showed declining outputs and sales value in 2024 (Figure 16). The Southeast produced the largest output volume and sales value; 2,294 tonnes, with a sales value of over €13 million, produced by 14 production units. Unit price for the region averaged €5.75 per kg. The North is the biggest regional employer; 301 persons worked on 49 relatively small units, averaging 6 employees on each.

5.1 Employment & capacity

Pacific oyster farming supported a total of 906 jobs in 2024, equivalent to 581 FTEs. Employment in the Pacific oyster aquaculture segment declined by 10% (96 people) nationally in 2024, with the largest losses seen in seasonal and casual roles (down 23%, 63 people). Alongside falling output and value, the sector continues to face challenges in retaining staff. In response, many producers are adopting labour saving culture techniques where site conditions, licensing, and funding permit. Full-time roles still account for the largest share of employment (44%: Figure 13). The workforce remains predominantly male (88%) with job losses relatively balanced between genders (10% male, 7% female).

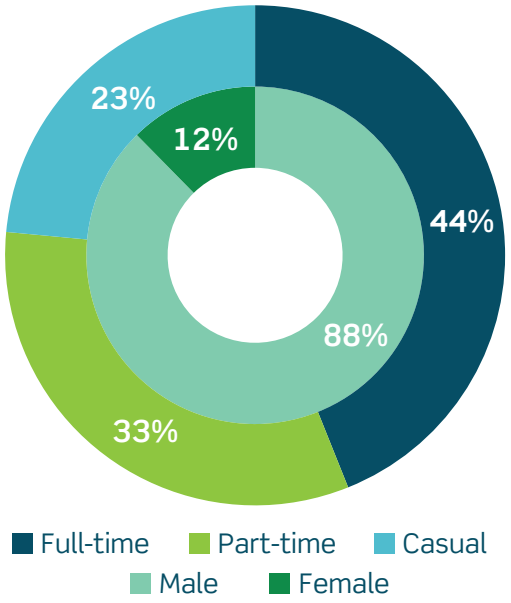

Figure 13: Pacific oyster aquaculture employment demographics in 2024

Table 7: Pacific oyster unit value by product category 2024

Output category	Tonnes	Avg. sales value per tonne 2024	% of total output
Consumer-ready	7,464	€5,689	81%
*Premium grade	4,885	€6,300	53%
Half-grown	1,832	€2,925	20%
Exported	7,584	€5,185	82%
Triploid	8,341	€5,091	90%
Diploid	927	€3,520	10%
Total output	9,268	€5,185	

*>= €5.00 per kg

5.2 Markets

In 2024, 81% of Irish farmed oysters were exported, while 19% were sold on the domestic market (Figure 14). France remained the primary export destination, accounting for 70% of exports and 57% of total production (5,282 tonnes). However, its dominance is gradually decreasing as alternative markets expand. The Netherlands and the United Kingdom accounted for 9% and 6% of sales respectively. Southeast Asia is also becoming an increasingly important destination, representing 8% of production and 10% of exports.

5.3 Inputs and costs

Costs increased in 2024, accounting for 73% of annual income, up 4% from 2023, and narrowing the profit margin (Table 8). The main cost drivers were wages and salaries (45%), stock input (seed) (21%), and other operational costs (15%). Oyster production remains the most labour intensive aquaculture segment, despite efforts to introduce labour saving methods.

Employment costs rose by 6%, even as staff numbers fell by 10%. Unpaid labour accounted for an estimated €1.8 million, reflecting the continued contribution of farm owners and partners undertaking non salaried administrative work. The value of this unpaid work rose by an estimated 20% in 2024 (Table 8).

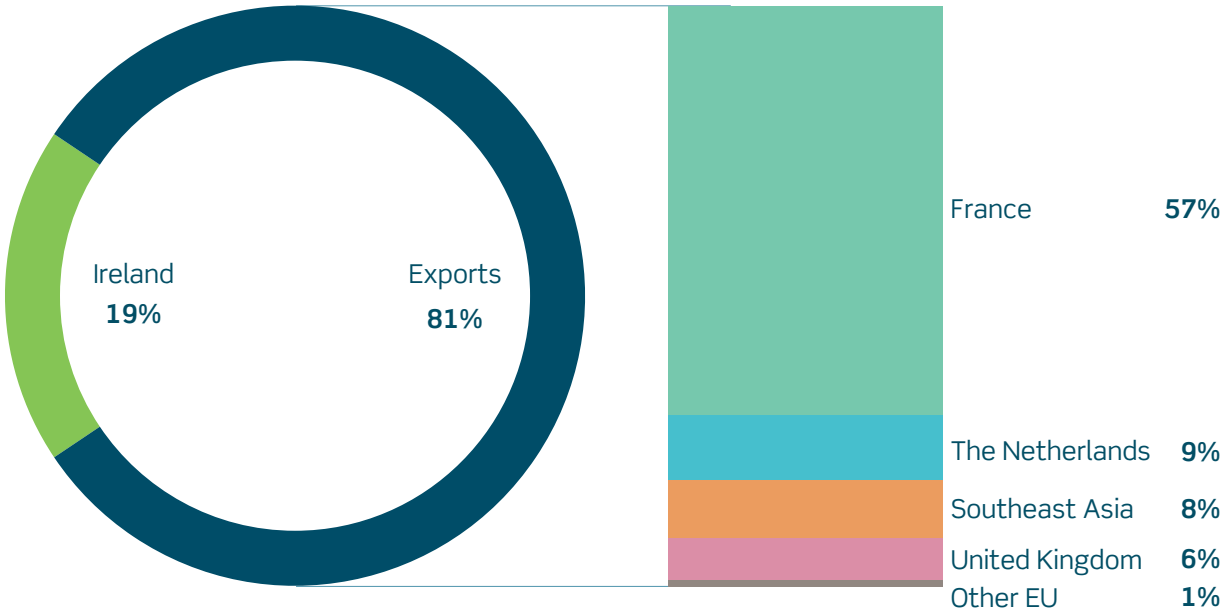

Figure 14: Pacific oyster market destinations in 2024

Table 8: Pacific oyster production costs 2023 to 2024

Pacific oyster culture costs	2023	2024	Proportion 2024 cost	Change 2023 to 2024
Total income	€57,877,000	€56,207,000		-3%
Wages and salaries	€16,759,000	€17,823,000	45%	6%
Imputed value of unpaid labour	€1,475,000	€1,764,000	n/a	20%
Energy costs	€1,314,000	€1,198,000	3%	-9%
Stock input cost	€8,001,000	€8,328,000	21%	4%
Feed cost	€0	€260,000	1%	-
Repair and maintenance	€1,889,000	€1,702,000	4%	-10%
Other operational costs	€6,435,000	€5,951,000	15%	-8%
Depreciation	€3,972,000	€4,234,000	11%	7%
Total costs	€39,845,000	€41,260,000		4%
Cost % of income	69%	73%		

Significant decreases in energy costs (9%), repairs and maintenance (10%), and other operational costs (8%) may reflect lower output and improved efficiencies, including pooled operations and new culture technologies, or conversely may be as a result of economic pressure reducing investment in non-essential repairs and operational costs. Depreciation rose by 7% in 2024, highlighting the need to manage wear and tear on capital equipment such as tractors, trailers, trestles, and vessels used in demanding intertidal environments. While accounting for a small proportion of overall 2024 costs, a substantial year on year increase in feed costs is observed due to operational changes related to segment aggregation.

5.4 Economic performance

Despite lower production volume and value, the oyster segment remained profitable in 2024. However, net profit fell sharply by 37% to €13.3 million. While total costs rose by 4%, total income declined by 3% to €56.2 million (Table 8). Key indicators stayed positive, though GVA dropped by 4% to €38.4 million, and EBIT declined by 35% to €14.5 million. Regional performance varied significantly, largely depending on the ability to produce premium grade oysters. In 2024, 53% of output achieved premium prices (Table 7).

Over the past two years, both output and value have been constrained by increasingly strict market specifications. Premium grade oysters continue to attract strong prices, while demand for standard grade product has fallen, widening the gap between regions. A drop in meat yield in some areas, linked to water quality issues is limiting the ability to produce high-grade oysters.

The French market is also experiencing a surplus of standard grade oysters, resulting in importation only superior grade Irish product. As Ireland's main export destination, this has serious implications for the oyster segment.

Alongside these market pressures, environmental challenges, particularly declining water quality, the presence of pathogens, contaminants, and invasive species continue to affect segment profitability.

