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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 EMFF implementation.

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Authors:
Matthew RUDH, Angelos SANPOULOS
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1 Introduction

1.1 Background

Technological innovations are an essential way for the fisheries industry to mitigate the ecological and environmental impacts of commercial fishing activities on the marine environment. The European Maritime and Fisheries Fund (EMFF) contains specific measures to provide financial support to such innovations in the fisheries sector.

In September 2023, DG MARE approached FAMENET with a request for a report on EU funding committed towards fisheries innovation activities under the EMFF to feed into a forthcoming report on technical measures (in line with Article 31(1) of EU reg. no 2019/1241). This was implemented as a FAMENET Ancillary Task.

1.2 Purpose and target groups

The purpose of this Ancillary Task report is to:

- calculate EMFF funding committed towards fisheries innovation activities under the EMFF, in the framework of the technical measures of the EMFF
- provide data on the different types of activities funded for each of the above-listed technical measures
- disaggregate the data to demonstrate variations in fisheries innovation funding by MS, EMFF article, type of operation, type of beneficiary and fishing fleet segment (based on fishing gear type and vessel size)

This report presents quantitative data based on desk research and data reporting from the database of EMFF-funded operations, known as ‘Infosys’, and provides details on any limitations or caveats in the findings. The report can serve as basis for further investigations into EMFF funding towards fisheries innovations.

The target group for this Ancillary Task is DG MARE officers involved with EMFF fisheries innovation funding, the implementation of the EMFF, and the production of the forthcoming technical measures report.

1.3 Structure of the document

After this introductory chapter, chapter 2 clarifies how data was gathered and reported. Chapter 3 provides an executive summary at the EU level, Chapter 4 gives a breakdown for each measure and Chapter 5 provides conclusions and closing remarks.

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1 EMFF ‘commitments’ towards an operation are defined in CIR 1243/2014 as the “amount of EMFF support as set out in the document setting out the conditions for support”. This is the amount of funds from the EMFF, in EUR, set to be paid towards an operation in the grant agreement.
2 Methodology

In the creation of this report the following steps were carried out:

- desk research in EMFF regulation and other relevant legal acts, MS AIRs, MS Infosys reports
- development and agreement on a working definition of data to be extracted and analysed, required structure for the report and presentation of template
- formulation of queries and data extraction from Infosys database
- drafting of the report

2.1 Innovation in the EMFF, relevant articles

FAMENET was requested by DG MARE to deliver data from the EMFF Infosys database on funds committed towards certain conservation-oriented measures of the EMFF, related to fisheries innovation activities. ‘Measures’ are sets of operations, fundable by the EMFF, which serve to accomplish the goals of the fund. In most cases, each measure of the EMFF corresponds to one specific article of the EMFF regulation; however in some cases one EMFF Article is split into several measures.

The following measures (and sub-measures, in the case of Article 40) of the EMFF are related to conservation-oriented fisheries innovation activities and are thus presented in this report:

- **Art 26**: “Innovation” under Union Priority 1
- **Art 28**: “Partnerships between scientists and fishermen”
- **Art 37**: “Support for the design and implementation of conservation measures and regional cooperation”
- **Art 38**: “Limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species”
- **Art 39**: “Innovation linked to the conservation of marine biological resources”
- **Art 40(1)(b)-(g) and (i)**: “Protection and restoration of marine biodiversity — contribution to a better management or conservation, construction, installation or modernisation of static or movable facilities, preparation of protection and management plans related to Natura 2000 sites and spatial protected areas, management, restoration and monitoring marine protected areas, including Natura 2000 sites, environmental awareness, participation in other actions aimed at maintaining and enhancing biodiversity and ecosystem services”

2.2 Innovation-related EMFF data

Under the EMFF regulation, funds are granted to projects in the fisheries and aquaculture sector that contribute to the implementation of Common Fisheries Policy and the achievement of certain objectives referred to in the Common Provisions Regulation.

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2 Measures are defined in Article 3(2)(13) of the EMFF regulation (Regulation (EU) No. 508/2014) as a ‘set of operations’.


Every project funded by the EMFF is linked to exactly one measure/article of the EMFF regulation. EMFF beneficiaries and MAs report on every funded project, including which measure/article the operation is linked to, as well as additional information on the operation and the beneficiary, including:

- funds committed and expenditures claimed towards the operation
- ‘type of operation’, i.e. details on the specific type of activity being funded
- gender of the beneficiary
- size of the enterprise; and
- Common Fleet Register (CFR) number of any fishing vessel(s) involved in the operation, if applicable.

These data compose the so called Infosys database, which is the database of all EMFF-funded operations under shared management.

Additionally, each EU Member State is required to maintain a register of all fishing vessels used in their waters, and the European Commission maintains a database of all such EU vessels, known as the Community Fishing Fleet Register. This database includes detailed vessel information including the length of the vessel and the gear type used.

Data for this report were gathered from Infosys, as well as the EU Community Fishing Fleet Register database. By matching the unique ‘CFR number’ of EMFF-funded vessels to CFR numbers in the fishing fleet register database, detailed beneficiary and operation-level data was combined with vessel characteristics to provide an in-depth look at what types of operations, types of beneficiaries and vessels received funding under conservation-oriented technical measures of the EMFF related to fisheries innovation activities.

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5 Exact data reported for each EMFF-funded project defined in Commission Implementing Regulations (EU) No 1242/2014 and (EU) No 1243/2014, the so called Infosys regulations
6 EMFF ‘commitments’ towards an operation are defined in CIR 1243/2014 as the “amount of EMFF support as set out in the document setting out the conditions for support”. This is the amount of funds from the EMFF, in EUR, set to be paid towards an operation in the grant agreement.
7 ‘EMFF eligible expenditure’, defined in CIR 1243/2014 as ‘the eligible expenditure declared by the beneficiary to the Managing Authority in payment claim(s)’
8 Types of operations defined in Commission Implementing Regulations (EU) No 1242/2014 and (EU) No 1243/2014
9 Article 15 of Regulation (EC) No 2371/2002
10 Commission Regulation (EC) No 26/2004 on the Community fishing fleet register
Disclaimer:
Under the EMFF, beneficiaries report a ‘type of operation’, based on the predetermined list defined in annex V table 3 of CIR (EU) 1242/2014, for each funded operation. The choice of which ‘type of operation’ a funded project falls under is ultimately up to the discretion of the beneficiary\textsuperscript{11}, and when reporting data on types of operations, it must be noted that these figures are solely based on information provided by the beneficiary.

