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Analysis of Environmental Projects Financed by *Fisheries Local Action Groups* (FLAGs) in Spain During the Period of the *European Maritime and Fisheries Fund* (EMFF)

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ABSTRACT

Hundreds of Fisheries Local Action Groups (FLAGs) have emerged along the European Union coast trying to dynamize fisheries-dependent areas through an approach based on *community-led local development* (CLLD) *strategies*. In this research, we characterized and analyzed environmental projects funded by the FLAGs through the *European Maritime and Fisheries Fund* in Spain from 2014 to 2020. The *Spanish Network of Fisheries Groups* database allowed us to locate projects defined as environmental, which were then classified into six areas and different project typologies. Most projects were categorized by FLAGs as environmental but were really linked to tourism development. Moreover, true environmental projects were substantially lower in total cost than statistics showed. These conclusions should lead to a reflection on the role that FLAGs and European fisheries funds should play in environmental care of European coasts.

1 | Introduction

The environmental condition of seas and oceans is affected by climate change, loss of marine biodiversity, overfishing, pollution, and waste, as environmental issues that concern politicians, scientists, and stakeholders directly or indirectly related to the sea (Gelcich et al. 2014; Kvamsdal et al. 2023). Seas and coasts provide humanity with a wide range of ecosystem services, ranging from food security and climate regulation to nutrient cycling and protection against extreme weather events (Cooley et al. 2023). These services support the livelihoods of millions of people around the world who depend on them as a primary source of protein and job security, both directly and indirectly (FAO 2022; Tidd et al. 2022). However, until recently, society viewed seas and coasts as a physical medium of inexhaustible resources and virtually unlimited tolerance for pollution and waste (Hill and Simons 2024). Recently, the economic importance of preserving the marine environment and its link to the productive capacity of economic activities that depend on it has begun to be understood (Hughes et al. 2005; Bennett et al. 2021).

The *European Green Deal (EGD)* is an integral part of the European Commission's strategy to implement the *United Nations 2030 Agenda* and its 17 *Sustainable Development Goals* (United Nations 2015) that envisions actions and initiatives to develop a strong, sustainable, resilient, and climate-neutral economic development model, based on the sustainable use of the oceans, coastal zones, and their resources, to serve economic recovery by providing quality jobs and prosperity for coastal communities (CEDEFOP 2021). By aligning with the *UN Sustainable*

Development Goals, in particular SDG 14 (Undersea Life) and SDG 17 (Partnerships to Achieve the Goals), EGD seeks to ensure sustainable use of marine resources and promote global cooperation for ocean conservation and restoration (Oanta 2022).

To ensure the protection of marine ecosystems and protect their biodiversity, the *EU Biodiversity Strategy* proposed, as a target for 2030, to address drivers of degradation (EU 2021). The *Farm to Fork Strategy* aims to support ecological transition to boost sustainable food production and promote healthy and sustainable food consumption (EU 2020).

Environmental issues permeate the priorities, strategies, and policies of the *European Union (EU)*, including maritime environmental problems. The EU has set the EGD as a priority to become the first climate-neutral continent (EU 2019). The *EU's Maritime Security Strategy* and *Blue Growth Strategy*, which are related to the *Integrated Marine Policy* (IMP), are a holistic approach to all sea-related EU policies related to the sea (Koivurova 2009; Schultz-Zehden, Weig, and Lukic 2019).

The IMP is based on the idea that the Union can draw higher returns from its maritime space with less impact on the environment by coordinating its wide range of interlinked activities related to oceans, seas, and coasts, including the *Common Fisheries Policy* (CFP). Today, European fisheries policy cannot be understood without framing it within this holistic approach and without this environmental focus.

Successive reforms of the CFP have increased the importance of environmental issues. Currently, the objective of the CFP is bringing fish stocks back to sustainable levels, using a fish stock management based on maximum sustainable yield is planned, which has been taking measures such as a landing obligation, application of multiannual plans (MAPs), or establishment of fleet capacity ceilings per EU country in combination with the obligation for EU countries to ensure a stable and enduring balance between fishing capacity and fishing opportunities over time (EU 2013). The CFP faces significant economic, social, and environmental challenges that require more adaptive and equitable management of EU resources (Hadjimichael, Edwards-Jones, and Kaiser 2010; Raicevich et al. 2017; Said et al. 2020; Gómez and Maynou 2021).

The CFP and the IMP have their own financial instrument within the EU structural funds. Fisheries funds have been adapted to the objectives and priorities of the fisheries policy. The *European Fisheries Fund* (EFF, 2007–2014), *European Maritime and Fisheries Fund* (EMFF, 2014–2020), and *European Maritime, Fisheries and Aquaculture Fund* (EMFAF, 2021–2027) are significant in how their sectoral scope has widened. In all of the funds, environmental objectives are combined with other sectoral and territorial objectives. In these three funds, one priority has been "development of fishing areas" through an approach based on *Community-Led Local Development* (CLLD) *Strategies*, which has led to the creation of *Fisheries Local Action Groups* (FLAGs) along the European coast. FLAGs have funded thousands of projects, including environmental projects.