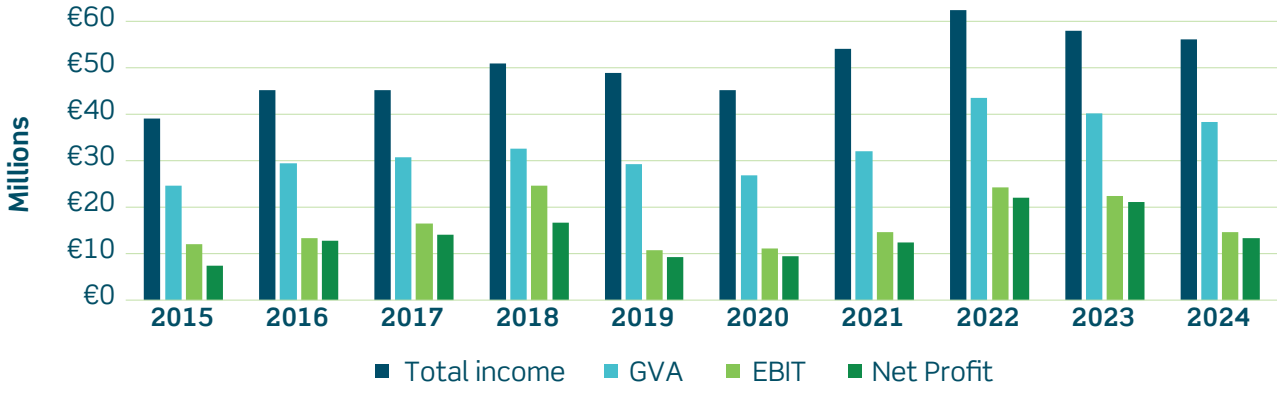

Figure 15: Pacific oyster 10-year economic performance trend

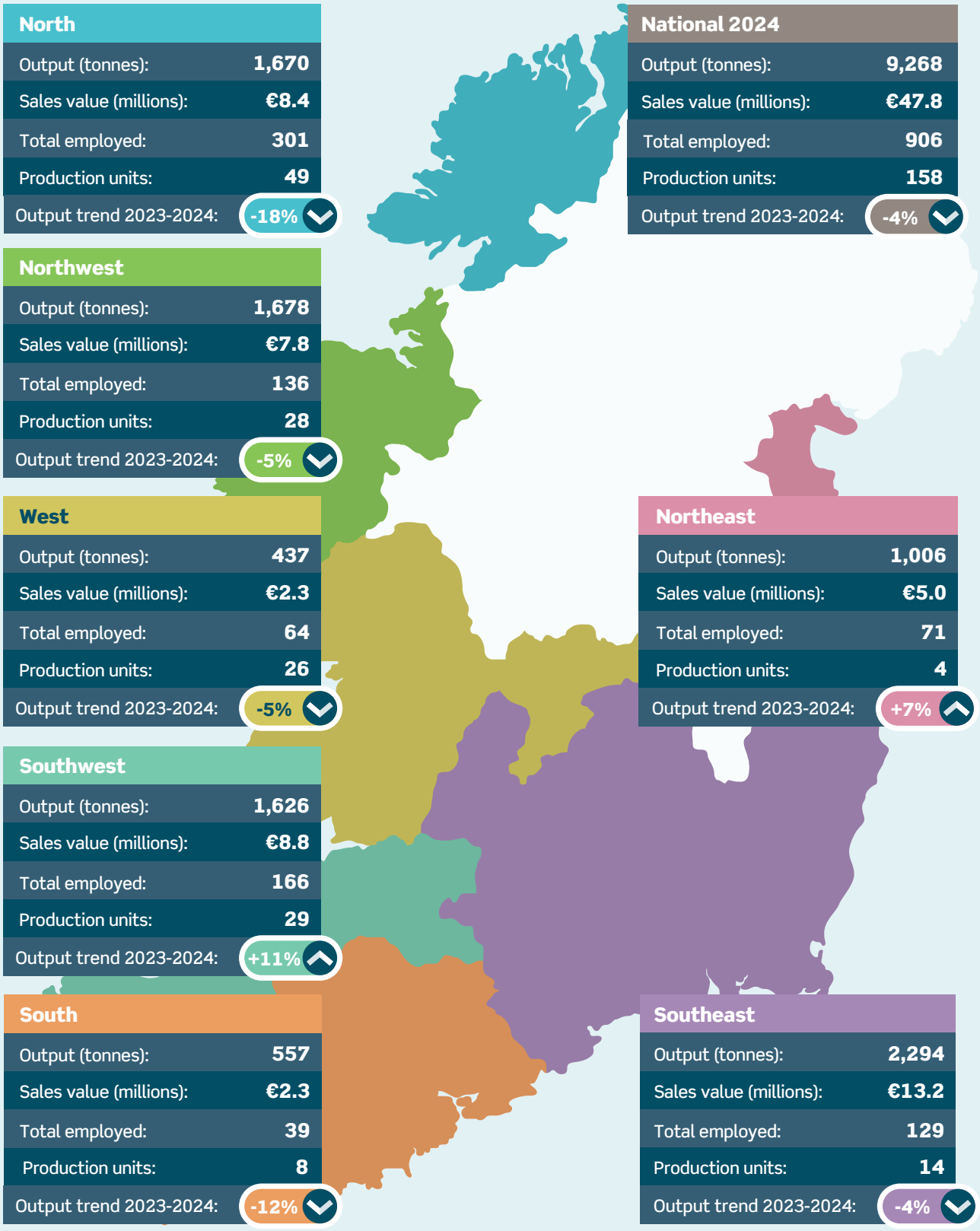

Figure 16: Pacific oyster performance by region 2024

6 Rope mussel culture

In 2024, total mussel output declined by 16% to 9,479 tonnes across all regions, while sales value fell by 18% to over €7.5 million. The decline in output negatively affected employment, with total employment declining by 6% to 228 people (137 FTEs). Overall, the economic performance of the rope mussel segment remained positive in 2024, though weaker than in recent years with decreases of 15% in GVA and 77% in net profit.

The modern Irish mussel industry started in the early 1970's. Mussel culture in Ireland primarily focuses on blue mussels *(Mytilus edulis)*, using two main production techniques, suspended rope culture and seabed (bottom) culture (Section 7). Rope culture uses specially designed ropes 'long lines' suspended in the water column from buoys or barrels, to which wild mussels naturally attach. To harvest, the ropes are hauled out of the water and the mussels are removed, often using specialized equipment.

Mussels typically take around two years to reach market size, although this can extend to three years depending on growing conditions in specific bays. Mussels can be eaten all year round, but the meat content and flavour will vary depending on the time of year. Mussels are typically sold fresh (live) directly to consumers or processors.

Mussel farming is generally considered environmentally friendly, as mussels filter feed on plankton from the water, and do not require supplemental feed. Each mussel can filter up to 65 litres of water per day. Their impact on the environment is minimal and mussel production generates an extremely low carbon footprint. Ireland has achieved MSC (Marine Stewardship Council) certification for its rope-grown mussels (since 2019), signifying sustainable and well-managed fisheries.

Over the past 20 years, Irish suspended rope mussel farming has produced between 9,500 and 10,000 tonnes annually, peaking at 13,240 tonnes in 2022 following a strong post-lockdown state-supported recovery (Figure 17). In the last two years, stock condition in the South and Southwest regions has declined, and the seed settlement period has shortened to just a few weeks. This has led to a shortage of mussel seed limiting production output. While unit prices are generally lower than those of EU competitors, average sale values have improved since 2021.

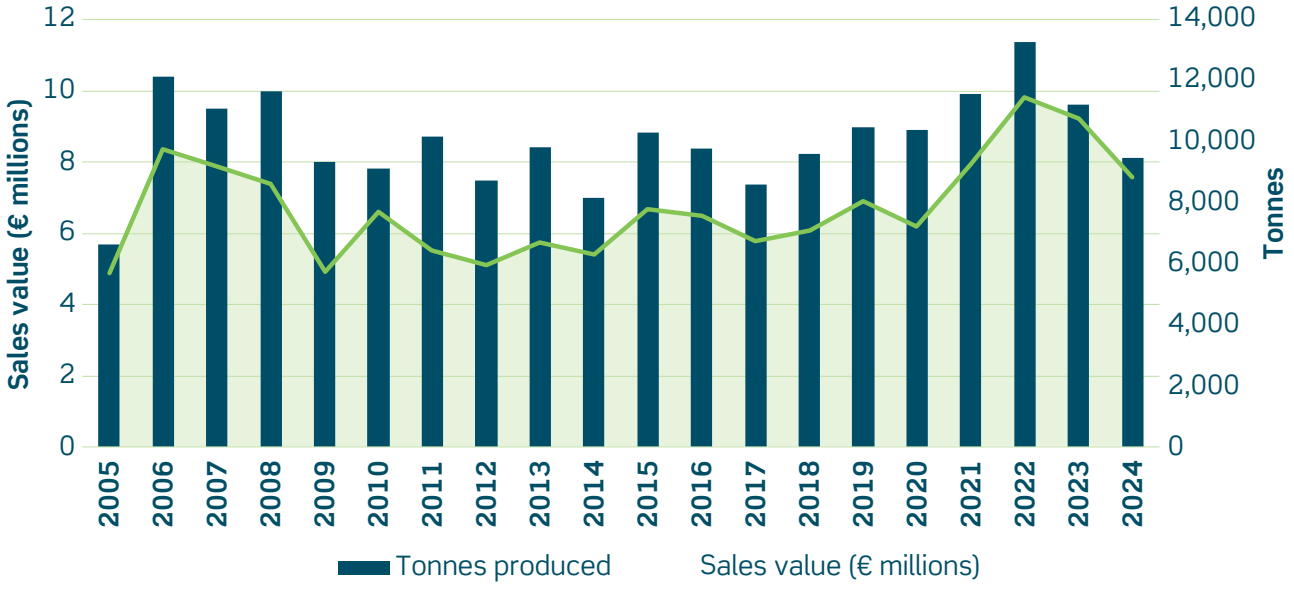

Figure 17: Rope mussel output, 2005-2024

In 2024, total mussel output declined by 16% to 9,479 tonnes across all regions (Table 9), while sales value fell by 18% to just over €7.5 million. The sheltered deep-water bays of the South, which have the largest licensed production capacity, produced 5,869 tonnes, a 15% decline from 2023. The Southwest experienced the sharpest drop, with production down 45%. Field observations suggest that shortening of the seed settlement period has disrupted alignment with producer collection schedules, contributing to the overall decline.

The majority (59%) of rope mussel produce was sold fresh, receiving an average unit sales price of €0.91 per kg, with the remaining 41% processed before going to the consumer (Table 10). Approximately 60% of total output was exported.

6.1 Employment & capacity

The decline in output negatively affected employment in the rope mussel culture segment. Total employment fell by 6% to 228 people, with FTEs decreasing by 6% to 137. Most losses occurred among part-time staff, which fell by 18% (17 people). Employment remains relatively evenly distributed across full-time, part-time, and casual roles (Figure 18). The workforce continues to show a strong gender imbalance, with 90% male workers.

The number of production units remained stable at 53. However, three larger units employing more than five people appear to have downsized, increasing the number of smaller units employing five or fewer. In 2024, the average rope mussel production unit produced 179 tonnes, generated €142,722 in sales, and employed four people. The segment used 1,969 suspended systems across 936 licensed hectares, producing 9,479 tonnes. Average production per hectare in 2024 was 10 tonnes.

Table 9: Rope mussel national output 2023 to 2024

Rope mussel	2023	2024	Change
Tonnes produced	11,218	9,479	-16%
Sales value	€9,229,000	€7,565,000	-18%

Table 10: Rope mussel product profile, 2024

	Tonnes	Price per tonne
Fresh market	5,576	€907
For process	3,903	€655
Exported	5,765	€798
Total output	9,479	

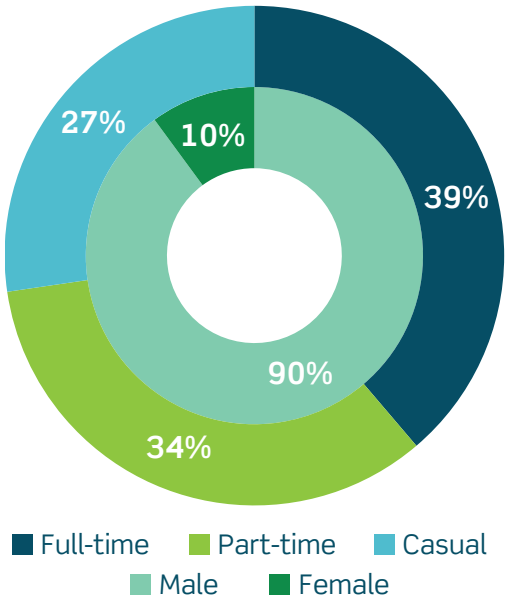

Figure 18: Rope mussel aquaculture employment demographics in 2024

6.2 Markets

The majority of exports in 2024 were to the EU (93%), with France remaining the primary destination. France accounted for 36% of total sales by volume and 62% of all exports (Figure 19). In total, 5,384 tonnes, or 59% of production, were exported, while the remaining 41% (3,979 tonnes) were sold to Irish processors or consumers. Rope mussels demonstrate the highest domestic market percentage of all cultured species illustrating their popularity among Irish consumers.

6.3 Inputs and costs

Although total costs remained stable, lower income led to a weaker cost-to-income ratio. In 2024, costs accounted for 87% of income, an increase of 14% on the previous year (Table 11). The largest cost was wages and salaries, making up 48% of the total, and rising by 3% despite lower employment. Other key costs included other operational costs (15%), repairs and maintenance (13%), and depreciation (11%), which together accounted for 39% of total costs.

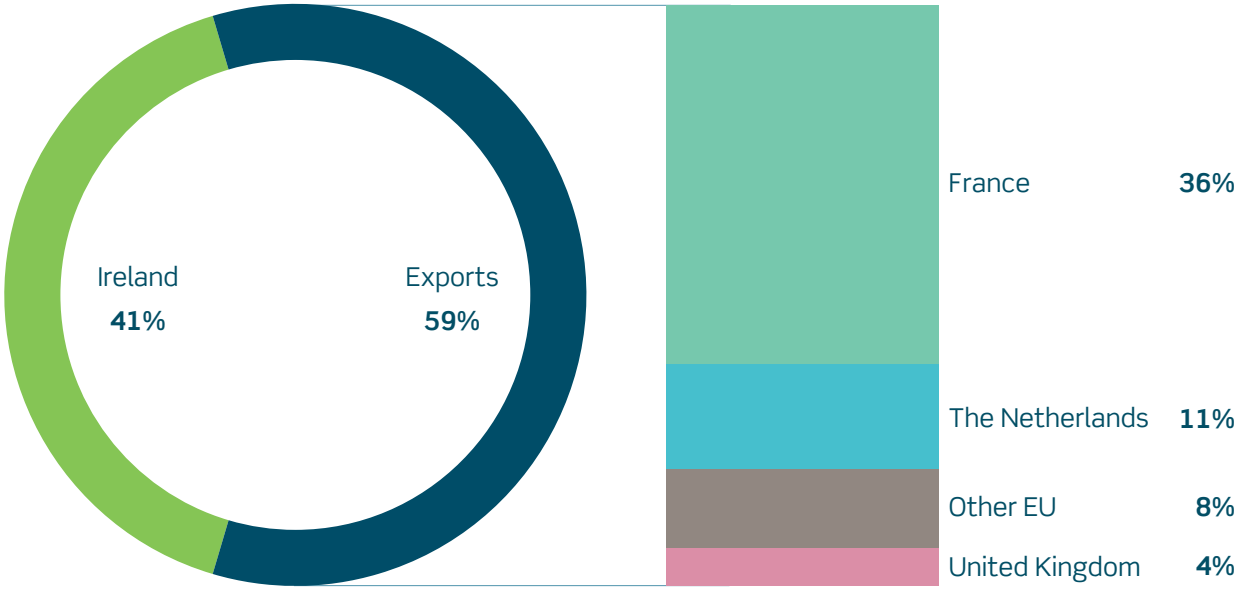

Figure 19: Rope mussel market destinations in 2024

Table 11: Rope mussel production income and costs 2023 to 2024

Rope mussels	2023	2024	Proportion 2024 cost	Change 2023 to 2024
Total income	€11,403,000	€9,658,000		-15%
Wages and salaries	€3,608,000	€3,707,000	48%	3%
Imputed value of unpaid labour	€396,000	€653,000	n/a	65%
Energy costs	€476,000	€465,000	6%	-2%
Stock Input cost	€586,000	€581,000	7%	-1%
Feed cost	€0	€0	n/a	-
Repair and maintenance	€1,451,000	€975,000	13%	-33%
Other operational costs	€1,101,000	€1,174,000	15%	7%
Depreciation	€716,000	€891,000	11%	25%
Total costs	€8,334,000	€8,447,000		1%
Cost % of income	73%	87%		

Unpaid labour, a notable feature of rope mussel farming, rose by 65% in 2024, reflecting the pressure on earnings. As in other shellfish segments, small business owners and their partners/families often perform administrative and financial tasks without pay.