\textsuperscript{11} in some Member States this selection might be done ex-ante by the MA, for example in the frame of a call for applications only for a specific type of operation. This does not affect the fact that DG MARE has no influence on the type of operation selected, apart from the rules defined in the Infosys regulations (certain types of operation apply only to certain measures).
3 Summary of findings

3.1 Overview of EMFF funding towards fisheries-related innovation measures

The EMFF grants financial support towards several conservation-oriented measures related to fisheries innovation activities. These include the following measures of the EMFF regulation:

- **Art 26**: “Innovation” in fisheries
- **Art 28**: “Partnerships between scientists and fishermen”
- **Art 37**: “Support for the design and implementation of conservation measures and regional cooperation”
- **Art 38**: “Limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species”
- **Art 39**: “Innovation linked to the conservation of marine biological resources”
- **Art 40(1)(b) – (g) and (i)**: “Protection and restoration of marine biodiversity — contribution to a better management or conservation, construction, installation or modernisation of static or movable facilities, preparation of protection and management plans related to Natura 2000 sites and spatial protected areas, management, restoration and monitoring marine protected areas, including Natura 2000 sites, environmental awareness, participation in other actions aimed at maintaining and enhancing biodiversity and ecosystem services”

Figure 1 and Figure 2 provide an overview of EMFF funding committed towards these measures:

**Figure 1: EMFF funds committed towards fisheries-related innovation activities**

![EMFF funding graph](image)

*Source: FAMENET 2023, based on Infosys data from 31 December 2022*

12Defined as operations falling under EMFF Art. 26, Art. 28, Art. 37, Art. 38, Art. 39 and Art. 40. ‘All other measures’ excludes Article 63, ‘selection of FLAGs’, which accounts for allocations to FLAGs, not de facto operations.
In total, EUR 438,038,353 were committed towards these fisheries-related innovation measures, comprising 7.87% of all EMFF commitments. The majority of funds committed towards these measures (53.91%) were committed towards Article 40(1)(b) – (g) and (i) “Protection and restoration of marine biodiversity”, followed by Article 28 “partnerships between scientists and fishermen” (12.4%) and Article 26 “Innovation” (11.65%). Table 1 below provides a summary of the number of funded operations, the number of vessels, EMFF committed and EMFF expenditures claimed towards each of the 6 measures.

Table 1 summarises, for each of the measures, the number of funded operations, number of funded vessels, EMFF funds committed and EMFF expenditures claimed.
Table 1: Summary of fisheries innovation funding

<table>
<thead>
<tr>
<th>Measure (Article)</th>
<th>No. of operations</th>
<th>No. of vessels funded under article</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art. 26 Innovation</td>
<td>336</td>
<td>130</td>
<td>51 038 696</td>
<td>26 901 570</td>
</tr>
<tr>
<td>Art. 28 Partnerships</td>
<td>200</td>
<td>128</td>
<td>54 311 695</td>
<td>30 039 441</td>
</tr>
<tr>
<td>Art. 37: Conservation measures &amp; regional cooperation</td>
<td>373</td>
<td>1</td>
<td>32 563 570</td>
<td>26 520 843</td>
</tr>
<tr>
<td>Art. 38: Marine environment, protection of species</td>
<td>1 774</td>
<td>1 545</td>
<td>23 865 290</td>
<td>20 502 182</td>
</tr>
<tr>
<td>Art. 39: Innovation linked to conservation</td>
<td>195</td>
<td>66</td>
<td>40 103 657</td>
<td>20 541 743</td>
</tr>
<tr>
<td>Art. 40(1)(b) – (g) and (i): Protection and restoration of marine biodiversity</td>
<td>2 714</td>
<td>38</td>
<td>236 155 446</td>
<td>142 980 974</td>
</tr>
<tr>
<td>Total:</td>
<td>5 592</td>
<td>-</td>
<td>438 038 353</td>
<td>267 486 754</td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022

In total there were 5 592 projects (operations) funded under the conservation-oriented technical measures of the EMFF. The largest amount of operations (48.53%) were funded under Article 40(1)(b) – (g) and (i), “Protection and restoration of marine biodiversity”, and 31.72% were funded under Article 38 “limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species”. The remaining operations were funded under the other 4 measures. The highest average funding committed per project was seen for projects under Article 28 (avg. of EUR 271 558 per project), Article 39 (avg. of EUR 205 659 per project) and Article 26 (avg. of EUR 151 900 per operation).

1 765 individual vessels were funded under the 6 conservation-oriented technical measures of the EMFF (see Figure 6). Some vessels were funded by multiple operations falling under more than one of the measures; hence, a sum total of ‘no. of vessels funded’ in Table 1 would yield a number higher than the number of unique vessels funded and was thus excluded from the table. The large majority of vessels (1 545) were funded under Article 38 “Marine environment, protection of species”, followed by Article 26 “innovations” (130) and Article 28 “partnerships” (128), while the remaining 105 vessels were funded under the other 3 measures. Only 1 vessel was funded, via 3 different projects involving the restocking of eels in Denmark, under Article 37 “conservation measures and regional cooperation”; the remaining 370 operations for this measure did not directly involve a funded vessel.

Figure 3 and Figure 4 summarize EMFF commitments towards the 6 conservation technical measures by Member State, for all Member States who have committed funds to the 6 measures

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Refers to ‘EMFF eligible expenditure’, defined in CIR 1243/2014 as ‘the eligible expenditure declared by the beneficiary to the Managing Authority in payment claim(s)’.
3.2 Overview of EMFF expenditures towards fisheries-related innovation measures by Member State

Figure 3: Total EMFF funds committed to fisheries-related innovation measures by Member State (million EUR)

Source: FAMENET 2023, based on Infosys data from 31 December 2022

14 Total EMFF support (EMFF Infosys field 12) towards operations under EMFF Articles 26, 28, 37, 38, 39 and 40(1)(b) – (g) and (i). Countries not shown had no commitments towards operations under these Articles in the Infosys database as of 31 December 2023.
Figure 4: EMFF funds committed towards fisheries-innovation related measures as percent of total EMFF commitments, per Member State

Source: FAMENET 2023, based on Infosys data from 31 December 2022
Figure 3 illustrates total EMFF funds committed towards the 6 conservation measures by Member State. Spain committed the highest amount of EMFF funds towards the measures (EUR 90,957,660); the next highest commitments were seen from Denmark (EUR 67,370,265), Italy (EUR 39,394,719), France (EUR 29,363,727) and Poland (EUR 27,361,750). Commitments of over EUR 20 million to the 6 conservation technical measures were made by Portugal, the UK, Germany, the Netherlands and Greece.

