



FAMENET

Report on support to skills in fisheries and aquaculture

FINAL
November 2025

Copyright notice:

© European Union, 2025

Reproduction is authorised provided the source is acknowledged.

EUROPEAN COMMISSION – Directorate-General for Maritime Affairs and Fisheries

Disclaimer:

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this report. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein. The approach and methodologies proposed do not constitute legal interpretation and are not binding. They are considered recommendations by technical experts to enhance exchange among stakeholders and to enrich the body of knowledge on EMFAF implementation.

Recommended citation:

EUROPEAN COMMISSION - Directorate-General for Maritime Affairs and Fisheries, Unit D.3 (2022): FAMENET report on the use of EMFF and EMFAF for enhancing skills in fisheries and aquaculture, Brussels

Authors:

Vincenzo ANGRISANI, Rosa CHAPELA, Benoit GUERIN, Sari RANNANPÄÄ, Monica VERONESI

Contact:

FAMENET

Boulevard de la Woluwe 2

1150 Brussels

info@famenet.eu

Table of Contents

Table of Contents	2
1 Introduction	3
1.1 Background	3
1.2 Purpose and target groups	3
1.3 Methodology	4
2 Findings: challenges and strategies to enhance skills and knowledge	6
2.1 Challenges in the fishing industry.....	6
2.2 Challenges in aquaculture	6
2.3 Some common objectives in the EMFF and EMFAF programmes.....	7
2.4 Coordination with other policies or funding instruments.....	7
3 Findings: overview of support to skills in fisheries and aquaculture.....	8
3.1 Provisions under the EMFF for strengthening skills and knowledge.....	8
3.2 Infosys data reported on EMFF investments in education and skills (2014-2020)	10
3.1 Provisions under the EMFAF for strengthening skills and knowledge	14
3.2 Infosys data reported on EMFAF investments in skills and knowledge	14
4 Findings: Examples of operations to support skills in fisheries and aquaculture.....	19
4.1 Enhancing skills for fishing and related activities.....	19
4.1.1 Support for skills under EMFF Articles 29, 30 and 44.....	19
4.1.2 Support for skills in fisheries from <i>other</i> EMFF Articles or EMFAF Priorities	21
4.2 Skills in aquaculture	24
4.2.1 Support for skills under EMFF Article 50, or EMFAF Priority 2.....	24
4.2.2 Support for enhanced skills and knowledge in aquaculture from <i>other</i> Articles.....	27
5 Findings: contribution of EMFF programmes to skills in fisheries and aquaculture	30
5.1 Main results	30
5.1.1 Overview in numbers	30
5.1.2 Results highlighted in case study countries	31
5.1.3 CLLD contribution to skills	34
6 Conclusions and recommendations.....	37
6.1 Conclusions.....	37
6.2 Recommendations to improve support to skills in fisheries and aquaculture.....	38

1 Introduction

1.1 Background

New skills are becoming increasingly important to ensure that both fisheries and aquaculture activities remain profitable in a competitive world economy, and environmentally sustainable in the context of modernisation, climate change and high demand for specific species.

Expanding professional training to equip workers with both traditional and new skills, as well as opportunities for professional development, are fundamental for a thriving fisheries and aquaculture sector.

Training not only equips workers with the necessary skills and qualifications, but can also play a critical role in supporting generational renewal by:

- Transforming the sector's identity by embracing technology, sustainability and new value-driven opportunities.
- Facilitating access for young people through regulated training pathways and professional certifications, such as skipper and deckhand courses, STCW-F¹ certificates and safety training, which are essential for working in fisheries.
- Building a more versatile and employable workforce, essential for navigating the sector's seasonal nature and economic unpredictability.
- Expanding the sector's horizons by fostering stronger ties with technical and higher education— particularly through specialised fields like fisheries engineering, marine sciences, blue biotechnology and dual vocational training.

As well as supporting generational renewal, **training is recognized as essential for making the sector more professional, competitive and sustainable, and adapting to new regulations and technologies.**

1.2 Purpose and target groups

This report examines the extent to which the EMFF and EMFAF have supported training and skills in fisheries and aquaculture. It offers an overview of investments around the EU and the types of operations supported with these funds to enhance skills in the sector.

It is intended to inform policymakers at EU level with regards to how EU funds can contribute to making the sector's workforce better equipped to meet emerging challenges and those of the future.

¹ *International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel*

1.3 Methodology

The methodology combines desk research based on quantitative data reported by 27 Member States (MS) in Infosys with case studies in four MS (Finland, France, Italy and Spain) based on interviews and additional information collection.

Desk research

for the EMFF, Infosys data was screened by “Type of Operation” (ToO) to identify the operations relevant to skills and knowledge enhancement. Eight relevant types of operation were identified:

- training (ToO 15)
- professional training (85)
- new professional skills (88)
- life-long learning (86)
- educational activities (22)
- networking and exchange of experience (90)
- training and exchange programmes (141)
- seminars and media tools (143).

For all operations reported by 27 MS under these eight types of operation, the following data² was extracted and analysed:

- Number operations supported
- EMFF expenditure (EUR)
- Results

Under the EMFAF, types of operation were broader and included three categories of relevance to skills and knowledge:

- skills and human capital (ToO 14)
- capacity building (17)
- knowledge sharing (22)

As such, analysis was focused on operations reported against these three types of operations.

At the time of data extraction, EMFAF expenditure in the 26³ MS was not significant enough for meaningful analysis and therefore analysis focused on projects *selected* by June 2025⁴, rather than those completed and reimbursed. This report therefore presents data on:

- Number of EMFF operations selected
- EMFAF budget committed (EUR)

² Reflecting the situation at the end of 2023, since which no further data has been reported.

³ Down from 27 under the EMFF due to Brexit

⁴ The original data extraction was in April 2025 but new data from September 2025 was incorporated before finalising the report. The EMFAF budget committed under shared management had increased from 24% to 32% between these dates but actual expenditure remained very low.

Case studies

Four MS case studies were undertaken (in ES, FI, FR and IT), based primarily on interviews with managing authorities, but also including representatives of regional intermediate bodies, training centres, a Fisheries Local Action Group (FLAG) and the President of the Spanish federation of fishing organisations. Each case study involved interviews with 4-9 people⁵.

The information gathered through four case study interviews, included:

- perceptions of the challenges faced in each MS in relation to skills development in fisheries and aquaculture;
- information on MS' strategies to address these challenges and use EMFF/EMFAF in coordination with other funding sources;
- types of skills-related operations that EMFF/EMFAF funding has focused on;
- perceptions regarding the impacts of EMFF/EMFAF funding on skills development in fisheries and aquaculture;
- recommendations for making EU funding more effective for enhancing skills in fisheries and aquaculture.

Each case study also included a specific MS overview of Infosys data related to investment in skills-related operations. MS were also asked to verify the Infosys data presented as well as providing additional information where necessary, in particular on specific operations funded so as to provide better qualitative information and examples of the types of projects funded. The four case studies can be found as annexes to this report.

This report brings together an overview of the data analysis at EU and MS level and the qualitative information found in the four case studies.

⁵ See the list of those interviewed in the Annexes of each case study.

2 Findings: challenges and strategies to enhance skills and knowledge

Fisheries and aquaculture are both in need of attracting and training new recruits as well as upskilling experienced workers. However, the challenges they face – and the types of skills needed – are not always the same.

2.1 Challenges in the fishing industry

Interviews reveal that training needs in fisheries are no longer tied to a single subject but are increasingly transversal. Technical-professional skills are needed to support the fishing industry in the fields of fleet and resource management, production improvement, product valorization and quality, market management, workplace safety, food safety, and more. These actions, on the one hand are essential from a sustainability perspective, and on the other, to allow fishermen to comply with mandatory rules aimed at protecting and safeguarding biological resources.

A shift is underway in which fishers are no longer expected to simply fish. **Fishers must be entrepreneurs, who can fish, comply with EU Regulations, manage a business and ensure their products reach the market.** Connections between fishers, administrators and industry representatives are increasingly important. Specific challenges to ensure that fishers are competent to operate in this challenging environment include:

- A weak business culture among fishers
- A changing context which requires a comprehensive and regularly updated training offer that is adapted to evolving technologies (ICT, innovation, digitalization).
- Low incorporation of young people and low willingness among experienced fishers to embrace change and innovation
- Limited dissemination and slow adoption of technological innovation
- Insufficient integration of fishers into supply chains
- Disconnect between fishers, universities and public research bodies
- Complex EU legislation
- A lack of fisheries training courses in some MS
- A shortage of practical, on-the-job training in other MS
- Lack of visibility and recognition of the role of women in the sector
- Territorial disparities and the need to facilitate training in remote areas

2.2 Challenges in aquaculture

Aquaculture is an increasingly modernised and high-tech industry, which tends to offer more attractive conditions and career path. It generally attracts a different target group, including university graduates. In the aquaculture sector, skills development and generational renewal are confronted by a different set of challenges, primarily linked to governance and the regulatory environment. The main obstacles include:

- The complexity of the regulatory framework
- Excessive fragmentation of responsibilities among various competent administrations at different institutional levels
- Administrative burden with complex and costly bureaucratic procedures required to obtain all necessary authorizations for starting and operating a business
- Limited business culture
- Insufficient technological innovation in offshore mariculture

2.3 Some common objectives in the EMFF and EMFAF programmes

Not all MS used the EMFF or EMFAF to tackle skills development in fisheries and aquaculture. Section 3 of this report provides an overview of those MS that did use these EU programmes to boost skills and knowledge of their fisheries workforce. Case studies in Italy, Finland, Spain and France revealed some common objectives within their national EMFF Programmes to ensure the relevant skills in the sector. These include:

- **Strengthening the professional qualifications of maritime workers** – including fishers, shellfish gatherers, aquaculture operators, and other industry professionals – through targeted training initiatives.
- **Promoting the transfer of knowledge, technical expertise, and best practices** in key areas, such as environmental sustainability, innovation, and occupational health and safety.
- **Developing customized learning pathways** that attract young people and new entrants to the fisheries and aquaculture sectors.