Depreciation represented 11% of total costs, increasing by 25% from 2023, suggesting growing capital investment needs. In contrast, repairs and maintenance fell by 33%, possibly reflecting cost saving measures that limit work to essential upkeep. This may also explain the higher depreciation rate, as reduced maintenance accelerates asset wear.

6.4 Economic performance

Overall, the economic performance of the rope mussel segment remained positive in 2024, though weaker than in recent years (Figure 20). Total income fell by 15% to €9.7 million, while total costs increased slightly by 1%, narrowing profit margins. GVA declined by 15% to €6.4 million. EBIT dropped by 75% to €1.2 million, and net profit decreased by 77% to €1 million.

Fluctuating market conditions in France, coupled with deteriorating stock productivity affecting spat production and retention in southern water bodies pose concerns heading into 2025.

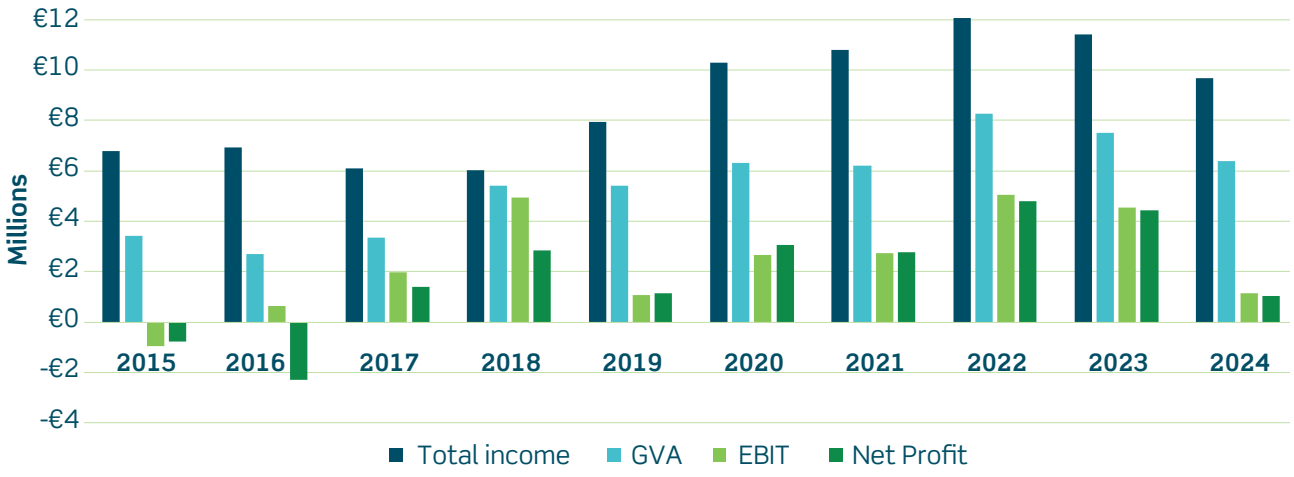

Figure 20: Rope mussel 10-year economic performance trend

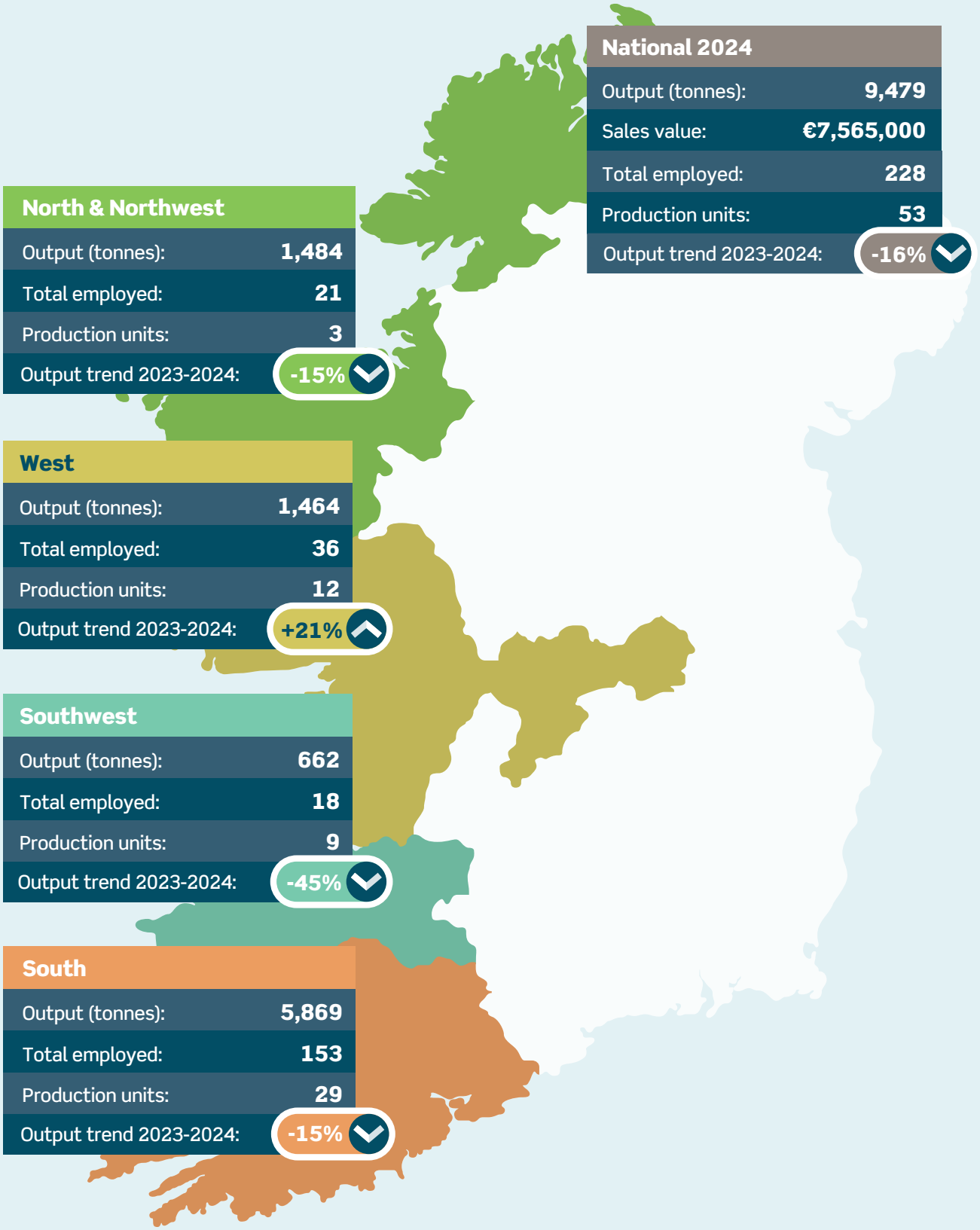

Figure 21: Rope mussel output and employment by region in 2024

7 Seabed cultured mussels

In 2024, output volume increased by 13% and sales value rose by 61%, reaching 4,096 tonnes worth €6.4 million. However, these values may mask significant issues facing the industry as multiple production units sold reserve stocks in 2024 to maintain income. Employment in the segment declined by 29% in 2024, to 64 individuals (43 FTE). Costs exceeded income, with EBIT and net profit indicating losses of -€1.6 million and -€2 million million respectively.

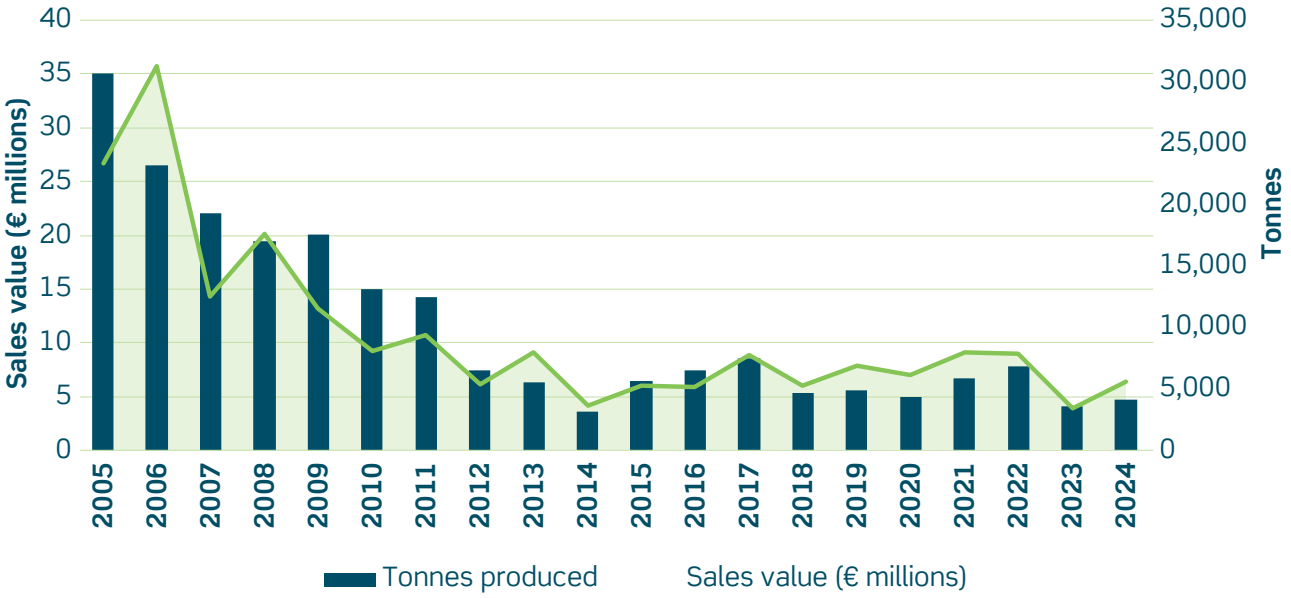

Figure 22: Seabed cultured mussel output, 2005-2024

In seabed mussel culture, mussels are grown on the seabed in licensed sites. Mussel seed collection takes place primarily in the Irish Sea in the Autumn, using light weight dredges designed to skim the upper layer of mud around aggregations of juvenile mussels with minimal impact to the underlying seabed. The collected seed is then re-laid for on-growing in marine bays before harvesting using dredges after approximately 2 years. Settlement of seed varies annually and may primarily be driven by environmental conditions during larval development, availability of suitable substrate, and post settlement survival.