Figure 4 summarizes each Member State’s commitment towards the 6 measures as a percent of their total EMFF commitments. This illustrates to what extent Member States have allocated a higher proportion of their EMFF resources towards fisheries-innovation oriented projects falling under the 6 conservation technical measures, as compared to other areas of EMFF funding. Since the total envelop of EMFF funding varies greatly by Member State, Figure 4 provides further context into amount of priority placed on these conservation technical measures among different Member States. The highest proportion of EMFF commitments toward the 6 measures were made by Denmark (33.8%) and the Netherlands (24.6%). Commitments of over 10% of total EMFF allocations were also made by Cyprus, Sweden, Germany, Belgium, and Estonia.

### 3.3 Overview of EMFF expenditures towards fisheries-related innovation measures by type of beneficiary of funded operations

Under the Infosys regulation\textsuperscript{15}, EMFF beneficiaries report their gender (‘male’, ‘female’, or ‘other’) and the size of their enterprise (‘micro’, ‘small’, ‘medium’, or ‘large’) Funding committed towards the 6 conservation technical measures varied by gender of the funded beneficiary and the size of the funded enterprise, as summarized in Figure 5:

**Figure 5: Characteristics of beneficiary for operations funded under innovation measures (number of operations)**

![Figure 5: Characteristics of beneficiary for operations funded under innovation measures](image)

\textit{Source: FAMENET 2023, based on Infosys data from 31 December 2022}

\textsuperscript{15}Commission Implementing Regulations (EU) No 1242/2014 and (EU) No 1243/2014
Under the ‘gender’ field in Infosys, beneficiaries can report ‘male’, female’ or ‘other’, or leave the field blank. In many cases, it is not clear what is meant by ‘other’; for instance, the beneficiary may be a family, a research center or another group of multiple individuals without one clear-cut gender, or may identify as non-binary. In these cases it is also possible that beneficiaries did not report a value for the ‘gender’ field., and as seen in Figure 5 many beneficiaries did not report this information. In total, 36.16% of operations funded under the 6 conservation technical measures had beneficiaries who reported their gender, and 51.41% had beneficiaries that reported the size of the enterprise.

Among the operations with beneficiaries who reported their gender, 69.83% were male, 2.72% were female and 27.45% reported ‘other’. Among those who reported the size of their enterprise, the majority were ‘micro’ enterprises (46.68%), followed by ‘large’ enterprises (34.5%) and ‘small’ enterprises (14.02%). Only 4.8% of these were ‘medium’ enterprises.

3.4 Overview of EMFF expenditures towards fisheries-related innovation measures by size and gear type of vessel funded

Characteristics of vessels funded under the 6 conservation technical measures vary considerably by size of vessel and type of fishing gear used. Figure 6 summarizes how many individual vessels were funded under all 6 measures, by vessel length category and type of fishing gear used:

Figure 6: Size and fishing gear type of vessels funded under innovation measures (EU-level)\(^\text{16}\)

There were a total of 1 765 individual vessels funded under the 6 conservation technical measures. Funding was committed primarily to smaller vessels; the large majority of funded vessels (66.46%) were under 12 meters in length, and another 20.11% were 12 – 24 meters in length. 13.43% were over 24 meters. and another 2.92% have no data on vessel length in the CFR database.

Gill nets and entangling nets were the most common primary fishing gear type among vessels funded under the 6 measures, comprising 28.84% of vessels funded under the measures. The next most frequently-funded gear types were trawls (24.08%), traps (20.96%), hooks and lines (11.05%) and

surrounding nets (9%). Only 3% of funded vessels used dredges, seines or ‘unknown gears’. Only 54 funded vessels (3.06%) in the EMFF infosys database have no data on gear type.

The following sections provide a detailed summary for each of the 6 measures, including breakdowns by type of operations funded, by Member State, and by vessel characteristics.
4 EMFF funding towards specific innovation-related measures

4.1 Article 26: ‘Innovation’

Article 26 of the EMFF regulation states that in order to stimulate innovation in fisheries, EMFF funds may be used to support the following operations in the fisheries sector, carried out by, or in collaboration with, scientific or technical bodies:

- developing or introducing new or substantially improved products and equipment
- developing or introducing new or improved processes and techniques
- developing or introducing new or improved management and organisation systems

Accordingly, in the EMFF infosys database, each operation funded under Article 26 is categorized under one of the above types of operations. Table 2 below provides an overview of the number of operations, number of vessels, funding committed and expenditures claimed for each type of operation:

Table 2: ‘Types of operations’ funded under EMFF Article 26

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of operations funded</th>
<th>No. of individual vessels funded</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 26: Fisheries innovation</td>
<td>Products and equipment</td>
<td>107</td>
<td>120</td>
<td>15 615 631</td>
<td>9 299 810</td>
</tr>
<tr>
<td></td>
<td>Process and techniques</td>
<td>160</td>
<td>10</td>
<td>25 061 838</td>
<td>12 684 161</td>
</tr>
<tr>
<td></td>
<td>Management and organisation system</td>
<td>69</td>
<td>0</td>
<td>10 361 227</td>
<td>4 917 598</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>336</td>
<td>130</td>
<td>51 038 696</td>
<td>26 901 570</td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022

The majority of funds committed to Article 26 were allocated towards the development and/or introduction of new or improved *processes or techniques* (49.1%). These activities comprised 47.62% of operations funded under the measure. However, only 10 individual vessels were involved in these types of operations, whereas 120 vessels received funding for new or improved *products and equipment*. 69 operations involving *management and organisation systems* were funded, comprising 20.30% of total funds committed to Article 26. These operations did not directly involve any vessels. Specific examples of the types of projects funded under Article 26 can be seen in Table 3 at the end of this section.

Funding towards innovation activities under Article 26 varied by country. The Member States that committed the most funding towards fisheries innovation activities under Article 26 were Italy (EUR 7 145 449), Poland (EUR 6 955 237) and Portugal (EUR 6 188 386). Figure 7 summarizes funding towards Article 26 per Member State:
Among vessels funded by the EMFF for fisheries innovation projects under Article 26, the majority of funds went to small vessels and vessels with traps or dredges reported as the primary gear type. Figure 8 summarizes:

In total, 130 individual vessels were funded under Article 26. Among the vessels in the EMFF Infosys database for which data on vessel length was available, 62.5% were under 12 meters in length.
Another 25% were 12 - 24 meters in length, and only 12.5% were over 24 meters in length. 26 vessels in the EMFF database under Article 26 were unable to be matched with a corresponding vessel from the CFR database and so no data on length is available.