Under the EMFAF, the MS studied mostly aim to build on their previous objectives but certain additional aims emerge, including:

- **Modernising vocational training and boosting practical training and professional fisheries internships.**
- **Developing life-long learning** in aquaculture and fisheries.
- **Better aligning training with labour market needs.**
- **Increasing focus on entrepreneurship**, including digital skills and knowledge in marketing, business management, market and supply chain awareness.
- **Enhancing the efficiency and quality of onboard operations**, including the handling of fish, compliance with environmental protection measures and awareness of climate change.
- **Promoting partnership with the scientific community**, studies and research.
- **Training professionals in emerging blue economy sectors**, such as algae production, biotechnology, renewable energy and maritime tourism.
- Promoting **cooperation and networking**

Interviews in Italy, Spain and Finland highlight the need to adopt a more systematic and integrated approach to skills-related interventions. This includes linking skills-development with larger operations to boost innovation (e.g. in Finland) as well as mobilising the fisheries Local Action Groups (LAGs) to improve the relevance and reach of training and educational activities (e.g. Italy and Spain).

2.4 Coordination with other policies or funding instruments

Depending on the country, the provision of education and training in the fisheries and aquaculture sector is usually foreseen in the national or regional budget, generally under the responsibility of the Department of Education and/or the Department in charge of fisheries. This would explain why various countries did not mobilise EMFF funds for training in fisheries or aquaculture.

However, provisions vary significantly. In France, for example, the national training offer was deemed largely sufficient, although uptake and opportunities for on-the-job training were considered to be lacking. EU funds in France are mainly used to fund new courses and life-long learning. In Finland, the SWOT analysis in its EMFF programme indicated that basic training in fisheries and aquaculture had been reduced and, as a result, there was a general lack of fisheries training and courses in Finland. Moreover, apart from the EMFF / EMFAF, Finland's rules for demarcation of EU funds do not allow other EU funds to be used for training in Finland's fisheries sector.

In other countries, such as Italy and Spain, the provision of training in fisheries and aquaculture depends heavily on EU funding, including the European Social Fund (ESF+), Interreg Programmes, and the European Regional Development Fund (ERDF). In countries such as Italy, the EMFF mainly complements bigger ESF-funded programmes by focusing on lifelong training for human capital within the sector, and promoting employment and entrepreneurship opportunities for young people.

Each MS has its own approach to combining different national, regional and/or EU funds to improve skills in the sector – as well as capitalizing on synergies with research and innovation programmes (e.g. Horizon) or fostering the transfer of knowledge to enhance the quality of work in the sector, including through Transnational Cooperation Programmes.

3 Findings: overview of support to skills in fisheries and aquaculture

3.1 Provisions under the EMFF for strengthening skills and knowledge

Eight main “types of operation” (ToO) considered to contribute to skills enhancement in fisheries and aquaculture could be reported under the EMFF⁶. These included:

- training (ToO 15);
- professional training (85);
- new professional skills (88);
- life-long learning (86);
- educational activities (22);
- networking and exchange of experience (90);
- training and exchange programmes (141);
- seminars and media tools (143).

These types of operations were funded under different Union Priorities (UPs) of the EMFF, and mainly under the following Articles:

UP1 – Sustainable fisheries

- **Article 29 - Promotion of human capital, job creation and social dialogue**, including:
 - 29.1 (a) professional training, lifelong learning, joint projects, the dissemination of knowledge of an economic, technical, regulatory or scientific nature and of innovative practices, and the acquisition of new professional skills, in particular linked to the sustainable management of marine ecosystems, hygiene, health, safety, activities in the maritime sector, innovation and entrepreneurship;
 - 29.1 (b) networking and exchange of experiences and best practices between stakeholders, including among organisations promoting equal opportunities...;
 - 29.1 (b) social dialogue at Union, national, regional or local level involving fishermen, social partners and other relevant stakeholders.
 - 29.2 – the same provisions made under 29.1 were also available for spouses and life partners of fishers
 - 29.3 - the same provisions made under 29.1 (a) were available for the training of people under 30 years of age. This support was limited to training on board a small-scale coastal fishing vessel owned by a professional fisherman of at least 50 years of age for a maximum period of 2 years.

⁶ See Commission Implementing Regulation (EU) 1242/2014

- **Article 44 - Inland fishing and inland aquatic fauna and flora**, including:
 - the promotion of human capital, job creation and social dialogue as referred to in Article 29 and reported with Article 29 operations
- **Article 30 - Diversification and new forms of income**, including:
 - “...investments contributing to the diversification of the income of fishermen through the development of complementary activities...”

UP2 – Sustainable development of aquaculture

- **Article 50 - Promotion of human capital and networking**, including:
 - 50.1 a) professional training, lifelong learning, the dissemination of scientific and technical knowledge and innovative practices, the acquisition of new professional skills in aquaculture and with regard to the reduction of the environmental impact of aquaculture operations;
 - 50.1 b) the improvement of working conditions and the promotion of occupational safety;
 - 50.1 c) networking and exchange of experiences and best practices among aquaculture enterprises or professional organisations and other stakeholders, including scientific and technical bodies or those promoting equal opportunities between men and women.
- **Article 52 - Encouraging new aquaculture farmers practising sustainable aquaculture**, including the the following provision to acquire adequate professional skills:
 - ...aquaculture farmers entering the sector may benefit from support under point (a) of Article 50.1.

UP5 – Accompanying measures for the CFP under shared management

Article 76 for control and enforcement of CFP rules also provided for strengthening skills, usually of controllers but also for fishers and others expected to comply with CFP rules

- **Article 76 - Control and enforcement**
 - 76.2 (h) training and exchange programmes, including between Member States, of personnel responsible for the monitoring, control and surveillance of fisheries activities;
 - 76.2 (j) initiatives, including seminars and media tools, aimed at enhancing awareness, among both fishermen and other players... of the need to fight illegal, unreported and unregulated fishing and of the implementation of the CFP rules;

Under UP3 (Sustainable development of fisheries and aquaculture areas), Article 63, the implementation of local development strategies under CLLD⁷, also provided opportunities for Fisheries Local Action Groups (FLAGs) to organise and fund training in response to needs in their local areas. However, for reporting purposes, no relevant ToO was foreseen to identify how many of the operations funded by the FLAGs were related to skills⁸.

⁷ *Community-Led Local Development*

⁸ *Under CLLD, Types of Operations that managing authorities could report included simply: preparatory support, FLAG running costs, and implementation of local development strategies (i.e. investments in local projects).*

3.2 Infosys data reported on EMFF investments in education and skills (2014-2020)

A review of EMFF operations reported in Infosys shows that around EUR 23 million was invested from the fund in a total of 1 745 skills and training-related operations. Table 1, below, shows that the majority of EMFF investment in skills (EUR 11.5 million) went to providing training under Article 29.1-2 for promoting human capital in fisheries. This measure also accounted for the majority of skills-related operations supported, 1 429 out of 1 745.

Networking and exchange of experience, funded under Art 50 for promoting human capital and networking in aquaculture, accounted for the second biggest investment, EUR 3.9 million – but just 58 operations, followed by EUR 2.8 million for training & exchanges to improve monitoring, control and surveillance of fisheries activities under Art 76 (37 operations).

Table 1: EMFF operations under shared management contributing to skills enhancement

EMFF Article	Type of operation	Total budget / €	number operations	people benefitting
29.1-2 promoting human capital, job creation and social dialogue	Training (15)	11 498 093	1 429	34 917
29.3 promoting human capital - trainees on board of SSCF vessels	Training (15)	11 607	11	10
30 Diversification and new forms of income	educational activities (22)	569 710	32	35
50 Promoting human capital and networking (in aquaculture)	professional training (85)	1 517 236	122	6 098
50 Promoting human capital and networking (in aquaculture)	networking and exchange of experience (90)	3 930 227	58	2 634
50 Promoting human capital and networking (in aquaculture)	lifelong learning (86)	479 934	14	2 812
50 Promoting human capital and networking (in aquaculture)	new professional skills (88)	173 038	12	493
76 Control & enforcement	Training & exchanges (141)	2 786 422	37	No data
76 Control & enforcement	Seminars and media tools (143)	2 153 955	30	No data
Total		23 120 224	1 745	46 988

Source: Infosys 2023

It must be mentioned that the investments indicated above equated to **less than 0.5% of total EMFF expenditure** reported by the end of 2023 (EUR 4.8 billion). This suggests that skills development was not a key priority for most EMFF programmes. However, although relatively limited, Table 1 shows that these investments were reported to benefit around 47 000 people.