As for rope culture, seabed cultured mussels filter feed on plankton from the water, and do not require supplemental feed, thus creating minimal environmental impact and an extremely low carbon footprint. Ireland achieved MSC certification for bottom-grown mussels in 2013.

Mussel seabed culture has declined significantly from a peak output of over 30,000 tonnes worth €36 million in 2005 and 2006, to output levels below 7,500 tonnes and annual sales of €9 million or less over the last 12 years (Figure 22). This segment operates on shallow estuarine sites with moderate tidal flow and freshwater interaction, including Carlingford Lough, Wexford Harbour, and Castlemaine Harbour. The total licensed area in use for seabed mussel culture in 2024 was 2,037 hectares.

For several years, the segment has faced persistent shortages of mussel seed from traditional wild settlement areas in the Irish Sea. Poor water quality in Wexford Harbour is also suspected to have caused recent mass mortalities. There are indications that mussel condition may be deteriorating more broadly, with rope mussel producers in the South also reporting difficulties in stock settlement and retention on farm structures.

Seabed culture businesses have stretched existing stock resources as far as possible but now risk closure unless short term financial support is secured. Competition for space due to conflicting interests across multiple stakeholder groups in Wexford are causing additional concerns to mussel producers. In the longer term, the segment's viability may depend on establishing suitable mussel seed collection sites which can provide adequate quantities at an economically viable cost.

Table 12: Seabed cultured mussel output 2023 to 2024

Seabed cultured mussel	2023	2024	Change
Tonnes produced	3,626	4,096	13%
Sales value	€3,957,000	€6,351,000	61%

In 2024, output volume increased by 13% and sales value rose by 61% compared with 2023, reaching 4,096 tonnes worth €6.4 million (Table 12). However, this increase does not reflect a true recovery of the segment. Most production units sold their final reserve stocks in 2024 to maintain income and buy time. Larger mussels typically secure higher prices, but in many cases, these represented the last saleable stocks, particularly for producers on the eastern seaboard. Without additional new sources of seed or immediate support, many of these businesses are now at risk of closure.

7.1 Employment & capacity

The sector supported a total of 64 jobs in 2024, equivalent to 43 FTEs. Employment in the seabed cultured mussel segment declined by 29% in 2024, compared with the previous year. The losses were mainly among full-time workers (43%) and casual employees (45%). A total of 64 individuals were employed across 15 production units, with half in part-time roles (Figure 23). The gender balance remains highly uneven, with 94% of employees being male.

The number of production units decreased by two in 2024. Most remaining units operated with five or fewer employees. On average, a fully active unit employed four persons and produced 256 tonnes worth €375,000.

7.2 Markets

The Netherlands was the primary destination in 2024, receiving 88% of total production exports with a preference for larger size classes (Figure 24). The French market, which prefers smaller mussels, accounted for 6% of production exports. The remaining 6% of output, made up of half-grown stock, was sold domestically to other on growing units. The national average sales value was €1,551 per tonne.

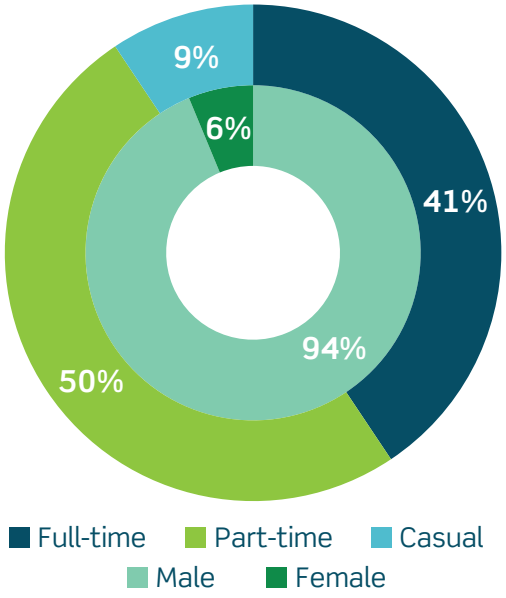

Figure 23: Seabed cultured mussel aquaculture employment demographics in 2024

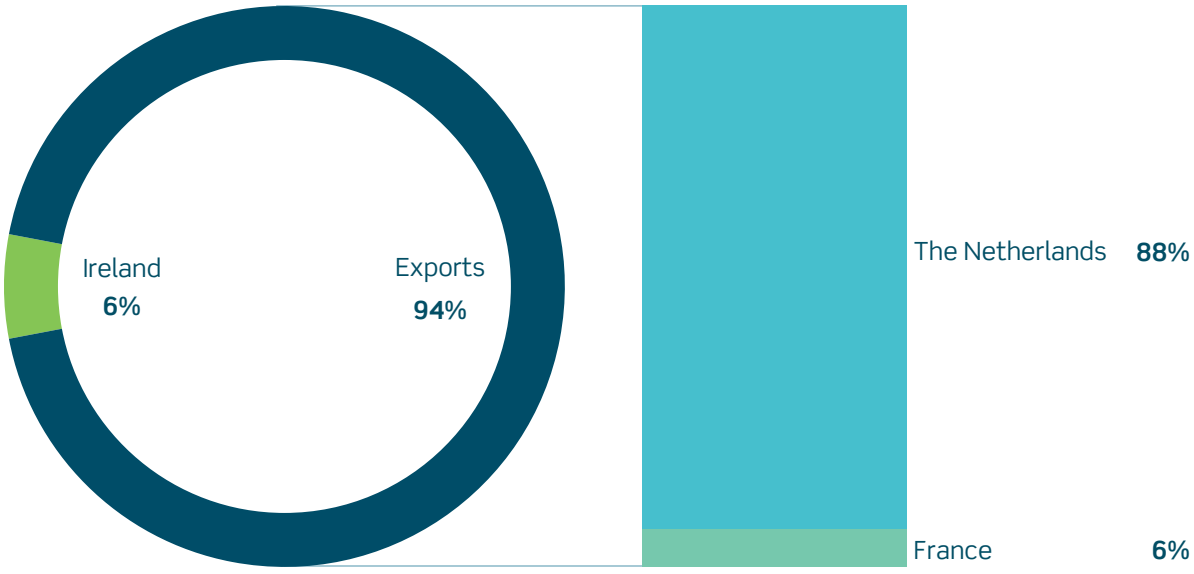

Figure 24: Seabed cultured mussel market destinations in 2024

7.3 Inputs and costs

Despite a 50% increase in total segment income to €6.7 million in 2024, costs still exceeded income by €1.6 million or 24%. However, the gap between income and expenditure narrowed by 63% compared to 2023 (Table 13). The largest cost driver was wages and salaries, which rose by 41% to €4.4 million and made up 54% of total costs. These were primarily associated with vessel operations for locating, harvesting, and managing mussel stocks. All other cost categories declined relative to 2023. As with other shellfish sectors, most units are small and family run, with unpaid administrative labour by owners or partners. However, unpaid labour decreased substantially (-68%) between 2023 and 2024.

7.4 Economic performance

Economic performance in the bottom mussel segment improved in 2024, with total income rising to €6.7 million. This shift brought GVA to a positive contribution of €3.5 million, reversing the negative outcome seen in 2023. However, despite these gains, both EBIT and net profit remained negative at -€1.6 million and -€2 million respectively, although they showed improvement on 2023 figures (Figure 25). The short-term improvements in value are due to a considerable increase in sales price per ton compared to 2023 and multiple production units selling their final reserve stocks in 2024. While this has helped to keep many businesses afloat in the short-term, the challenges relating to environmental conditions, seed sourcing, and spatial competition continue to threaten the future viability of the industry.

Table 13: Seabed cultured mussel production costs 2023 to 2024

Seabed cultured mussel	2023	2024	Proportion of 2024 cost	Change 2023 to 2024
Total income	€4,455,000	€6,684,000		50%
Wages and salaries	€3,160,000	€4,442,000	54%	41%
Imputed value of unpaid labour	€174,000	€56,000	n/a	-68%
Energy costs	€658,000	€502,000	6%	-24%
Stock input cost	€1,153,000	€776,000	9%	-33%
Feed cost	€0	€0	-	-
Repair and maintenance	€990,000	€676,000	8%	-32%
Other operational costs	€1,800,000	€1,241,000	15%	-31%
Depreciation	€887,000	€604,000	7%	-32%
Total costs	€8,823,000	€8,298,000		-6%
Cost % of income	198%	124%		