We analyzed projects funded by the EMFF to assess their impact on the sustainable development of fishing areas and to determine possible actions to improve the implementation of future funds. European funds follow an $n+2$ system, which means each fund ends 2 years later. The EMFF has a programmed period from 2014 to 2020, but some projects continued until 2022. Specifically, we reviewed projects linked to the environment in Spain, financed through one of the funds: EMFF (2014–2020), and whose approval and implementation depended on FLAGs through the UP4. By analyzing environmental projects funded by the EMFF in Spain, we sought to reveal that many projects classified as environmental were actually tourism-related, and that genuine environmental projects were of significantly lower costs than reported. Our research highlights a reevaluation of the role and effectiveness of FLAGs and EFFs in environmental stewardship, by emphasizing a need for more accurate project categorization and better alignment with true environmental objectives.

2 | Environmental Actions in EFFs

The EU's environmental and climate change policy has a cross-cutting approach that encompasses the entire economic growth strategy and is focused on an ecological transition, with the objective of achieving climate neutrality in the EU by 2050 (Wolf et al. 2021; Hermoso et al. 2022). This priority is reflected in the EGD and in its budgetary policy. The current *Multiannual Financial Framework 2021–2027* allocates at least 30% of its resources to climate action, which is also reflected in other European funds, and EFFs are no exception.

European fisheries funds are one of the five *European Structural and Investment Funds* (ESIF) and are the financial instrument of the CFP and the IMP of the EU. During previous decades a succession of fisheries funds have had objectives to contribute to the sustainable development of fishing, aquaculture, and related activities, although a large part of their objectives were focused on environmental protection, particularly on recovery of fish species, marine biodiversity, and marine ecosystem health.

The EMFF was structured around six Union Priorities (UP), the first two, of which sought to achieve a sectoral approach based on principles of sustainability. Union Priority 1 (UP1) specifically contemplated *the financing of investments aimed at limiting and adapting to global warming, reducing pressure on natural resources, and protecting biodiversity.*

Reduction of the impact of fishing on the marine environment, protection of biodiversity and aquatic ecosystems, or increasing energy efficiency were explicit objectives. Several initiatives in the EMFF regulation have been financed, such as temporary or definitive stoppages of fishing activity (art. 33 and art.34), energy efficiency and climate change mitigation measures (art. 41.1), replacement or modernization of engines (art. 41.2), and protection and recovery of biodiversity and marine ecosystems (art. 40), etc. (EU 2014).

The Union Priority 2 (UP2) of the EMFF was *to promote environmentally sustainable, resource-efficient, innovative, competitive, and knowledge-based aquaculture*. Specific objectives included environmental objectives, such as "the protection and recovery of aquatic biodiversity and the enhancement of aquaculture-related

ecosystems and the promotion of resource-efficient aquaculture" or "the promotion of aquaculture with a high level of environmental protection, and the promotion of animal health and welfare." Aids were provided for resource efficiency, reduction of water and chemical use, environmental audits, promotion of new sustainable aquaculture enterprises, or for animal health and welfare measures.

Other priorities were related to the CFP *(UP3), Increasing employment and territorial cohesion (UP4), Commercialization and processing of seafood products* (UP5), and the *Implementation of the IMP* (UP5). We focused on UP4: *Increasing employment and territorial cohesion*.

Through the application of an "area-based" approach (Budzich-Tabor 2014), priority four identifies a specific objective: *the promotion of economic growth, social inclusion, job creation, and support for employability and labor mobility in coastal and inland communities dependent on fisheries and aquaculture, including the diversification of activities carried out in the framework of fisheries and with respect to other sectors of the maritime economy*. This objective was included since the previous EFF (2007–2014).

Inclusion of this axis meant incorporating a territorial vision in a sectoral fund (Phillipson and Symes 2015), because multiple objectives were proposed for economic and social prosperity, quality of the coastal environment, creation of employment, and economic diversification of fishing areas. Along the European coast, about 350 FLAGs were created, which have been designing and implementing their own CLLD *Strategies*, in the image of LEADER projects introduced in the 1990s in rural areas, but in coastal and inland fishing areas under the financial umbrella of the EFF, EMFF, or EMFAF (Phillipson et al. 2024).

Projects financed by FLAGs were diverse (Bugeja-Said et al. 2022; Piñeiro-Antelo, Felicidades-García, and Lois-González 2019), but depending on the five objectives set out in Article 63 of the EMFF, were usually grouped into five categories, including added value; diversification, environment, sociocultural, and governance. These categories were based on Article 63 of the EMFF regulation, which established five types of objectives that may be contemplated in the CLLD *Strategy*. Specifically, environmental projects were justified in the promotion and use of the environmental heritage of fishing and aquaculture areas, including climate change mitigation operations.