Information on whether local projects were related to adding value to fisheries, diversification, environment, social issues, or governance was reported, but as skills are transversal to all of these and as all these categories cover many other types of projects, they do not help us identify which projects were related to skills.

Moreover, interviews reveal that a significant number of additional skills-related operations were funded by the Fisheries Local Action Groups (FLAGs) under Article 63; however no overview exists of these operations (for the reasons mentioned previously).

EMFF investments by Member State

A total of 20 MS mobilised their EMFF budgets for operations identified as skills related. Table 2 shows the total amount each MS reported for types of operations related to skills, including the percentage of their total EMFF expenditure that this represented. Only 5 out of 27 MS (Malta, Austria, UK, Estonia and Ireland) allocated more than 1% of their EMFF budget to the skills-related types of operations identified above, and seven MS did not report any expenditure for skills-related operations.

Table 2: Total EMFF and skills-related expenditure by MS

MS	Total eligible EMFF expenditure declared (EUR)	Total EMFF expenditure in skills-related operations	% of EMFF invested in skills
AT	6,964,436	156,946	2.25%
BE	37,786,577	30,699	0.08%
BG	55,815,936	59,796	0.11%
CY	34,819,768		0.00%
CZ	28,346,720		0.00%
DE	193,385,864	256,090	0.13%
DK	182,142,670	1,116,903	0.61%
EE	93,643,876	1,702,117	1.82%
EL	292,585,891	86,348	0.03%
ES	958,475,240	5,798,493	0.60%
FI	73,652,185	230,068	0.31%
FR	500,788,641	1,780,312	0.36%
HR	194,798,994		0.00%
HU	27,821,093		0.00%
IE	144,151,868	2,091,926	1.45%
IT	430,494,190	2,446,552	0.57%
LT	53,840,346	59,806	0.11%
LV	118,866,393	102,104	0.09%
MT	22,065,789	908,607	4.12%
NL	73,420,996		0.00%
PL	436,755,999	1,413,082	0.32%
PT	373,128,875	198,897	0.05%
RO	129,604,264		0.00%
SE	107,463,509	820,016	0.76%
SI	21,064,912	28,898	0.14%
SK	3,070,128		0.00%
UK	209,624,916	3,832,564	1.83%
Total/average	4,804,580,077	23,120,224	0.48%

Source: Infosys 2023

Table 3, below, shows the breakdown of these skills-related investments by EMFF Article to which they were allocated. Of the 20 MS reporting skills-related operations, 13 MS used Articles 29, 30 and

50 to fund operations to enhance skills in fisheries and/or aquaculture, and 16 MS funded skills and educational activities for improving monitoring and surveillance.

We can see that Spain committed the largest EMFF budget to enhancing skills (EUR 5.8 million), followed by the UK (EUR 3.8 million), Italy (EUR 2.4 million), France (EUR 1.8 million) and Ireland (EUR 2.1 million). Only 10 MS reported more than EUR 300 000 against skills-related operations.

Italy and Poland were the MS that funded the highest variety of different types of operations, making use out of seven out of the nine options. Along with Finland, they were the only MS that funded training activities to help diversify economic activities. Italy was also one of only two MS to support activities for trainees onboard SSCF vessels (along with Ireland).

Table 3: Detailed EMFF educational and skills-related expenditure by MS (per type of operation)

MS	Sustainable fisheries Art 29.1-2 (training)	Sustainable fisheries Art 29.3 SSCF vessels (training)	Sustainable fisheries Art 30 diversification (educational activities)	Sustainable Aquaculture Art 50 (professional training -85)	Sustainable Aquaculture Art 50 (life-long learning - 86)	Sustainable Aquaculture Art 50 (new professional skills -88)	Sustainable Aquaculture Art 50 (networking & exchange -90)	Control & enforcement Art 76 (Training & exchanges)	Control & enforcement Art 76 (Seminars and media tools)	Total skills-related EMFF expenditure per MS
ES	5,497,710			369	170,838		129,576			5,798,493
UK	3,657,720			61,618	547	607	262	111,809.82		3,832,564
IT	1,157,120	8,000	512,993	498,982		76,375	173,348		19,733.27	2,446,552
FR				180,143	107,687		1,492,482			1,780,312
IE	365,212	3,607		102,784		12,436		1,011,740.81	596,145.60	2,091,926
PL	296,106		55,692	375,640	200,861	9,263	448,652		26,867.25	1,413,082
DK								1,010,525.66	106,376.87	1,116,903
EE							988,434		713,683.68	1,702,117
SE	124,706			137,399			420,368	35,787.00	101,756.00	820,016
MT	335,172							26,133.09	547,301.49	908,607
DE				3,355		2,854	220,965	28,579.49	336.80	256,090
FI	64,347		1,025			71,503	25,442	67,750.61		230,068
PT								198,897.29		198,897
AT				156,946						156,946
LV								102,103.79		102,104
EL								86,347.79		86,348
LT								59,806.42		59,806
BG								46,371	13,425	59,796
BE							30,699			30,699
SI								569.32	28,328.92	28,898
Total	11,498,093	11,607	569,710	1,517,236	479,934	173,038	3,930,228	2,786,422	2,153,955	23,120,224

Source: Infosys 2023

3.1 Provisions under the EMFAF for strengthening skills and knowledge

Provisions for funding have been simplified and follow a less prescriptive approach under the EMFAF Regulation. Rather than proposing specific articles for developing skills in fisheries and aquaculture, such operations are dealt with in a more transversal way.

In terms of the reporting system, operations from any Union Priority or article, including CLLD, can be now linked to any relevant “Type of Operation”. Each operation reported must indicate the most relevant operation type⁹. Three types of operation stand out for their likely contribution to skills and knowledge:

- ToO 14: skills and human capital
- ToO 17: capacity building
- ToO 22: knowledge sharing

The data presented below is based on all operations reported by July 2025 linked to these three types of operations.

3.2 Infosys data reported on EMFAF investments in skills and knowledge

In January 2025, MS reported all EMFAF operations to which funds had been *committed* by the end of 2024 (actual expenditure not yet declared). Figures show that MS were still in a very early stage of implementation with less than 25% of the EMFAF shared management budget committed (EUR 1.5 billion). This was the situation at the time of preparing this report.

By September 2025, updated data became available for operations selected up until June 2025. Implementation has progressed with 32% of the EMFAF shared management budget now committed (EUR 1.7 billion), and a total of just EUR 26.6 million committed by the MS to skills-related operations.

This compares to around EUR 52 million reported against skills-related operations under direct management. In total EUR 78.3 million had, therefore, been committed to 284 skills-related operations, as illustrated below in tables 4 (shared management operations) and 5 (direct management operations).

Table 4: Shared management operations reported linked to skills and knowledge

Intervention Type	EMFAF Support / €	Number of operations	Average EMFAF contribution per operation
Promoting conditions for economically viable, competitive and attractive fishery, aquaculture and processing sectors	12,302,552	126	97,639
Data collection and analysis, and promotion of marine knowledge	6,291,539	7	898,791
CLLD implementation of strategy	1,766,869	66	26,771

⁹ There are a total of 66 possible “Types of Operations” that MAs can select from

Reducing negative impacts and/or contributing to positive impacts on the environment and contributing to a good environmental status	1,696,748	9	188,528
Control and enforcement	573,657	5	114,731
Contributing to climate neutrality	503,797	1	503,797
Scientific advice	349,960	1	349,960
CLLD preparation actions	187,474	24	7,811
Grand Total	26,587,836	246	108,081

Source: Infosys 2023

We can see from Table 4 that most shared management operations related to skills and human capital (126 out of 246) were reported under interventions for “economically viable, competitive and attractive fishery, aquaculture and processing sectors”¹⁰, followed by CLLD projects where 66 projects were selected for funding. However, as CLLD projects are small-scale (EMFAF contribution of less than EUR 30 000 per project on average), they represented less than EUR 1.8 million, compared to EUR 12.3 million committed of EMFAF to operations for competitive fisheries, aquaculture and processing (on average around EUR 97 600 per operation). EUR 1.7 million was also allocated to skills-related operations linked to better environmental practice – though consisting of just 9 operations in total; EUR 6.2 million was dedicated to 7 projects linked to improving data and marine knowledge; and 5 projects were related to skills to improve control of fishing activities. Twenty-four operations to support the preparation of FLAG strategies were linked to capacity building for local stakeholders.

Table 5: Direct Management operations reported linked to skills and knowledge

Intervention Type	EMFAF Support / €	Number of operations	Average EMFAF contribution per operation
Voluntary contributions to international organisations	24,000,000	3	8,000,000
Maritime policy	22,550,756	26	867,337
International ocean governance	4,800,000	6	800,000
Maritime surveillance and security	3,294,000	10	329,400
Grand Total	51,729,516	38	167,685

Source: Infosys 2023

The intervention types under direct management¹¹ – contributions to international organisations, maritime policy; international ocean governance; and maritime surveillance and security – accounted for more than double the commitments to skills-related operations reported under shared management. However, they involved fewer, but high budget, projects (38 operations compared to 246). Three operations under “voluntary contributions to international organisations” account for almost half of the budget commitments under direct management, whilst maritime policy accounts for the next largest chunk as well as the largest number of operations (26 out of the 38 operations). As this report, focuses on how the MS are mobilising EMFF and EMFAF for skills in fisheries and aquaculture, it will not analyse the commitments made to skills under direct management operations.