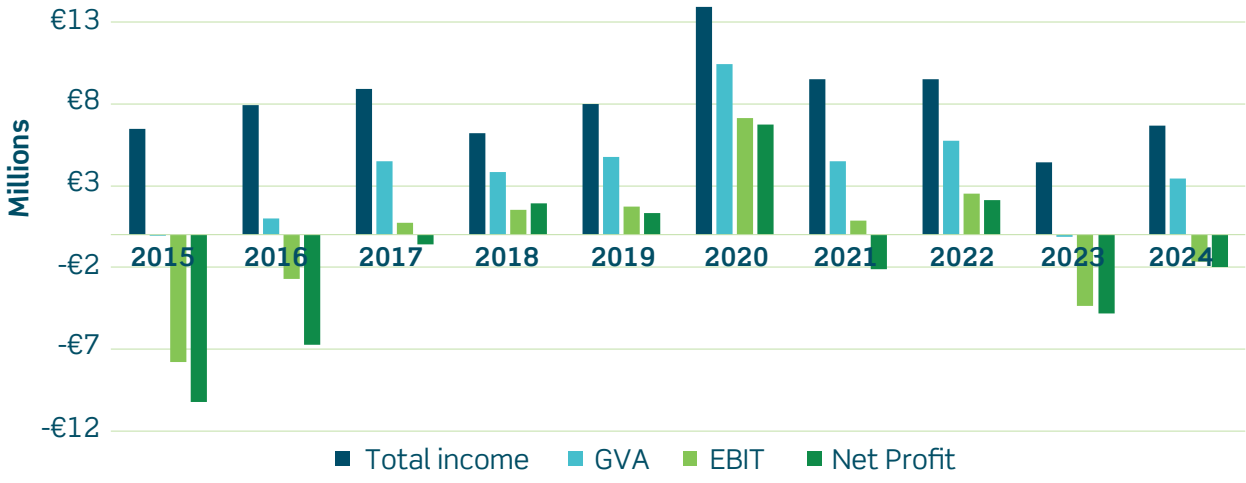

Figure 25: Seabed cultured mussel 10-year economic performance trend

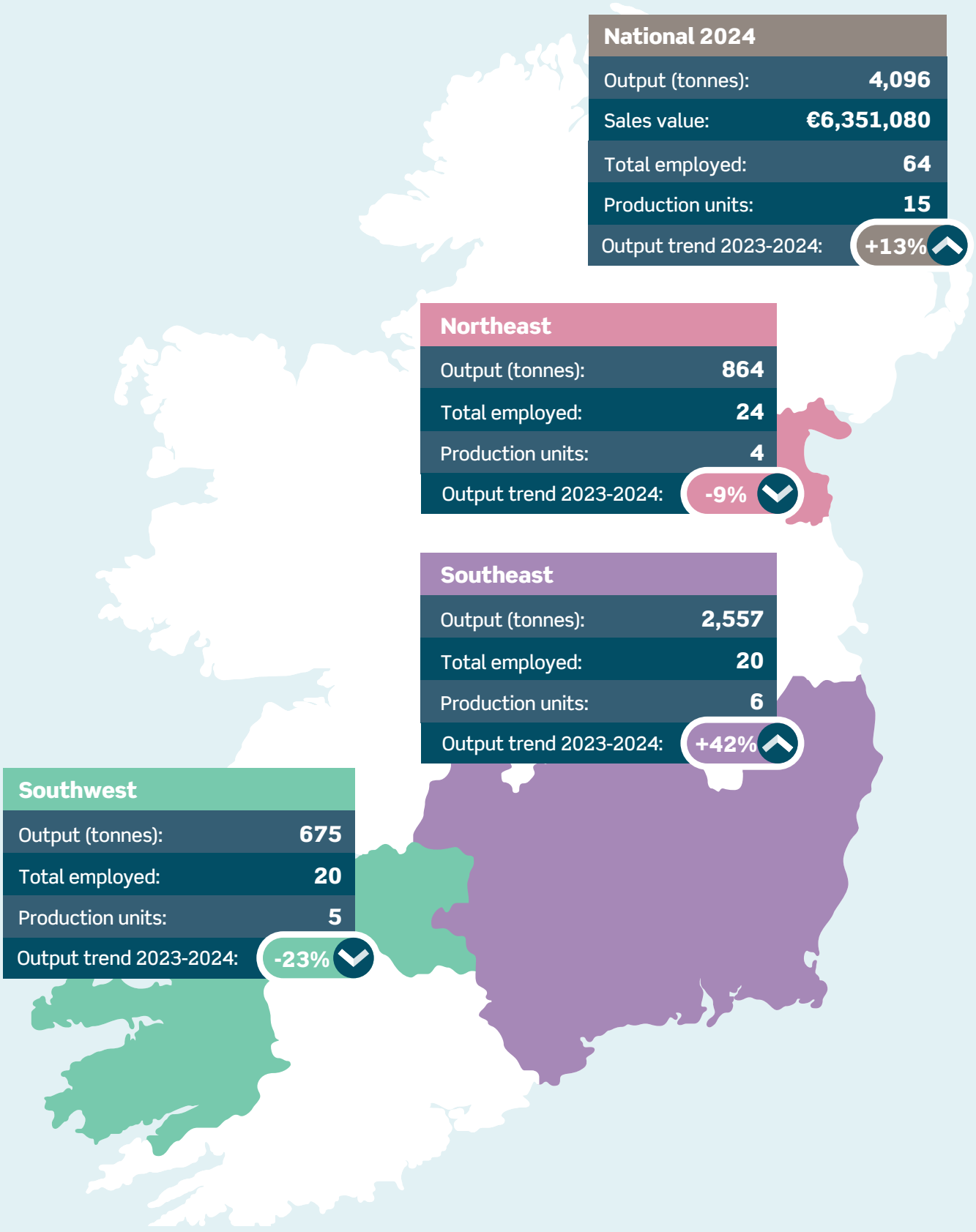

Figure 26: Seabed cultured mussel output and employment by region in 2024

8 Other segments

In addition to the main Atlantic salmon, Pacific oyster, and blue mussel segments, smaller-scale production also takes place. This includes seabed culture of other bivalve shellfish such as native oyster, king scallop, and Manila clam; land-based hatchery production of juvenile Atlantic salmon; and on-growing of rainbow trout, lumpfish, and European perch. Ireland's newest aquaculture segment, seaweed culture, is also showing growth.

In 2024, these smaller segments collectively produced 2,153 tonnes valued at €10.9 million, employing 374 people (151 FTEs) across 36 production units. While total output rose by 2.4% due to increased smolt production, a drop in smolt unit sales value led to an overall revenue decline of 9.6%.

Table 14: Distribution of other aquaculture units in 2024

	Seabed cultured shellfish	Seaweed	Salmon hatcheries	Trout, Perch, Charr, Lumpfish
Clare				
Cork		●	●	●
Donegal		●	●	
Galway	●	●	●	●
Kerry	●	●		
Kilkenny				●
Mayo	●	●		
Offaly				●
Roscommon				●
Sligo	●			
Tipperary			●	
Wexford			●	
Wicklow				●

8.1 Other seabed cultured shellfish

Other seabed cultured shellfish are primarily native oysters. Unlike inshore wild fisheries, oyster culture on the seabed involves site preparation, including the use of culch for seed settlement, and occasional reseeding programmes. In pond culture of European flat oysters, fertilized eggs are brooded within the adult female oyster shell for 7 to 10 days before being released and settling as 'spat' on culch (stones, broken shells, and grit) or collectors. The culch is then re-laid, or the collectors are stripped, and the oysters are moved to open water. The spat or seed oysters are then spread over traditionally managed natural oyster beds to mature and are later harvested in winter using dredge fishing methods. The most productive areas are Tralee Bay, Lough Foyle, and Cork Harbour, with smaller contributions from Galway, Kilkieran, Clew, and Blacksod Bays.

King scallop cultivation has been largely inactive since 2017 due to unreliable wild seed settlement and low prices. A small recovery in the West is expected from 2025. In the Northwest, several units are working to rebuild Manila clam production, which peaked at 180 tonnes in 2010 before collapsing due to Brown Ring disease. Three small hatcheries on the west coast currently supply oyster seed for on-growing farms. There is potential for these hatcheries to expand into seed production for other bivalves, which could support the revival of king scallop and Manila clam culture.

Segment productivity decreased by 23% to 388 tonnes in 2024. However, average sales price increased by 7% to €7 per kg, resulting in a slightly less severe 17% decrease in sales revenue (€2.8 million: Table 15).

Table 15: Other bottom bivalve culture output 2023 to 2024

Other bottom bivalves	2023	2024	Change
Tonnes produced	502	388	-23%
Sales value	€3,340,000	€2,761,000	-17%

8.1.1 Employment & capacity

There are 13 native oyster production units, mainly cooperatives, managing extensive low density seabed culture across seven west coast bays. While the number of units remained unchanged in 2024, there was a shift from larger to smaller operations, with fewer employing more than 10 people. Employment is almost entirely Irish and predominantly seasonal, with 229 workers (47 FTEs) in 2024, a 26% decrease in headcount and a 15% decrease in FTEs from the previous year. Contrary to anecdotal evidence, the national seafood survey indicated a broad age profile, with 88% of workers below retirement age and 25% under 35. The workforce is overwhelmingly male (97%). An estimated 2,206 hectares of cooperative order ground were worked in 2024.

8.1.2 Markets

The majority of produce, almost 90%, is exported, with Spain as the principal market destination, taking 78% of all exported live product in 2024. France, The Netherlands, and the United Kingdom were responsible for 12%, 6%, and 4% of exports respectively.

8.1.3 Costs and economic performance

Economic data for this segment is difficult to access and therefore economic performance cannot currently be assessed.

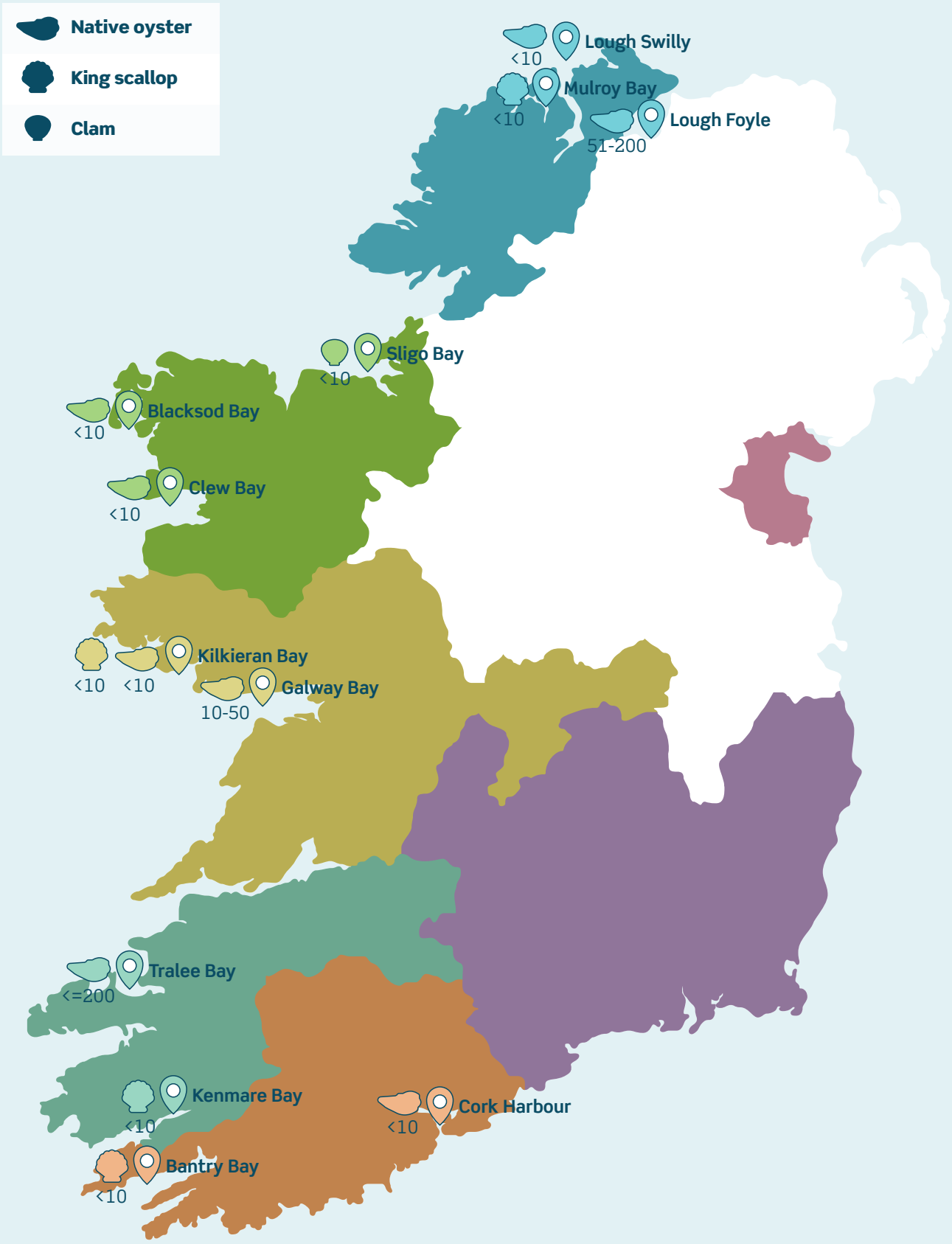

Figure 27: Location, type, and volume of seabed cultured shellfish (native oyster, king scallop, clams) in 2024

8.2 Land-based finfish production

Land-based finfish aquaculture includes the on-growing of rainbow trout, lumpfish, and European perch, as well as the hatchery production of Atlantic salmon smolts. Salmon smolt production provides essential input stock for national sea site salmon farming. Lumpfish, one of the few non-food aquaculture products, are cultivated to act as cleaner fish, helping to control parasites in sea site salmon stocks. Production of other finfish species remained at an experimental stage or was suspended in 2024.

Segment output increased for a second year by 19% to 1,329 tonnes in 2024; however, sales value fell by 3% to €8.3 million in 2024 (Table 16). Five hundred tonnes of non-salmon finfish, primarily rainbow trout, were produced generating approximately €3 million. A total of 824 tonnes of salmon smolts, worth €5.3 million in sales, were produced for on-growing culture by a combination of 10 stand-alone business and auxiliary production units.

Table 16: Land-based finfish aquaculture output 2023 to 2024*

Land-based finfish	2023	2024	Change
Tonnes produced	1,120	1,329	19%
Sales value	€8,570,000	€8,320,000	-3%

*Values include auxiliary production unit output and value

8.2.1 Employment & capacity

Land-based units employed 122 persons (83 FTEs) in 2024, representing a 48% increase in FTEs (27 persons) compared to 2023. The number of operating units remained stable at 15, although 5 units expanded to employ more than 10 persons. Employees were primarily Irish or EU nationals, with 83% aged between 25 and 64 years, and 80% male.

Significant investment has been made in trout culture infrastructure, particularly with a shift from pond to raceway systems. The total number of structures used for cultivation, including tanks, ponds, and cages, declined by 8% to 444, while the total enclosed area increased by 38% to 119,017 cubic metres.

8.2.2 Markets

Non-Salmon finfish production primarily supplies a home market, although 48% of a total output of 500 tonnes was exported to the UK in 2024.