Data on primary fishing gear type is available for 75.38% of vessels funded under Article 26 in the Infosys database. 31.54% of vessels funded under Article 26 use traps as their main gear, 23.85% use dredges, and another 11.51% use trawls as their primary gear. A small amount of vessels with gill nets/entangling nets, surrounding nets, hooks and lines and unknown gears were also funded. There were 32 vessels funded under Article 26 in the EMFF database for which no data was available on main gear type.

A variety of different types of projects were funded under EMFF Article 26; table 3 provides an overview:

### Table 3: Examples of projects funded under EMFF Article 26

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 26: Fisheries innovation</td>
<td>Products and equipment</td>
<td>• University research into scientific or technical innovations on board vessels (PL) (operation id: 00002-6520.13-OR1600002/17/18)</td>
</tr>
</tbody>
</table>
| | Process and techniques | • Innovative evaluation of trawling in Molise (IT) (02/INP/17/MO)  
• Development of fishing gear, processing and propulsion for profitable fishing (NL) (18993000007)  
• University research into value-enhancing preparation of Cancer Pagurus crab species (SE) (PoF 2018-1678) |
| | Management and organisation system | • Development of integrated information system for the management of shellfish harvesting areas by research institute (IT) (04/INP/20/VE)  
• Seafood sector carbon footprint study (IE) (/SFS/ESS-BG028-BR042)  
• University research into integration of new technologies for sustainable and safe local fishing (PT) (MAR-01.03.01-FEAMP-0028) |
4.2 Article 28: ‘Partnerships between scientists and fishermen’

According to Article 28 of the EMFF, in order to foster the transfer of knowledge between scientists and fishermen, EMFF funds can be used to support the following types of operations:

- The creation of networks
- Partnership agreement or associations between one or more independent scientific bodies and fishermen, or one or more organisations of fishermen, in which technical bodies may participate
- Data collection and management activities
- Studies
- Pilot projects
- Dissemination of knowledge and research results
- Seminars
- Best practices

Accordingly, every operation funded under Article 28 in the EMFF infosys database is categorised under one of the above types of operations; Table 4 provides a summary of EMFF funding for each:

Table 4: Types of operations funded under EMFF Article 28

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of funded operations</th>
<th>Number of vessels involved*</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 28: Partnerships between scientists and fishermen</td>
<td>Networks</td>
<td>43</td>
<td>1</td>
<td>9 983 907</td>
<td>7 022 877</td>
</tr>
<tr>
<td></td>
<td>Partnership agreement or association</td>
<td>22</td>
<td>2</td>
<td>4 294 087</td>
<td>2 917 607</td>
</tr>
<tr>
<td></td>
<td>Data collection and management</td>
<td>58</td>
<td>41</td>
<td>24 304 220</td>
<td>10 906 140</td>
</tr>
<tr>
<td></td>
<td>Studies</td>
<td>41</td>
<td>83</td>
<td>8 675 173</td>
<td>4 994 398</td>
</tr>
<tr>
<td></td>
<td>Pilot projects</td>
<td>10</td>
<td>3</td>
<td>2 378 142</td>
<td>1 552 820</td>
</tr>
<tr>
<td></td>
<td>Dissemination</td>
<td>17</td>
<td>0</td>
<td>3 879 047</td>
<td>2 273 437</td>
</tr>
<tr>
<td></td>
<td>Seminars</td>
<td>3</td>
<td>0</td>
<td>14 352</td>
<td>14 327</td>
</tr>
<tr>
<td></td>
<td>Best practices</td>
<td>6</td>
<td>0</td>
<td>782 765</td>
<td>357 834</td>
</tr>
<tr>
<td></td>
<td><strong>Total:</strong></td>
<td><strong>200</strong></td>
<td><strong>-</strong></td>
<td><strong>54 311 695</strong></td>
<td><strong>30 039 441</strong></td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022

In total, 128 individual vessels were funded (see Figure 10). Since some vessels were funded by more than one operation under different ‘types of operations’, the sum of ‘number of vessels involved’ in Table 4 is larger than the total number of funded vessels under Art. 28 and was thus omitted. The largest proportion of funding for Article 28 activities was committed towards data collection and management activities, followed by creation of networks and production of studies. The large majority of vessels funded under Article 28 were involved in these three types of activities. Specific examples of the types of projects funded can be seen in Table 6 at the end of this section.
Funding for operations under Article 28 varied by Member State; Figure 9 provides an overview:

**Figure 9: Commitments towards operations under EMFF Article 28 per Member State**

The Netherlands committed the most EMFF funds (EUR 20,005,562) towards operations involving partnerships between scientists and fishermen, by a large margin. The next highest investments were seen by France, Portugal and Estonia.

Most vessels involved in partnership activities between scientists and fishermen were large vessels; nearly half (49%) of vessels involved in partnership activities between scientists and fishermen were over 24m. The majority (70.31%) reported trawls as their main gear type. Figure 10 summarizes:

**Figure 10: Types of vessels receiving funding under EMFF Article 28**

Source: FAMENET 2023, based on Infosys data from 31 December 2022
Partnerships between scientists and fishermen involved an additional 34 vessels under 12m and another 28 vessels between 12m and 24m. 22 vessels involved in partnerships reported traps as their main gear type.

Table 6 provides examples of different types of projects funded under Article 28:

**Table 6: Examples of projects funded under EMFF Article 28:**

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual campaign to assess scallop stocks in the Bay of Seine (FR) (operation id: PFEA280019DM0250001)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Creation of a work network between Cantabrian fishing industry and AZTI scientists (ES) (152FBD00002)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Innovation and knowledge transfer between scientists and fishermen (PT) (MAR-01.03.02-FEAMP-0026)</td>
<td></td>
</tr>
<tr>
<td><strong>Partnership agreement or association</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-management as a method for ecosystem-based management and sustainable fishing (SE) (PoF 2019-4891)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Agreement for the creation of a management plan for small pelagic fisheries in Campania (IT) (I/PEP/21)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scientific campaigns and tagging to monitor shark populations in the North-East Atlantic (FR) (PFEA280017DM0530002)</td>
<td></td>
</tr>
<tr>
<td><strong>Data collection and management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research collaboration between Dutch Fishermen’s Union, Co-ops, Ship-owners’ Association for Sea Fisheries, Prosea Marine Education Foundation, CPO and Beheersgroep Wieringen U.A., and Wageningen Research Foundation (NL) (17684000007)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaboration to improve data on fish stocks (NL) (20202000006)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilitating classification of new wild bivalve fisheries (IE) (IFCS/2017/003)</td>
<td></td>
</tr>
<tr>
<td><strong>Studies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact assessment of electric pulse fishing (NL) (16269000018)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Study of the potential role of changing plankton and pollution levels in the decline of small pelagic species in the Catalan Sea (ES) (152CAT00013)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assessing impact of newly established cormorant colonies and invasive species on fish stocks (LT) (28MŽ-KL-19-1-01005)</td>
<td></td>
</tr>
<tr>
<td><strong>Pilot projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Partnership between researchers and fishermen on the production and release of lobster fry (SE) (PoF 2017-3842)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increasing the productivity of the Curonian Lagoon and developing recreational and commercial fishing opportunities using artificial reefs (LT) (28MŽ-KL-19-1-01063)</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissemination</td>
<td>• Creation and launch of Coordination Network between fishing sector and researchers in the Gulf of Cádiz (ES) (152FBDO00007)</td>
</tr>
<tr>
<td></td>
<td>• Analysis and evaluation of scallop stocks in the bay of St-Brieuc (FR) (PFEA280017DM0530003)</td>
</tr>
<tr>
<td></td>
<td>• Dissemination of knowledge about red lobster (FR) (PFEA280019DM0940001)</td>
</tr>
<tr>
<td>Seminars</td>
<td>• Services for the celebration of “Marine Trash Day” in Asturias, involving fishers (ES) (152AST00006)</td>
</tr>
<tr>
<td></td>
<td>• Seminar on hygiene practices in primary production (ES) (152AST00009)</td>
</tr>
<tr>
<td>Best practices</td>
<td>• ‘PesConect’: Connecting science and fishing for sustainable management of marine resources (ES) (152FBDO00006)</td>
</tr>
<tr>
<td></td>
<td>• Defining and producing specifications for campaigns to create a database for the evaluation of Normandy fish stocks (FR) (SYNERGIE MER ET LITTORAL)</td>
</tr>
</tbody>
</table>
4.3 Article 37: ‘Support for the design and implementation of conservation measures and regional cooperation’

Article 37 of the EMFF states that EMFF funds can be used to support the efficient design and implementation of the conservation measures under Articles 7, 8 and 11 of the Common Fisheries Policy regulation (Regulation (EU) No 1380/2013), as well as regional cooperation under Article 18 of the CFP, through the following activities:

- The design, development and monitoring of technical and administrative means necessary for the development and implementation of conservation measures and regionalisation
- Stakeholder participation and cooperation between Member States in designing and implementing conservation measures and regionalisation
- Direct restocking (when provided for as a conservation measure in a Union legal act)

As such, all operations funded under Article 37 are categorized under one of these types of operations in the EMFF Infosys database, as summarized in Table 7:

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of funded operations</th>
<th>No. of individual vessels funded</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 37: Support for the design and implementation of conservation measures and regional cooperation</td>
<td>Design</td>
<td>13</td>
<td>0</td>
<td>235 783</td>
<td>226 070</td>
</tr>
<tr>
<td></td>
<td>Development</td>
<td>112</td>
<td>0</td>
<td>5 877 632</td>
<td>4 334 041</td>
</tr>
<tr>
<td></td>
<td>Monitoring</td>
<td>18</td>
<td>0</td>
<td>5 409 838</td>
<td>3 259 238</td>
</tr>
<tr>
<td></td>
<td>Stakeholder participation</td>
<td>7</td>
<td>0</td>
<td>277 135</td>
<td>197 860</td>
</tr>
<tr>
<td></td>
<td>Direct restocking</td>
<td>223</td>
<td>1</td>
<td>20 766 227</td>
<td>1,506 679</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>373</td>
<td>1</td>
<td>32 566 614</td>
<td>26 523 888</td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022

The majority of EMFF funds (63.77%) committed towards the design and implementation of conservation measures and regional cooperation were used for direct restocking activities. One vessel was involved in direct restocking in Germany, and the remaining direct restocking activities did not involve vessels. Among the other types of operations under Article 37, a substantial proportion of funding was committed towards development (18.05%) and monitoring (16.61%) of technical and administrative means necessary for the development and implementation of conservation measures and regionalisation. Specific examples of the types of projects funded under Article 37 can be seen in Table 8 at the end of this section.

Figure 11 shows the total amount of funding committed towards projects under Article 37 by Member State:
Germany committed the largest amount of EMFF funds (EUR 14,303,431) towards the design and implementation of conservation measures and regional cooperation by a large margin, followed by Spain (EUR 4,271,087) the UK (EUR 3,384,903) and the Netherlands (EUR 3,048,750); these 4 Member States accounted for 76.79% of EMFF funds committed towards Article 37. Substantial investments into the design and implementation of conservation measures and regional cooperation were also made by Denmark, Sweden, Poland and Lithuania.

Only 1 vessel was involved in any operations funded under Article 37, via 3 separate restocking operations in Germany.

Table 8 provides specific examples of projects funded under Article 37:

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
</table>
| Article 37: Support for the design and implementation of conservation measures and development | Design | • Aid for regional cooperation (ES) (operation id: 111CAT00001)  
• Design of ‘Planes de explotacion’ by various Spanish Cofradias (ES) |
<p>| | Development | • Development of ‘Planes de explotacion’ by various Spanish Cofradias (ES) |</p>
<table>
<thead>
<tr>
<th>Regional cooperation</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Eel population monitoring in the inland and coastal areas of the state of Mecklenburg-Western Pomerania (DE) (MV-I.14-LM-020)</td>
</tr>
<tr>
<td></td>
<td>• Bridging knowledge gaps for sharks and rays in the North Sea (NL) (16269000039)</td>
</tr>
<tr>
<td>Stakeholder participation</td>
<td>Regional cooperation projects involving producer organisations (SE) (PoF 2018-4593)</td>
</tr>
<tr>
<td>Direct restocking</td>
<td>• Release of eels as a measure to improve the population (DK) (33113-U-19-124)</td>
</tr>
<tr>
<td></td>
<td>• Eel stocking to increase in the spawning population of European eels in the Elbe catchment area (DE) (BE-I.14–102)</td>
</tr>
<tr>
<td></td>
<td>• Purchase of glass eels to supplement eel stocks (LV) (18-00-F01114-000001)</td>
</tr>
</tbody>
</table>
4.4 Article 38: ‘Limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species’

Article 38 of the EMFF regulation specifies that EMFF funds can be used to reduce the impact of fishing on the marine environment, to foster the gradual elimination of discards and to facilitate the transition to a sustainable exploitation of living marine biological resources in accordance with Article 2(2) of the Common Fisheries Policy regulation (Regulation (EU) No 1380/2013). This can be accomplished by funding the following investments under Article 38:

- Investments in equipment improving size selectivity or species selectivity of fishing gear
- Investments on board or in equipment that eliminates discards by avoiding and reducing unwanted catches of commercial stocks, or that deals with unwanted catches to be landed in accordance with Article 15 of the Common Fisheries Policy regulation
- Investments in equipment that limits and/or eliminates physical and biological impacts of fishing on the ecosystem or the sea bed
- Investments in equipment that protects gear and catches from protected mammals and birds
- Anchored fish aggregating devices in the outermost regions

Accordingly, operations funded under Article 38 are each categorized under one of these types of operations in the EMFF Infosys database, as summarized in Table 9:

Table 9: Types of operations funded under EMFF Article 38

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of funded operations</th>
<th>No. of vessels involved*</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 38:</td>
<td>Selectivity of gear</td>
<td>1 014</td>
<td>951</td>
<td>12 992 559</td>
<td>10 421 851</td>
</tr>
<tr>
<td></td>
<td>Reduced discards, dealing with unwanted catch</td>
<td>296</td>
<td>265</td>
<td>4 380 196</td>
<td>4 378 285</td>
</tr>
<tr>
<td></td>
<td>Eliminating impacts on ecosystem and seabed</td>
<td>112</td>
<td>106</td>
<td>2 077 058</td>
<td>1 695 381</td>
</tr>
<tr>
<td></td>
<td>Protecting gears and catches from mammals and birds</td>
<td>351</td>
<td>288</td>
<td>4 397 693</td>
<td>3 995 309</td>
</tr>
<tr>
<td></td>
<td>Fish aggregating devices in outermost regions(^\text{17})</td>
<td>1</td>
<td>1</td>
<td>17 784</td>
<td>11 356</td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>1 774</td>
<td>-</td>
<td>23 865 290</td>
<td>20 502 182</td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022

Under Article 38, 1 774 operations were funded, and a total of 1 545 individual vessels were involved in funded operations (see Figure 13). Since some vessels received funding for more than one operation

\(^{17}\) The NUTS code for this operation in the infosys database does not correspond to an outermost region; this likely represents an error in data reporting for this operation and it can be concluded that no funding went to the type of operation ‘fish aggregating devices in outermost regions’.
under different types of operations, the sum of the ‘number of vessels involved’ column in Table 9 would be larger than the total number of unique vessels funded and was thus omitted. The majority of funds committed to operations under Article 38 went towards investments in the selectivity of gears (54.45%); 951 vessels were involved in such activities via 1014 funded operations. Substantial investments were also made towards reducing discards and/or dealing with unwanted catch, eliminating impacts on ecosystems and sea beds and protecting gears and catches from mammals and birds. Specific examples of the types of projects funded under Article 38 can be seen in Table 10 at the end of this section.

Funding towards Article 38 varied substantially by Member State, as illustrated in Figure 12:

**Figure 12: Commitments towards operations under EMFF Article 38 per Member State (million EUR)**

Source: FAMENET 2023, based on Infosys data from 31 December 2022

The largest amount of EMFF funding for the limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species was seen by Denmark (EUR 5,324,441), Estonia (EUR 4,530,125) and the UK (EUR 4,017,522). Investments of over EUR 1 million were also made by Poland, Italy and Spain.

Figure 13 illustrates the different types of vessels that were funded under Article 38:
Figure 13: Types of vessels receiving funding under EMFF Article 38

Source: FAMENET 2023, based on Infosys data from 31 December 2022

The majority of funded vessels (67.89%) were under 12 meters in length. The most common gear types of funded vessels were gill nets and entangling nets, traps and trawls.

Table 10 provides concrete examples of projects funded under Article 38:

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
</table>
| Article 38: Limitation of the impact of fishing on the marine environment and adaptation of fishing to the protection of species | Selectivity of gear | • Updating and improving selectivity of netting equipment onboard vessels (IT) (operation id: 59/LIP/17/SA)  
• Improvement in gears to limit impact on seabed (IT) (79/LIP/17/SA)  
• Purchase of seal-proof fish bags and edge traps with partitions (EE) (811520790185)  
• Acquisition of open water traps to reduce the amount of small fish in the catch (EE) (811521790203)  
• Manufacture of topless trawls, selection panels and floating paddles (DK) (33101-15-S-0036) |
| | Reduced discards, dealing with unwanted catch | • Reels and winches for more selective fishing (DK) (33101-17-S-0349)  
• Conversion of vessel’s cargo for storage of unwanted catch (DK) (33101-17-S-0353)  
• Purchase of equipment for bottom long lines and MBP model radio buoy system (IT) (23/LIP/17/SA) |
| | Eliminating impacts on ecosystem and seabed | • Installation of trawl and shovel sensors (DK) (33101-15-S-0118)  
• On-board installations to monitor fishing nets (ES) (112MUR00061)  
• Conversion of fishing techniques to basket fishing (BE) (20/up1/07/2.85) |
| Protecting gears and catches from mammals and birds | • Conversion from trawl to seine fishing (FR) (PFEA380018CR0720002)  
• Installation of predator-proof whitefish traps (SE) (PoF 2022-459)  
• Purchase of seal-safe lobster traps (DK) (33101-15-S-0052)  
• Replacement of open water traps with more seal-proof and higher selectivity traps (EE) (811520790183) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish aggregating devices in outermost regions</td>
<td>-</td>
</tr>
</tbody>
</table>

FAMENET: AT1.2 2023-16, fisheries innovation funding under the European Maritime and Fisheries Fund (EMFF), December 2023

23/39
4.5 Article 39: ‘Innovation linked to the conservation of marine biological resources’

Under Article 39 of the EMFF, funds can be utilized to contribute to the gradual elimination of discards and by-catches and to facilitate the transition to exploitation of living marine biological resources outlined in Article 2(2) of the Common Fisheries Policy Regulation, and to reduce the impact of fishing on the marine environment and the impact of protected predators. This can be done through investments in:

- developing or introducing new technical or organisational knowledge that reduces the impact of fishing activities on the environment, including improved fishing techniques and gear selectivity
- developing or introducing new technical or organisational knowledge that achieves a more sustainable use of marine biological resources and coexistence with protected predators

Accordingly, each operation funded under Article 38 is categorized under one specific type of operation, as summarized in Table 11:

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of funded operations</th>
<th>No. of vessels involved*</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 39: Innovation linked to the conservation of marine biological resources</td>
<td>Developing new technical or organisational knowledge reducing impacts</td>
<td>74</td>
<td>31</td>
<td>19 443 037</td>
<td>10 241 073</td>
</tr>
<tr>
<td></td>
<td>Introducing new technical or organisational knowledge reducing impacts</td>
<td>41</td>
<td>5</td>
<td>6 785 349</td>
<td>3 211 090</td>
</tr>
<tr>
<td></td>
<td>Developing new technical or organisational knowledge achieving sustainable use</td>
<td>49</td>
<td>10</td>
<td>6 843 331</td>
<td>4 529 911</td>
</tr>
<tr>
<td></td>
<td>Introducing new technical or organisational knowledge achieving sustainable use</td>
<td>30</td>
<td>25</td>
<td>6 658 706</td>
<td>2 329 087</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>373 234</td>
<td>230 582</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td>195</td>
<td>-</td>
<td>40 103 657</td>
<td>20 541 743</td>
<td></td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022
In total, 195 operations were funded under Article 39, and a total of 66 individual vessels were involved with funded operations (see Figure 15). Since some vessels were funded through more than one operation under different ‘types of operations’, the sum of the ‘No. of vessels involved’ column in Table 11 would be more than the total number of funded vessels and was thus omitted.

The largest amount of funding (48.48%) was committed towards projects developing new technical or organisational knowledge reducing impacts of fishing activities on the environment. The rest of the funds committed to Article 39 were distributed nearly equally among the other 3 types of operations. There was one operation funded under Article 39 for which a type of operation was not reported in the EMFF Infosys database, listed here as ‘other’. Specific examples of the types of projects funded under Article 39 can be found in Table 12 at the end of this section.

Funding for operations under Article 39 varied by Member State, as summarized in Figure 14:

**Figure 14: Commitments towards operations under EMFF Article 39 per Member State (million EUR)**

![Graph showing commitments per Member State](image)

*Source: FAMENET 2023, based on Infosys data from 31 December 2022*

The largest amount of EMFF funds for innovations linked to the conservation of marine biological resources were committed by France (EUR 9,222,929), by a substantial margin. Denmark, Spain, Italy, Germany and Sweden also made considerable investments into these activities.

Figure 15 illustrates which types of vessels were involved in operations funded under Article 39:
Figure 15: Types of vessels funded under EMFF Article 39

In total, 66 individual vessels were involved in operations that received EMFF funding under Article 39. Of these, 50% were under 12 meters in length. Nearly half (45.45%) reported trawls as their main gear type, and another 36.36% reported gill nets and entangling nets as their main gear type.

Table 12 provides some specific examples of projects funded under Article 39:

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
</table>
| Article 39: Innovation linked to the conservation of marine biological resources | Developing new technical or organisational knowledge reducing impacts | • Development of innovative devices to promote the survival of rejected catches and facilitate their reintegration into their habitat (FR) (operation id: PFEA390018FA1000001)  
• Development of seal-proof fishing equipment (DK) (operation id: 33113-I-17-093)  
• A scientific study to improve trawl gear selectivity (MT) (EMFF 1.16.1)  
• Large-scale trial of using cod cages on the south and west coast of Sweden (SE) (PoF 2017-2177)  
• Development of an ecological selective cod trawl for the Baltic Sea (SE) (PoF 2016-5566) |
| Introducing new technical or organisational knowledge reducing impacts | • Experiments with innovative fishing techniques to reduce accidental captures of large marine vertebrates by gillnetters (FR) (PFEA390019FA1000006)  
• Bycatch reduction in the North Sea brown Shrimp beam trawl fishery (DK) (33113-I-19-155) |
| Developing new technical or organisational knowledge reducing impacts | • Development of lighting devices to improve selectivity of trawlers (FR) (PFEA390018FA1000002)  
• Development of seal-safe seine fishing for an active coastal fishery (SE) (PoF 2016-2739) |
| Knowledge achieving sustainable use | • Development of innovative materials to reduce fuel emission and increase cod exits (DK) (33113-I-20-186)  
• Using Hydrodynamics to develop more selective fishing gears (DK) (33113-I-19-130) |
| Introducing new technical or organisational knowledge achieving sustainable use | • Improving knowledge on the estimation of shark capture and post-discard mortality (FR) (PFEA390019FA1000002)  
• Introduction of new vision technologies applied to the development of standardized, more compact and flexible total catch electronic monitoring systems (ES) (113FBD00034)  
• Artificial vision systems for species identification and obtaining biometric data in the fish market based on Deep Learning (ES) (113FBD00043)  
• Pilot study of electronic monitoring for bajura fleet (ES) (113PVA00979) |
4.6 Article 40(1)(b) – (g) and (i): Fisheries innovations related to the protection and restoration of marine biodiversity and ecosystems

Article 40 of the EMFF allows for funding towards the protection and restoration of marine biodiversity. Specifically, fisheries innovations under Article 40 fall under the measures outlined in sub-articles 40(1)(b) – (g) and (i). In the Infosys database, operations falling under these sub-articles are categorized according to the following types of operations, as outlined in the regulation:

- construction, installation or modernisation of facilities to protect and enhance marine fauna and flora, including their scientific preparation and evaluation
- contributions to a better management or conservation of marine biological resources
- preparation, including studies, drawing-up, monitoring and updating of protection and management plans for fishery-related activities relating to NATURA 2000 sites and spatial protection measures
- management, restoration and monitoring of NATURA 2000 sites
- management, restoration and monitoring of marine protected areas with a view to the implementation of the spatial protection measures
- increasing environmental awareness, involving fishermen, with regard to the protection and restoration of marine biodiversity
- participation in other actions aimed at maintaining and enhancing biodiversity and ecosystem services, such as the restoration of specific marine and coastal habitats in support of sustainable fish stocks, including their scientific preparation and evaluation.