¹⁰ Objectives 1.1 and 2.1

¹¹ i.e. managed by the European Commission

In terms of budget committed to skills-related operations, we can see that, in June 2025, a higher percentage of the EMFAF budget had been allocated to skills-related operations than the percentage of budget identified as skills related in EMFF data (expenditure). Indeed, at this stage of the programming period, an average of 1.56% of shared management funds have been committed against skills-related operations, up from 0.48% under the EMFF.

This might mark an increased recognition of the importance of enhancing skills in fisheries and aquaculture. However, with just 32% of the budget committed, this picture could yet change significantly by the end of the programming period.

Table 6: Member States' EMFAF commitments to skills-related operations by June 2025

Member State	Total EMFAF committed	EMFAF committed to skills	% of EMFAF committed to skills (June 2025)
Austria	3,234,044.57	115,477	3.57%
Belgium	16,343,907.72	603,094	3.69%
Bulgaria	14,167,234.67	187,474	1.32%
Croatia	73,826,253.10		0.00%
Cyprus	20,046,748.74	56,000	0.28%
Czechia	13,680,395.67		0.00%
Denmark	107,175,257.43	503,797	0.47%
Estonia	33,455,376.64	280,180	0.84%
Finland	32,912,797.19	1,087,474	3.30%
France	164,671,418.90	541,589	0.33%
Germany	95,517,975.20	1,540,879	1.61%
Greece	152,988,235.20		0.00%
Hungary	15,163,771.91		0.00%
Ireland	36,232,831.08	1,393,689	3.85%
Italy	159,459,393.02		0.00%
Latvia	63,638,854.23	217,434	0.34%
Lithuania	19,191,062.02		0.00%
Malta	8,089,970.00		0.00%
Netherlands	27,454,847.59	65,870	0.24%
Poland	184,815,472.21	6,148,648	3.33%
Portugal	154,542,218.93	8,988,747	5.82%
Romania	139,045.25		0.00%
Slovakia			0.00%
Slovenia	5,940,398.80	747,434	12.58%
Spain	247,882,258.98	2,066,828	0.83%
Sweden	55,122,809.62	2,043,222	3.71%
Total/average	1,705,692,579	26,587,836	1.56%

Source: Infosys 2023

With regards to the category types of operations supported in the different MS¹² under the EMFAF, table 7 shows that “skills and human capital” accounted for the largest number of shared management operations (130 out of 146), for a committed investment of EUR 10 million. “Knowledge sharing” accounted for a larger investment – EUR 15 million, which was committed to 77 operations. Commitments to “capacity building” were a significantly lower (EUR 1.3 million). The majority of the capacity building operations reported (24 out 39) were for local stakeholders in Bulgaria to prepare their FLAG strategy under CLLD.

Portugal stands out for its commitments to skills and knowledge-related operations with almost EUR 9 million committed, EUR 8.7 million of which to “knowledge sharing”. Poland also stands out with EUR 6.1 million committed to “skills and human capital”.

Table 7: Member State EMFAF commitments by "Types of Operations"

Member State / Type of operation	EMFAF Support committed	Number of operations	Average EMFAF Support per operation
Capacity building	1,131,733	39	29,019
Bulgaria	187,474	24	7,811
Finland	47,017	3	15,672
France	354,946	2	177,473
Germany	13,321	2	6,661
Ireland	256,582	5	51,316
Portugal	123,457	1	123,457
Slovenia	148,937	2	74,468
Knowledge sharing	15,282,680	77	198,476
Belgium	458,794	4	114,698
Estonia	82,676	4	20,669
Finland	594,000	1	594,000
France	186,643	3	62,214
Germany	1,413,240	5	282,648
Ireland	889,132	10	88,913
Netherlands	65,870	1	65,870
Portugal	8,744,578	14	624,613
Slovenia	526,230	3	175,410
Spain	325,550	18	18,086
Sweden	1,995,966	14	142,569
Skills, human capital	10,173,422	130	78,257
Austria	115,477	2	57,739
Belgium	144,300	1	144,300
Cyprus	56,000	2	28,000
Denmark	503,797	1	503,797

¹² Direct management operations do not appear in table 7 but analysis shows that EUR 41 million have been committed to “capacity building” (22 operations) and EUR 10.7 million to “skills and human capital” (16 operations).

Estonia	197,504	13	15,193
Finland	446,458	20	22,323
Germany	114,318	9	12,702
Ireland	247,975	5	49,595
Latvia	217,434	4	54,359
Poland	6,148,648	18	341,592
Portugal	120,711	2	60,356
Slovenia	72,267	1	72,267
Spain	1,741,277	50	34,826
Sweden	47,255	2	23,628
Grand Total	26,587,836	246	108,081

Source: Infosys 2023

Given the limited amount of information that can be gained from EMFAF figures at this stage, these fund allocations have mainly been used as an indication of choices being made and as a starting point for discussions with the case study MS regarding their aims in terms of boosting skills in fisheries and aquaculture. Section 0 presents more qualitative information from the case study interviews on the types of projects that Spain, France, Finland and Italy funded under the EMFF, along with their plans and initial commitments for using the EMFAF to enhance skills.

4 Findings: Examples of operations to support skills in fisheries and aquaculture

As seen in the overview above, MS have chosen to use the EMFF in different ways to boost skills in fisheries and/or aquaculture. For some it has complemented the existing national / regional provisions for training, in other MS the Funds were not used. The MS that did mobilise the EMFF for enhancing skills, generally aim to build on this work under the EMFAF. Indeed, many of the projects that were funded under the EMFF continue to be funded, or expect to receive funding under the EMFAF.

4.1 Enhancing skills for fishing and related activities

4.1.1 Support for skills under EMFF Articles 29, 30 and 44

Funded under Article 29, 30 and 44 of the EMFF, promoting “human capital, job creation and social dialogue in fisheries” accounted for the main bulk of investment reported for skills-related operations under the EMFF. Investments included training courses covering mandatory subjects required for fishers to legally carry out fishing activities, as well as other subjects to improve the quality of their work or diversify their activities.

Table 8: Investment in skills for fishers

EMFF Article	Type of operation	Total budget / €	number operations	people benefitting
29.1-2 promoting human capital, job creation and social dialogue	Training (15)	11 498 093	1 429	34 917
29.3 promoting human capital - trainees on board of SSCF vessels	Training (15)	11 607	11	10
30 Diversification and new forms of income	educational activities (22)	569 710	32	35

Source: Infosys 2023

Eight MS reported 1 429 operations to enhance skills for fishers, for a total investment of around EUR 12 million. Of the four case study countries, Spain, Italy and Finland made use of these Articles to different extents, while France did *not* mobilise funding available (it was used mostly for aquaculture, article 50). Finland supported just two projects (under Article 29), while Spain and Italy used them to support skills and knowledge enhancement through 818 and 73 projects respectively. The types of operations funded included:

- **Training to obtain mandatory certifications**, including skipper, deckhand, and basic safety training.
- **Vocational training courses** - covering areas such as commercial fishing, sustainable fishing techniques, resource management, aquatic animal health, fish product handling, equipment maintenance, digitalization, and the circular economy.
- **Continuous training and upskilling** - designed for workers to update and enhance their skills in response to evolving challenges, including the adoption of best practices, new technologies and climate change adaptation.
- **Work-based training programmes** - combining theoretical instruction with practical experience onboard vessels, but also in laboratories and other relevant work environments.

- **Training in business management** and entrepreneurship, including business management skills and market strategies and initiatives.
- **Training to diversify into new activities**, such as fishing tourism, product processing or direct sales.
- **Training in auxiliary activities**, e.g. for diving technicians, ship construction trades, net mending, etc.
- **Development of educational materials and digital tools** - including the creation of online training platforms, interactive resources, and sector-specific learning modules tailored to the needs of fisheries and aquaculture
- **Awareness-raising and promotion of careers in fisheries and aquaculture** - especially targeting youth and women through school talks, outreach campaigns, site visits, and hands-on workshops to spark interest in the sector.

Below, we provide a short description of several operations funded to enhance the skills of fishers and others in the fisheries sector.

Blue inclusion through practical training, Spain

EMFF & EMFAF

The EMFF supported the transition of vulnerable workers into the maritime sector through free, sector-specific courses related to fishing trades, navigation, shell fishing and aquaculture.

The CETMAR foundation has been coordinating EMFF-funded training at the Aixola training centre to support the career transition of former fishers and low-skilled workers into various maritime professions. Project-driven courses have been delivered since 2004, covering areas such as wooden and polyester boat building, inflatable boat repair, electrical and hydraulic ship systems, net making, sailmaking, and composites.

Delivered by experienced tutors, the trainings take place in small groups and replicate real work conditions. The training centre promotes social inclusion and gender equality by training former fishers, immigrants, and low-skilled workers while also encouraging women to join male-dominated sectors like shipbuilding and marine repairs. European funding has allowed these courses to be continued over many years, and they continue under the EMFAF.