8.2.3 Costs and economic performance

Land-based finfish income decreased by 3% year on year to €9.38 million. The ratio of costs to income remained relatively stable, with most costs holding steady, apart from a 22% rise in stock and feed costs, which together accounted for 39% of total costs (Table 17). Wages and salaries decreased by 6%. Energy cost continues to make up 9% of the total and recent investments will help to manage increasing energy unit cost. Auxiliary and state unit costs are not included in Table 17 due to data limitations.

Table 17: Land-based finfish aquaculture production costs 2023 to 2024 (standalone units)

Land-based finfish	2023	2024	Proportion of 2024 cost	Change, 2023 to 2024
Total income	€9,672,000	€9,384,000		-3%
Wages and salaries	€1,742,000	€1,632,000	28%	-6%
Imputed value of unpaid labour	€0	€0	n/a	-
Energy costs	€535,000	€541,000	9%	1%
Stock input cost	€786,000	€913,000	16%	16%
Feed cost	€1,250,000	€1,323,000	23%	6%
Repair and maintenance	€257,000	€259,000	4%	1%
Other operational costs	€790,000	€781,000	13%	-1%
Depreciation	€368,000	€372,000	6%	1%
Total costs	€5,728,000	€5,821,000		2%
Cost % of income	59%	62%		

8.3 Seaweed

The primary cultivated species is *Alaria esculenta*, a fast-growing edible brown seaweed commonly known as winter weed, winged kelp, Irish wakame, dabberlocks or badderlocks. *A. esculenta* is valued for its nutritional profile, including protein and bioactive compounds with potential applications in food, cosmetics, and nutraceuticals.

Seeded lines are supplied by hatcheries and deployed in December. Harvesting typically occurs by May or June. Other species under cultivation include Laminaria (oarweed) and Saccharina species, though at smaller volumes. Cultivation of red seaweeds, *Asparagopsis armata, Palmaria palmata,* and *Chondrus crispus* is relatively new and increasing.

Output of seaweed aquaculture decreased in 2024 by 7% to 496 tonnes. Sales value decreased by 24% to just under €0.5 million (Table 18). Wet weight product makes €1 to €3 per kilogram, depending on species.

Table 18: Land-based finfish aquaculture output 2023 to 2024

Seaweed	2023	2024	Change
Tonnes produced	532	496	-7%
Sales value	€650,739	€495,883	-24%

8.3.1 Employment & capacity

Employment remained unchanged at 29 persons despite substantial reductions in revenue, however FTE decreased by 15%. The majority of the workforce are Irish nationals aged between 35 and 64. Operating production units increased by 3 to 11, most of these are at a startup or experimental phase. In total 259 suspended longline systems, over 173 licenced hectares/km^2 were used in 2024.

8.3.2 Costs and economic performance

Procurement of cost and economic performance data for this segment remains challenging, and caution is advised in the interpretation of estimates. Total costs are still assessed as exceeding income, with most units continuing to operate below commercially viable output levels. A significant proportion of labour remains unpaid, as operators attempt to offset high running costs.

Wages and salaries decreased by 25% year-on-year, and represented 43% of total costs in 2024 (Table 19). Energy costs were also relatively high at 12%, potentially due to the energy demands of early-stage processing activities. The most notable shift in 2024 was the near doubling of stock input costs, likely associated with scaling up activities. A 25% reduction in depreciation suggests recent capital investment in more efficient infrastructure, which may not yet have translated into higher levels of commercial output.

Table 19: Seaweed culture production costs 2023 to 2024

Seaweed Culture	2023	2024	Proportion of 2024 cost	Change, 2023 to 2024
Total income	€788,684	€651,240		-17%
Wages and salaries	€502,496	€375,937	43%	-25%
Imputed value of unpaid labour	€95,014	€110,256	n/a	16%
Energy costs	€91,057	€100,074	12%	10%
Stock Input cost	€32,540	€61,908	7%	90%
Feed cost	n/a	n/a	n/a	-
Repair and maintenance	€50,842	€50,818	6%	0%
Other operational costs	€89,263	€82,626	10%	-7%
Depreciation	€260,333	€195,625	23%	-25%
Total costs	€1,121,545	€977,244		-13%
Costs % of income	142%	150%		

9 Technological survey

The potential for growth in Irish aquaculture is shaped by a broad range of factors, including shifting market demands, governance and licensing constraints, technological limitations, and adverse environmental conditions such as disease outbreaks, extreme weather, and water quality issues.

Many of these influences lie beyond the control of individual producers. However, improvements in methodological and technological approaches represent a tangible area for advancement. To better understand current practices and explore possible growth opportunities, a survey was conducted of the equipment used to capture the diversity of techniques in operation and the rationale behind their use, in order to assess optimal approaches and identify areas with potential for expansion.

As a part of this year's National Seafood Survey, aquaculture producers were asked the following three questions:

1. What growing system was currently in use?
2. Why are you using the current system, e.g. preferred choice, licence condition, prohibitive costs of alternative, etc.?
3. What would be your ideal growing system and why?

The questionnaire was most relevant to, and received sufficient responses (53%) from 82 oyster production units; as such the results presented focus on this segment; additional investigations are needed for other segments. Currently, 77% (66 respondents) use traditional bag and trestle methods (Figure 28). Of the 73 respondents that provided rationale for current method, 45% were primarily determined by licencing condition, while 38% believe the bag and trestle method to be the best available system suited to their needs and site conditions. Site-specific environmental constraints were also mentioned as an influential factor. However, 15% of respondents identified cost as a barrier to adopting alternative methods. Only 2% reported that the equipment currently in use, at their production unit was part of a new system under trial.

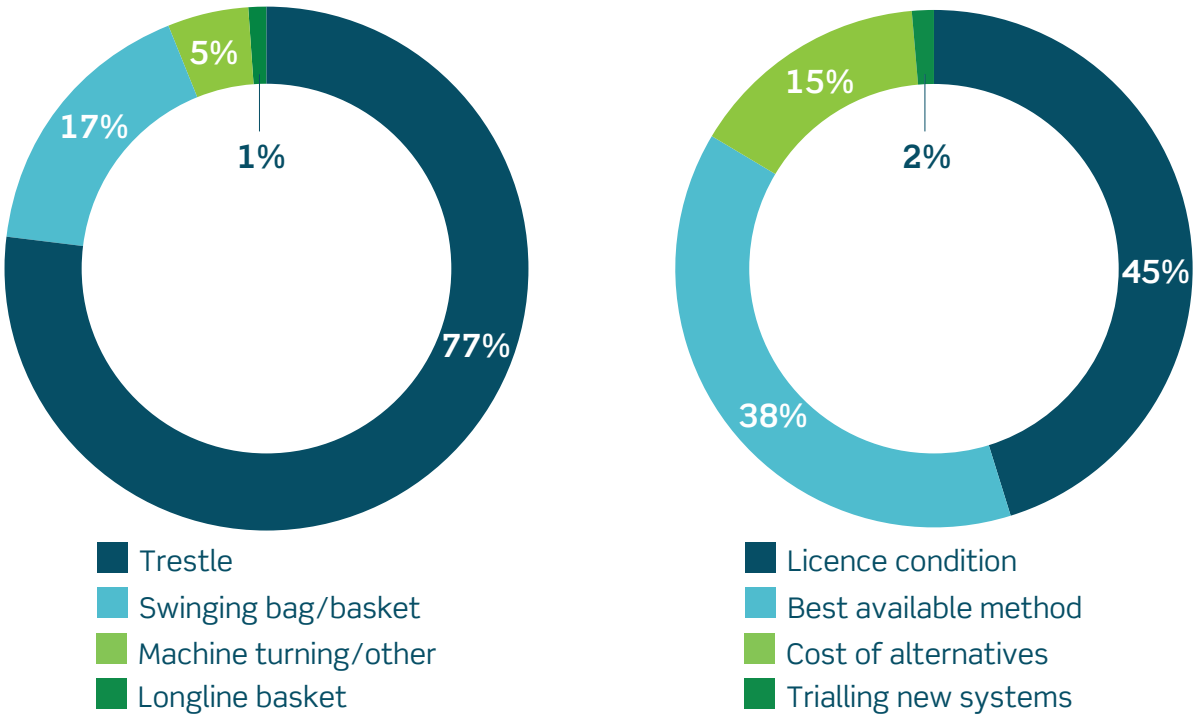

Figure 28: Profile of oyster farming equipment/techniques (left panel, 82 respondents) and rational for use (right panel, 73 respondents)

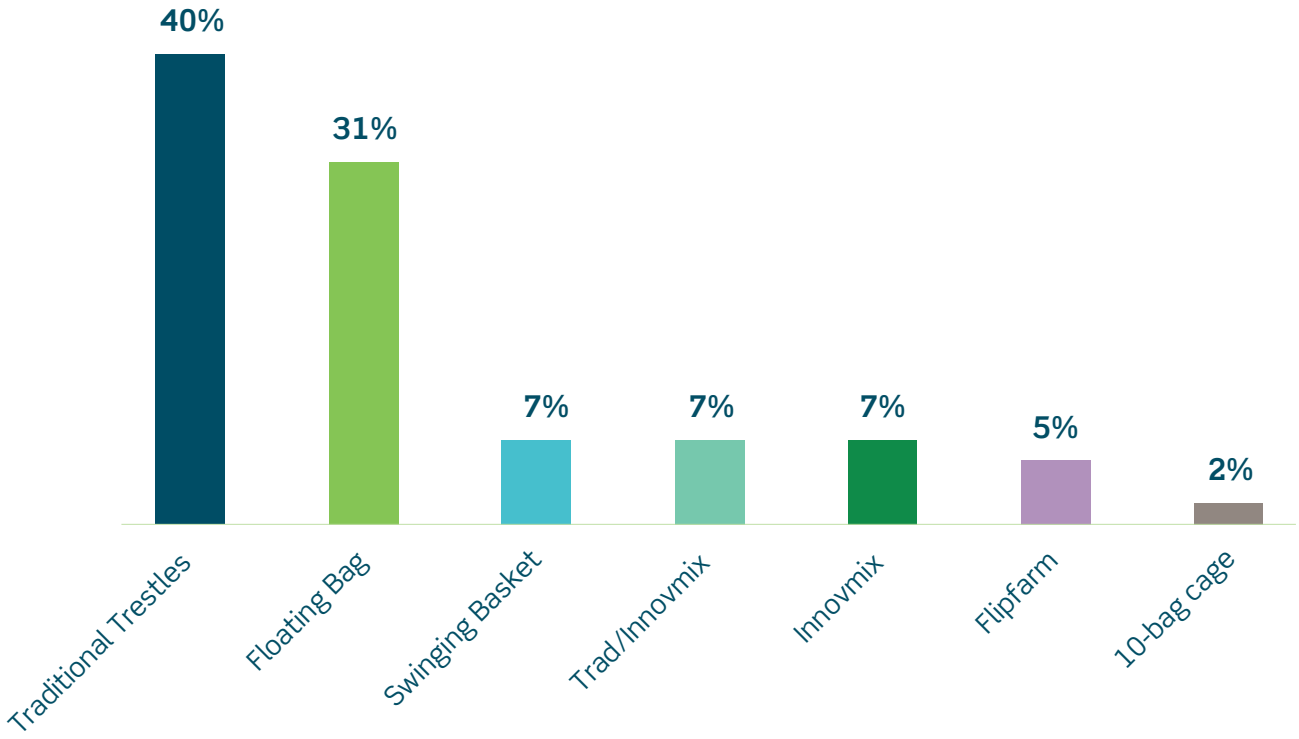

Figure 29: Preferred oyster farming equipment/techniques (55 respondents)

Figure 29 shows a summary of the ideal growing systems desired by oyster producers. Of the 55 respondents, a substantial proportion (40%) felt that traditional bag and trestle systems were the ideal system, followed closely by 32% who would prefer a floating bag system. Fewer individuals expressed a preference for other methods, but overall, 60% (33 respondents) indicated a preference for alternatives to trestles despite this being the main method currently in use.