Table 13 provides a summary of funding towards the different types of operations under Article 40(1)(b) – (g) and (i):

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>No. of funded operations</th>
<th>No. of vessels involved*</th>
<th>EMFF committed (EUR)</th>
<th>EMFF spent (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article 40(1)(b) – (g) and (i): Protection and restoration of marine biodiversity and ecosystems</td>
<td>Investment in facilities</td>
<td>113</td>
<td>1</td>
<td>10 976 209</td>
<td>6 909 456</td>
</tr>
<tr>
<td></td>
<td>Management of resources</td>
<td>116</td>
<td>250</td>
<td>74 831 471</td>
<td>46 951 279</td>
</tr>
<tr>
<td></td>
<td>Management plans for Natura 2000 and SPA</td>
<td>63</td>
<td>1</td>
<td>6 768 666</td>
<td>4 090 077</td>
</tr>
<tr>
<td></td>
<td>Management of Natura 2000</td>
<td>96</td>
<td>185</td>
<td>15 245 278</td>
<td>10 305 074</td>
</tr>
<tr>
<td></td>
<td>Management of MPAs</td>
<td>55</td>
<td>1</td>
<td>31 579 089</td>
<td>26 465 376</td>
</tr>
<tr>
<td></td>
<td>Increasing awareness</td>
<td>62</td>
<td>0</td>
<td>4 498 243</td>
<td>3 134 903</td>
</tr>
<tr>
<td></td>
<td>Other actions enhancing biodiversity</td>
<td>1207</td>
<td>2</td>
<td>90 405 134</td>
<td>43 966 651</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
<td>0</td>
<td>1 851 355</td>
<td>1 158 158</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td>2 714</td>
<td>-</td>
<td>236 155 446</td>
<td>142 980 974</td>
</tr>
</tbody>
</table>

Source: FAMENET 2023, based on Infosys data from 31 December 2022
In total, there were 2,714 operations funded under Article 40(1)(b) – (g) and (i), with 388 individual vessels involved in funded operations (see Figure 17). Since some vessels were funded under more than one operation under different types of operations, the sum of the ‘no. of vessels involved’ column in Table 13 would be different from the total number of vessels funded and was thus omitted from the table. The majority of operations funded under Article 40(1)(b) – (g) and (i) were ‘management of resources’ and ‘management of Natura 2000’. In terms of total funding committed, the largest monetary investments were towards ‘other actions enhancing biodiversity’ (EUR 90,405,134), ‘management of resources’ (EUR 74,831,471) and ‘management of MPA’s’ (EUR 31,579,089). Specific examples of the types of projects funded under Article 40(1)(b) – (g) and (i) can be found in Table 14 at the end of this section.

Funding for operations under Article 40(1)(b) – (g) and (i) varied by country; Figure 16 shows an overview of funds committed per Member State:

**Figure 16: Expenditures towards operations under EMFF Article 40(1)(b) – (g) and (i) per Member State (million EUR)**

Spain committed the most funds (EUR 72,371,102) towards the protection and restoration of marine biodiversity and ecosystems and sustainable fishing compensation regimes; Spain’s commitments accounted for 30.65% of all commitments towards operations under Article 40(1)(b) – (g) and (i). Notable investments were also made by Denmark (EUR 45,111,160), Italy (EUR 24,232,684), Greece (EUR 21,571,744) and Poland (EUR 15,319,217).
Figure 17: Types of vessels receiving funding under EMFF Article 40(1)(b) – (g) and (i)

The large majority of vessels involved in operations funded under Article 40(1)(b) – (g) and (i) (94.59%) were vessels under 12 meters in length, and most (75.77%) reported gill nets and entangling nets as their main gear.

Table 14 provides some specific examples of projects funded under Article 40(1)(b) – (g) and (i):

<table>
<thead>
<tr>
<th>Article/measure</th>
<th>Type of operation</th>
<th>Examples of projects funded (MS)</th>
</tr>
</thead>
</table>
| Article 40(1)(b) – (g) and (i): Protection and restoration of marine biodiversity and ecosystems | Investment in facilities | • Underwater bio-reefs for the regeneration of invertebrates and reduction of pollution on the Mediterranean Coast (ES) (121CAT00008)  
• Creation of an artificial reef (PT) (operation id: MAR-01.04.02-FEAMP-0021)  
• Passage for wild fauna (DK) (170329798)  
• Technical and feasibility study for restoration of waterways (DK) (32317-F-19-0100) |
| | Management of resources | • Recovery of the coastal habitat of Punta do Cabo and improvement of its biodiversity (ES) (121GAL00307)  
• Lobster V-notching scheme to manage stocks (IE) (16.VN.08)  
• Development of population and ecosystem indicators for sustainable management of demersal fish stocks (FR) (PFEA400018DM0980001) |
| | Management plans for Natura 2000 and SPA | • Carrying out studies for the preparation of management plans for fishing activities in the Sinis Peninsula - Mal di Ventre Island MPA (IT) (19/RBC/18)  
• Analysis of yields of small-scale fishing in the Pelagian islands through in situ observations and the census of landing data (IT) (2/RBC/18) |
### Management of Natura 2000
- Characterization of rigging and practices of bottom trawls on the Atlantic coast with regard to interactions with marine habitats in the Natura 2000 zone (FR) (PFEA400020DM0250001)
- Evaluation of Biodiversity and habitat mapping in the Biologically Sensitive Area (BSA) (IE) (MB/2020/04)
- Development of new methods for impact assessment of fishing regulations and area closures in relation to environmental goals (eDNA detection of benthic fauna effects of fishing) (DK) (33113-B-19-146)

### Management of MPA
- Studying compatibility of bottlenose dolphins with fishing activities in marine protected areas (ES) (121FBD00017)
- River-specific salmon management in the Natura 2000 area of the Râne river (SE) (PoF 2015-6239)
- Study on the presence of migrating eels along the Po river and the Savio river (IT) (1/AIRBC/22/ER)

### Increasing awareness
- Initiative for the promotion of marine culture and Knowledge of the Ocean. Fishing and aquaculture as emblematic sectors of the blue economy in Spain (ICONO) (ES) (121FBD00053)
- Funding for ‘Fishing For Litter’ organisation (DE) (SH-345-I.18)

### Other actions enhancing biodiversity
- Study of restoration measures of water area plan (DK) (16-0242721)
- Feasibility study to restore free movement of fish in the Hautes Fagnes-Eifel Natural Park (BE) (44-1604-006)
5 Conclusions

The types of operations that received the most funding under the conservation oriented technical measures of the EMFF were ‘other actions enhancing biodiversity’ under article 40(1)(b) – (g) and (i) (EUR 90 405 134), ‘management of resources’ (EUR 74 831 471), direct restocking (EUR 55 705 331), developing or introducing new or improved processes and techniques in fisheries (EUR 25 061 838) and data collection and management (EUR 24 304 220).

Most vessels were funded for operations seeking to limit the impact of fishing on the marine environment and adaptation of fishing to the protection of species, and for the protection and restoration of marine biodiversity and ecosystems, and compensation regimes in the framework of sustainable fishing activities. Of these, the majority received funding for the selectivity of gears, compensations for damage to catches caused by protected mammals and birds, and protecting gears and catches from mammals and birds.

The findings of this report can support stakeholders of the EMFF, the EMFAF and future European fisheries and aquaculture funds in identifying where support was most intensively provided for the conservation-oriented technical measures of the EMFF related to fisheries innovation activities, and where there are opportunities for improved support in similar areas in the future.