Results

- Personalized employment guidance provided for each participant.
- Certificate of Achievement delivered to participants upon completion.
- Support for diversification in coastal and maritime economies.

Funding

Total project cost: €235 712

EMFF (Article 29) contribution: €149 998

These training courses continue to be funded under the EMFAF and delivered at the Aixola training centre. Thanks to EU funding, training courses have been financed at the Aixola school since 2004. A total of 167 courses have been delivered, training around 2,000 students in areas such as naval carpentry, ship electricity and mechanics, sailmaking and rigging, and fishing gear and nets.

Beneficiary: Regional department of Fisheries Development and Innovation

Training in underwater skills, Italy

EMFF

Professional fishers obtain technical diving skills in order to undertake different underwater tasks.

This project aimed to enhance the professional skills and safety standards of inshore diving technicians working in the Campania region. The initiative was designed to equip professional fishers with the ability to perform SCUBA and surface-supplied diving interventions, to carry out underwater work in a variety of marine environments, including at shipyards, port docks, tourist ports, fish and mussel farming facilities, as well as in Marine Protected Areas. Operations could include tasks such as installing and maintaining underwater structures, conducting surveys, and supporting fish and mussel farming activities.

Training courses were delivered to groups of 8 to 12 participants, through a series of comprehensive modules, covering topics such as risk prevention, emergency management, underwater operations, and equipment handling. Each course lasted 800 hours, including theoretical instruction and practical internships. All courses were provided free of charge, and upon successful completion of the final evaluation exam, participants were awarded the professional qualification of "Inshore Diving Technical Operator", enabling them to undertake specialized underwater work.

People receiving training: 80

Funding

Total project cost: EUR 799 782

EMFF (Article 29) contribution: EUR 399 891

Organisation receiving the grant: Associazione Percorsi

4.1.2 Support for skills in fisheries from *other* EMFF Articles or EMFAF Priorities

As mentioned previously, additional EMFF Articles were also mobilised to support operations that integrated skills-related actions - even though the skills dimension of these cannot be identified in Infosys. For example, FLAGs in many MS used CLLD (Article 63) funding to support a series of skills-related projects, while Finland integrated educational activities into projects funded under Articles foreseen for innovation (e.g. Articles 39 and 47). Interviews with the MS helped identify and collect information on some of these actions.

CLLD projects from Finland, Spain and France funded under the EMFF, are provided below – two funded under Article 63 of the EMFF and two selected under Priority 3 of the EMFAF.

Promoting youth employability through fisheries training, Spain

EMFF

The EMFF supported the creation of a maritime-fisheries training classroom in Andalusia, contributing to the creation of new jobs among young people and highlighting the fisheries sector as a potential source of employment.

This initiative aimed to increase the employability of young people, while promoting maritime culture as a way of life and source of economic activity. In this way, it sought to encourage generational renewal in fisheries by facilitating entry into the labour market and supporting career progression and improved working conditions within the sector.

The project provided training for professional fisheries qualifications, offering participants a clear career pathway in the sector. Beyond professional certification, the classroom enabled other sector-related training, including the highly demanded “Training for Shellfishing Activity” course, currently essential for obtaining both the General Shellfishing Licence and the Specific Licence for coquina harvesting along the Andalusian coast.

Results

- Strengthened the fisheries sector through the involvement of young people.
- Supported generational renewal, ensuring the continuity and sustainability of local fisheries businesses.
- Enhanced the long-term viability of the fisheries sector as a fundamental productive activity for the region.

Funding

Total project cost: €17 450

EMFF (Article 63, CLLD) contribution: €14 468

Beneficiary: Municipality of Isla Cristina, a local authority in Huelva, Andalusia, Spain

Master-Apprentice Programme for Young Fishers, Finland

EMFF / EMFAF

The Lapland fisheries LAG has financed a fisheries recruitment and training project to rejuvenate the ageing fisheries sector in the area.

To reverse the trend of its ageing fishers’ population, this project, led by the Lokka Fishers’ Cooperative and the Municipality of Sodankylän, assessed ways to attract young adults to the area and, specifically, to its fishing industry. The project identified three objectives: to ensure the continuity of fishing in the area, improve the professional skills of both new and existing fishers, and develop an innovative recruitment model.

The result was a ‘master and apprentice’ programme in which newly recruited young adults were trained for two and a half years by the area’s senior fishers. This was a flexible programme that provided the apprentices with enough time for other work and study commitments, which was important since the project did not offer an initial income.

The master and apprentice method has been utilized in Finland since the programming period 2007-2013 and its success has led it to be replicated in various FLAG areas. There were a total of six master and apprentice projects during the 2014-2022 period; and several programmes continue to be funded in the current EMFAF period, both in the fisheries and aquaculture sectors.

Results

- 12 young fishers started to work in the area (8 full-time, 4 part-time), including two women. The total number of commercial fishers in the reserve has almost doubled.

- New investment in the port and processing infrastructure followed the project. The new fishers are also expected to bring new ideas to develop the local fisheries sector.
- After the initial EMFF-funded project finished, the Lokka Fishers' Cooperative decided to carry on under their own steam. Experienced fishers are committed to providing training for anyone who is genuinely interested in work as a fisher. This has increased the importance of the role that the fisheries sector has in developing the local economy.
- Another project, focusing on the recruitment of fishermen to the area is being implemented under the EMFAF for the years 2023-2026

Funding

Total project cost: €36 740

EMFF (Article 63, CLLD) contribution: €17 268

Beneficiary: Municipality of Sodankylän

EMFAF

Introducing Young People to Maritime Careers, France

The BIMer diploma allows students discover the maritime world and sea-related professions through a structured, multi-level programme. Under the EMFAF, the FLAGS will promote uptake of this course.

The *Brevet d'Initiation à la Mer* (BIMer) is an official diploma launched by the French Ministry of Education in 2018. It targets students from 14 years old, up to post-secondary school learners preparing for higher education. The curriculum comprises a minimum of 40 hours of training covering six core modules: ship construction, stability and safety, marine environment, navigation and regulations, maritime geography and challenges, and English for seafaring. Delivered in secondary schools and training centres, the programme features classroom learning, visits to ports and maritime companies, and hands-on activities at sea.

The BIMer was piloted in the Hauts de France region from 2012-2014 and the region's three FLAGS are jointly funding a project under EMFAF to promote uptake of this course in secondary schools. Funding has been approved for a full-time coordinator to promote the course in the region's schools, ensure a sufficient supply of instructors are trained to deliver the course and organise the various study trips that are part of the course.

Expected results

- Increased uptake of this nationally recognised diploma
- Increase in students studying the BIMer
- Greater awareness among teachers and pupils of opportunities for marine-related careers

Funding foreseen:

Total project cost: €200 000

EMFAF contribution (from CLLD): €80 000 + €80 000 regional co-financing

Beneficiary

L'Université du Littoral Côte d'Opale (ULCO)

MARESMAR SCHOOL: Study for the creation of a "repair & refit" centre of excellence for the repair and maintenance of fishing fleets

This is an example of an innovative public-private collaboration, integrating different sectors of the blue economy to set up a unique centre in Catalonia providing specialised training in nautical disciplines.

This is a pioneering project proposal to position the Port of Arenys de Mar as Catalonia's most important training hub for the repair and maintenance of fishing vessels and industrial ships. It aims to provide training to students who have previously completed vocational training and ensure successful employment outcomes for students by linking training with direct entry into companies in the sector.

As such, it combines objectives of fostering generational renewal, supporting local SMEs and job retention, and creating cooperation networks. It also promotes gender equality, the inclusion of disadvantaged groups, and the attraction of new student profiles.

Expected Results

- Creation of a centre of excellence in nautical and naval training linked to the Port of Arenys de Mar.
- Greater specialisation and employability of students in key areas of the fishing and industrial sectors.
- Boost to the development of the port as a strategic hub for training and blue economy activities.

Funding

Total project cost: EUR 28 200

EMFF (Article 63, CLLD) contribution: EUR 19 740

Beneficiary: Cofradía Pescadores Sant Elm, Cataluña, Spain

4.2 Skills in aquaculture

4.2.1 Support for skills under EMFF Article 50, or EMFAF Priority 2

Under Article 50, EUR 6.1 million of EMFF money was reported by 11 MS to have been invested in the types of operations related to skills: professional training; new professional skills; life-long learning for aquaculture operators; and projects to promote learning through networking and exchange.

Table 9: enhancing skills and knowledge in aquaculture

EMFF Article	Type of operation	Total budget / €	number operations	people benefitting
50 Promoting human capital and networking (in aquaculture)	professional training (85)	1 517 236	122	6 098
50 Promoting human capital and networking (in aquaculture)	networking and exchange of experience (90)	3 930 227	58	2 634
50 Promoting human capital and networking (in aquaculture)	lifelong learning (86)	479 934	14	2 812

50 Promoting human capital and networking (in aquaculture)	new professional skills (88)	173 038	12	493
--	------------------------------	---------	----	-----

Source: Infosys 2023

Operations to support **networking and exchange accounted for the biggest part of the budget allocated to these types of operations** (EUR 3.9 million), followed by professional training which absorbed EUR 1.5 million. New professional skills and life-long learning absorbed just EUR 173 035 and EUR 479 934 respectively. The networking projects were reported to have benefited 36 736 people, while 6 098 people were reported to have benefitted from professional training related to aquaculture.