Reduced handling, lower labour demands, improved product quality, and decreased mortalities were all cited as reasons for preferring alternative methods to traditional trestle systems. Several producers highlighted the value of mixed method approaches as a resilience measure. Different techniques may be more suitable for specific life cycle stages of the stock, depending on the environmental conditions of the site. For this reason, a notable proportion of producers (14%) reported using alternative systems alongside traditional trestles within the same production unit.

Respondents who trialled or transitioned from exclusive trestle culture noted that the change had helped address staffing challenges and improved product output or quality. In some cases, improved survival rates of juvenile stock reduced the quantity of seed needed for input, thereby lowering overall costs.

Investment in new culture techniques and equipment primarily supports cost reduction, product quality improvement, and workforce challenges. The most significant benefits reported include increased unit sales value, higher output per hectare, and improved economic performance and production unit viability.

10 Future outlook

The aquaculture industry in 2025 faces a range of challenges to production output and sales value generation, resulting in mixed projections for 2025 and 2026. Sales value and employment in the salmon segment may sustain overall performance in 2025, due to the segment's dominant role in the sector. However, continued difficulties across shellfish segments are expected to negatively affect national-level performance indicators.

Finfish production is operating at full capacity within a static licensing regime. The cyclical pattern of Atlantic salmon output is anticipated to continue, with a strong year expected in 2025, potentially exceeding 13,000 tonnes. The outlook for 2026 will depend largely on smolt output in 2025, which remains uncertain. Other land-based finfish production is expected to remain stable at approximately 1,000 tonnes. Overall, output, sales value, and employment in the finfish segment are projected to remain stable or show modest increases compared to 2024.

The ability of the shellfish segment to stabilise its declining output and sales value is hindered by two key factors: weakening and increasingly specific market demand in the main export destination of France, and deteriorating local stock condition linked to changing water profiles and quality.

Pacific oyster producers are finding it increasingly difficult to sell bulk standard-grade oysters, while premium grades continue to achieve strong prices, however even the specification for 'Speciales' (premium grade oysters) is becoming more demanding making it harder to secure the top price in these markets. These factors combine with recent reductions in seed input, and indications of changing environmental conditions, leading to expectations of further output declines in 2025.

The suspended rope mussel segment in southern bays faces challenges relating to seed settlement, which was extremely poor in 2024, resulting in poor seed capture and retention, and lower volumes of saleable stock in 2024 and continuing into 2025. The situation is more acute for bottom-cultured mussel producers, with no significant wild seed settlement observed for two consecutive years and older saleable stocks now exhausted.

Shellfish output and sales value are therefore expected to decline further in 2025, with associated reductions in employment. Any improvement in sales performance is likely to come from product quality enhancement, market differentiation, and diversification, rather than from increased production.

Overall, aquaculture sector output in 2025 is forecast at approximately 36,000 tonnes, generating sales of over €200 million and supporting employment for an estimated 1,780 individuals.

11 Appendices

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Concepts, terms, and definitions

Average wage: The average salary or mean wage estimates the salary an employee working full time is receiving in this sector. It includes the salaries, the social security costs, and imputed value of unpaid labour. *Mean wage = (Wages and salaries + Imputed value of unpaid labour) / FTE*

Auxiliary production unit: a supporting facility or operation that contributes to the main production process but does not itself generate a distinct turnover from the final product sale.

Capital productivity: refers to how efficiently a company or economy uses its capital assets (like equipment, buildings, and technology) to produce goods and services. It's a measure of how much output is generated for each unit of capital input. Higher capital productivity means capital is being used more effectively to create value.

Depreciation of capital: Refers to the decline in value of the assets. In accounting, it is used as the allocation of the cost of tangible assets to periods in which the assets are used, to reflect this decline in their value.

Earnings Before Interest and Tax (EBIT): Or "Operating profit" is a measure of a firm's profitability that excludes interest and income tax expenses. EBIT = Turnover + Other Income + Subsidies – Energy costs – Wages and salaries – Imputed value of unpaid labour - Livestock costs – Feed costs – Repair and maintenance – Other

Energy costs: Corresponds to the purchase of energy products (in value) during the reference period.

Feed costs: Include the purchasing costs of the feed during the reference period. The feed costs should correspond to feed volume.

Financial position: The financial position of a business or grouping of them is an EU Data Collection Framework economic indicator measuring liquidity.

Fish feed (volume): Volume of feed purchased during the reference period. The feed volume should correspond to feed cost.

FTE National: The number of employees converted into full time equivalents (calculation methodologies vary between countries).

Future Expectations of the industry (FEI): A measure of its trend towards growing, surviving, or leaving the sector, depending on its value being positive, zero or negative, in that order.

Gross Value Added (GVA): Measures the contribution of the sector to the economy and is defined as the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus, other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Gross Value Added is calculated on this report as: *GVA = Turnover + Other Income – Energy costs – Livestock costs – Feed costs - Repair and maintenance - Other Operational costs.*

GVA to revenue: 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 gross value added and revenue (the sum of Turnover and Other Income). Expressed as a percentage. *GVA to Revenue = GVA Turnover + Other Income 100%*

Imputed value of unpaid labour: Unpaid workers normally refer to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to persons who are not included on the payroll of another unit as their principal occupation. Thus, imputed value of unpaid labour estimates the value of the salaries that these unpaid workers would have received if their work was remunerated.

Labour productivity: measures how efficiently labour is utilized in an economy, i.e., the amount of goods and services produced by each member of the labour force or the output per input of labour.

Livestock (volume): Volume of livestock purchased during the reference period. The livestock volume should correspond to the livestock cost.

Livestock costs: Correspond to the variable livestock volume.

Net profit margin: Measure of the economic performance of a sector or enterprise expressed in relative terms. It is a difference between total income and all incurred costs (operating, capital and financial). Expressed as a percentage.

Net profit: Measure of a firm's profitability that includes the results of financial activity of the enterprise.

Number of enterprises: This parameter corresponds to a count of the number of enterprises active during at least a part of the reference period.

Number of persons employed (total employment): This indicator refers to the number of people employed (including full-time and part-time employees inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g., sales representatives, delivery personnel, repair, and maintenance teams). The number of employees should be reported by gender.

Other income: Refers to other operating income included in company accounts which are excluded from turnover; income coming from other activities than aquaculture (e.g., the licensing of ponds for recreational fishery purposes).

Other operational costs: Comprise outsourcing costs, property or equipment rental charges, the cost of raw materials and supplies that cannot be held in the inventory and have not been already specified (i.e. water, small items of equipment, administrative supplies, etc.), insurance premiums, studies and research costs, external personnel charges, fees payable to intermediaries and professional expenses, advertising costs, transportation charges, travel expenses, the costs of meetings and receptions, postal charges, bank charges (but not interest on bank loans) and other items of expenditure.

Production Unit (PU): The production unit is the smallest disaggregation of a business from which a distinct turnover figure can be obtained. Each production unit refers to a distinct sea-site within a bay or an onshore or inland facility, into which, a distinct species stock is input and upon which a particular aquaculture practice is imposed. Most Irish aquaculture businesses consist of one marine production unit, though this may consist of multiple licenced sites within that bay using the same culturing method upon a single species. A business engaged in culturing two or more species or culturing one species by two or more methods within a bay is considered to have two or more production units. A business culturing a species by one method but in two or more distinct bays is also considered to have two or more production units.

Repair and maintenance: Under repair and maintenance there should be included the costs incurred to bring an asset back to its earlier condition or to keep the asset operating at its present condition (as opposed to improving the asset).

Social security costs: Employers' social security costs correspond to an amount equal to the value of the social contributions incurred by employers to secure for their employees, the entitlement to social benefits.

Subsidies: The financial assistance received from public authorities or the institutions of the European Union which are excluded from turnover. It includes direct payments, e.g., compensation for stopping trading, refunds of fuel duties or similar lump sum compensation payments; excludes social benefit payments and indirect subsidies (e.g., reduced duty on inputs such as fuel or investment subsidies).
*The formula is: (Assets-debt/debt)*100*
The formula is: (Net investment-Depreciation/ assets)

Turnover: Comprises the totals invoiced during the reference period and corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis- à-vis its customer and other similar deductible taxes linked to turnover. It also includes all other charges (e.g., transport, packaging) passed on to the customer, even if these charges are listed separately in the invoice. Reduction in prices, rebates, and discounts as well as the value of returned packing must be deducted. Income classified as other operating income, financial income and extraordinary income in company accounts is excluded from turnover.

Volume of sales: The volume of sales should correspond to the variable on turnover value.

Wages and salaries: Defined as "the total remuneration, in cash or in kind, payable to all persons counted on the payroll (including homeworkers), in return for work done during the accounting period." Regardless of whether it is paid on the basis of working time, output, or piecework and whether it is paid regularly or not. Wages and salaries include the values of any social contributions, income taxes etc. payable by the employee even if they are, withheld by the employer and paid directly to social insurance schemes, tax authorities, etc. on behalf of the employee. Wages and salaries do not include social contributions payable by the employer.

Aquaculture output tonnage by culture groups, 2015 to 2024

Segment	2015	2016	2017	2018
Farmed salmon	13,477	16,718	18,686	12,044
Salmon hatchery	166	191	201	196
Other finfish	848	720	647	557
Farmed oyster	8,953	9,459	9,990	10,196
Rope mussel	10,318	9,770	8,582	9,604
Seabed mussel	5,697	6,475	7,491	4,697
Other bivalves	521	413	241	250
Seaweed	76	54	96	97
National value	**40,057**	**43,799**	**45,934**	**37,640**

Aquaculture employment number by culture groups 2015 to 2024

Segment	2015	2016	2017	2018
Farmed salmon	159	176	169	199
Salmon hatchery	32	31	43	31
Other finfish	26	23	19	20
Farmed oyster	772	800	834	847
Rope mussel	256	262	240	228
Seabed mussel	107	114	124	112
Other bivalves	462	507	491	505
Seaweed	32	33	31	29
National value	**1,846**	**1,950**	**1,951**	**1,971**

Aquaculture Sales value by culture groups 2015 to 2024

Segment	2015	2016	2017	2018
Farmed salmon	€92,267,000	€105,998,000	€134,928,000	€97,282,000
Salmon hatchery	€2,414,000	€2,647,000	€3,937,000	€3,578,000
Other finfish	€2,728,000	€2,039,000	€1,971,000	€1,635,000
Farmed oyster	€34,961,000	€41,175,000	€43,728,000	€44,610,000
Rope mussel	€6,673,000	€6,479,000	€5,775,000	€6,069,000
Seabed mussel	€6,015,000	€5,858,000	€8,830,000	€6,074,000
Other bivalves	€2,817,000	€2,417,000	€1,387,000	€1,375,000
Seaweed	€638,000	€433,000	€342,000	€347,000
National value	**€148,513,000**	**€167,046,000**	**€200,898,000**	**€160,970,000**

2019	2020	2021	2022	2023	2024
11,567	12,870	13,214	11,862	9,289	13,877
167	462	153	149	163	352
608	604	537	398	488	500
9,899	8,763	10,823	11,038	9,698	9,268
10,460	10,375	11,575	13,240	11,218	9,479
4,894	4,354	5,865	6,864	3,626	4,096
256	233	440	489	502	388
73	75	215	493	532	496
37,922	**37,735**	**42,822**	**44,532**	**35,516**	**38,456**

2019	2020	2021	2022	2023	2024
215	170	245	253	229	337
28	47	26	25	28	20
22	22	21	26	22	22
837	850	1,033	1,037	1,002	906
226	249	226	232	242	228
102	110	84	103	90	64
524	376	273	295	309	229
32	34	35	33	29	29
1,986	**1,858**	**1,943**	**2,004**	**1,951**	**1,835**

2019	2020	2021	2022	2023	2024
€109,006,000	€118,942,000	€106,108,000	€101,551,000	€94,754,000	€138,365,000
€3,109,000	€7,831,000	€3,437,000	€3,512,000	€3,983,000	€3,710,000
€1,674,000	€1,883,000	€1,762,000	€2,224,000	€2,311,000	€3,027,000
€44,057,000	€36,735,000	€47,551,000	€54,484,000	€51,009,000	€47,766,000
€6,907,000	€6,200,000	€7,952,000	€9,825,000	€9,229,000	€7,565,000
€7,886,000	€7,067,000	€9,142,000	€8,966,000	€3,957,000	€6,351,000
€1,239,000	€854,000	€2,037,000	€2,803,000	€3,340,000	€2,761,000
€260,000	€271,000	€753,000	€396,000	€651,000	€496,000
€174,138,000	**€179,783,000**	**€178,742,000**	**€183,761,000**	**€169,234,000**	**€210,041,000**

Aquaculture economic performance 2015 to 2024

Variable	2015	2016	2017	2018
Turnover	€148,594,293	€167,724,372	€200,017,543	€179,455,531
Subsidies	€1,816,919	€4,316,202	€1,724,345	€2,769,867
Financial income			€32,269,404	€776,749
Other income			€979,456	€1,688,522
Other income total	€1,816,919	€4,316,202	€34,973,205	€5,235,137
Total income	€154,505,319	€176,106,777	€234,990,748	€184,690,669
Wages and salaries	€30,872,908	€27,854,618	€26,830,773	€29,820,207
Imputed value of unpaid labour	€1,517,451	€1,416,301	€852,315	€1,966,961
Energy costs	€4,160,373	€4,988,212	€2,693,931	€9,564,373
Raw material costs: livestock costs	€28,504,784	€16,886,284	€14,280,006	€12,317,040
Raw material costs: feed costs	€20,100,628	€36,196,864	€31,099,907	€23,658,466
Repair and maintenance	€9,412,331	€9,851,804	€9,721,112	€9,397,921
Other operational costs	€29,141,074	€33,084,156	€18,099,786	€65,402,360
Depreciation of capital	€9,132,866	€5,745,397	€9,057,950	€9,346,213
Financial costs, net	€8,979,875	€4,877,908	€3,084,344	€1,355,238
Extraordinary costs (net)	€40,242,642	€4,914,061	€47,924,575	€5,308,483
Total Costs*	€140,304,839	€139,485,242	€114,867,810	€160,861,817
Total value of assets	€175,865,728	€190,942,888	€194,431,686	€240,470,462
Net investments	€3,833,551	€7,208,575	€7,639,443	€10,548,856
Debt	€76,138,898	€84,362,877	€66,635,403	€79,492,327
Raw material volume: livestock	17,592	15,612	14,083	860,790
Raw material volume: feed	13,333	23,883	22,576	16,347
Total sales volume	40,128	44,018	45,726	37,201
Male employees	1,713	1,798	1,773	1,709
Female employees	118	150	150	149
Total employees**	1,830	1,948	1,923	1,858
Male FTE	917	950	950	1,006
Female FTE	67	78	78	77
FTE	983	1,027	1,026	1,083
Number of enterprises <=5 employees	200	194	185	181
Number of enterprises 6-10 employees	48	61	67	68
Number of enterprises >10 employees	31	34	30	32

Red font = provisional data

* Excluding value of unpaid labour

** Including all hatcheries

2019	2020	2021	2022	2023	2024
€175,288,680	€179,962,851	€178,878,868	€183,769,642	€168,187,524	€210,040,581
€1,720,133	€9,538,153	€2,224,592	€3,152,309	€2,259,622	€372,389
€989,726	€5,971,344	€373,574	€3,310,584	€1,221,105	€1,429,761
€3,387,468	€16,700,557	€11,398,805	€10,357,665	€10,482,636	€15,986,181
€6,097,327	€32,210,055	€13,996,971	€16,820,559	€11,703,740	€17,415,941
€178,143,158	€212,172,906	€192,875,840	€199,323,809	€182,150,887	€227,400,000
€31,027,724	€34,331,124	€33,697,747	€38,979,147	€40,766,394	€43,826,795
€309,763	€3,480,619	€2,203,905	€2,030,695	€2,602,282	€3,108,635
€2,736,982	€3,689,535	€5,573,681	€10,638,427	€9,399,532	€10,272,139
€18,623,317	€14,679,024	€32,024,488	€22,279,113	€22,739,977	€16,982,404
€21,733,606	€30,536,557	€37,995,860	€37,039,447	€41,893,221	€60,712,605
€5,949,501	€7,777,028	€9,548,801	€14,544,483	€15,621,435	€13,318,716
€64,917,632	€60,710,589	€64,934,180	€39,182,691	€41,177,914	€53,422,172
€12,488,705	€10,030,618	€9,193,925	€10,617,487	€12,021,659	€12,410,422
€1,301,243	€18,300,472	€8,786,587	€3,440,061	€3,754,250	€2,608,669
€2,110,405	€0	€0	€0	€0	€0
€158,778,709	€180,054,946	€191,122,449	€176,720,856	€187,374,383	€213,553,922
€315,087,657	€315,087,657	€252,253,199	€280,079,898	€280,079,898	€326,735,305
€11,130,926	€11,130,926	€6,728,866	€11,566,556	€11,566,556	€19,437,826
€70,675,213	€70,675,213	€79,528,553	€91,607,858	€91,607,858	€97,532,621
3,361,766	12,138,047	5,050,377	14,207,069	8,212,384	5,348
20,113	20,388	24,328	20,853	19,946	28,109
38,289	37,822	42,970	44,532	35,269	38,456
1,824	1,665	1,768	1,764	1,738	1,607
162	188	189	240	213	228
1,986	1,853	1,957	2,004	1,961	1,835
999	926	1,038	1,033	1,019	994
81	90	106	138	124	137
1,080	1,016	1,128	1,171	1,143	1,131
200	208	220	188	178	188
48	61	57	59	51	40
40	41	41	44	51	50

Aquaculture economic indicators 2015 to 2024

	2015	2016	2017	2018
Total volume (tonnes)	44,018	45,726	37,201	38,289
Total income	€176,106,777	€234,990,748	€184,690,669	€178,143,158
Gross Value Added (GVA)	€66,717,053	€157,371,661	€61,580,642	€65,704,836
Operating Capital Flow (OCF)	€43,178,637	€132,265,233	€34,530,302	€36,397,245
Earnings Before Interest and Tax (EBIT)	€36,016,940	€122,354,967	€23,217,129	€23,598,777
Net profit	€26,224,971	€71,346,048	€16,553,408	€20,187,129
Return on Investment (ROI)	0.2	0.6	0.1	0.1
Financial position	1.3	1.9	2.0	3.5
Full Time Equivalent (FTE)	1,027	1,026	1,083	1,080
Subsidies	€4,316,202	€1,724,345	€2,769,867	€1,720,133
Labour productivity	65	153	57	61
Capital productivity	0.3	0.8	0.3	0.2
Running cost to turnover ratio	77	51	84	83
EBIT to turnover ratio	20	52	13	13
GVA per FTE	€64,991	€153,381	€56,861	€60,822
Future Expectations of the Industry (FEI)	0.008	-0.007	0.005	-0.004

	2019	2020	2021	2022	2023	2024
	37,822	42,970	44,723	44,532	35,269	38,456
	€212,172,906	€192,875,840	€206,891,417	€199,323,809	€182,150,887	€227,400,000
	€85,242,020	€40,574,238	€67,990,626	€73,753,729	€49,028,068	€72,748,487
	€60,449,050	€9,101,083	€30,514,865	€37,926,892	€46,837,305	€25,813,057
	€46,937,813	-€2,296,747	€15,723,930	€25,278,710	-€4,102,646	€14,191,030
	€28,637,341	-€11,083,335	€11,409,787	€21,838,649	-€7,856,896	€11,582,360
	0.1	0.0	0.1	0.1	-1.5	5
	3.5	2.2	1.9	2.1	205.7	235
	1,016	1,128	1,170	1,171	1,117	1,131
	€9,538,153	€2,224,592	€2,224,592	€3,152,309	€2,259,622	€372,389
	84	36	58	63	44	65
	0.3	0.2	0.3	0.3	17.5	22
	84	103	95	89	102	95
	22	-1	8	13	-2	7
	€83,900	€35,964	€58,112	€62,992	€43,199	€65,157
	0.003	-0.010	-0.028	0.003	-0.002	0.022

Notes

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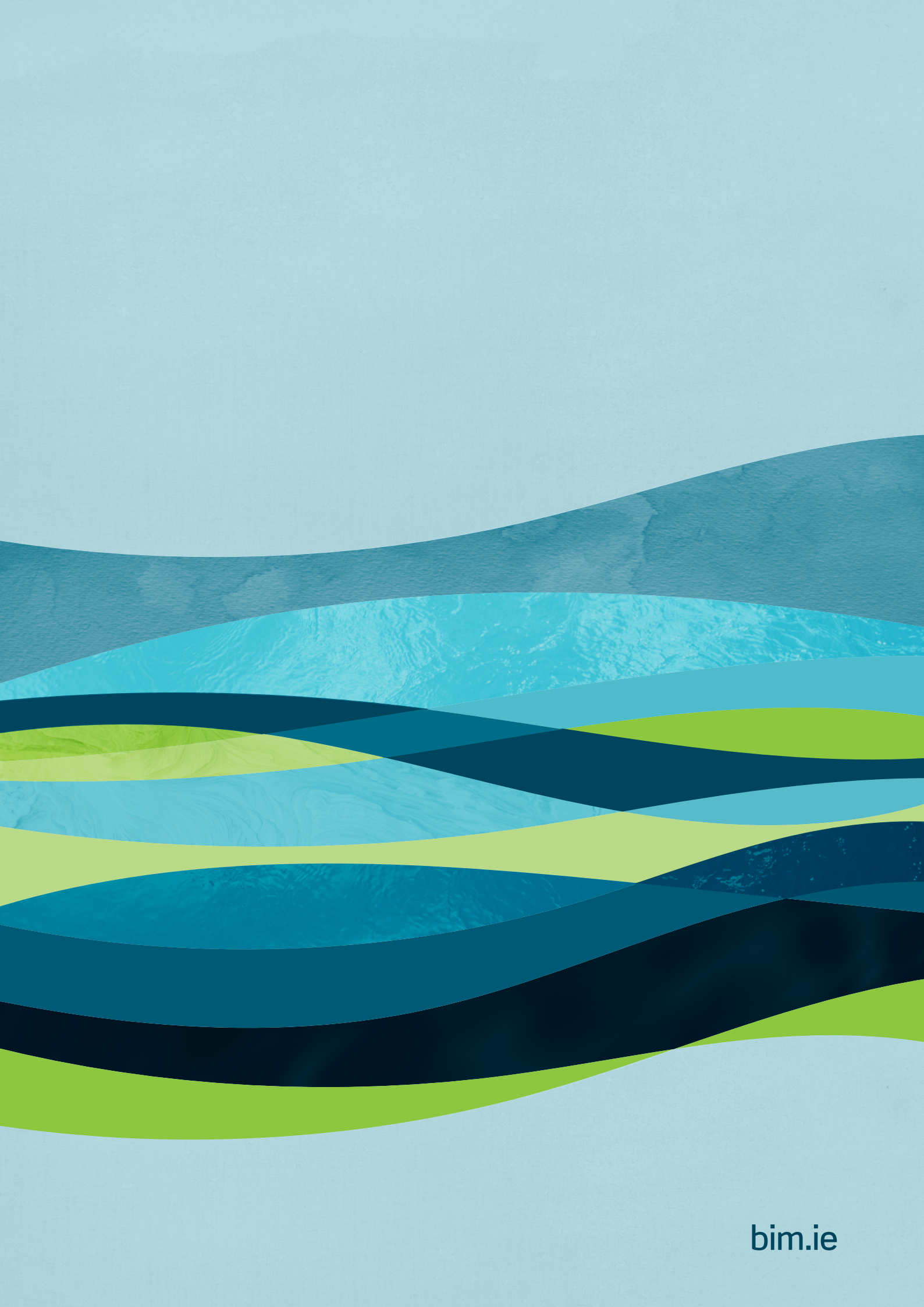
Herbie Dennis, BIM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