Under **networking and exchange**, projects included both the creation of networks, support units, and seminar type activities for industry professionals to learn from best practice. Examples of topics include:

- General technical support and networking for shellfish farmers
- Creation of a network of sector representatives to ensure the transfer of knowledge about offshore aquaculture and competitiveness
- Creation of a network for the identification and reduction of plastic waste in aquaculture
- Activities to strengthen territorial management and collaboration between SMEs, producer organizations and research institutions.
- Network analysis of health information in aquaculture
- Working groups and seminars on innovations in aquaculture
- Environmental workshops on aquaculture and natural spaces

Other skills and knowledge-related operations funded included professional training courses covering specific skills and knowledge areas, as well as smaller number of lifelong learning and educational and awareness-raising initiatives (e.g. promotion of aquaculture professions and cultural heritage).

Some of the themes addressed by the **professional training projects** included:

- Sustainable shellfish farming, including recovery of natural populations
- Diagnosis and prevention of diseases
- Fisheries biology for shell-fishers
- Management of seeds of bivalve molluscs
- Quality, hygiene, health and safety in aquaculture production
- Animal welfare
- Brand creation

Below, we provide a short description of several operations funded with the EMFF or EMFAF to enhance skills and knowledge in aquaculture.

FORMAQUAE, Italy

EMFF

Professional training, lifelong learning and knowledge dissemination activities aimed to foster environmentally sustainable, resource-efficient, innovative, competitive, and skill-based aquaculture on Italy's Adriatic coast.

Aquaculture has always been part of the entrepreneurial history of the Adriatic Sea: Emilia-Romagna and Veneto account for approximately 50% of national production. However, the sector has undergone significant fluctuations over the years, both in productivity and representativeness in

terms of the number of companies and employees. Currently imported fish represents approximately 80% of the national market. This situation is impacted by several negative factors, from regulatory and economic ones to environmental ones.

The FORMAQUAE project aimed to promote and foster environmentally sustainable, resource-efficient, innovative, competitive, and skill-based aquaculture. To this end, the project includes a series of professional training, lifelong learning, knowledge dissemination, and networking activities that contribute to the professional development of aquaculture farmers, while maintaining environmental, social, and economic sustainability.

The project's final beneficiaries were fishermen and aquaculture operators from the coastal communities, organized into cooperatives associated with Legacoop and Confcooperative.

People receiving training: 110

Funding

Total project cost: EUR 56 597

EMFF (Article 50) contribution: EUR 27 615

Beneficiary: Demetra Formazione

Supporting aquaculture producers in a process of continuous improvement, Nouvelle, Aquitaine, France

EMFF/EMFAF

The “*Groupement de Défense Sanitaire Aquacole*” (GDSA) received EMFF funding to bring aquaculture businesses together to identify shared challenges for building sustainable aquaculture, and to promote knowledge acquisition and exchange of experience.

EU funding is supporting the “*Groupement de Défense Sanitaire Aquacole*” (GDSA) to offer collective solutions to health challenges in aquaculture; run an environmental monitoring network to assess water quality and its impact on aquaculture sites; and to foster best practices and innovation through training sessions and collective strategies.

Training and collective action is helping update a growing knowledge base to improve aquaculture practices. These trainings enable the transmission of information, the exchange of knowledge, and the improvement of practices. The initiative also involves creating and disseminating memos, collective strategies, and opinions on specific topics to support aquaculture businesses in their efforts to progress toward more sustainable aquaculture. The success under the EMFF has led to new grant being requested - and approved - under the EMFAF.

Results

- Enhanced skills and knowledge among aquaculture producers.
- Collaborative dynamic among aquaculture producers set in motion
- Public access to regularly monitored water quality data via the observation network.
- Development and dissemination of collective strategies and technical advice to promote sustainable aquaculture.

EMFAF Funding committed

Total project cost: €207 838

EMFAF (Priority 2) contribution: €130 938

4.2.2 Support for enhanced skills and knowledge in aquaculture from *other* Articles

As with fisheries, additional EMFF Articles were also mobilised to improve skills and knowledge in aquaculture – in particular CLLD and Articles foreseen for fostering innovation. Galicia (Spain) was also found to have dedicated Technical Assistance funding to a network set up to develop skills and share knowledge among aquaculture producers. Description of several examples of operations identified through interviews can be found below.

EMFF

Aquaculture Innovation programme, Finland

Finland's 2017-2023 Aquaculture Innovation Programme aimed to sustainably increase the volume and value of aquaculture in Finland and to create an active network within the sector. The Programme explored solutions to the industry's current challenges and worked with enterprises and other partners to improve the conditions of circular aquaculture.

Led by the Finnish Institute for Natural Research, the project had a total of ten partners, including the Finnish Environmental Institute, the Finnish Meteorological Institute, the Finnish Food Agency, its Aquaculture Producers' Association, the Universities of Jyväskylä, Oulu, and Aalto, Livia vocational college, and the State Forestry Enterprise.

The Aquaculture Innovation Programme included six work packages, one of which focused on the development of knowledge and training to meet the needs of the sector. Livia Vocational College mapped the state of the aquaculture learning material and [created extensive learning material on aquaculture](#) for educational institutions and companies. All the materials are published in the publicly accessible Peda.net learning environment. Furthermore, a new aquaculture learning environment was created in the Livia Vocational College. The University of Jyväskylä [mapped the skills needs of the sector](#), [conducted a study on the state of aquaculture education in the Nordic countries](#), organised a five-day international summer school on recirculating aquaculture and supported various master's theses on the theme in cooperation with the Laukaa Fish Farm.

Results

- Both teachers and learners benefited from the publicly available learning material on aquaculture
- The programme supported the networking of the educational institutions with the aquaculture companies, helping foster skills development within the sector.
- 13 students attended the aquaculture summer school
- Students participated in the project in various ways. A total of three PhD theses and 9 MA theses were developed in the auspices of the programme.
- A new, Nordic training programme on aquaculture - [Bridges - blue sector | BRIDGES](#) - was subsequently developed (funded under Erasmus+) as a result of knowledge and networking from this project.

Total project cost: €5 500 000

EMFF (Article 47) contribution: €2 255 000

Approximately 10% of the budget went to skills-related activities

Beneficiary (Lead Partner)

Finnish Institute for Natural Research

Building Careers in Microalgae Farming, France

A pilot project in Brittany introduced microalgae cultivation through hands-on training and a new school curriculum.

A small-scale algae production unit was set up in a horticultural school to experiment with microalgae cultivation using bioreactors. The facility serves as a learning environment to raise awareness and train students in the production of single-cell algae. The project brought local actors together with complementary expertise to lay the foundations for a formal training programme. It led to the creation of a certified course designed to support the development of new skills in algae farming.

The course was subsequently included in the 2023-2025 'plant-related professions' BTS (higher technical certificate) training programme. However, in 2025, this BTS was not offered (including the algae module) due to a lack of candidates. However, the bioreactor is still used by the school and the microalgae produced are used to fertilize their own market gardening produce.

Results

- A 10m² microalgae production unit was installed for practical training use.
- A new school curriculum specialised in algae was launched in September 2023.
- Seven students gained hands-on experience with algae production systems.

Funding

Total project cost: €329 716

EMFF (Art 63, CLLD) contribution: €131 886

Beneficiary

Association Responsable de Saint-Illan

REDEMAR: A network to bridge shell-fishing and research, Spain

A pioneering collaboration between Galicia's shell-fish sector and scientists has been established to enhance resource management through shared knowledge and tackling key challenges.

Launched in 2022, REDEMAR is an initiative fostering structured collaboration between shell-fishers, research centres, universities, and Galicia's Department of Fisheries Development. The network drives the co-creation of solutions through working groups and joint research on topics such as shellfish resources, sediment impacts, oyster restoration, sea urchin sustainability, macroalgae conservation, polychaete valorisation, inclusive employment, and more.

REDEMAR organizes thematic groups, workshops and research initiatives, and has been publishing results publicly since 2023 to ensure that scientific findings inform sustainable fisheries policy and marine governance.

Results

- 28 joint activities delivered, including research projects, policy workshops, and capacity-building actions.
- Research projects focusing on shellfish, sediment, genetics, benthic ecosystems, algae and employment inclusion.
- A public website launched in 2023 to share findings, documents and proposals.

- A governance system regulated by regional decree to institutionalize and facilitate the relationship and cooperation between the productive sectors of fisheries, aquaculture and shell-fishing, and the scientific community in Galicia, ensuring that the scientific results reach the fisheries sector.

Funding

Total project cost: €920 380

EMFF (Article 28 – Partnerships between scientists and fishermen) contribution: €690 286

Beneficiary: Regional department of Fisheries Development and Innovation

5 Findings: contribution of EMFF programmes to skills in fisheries and aquaculture

5.1 Main results

This section is based on the analysis of the performance indicators of the INFOSYS database as well as the feedback from managing authorities, intermediate bodies and training centres collected through interviews.

5.1.1 Overview in numbers

Despite the relatively small amounts of EMFF invested in strengthening skills in fisheries and aquaculture, around 47 000 people were reported to have benefited from operations to enhance their skills or knowledge. The number of people benefiting varied significantly across MS¹³.

Article 29 that supported human capital in fisheries accounted for most of the people benefiting from skills or knowledge enhancing actions with a total of 34 917 people reported to have benefited in eight countries. The overwhelming majority of the people reported to have benefited from these operations were in Spain (20 548 people), followed by the UK (with 10 908 reported beneficiaries) and Italy (with 1 488 people benefiting).

Table 10: number of people benefiting from operations funded under Art. 29 (fisheries)

MS	Total EMFF Expenditure	Number of operations	Number of people benefiting
ES	5,497,710	818	20,548
UK	3,657,720	33	10,908
IT	1,157,120	40	1,488
SE	124,706	6	750
IE	368,819	528	630
MT	335,172	1	364
PL	296,106	8	211
FI	64,347	1	18
Total	11,501,700	1,435	34,917

Source: Infosys 2023

Article 30 that supported fishers to diversify their revenues sources, made just a minor contribution to skills for fishers. Italy was the only country that made any significant use of Article 30 for enhancing skills, with 28 fishers supported.

Table 11: number of people benefiting from operations funded under Art. 30 (diversification)

MS	Total EMFF Expenditure / €	Number of operations	Number of Fishers concerned
IT	512,993	28	28
PL	55,692	2	4
FI	1,025	1	2
Total	569,710	31	34

¹³ At the time of this study, it is still too early to look at results of EMFAF investments as few projects have been completed.

Source: Infosys 2023

Finally, as we see in Table 12 below, Article 50 which supported the development of human capital in aquaculture reached around 12 000 people with networking and exchange, training and other educational activities. France stands out in terms of results with 4 253 people reported to have benefited. Austria and Spain both reported around 2 000 people in aquaculture benefitting from projects to enhance their skills or knowledge, followed by around 1 400 in Italy and 1 200 in Poland.

Table 12: number of people benefiting from operations funded under Art. 50 (aquaculture)

MS	Total EMFF Expenditure	Number of operations	Number of persons benefitting
FR	1,780,312	24	4,253
AT	156,946	5	2,011
ES	300,783	25	1,938
IT	748,705	20	1,392
PL	1,034,416	12	1,206
IE	115,220	91	637
SE	557,767	9	298 ¹⁴
EE	988,434	2	200
FI	96,945	4	50
UK	63,034	6	31
BE	30,699	3	17
DE	227,174	5	4
Total	6,100,436	206	12,037

Source: Infosys 2023

These figures point to significant numbers of people benefiting from EMFF-supported training and related activities in fisheries and aquaculture. However, the numbers of people reached only tells part of the story. Section 5.1.2, below, takes a more qualitative look at some of the results witnessed in Spain, France, Italy and Finland.

5.1.2 Results highlighted in case study countries

The four case studies on the use of the EMFF and EMFAF to enhance skills in fisheries and aquaculture revealed varying degrees of uptake and results. The funds appear to have been particularly important in Spain and somewhat important in Italy. The Finnish case study highlights a significant contribution that the EMFF made to training new fishers and increasing expertise in aquaculture – though mainly through the use of CLLD and provisions made for innovation. As for France, it did not make use of the EMFF to fund skills-related projects in fisheries (with the exception of certain CLLD projects), but a few regions were reported to have obtained good results with EMFF funds under the provisions made for supporting human capital in aquaculture.

Spain

¹⁴ The results of one operation in Sweden were removed from the figures as it was significantly out of range and therefore assume to be an error (more than 34 000 persons reported to have benefited from one project).

Based on FAMENET's interview with the MA, the operations funded through the EMFF have had a positive impact across several key areas of development in the fisheries and aquaculture sector, although there is still room for improvement in terms of coverage, continuity, and results measurement.

EUR 5.5 million from Spain's EMFF budget went to enhancing skills in fisheries, funding 818 skills-related operations for 20 550 people. A more limited amount of EMFF funding was invested in skills for aquaculture – around EUR 300 000 for the whole programming period under Article 50. These funds supported 25 operations and benefited around 2 000 people, according to Infosys data. This means that a total of 22 550 people in Spain's fisheries and aquaculture sector¹⁵ benefited from projects to improve skills, significantly higher than any other MS.

In terms of results of these projects, the MA points to the creation of more than 1 300 jobs, over 300 of which have been filled by women. Additionally, nearly 6 000 jobs have been maintained, including approximately 1 000 held by women. Some projects were also reported to have brought results beyond the economic impact, such as 34 projects which had a positive environmental impact and 33 projects which made a significant contribution to gender equality.

Many of the training activities under the EMFF—and some currently under the EMFAF—have focused primarily on equipping the fisheries sector with the necessary qualifications and safety standards required to go to sea. These include basic professional certifications for fishers. However, there have been fewer courses to improve environmental sustainability, quality and efficiency within fisheries and aquaculture, such as training in business management, digitalization, energy transition and decarbonization, circular economy, outreach and communication, among others.

Italy

A relatively small proportion of Italy's EMFF budget went to strengthening skills – EUR 2.4 million out of a total budget of EUR 439 million (0.57%). However, this was more than most other EU MS allocated.

Data reported in Infosys points to a total of 108 skills-related operations that were funded with this budget and 3 270 people¹⁶ that benefited from training or acquiring new knowledge. The creation of 33 new jobs and 167 jobs maintained were also reported as a result of these projects.

Interviews, however, pointed to limited uptake of the opportunities to apply for funds to deliver skills and knowledge enhancement activities under Article 29. This was thought to be due to challenges related to implementation procedures, which, amongst other factors, did not always offer a 100% funding contribution. Additionally, participation of fishers in the training courses offered was low. The relatively low uptake of funding led to a reduction of the budget during the programming period.

¹⁵ In Spain, the fisheries sector represents 24,209 full time equivalents, the aquaculture sector 5,934 FTEs and the processing sector 25,471 FTEs (STECF reports 23-07, 22-17, 23-14).

¹⁶ In Italy, the fisheries sector represents 14,875 full time equivalents, the aquaculture sector 2,042 FTEs and the processing sector 5,251 FTEs (STECF reports 23-07, 22-17, 23-14).

Similarly, for aquaculture, Article 50 also faced implementation difficulties, generating limited interest among operators, despite aquaculture activities requiring significant management skills, including IT competencies.

Finland

Relatively little funding was channeled through the EMFF Articles foreseen for skills development, indeed only 4 projects were funded by these Articles. However, the few operations funded were reported to have directly benefited 91 people¹⁷, 38 people from the two projects funded under Article 29 and 53 people from the two projects funded under Article 50. Moreover, according to the MA, these projects resulted in improved knowledge for the entire sector.

As for the innovation schemes that the EMFF helped fund in Finland, they have produced training materials and utilized co-creation of new knowledge between researchers and fishers as a method to gather information, pilot new technologies and methods, and to transfer know-how to the sector. They have significantly improved cooperation between research and entrepreneurs and the interactive exchange of information.

The ex-post evaluation of the EMFF revealed that new entrepreneurs have entered aquaculture, and expertise has developed particularly in the application of new aquaculture technologies and production methods, such as recirculating aquaculture. However, fish farmers continue to experience difficulties in accessing skilled labour necessary with the ongoing emergence of new technologies.

As for fisheries in Finland, the evaluation points to increasingly complex demands on fishers and the resulting ongoing need to strengthen the business and cooperation skills of fishers. The role of FLAGS in engaging with the numerous small fishing companies (whose expertise is mainly based on mastering the fishing profession and good local knowledge) has proved effective at increasing knowledge and providing advice at the local level.

France

As mentioned, France did *not* invest EMFF money in supporting skills and capacity development in its fisheries sector. However, under article 63 (CLLD), numerous small-scale projects were funded by the FLAGS, ranging from support to start-ups, to dissemination of information on maritime careers, developing training materials, or supporting structures that facilitate professional integration in the fisheries and aquaculture sectors. However, most of the projects were mainly focused on promoting and facilitating the start-up of careers in fisheries and aquaculture, rather than training per se, which is generally covered by national funding.

In terms of supporting knowledge and skills in aquaculture (article 50), 24 projects were supported during the EMFF funding period. Most of the funding invested (around EUR 1.5 million for 19 of the 24 operations) was invested in activities to foster networking and exchange of knowledge and experience among aquaculture producers.

¹⁷ In Finland, the fisheries sector represents 193 full time equivalents, the aquaculture sector 370 FTEs and the processing sector 872 FTEs (STECF reports 23-07, 22-17, 23-14).

The majority of these activities were funded in the Nouvelle Aquitaine region where the EMFF is understood to have played an important role in federating shellfish farms to pool knowledge, develop joint strategies to address shared challenges and ensure continuous improvement of aquaculture activities.

For the EMFAF period, the managing authority has proposed a financing plan for the revalidation of maritime and fisheries certificates, however, complex and costly procedures to apply for EMFAF funding have meant that the body responsible for competences in the maritime field has so far not found it cost-effective to use the EMFAF funding earmarked.

5.1.3 CLLD contribution to skills

It is worth noting that while Community-Led Local Development funded under the EMFF and EMFAF supports a broad range of different development objectives in fisheries and aquaculture areas, capacity building and skills enhancement for local stakeholders is an important element of many FLAG strategies. The EMFF reporting system does not provide a comprehensive overview of CLLD funds invested in skills, or of the results of such projects, nor do most MS collect comprehensive information for their own purposes. However, all four case studies point to the important contribution that FLAGS have made to addressing skills gaps and/or promoting opportunities to work in fisheries, aquaculture and other marine sectors.

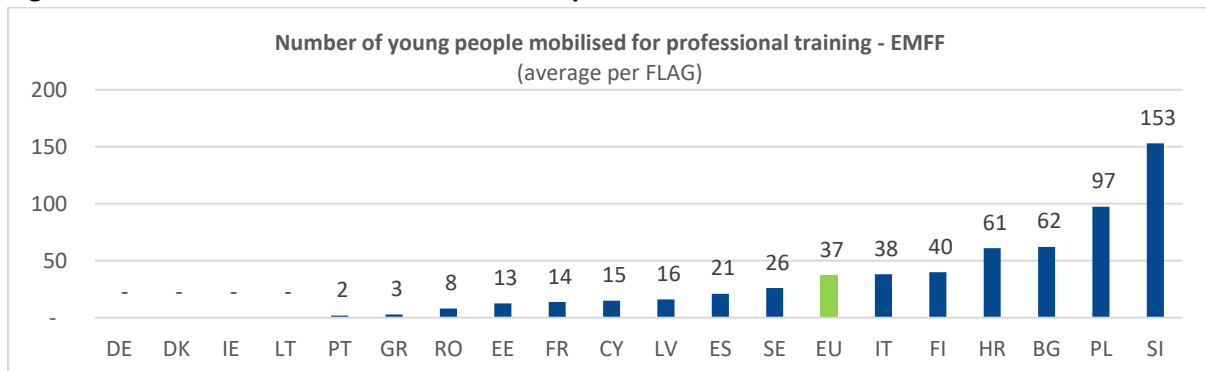
Finland provided result figures on six CLLD projects related to training and skills. Four of the ten Finnish FLAGS had funded a 'Master-Apprentice' programme to attract and train new fishers and two other CLLD projects had also supported the recruitment of new fishers. With a total of just EUR 135 858 from the EMFF (total public funding EUR 330 477), these six projects trained 53 apprentices, out of whom 30 have continued working in the fisheries sector (25 full-time and 5 part-time). In some cases, the CLLD project almost doubled the number of fishers in the area. Some of the apprentices started their own business, some took over the businesses of retiring fishermen, and others were employed in existing fisheries companies.

In Spain, information provided by the Spanish managing authority points to 71 CLLD projects which were focused on training and skills enhancement. This implied EUR 2.2 million in public support, of which around EUR 1.65 million came from the EMFF. Given the regional structure in Spain, no overview of the results of these 71 projects exists. In Italy and France, results remain anecdotal given the lack of comprehensive data, but interview revealed a strong perception that CLLD was a powerful tool.

At the EU level, a [report on CLLD achievements](#), published by FAMENET in July 2025, indicated that, on average, FLAGS had supported professional training for around 37 young people each. This information was based on a survey of all EMFF FLAGS still in operation¹⁸ in 2024 on their results from the 2014-2020 period.

¹⁸ 149 EMFF FLAGS completed the survey (43% of all 348 FLAGS that operated under during the 2014-2020 period).

Figure 1: CLLD also contributed to skills development



Source: FAMENET EMFF FLAG survey, 2024

Figure 1, above, shows the average numbers of young people trained per FLAG, in each MS. While the survey question was not limited to training in fisheries or aquaculture (it also included related subjects such as training on fish preparation for young chefs, general business skills, etc.), the numbers were quite impressive in some countries and show the potential that local action offers to strengthen skills.

As explained in section 3.1, the reporting system under the EMFAF makes “types of operations” transversal to *all* operations and it is therefore easier¹⁹ to identify CLLD projects that are related to “skills and human capital”. Commitments by the end of 2023 already revealed 66 local CLLD projects related to skills. While the budget allocated is fairly small (around EUR1.7 million), as we have seen, given the ability of the FLAGs to tailor training to specific needs and interests, uptake and impact of CLLD projects tend to be strong.

¹⁹ Under the EMFF, managing authorities could only report certain types of operations under certain Articles. For CLLD, only three very broad types of operations could be reported: preparatory support, FLAG running costs, and implementation of local development strategies (i.e. all projects funded by the FLAGs).

6 Conclusions and recommendations

6.1 Conclusions

The enhancement of knowledge and skills is a **fundamental element of fostering a better equipped workforce in fisheries and aquaculture** to take on the challenges of an ever-changing world. A skilled workforce is necessary if Europe is to remain competitive in an increasingly high-tech aquaculture sector, while support for the transformation of fishers into fishing entrepreneurs is needed to make the sector more attractive for new generations.

This report highlights that a **relatively modest share of EMFF resources** was dedicated to types of operations linked to skills enhancement, a total EMFF expenditure of EUR 23 million was declared by the end of 2023. Seven MS did not report any expenditure on skills-related operations, while the 20 MS that did mobilise their EMFF budgets for skills-related operations invested on average just 0.48% of their EMFF budget to skills. EMFF Article 29 on human capital in fisheries was the main driver of this support, accounting for approximately half of the expenditure reported and nearly 35,000 beneficiaries in eight Member States, with Spain alone reaching over 20,000 people, followed by the UK and Italy. In total around **47,000 people across the EU were reported to have benefited** from operations aimed at strengthening their skills or knowledge.

Where applied effectively, for example in Spain and Finland, EU support has strengthened innovation, helped improve sustainability and diversify income sources, and contributed to job creation and gender equality. In Italy, the contribution of the EMFF to skills was relatively modest, instead it relies heavily on the ESF for training, including in the fisheries and aquaculture sector. By contrast, France chose largely to rely on national systems for training, though some aquaculture and CLLD projects still yielded positive results.

As a transversal subject, it is **not always easy to identify training activities within larger, more comprehensive projects** supported under the EMFF. The findings also highlight the important role of the FLAGs, funded under CLLD, which, while not always systematically captured in reporting, have made a valuable contribution to addressing skills gaps and promoting opportunities in fisheries, aquaculture, and the wider blue economy. By embedding training and capacity building within locally driven strategies, **FLAGs have been able to tailor support to local and regional needs, engage directly with fishers and potential entrants**, and create stronger cooperation structures. This bottom-up approach has been especially effective for engaging young people and piloting innovative solutions.

Looking ahead, the lessons learned underline the importance of designing flexible and integrated support systems that combine training with financial incentives, mentoring, and communication strategies to improve the attractiveness of “blue careers.” **A more strategic and holistic approach**—bringing together digitalization, environmental sustainability, managerial skills, business diversification, and intergenerational knowledge transfer—will be essential to equipping fishers and aquaculture professionals for the challenges and opportunities of the future.

However, to ensure fisheries and aquaculture offer an attractive, dynamic and long-lasting career, better working conditions, improved pay and good prospects for the future will also be vital for attracting new talent. Overall, the EU’s continued support for skills development remains crucial to building a competitive, sustainable, and resilient sector – but this is just one element of a bigger picture.

6.2 Recommendations to improve support to skills in fisheries and aquaculture

Based on the analysis provided in this report, including the feedback collected through the interviews, we can point to several recommendations to make EU funding more adapted to supporting Europe's fisheries and aquaculture workforce to acquire the skills and knowledge necessary to remain competitive and sustainable in a fast-changing world:

1. **Ensure funding provisions are as flexible as possible**, allowing support for skills to be easily packaged with other, strategic actions such as innovation; communication around careers in fisheries and aquaculture; and improved (e.g. on board) working conditions.
2. **Minimize administrative burden** by, *inter alia*, facilitating simplified cost options that allow organisations specialised in delivering training and other skills and knowledge activities to easily access EU funding. In other circumstances, financial instruments can help bring solutions to simplify access to funding.
3. **Improve outreach to potential beneficiaries and on the ground knowledge of needs and target audience**. This can help encourage higher rates of uptake of training on offer, as well as focusing training on those most likely to pursue a career in the sector. FLAGS can be a valuable tool to help inform outreach strategies, mobilise participants and support project development.
4. **Training must be aligned with real sector needs** and linked to clear pathways for employment and generational renewal. Strong coordination between industry and the authorities organising education is fundamental.
5. **Training should be modernized and made more flexible**, including the use of online courses as well as on the job training. Regional disparities in training duration and format should be addressed to ensure equal opportunities across territories.
6. **Focus on digitalization and entrepreneurship**. Training content should place greater emphasis on digital skills and entrepreneurship to keep the workforce competitive and adaptable.
7. **Expand provisions for training to auxiliary sectors**. With rising demand for specialized technicians, training should also target service providers and support staff in aquaculture and fisheries. Provisions should also be made for training in processing and marketing, given their critical role in the fisheries value chain. Better cooperation along the supply chain can help improve quality and efficiency of fish and seafood operations and products.
8. **Broaden the target audience of training actions** - Training should also be promoted beyond the "usual suspects" in fishing communities, including among women, and youth from outside fisheries and coastal communities in order to attract new ideas and talent to the sector.



FAMENET