A study of EMFF-funded projects in eight countries (Miret-Pastor, Svels, and Freeman 2020) estimated that environmental projects accounted for just over 10% of the total number of projects analyzed, much lower than 30% for each of the three main typologies (added value, diversification, and sociocultural), but higher than 0.5% for governance projects. However, these overall figures concealed a reality that varies greatly among countries. Environmental projects are the majority in Sweden (43.4% of all projects), but a small minority in Ireland (<1% of all projects). In Spain, environmental projects are 8.4% of all projects, below average, but intermediate among eight countries (Miret-Pastor, Svels, and Freeman 2020).

3 | Methods

A database of the *Spanish Network of Fisheries Groups* (REGP 2022) was used to provide detailed information on projects financed by Spanish FLAGs during the FEMP period. The database classified projects according to "type of operation" into five categories: added value, diversification, environment, sociocultural, and governance. This classification was identical to the FEMP that has been used in previous analyses (Miret-Pastor, Svels, and Freeman 2020). In March 2023, 312 projects were identified as environmental projects, which was 14% of all projects funded. Eight projects were excluded that were canceled before execution, and one that was repeated, leaving 304 projects. Subsequently, all projects were compiled in a database and the objectives and activities of each project were reviewed and classified into six areas.

The choice of areas was justified by existing literature on environmental indicators, and by characteristics of projects financed. The first four areas (air, water, habitats and biodiversity, and resources and waste) were adapted from environmental indicators used by international agencies such as the OECD (OECD 2022) or the *European Environment Agency* (EEA 2023). These four areas (Table 1) aligned with environmental objectives in EMFF legislation, such as "conservation of marine biological resources" (art. 39), "protection and recovery of biodiversity and marine ecosystems" (art. 40), or "energy efficiency and climate change mitigation" (art. 41).

However, after an initial review of projects categorized as environmental, many projects did not have a main objective to directly improve the environment, other projects had an objective focused on environmental outreach and awareness, and many projects had a main objective that was better framed in other categories in the EMFF, such as Added Value, Sociocultural, governance and, especially, diversification. Therefore, two new areas, "awareness" and "other", were added (Table 2).

Although most projects included a variety of activities that allowed them to be classified in more than one area, each project was included in only one area based on its central objective, to prevent the analysis from becoming too complex. This was particularly significant for the awareness area. Many projects had

TABLE 1 | Areas and objectives of environmental projects financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020.

Areas	Objective
1. Air	Improve air quality; including operations to mitigate climate change
2. Water	To achieve a good status of water bodies
3. Habitats/biodiversity	Halting biodiversity loss and habitat degradation and achieving their recovery
4. Resources/wastes	Sustainable use of resources and waste management

TABLE 2 | Areas and objectives of environmental projects financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020.

Areas	Objective
1. Awareness	Dissemination of natural heritage and awareness of its importance and threats
2. Others	Promotion of tourism and diversification. Social measures. Measures for the improvement of governance...

environmental awareness objectives, but most were additional objectives to the main objective. Projects focused exclusively on awareness-raising or dissemination were left in the awareness section.

Projects were categorized within general areas of operation that were too broad for detailed study and did not allow description and categorization of projects financed, so each area was subdivided into a typology of projects. Further, to achieve a better description of projects, each typology was subdivided into projects of similar description. This triple division enabled a description of the typology of environmental projects financed through the EMFF (Table 3). Within each area, except for Area 5 "Awareness," an extra group, "Studies," was used for group projects where evaluations, analyses, or any type of research aimed to improve knowledge of a topic related to the area. For each project, information was collected on the region where the project was located, total cost (TC), ownership, and business profile of the promoter.

4 | Results

4.1 | Environmental Projects by Area, Cost, and Promoter

Area six "other" had the most projects, with 103 projects (33.9% of all projects), followed by area one "air" (61 projects, 20.1%), area four "resources/waste" (57 projects, 18.8%), area five "awareness" (43 projects, 14.1%), area three "habitats/biodiversity" (10.5%), and area two "water" (8 projects, 2.6%) (Figure 1).

The TC of environmental projects executed was €19,154,628, with an average cost (AC) of €63,008. Area six "Others" were the most costly (52% of TC, AC = €96,726), and Area two "Water" were the lowest cost (1.1% of TC, AC = €25,761; Table 4).

Private entities (71.4%) participated more than public entities (28.6%) in the development of environmental projects. Fisher guilds, a peculiarity of the Spanish fishing system, promoted 59 environmental projects (19.4%), with leadership in projects in air (Area 1) and water (Area 2). Many projects (14.4%) were developed by associations of different types (e.g., sports, cultural), and if grouped with for-profit legal entities (companies and businessmen), accounted for one in five projects. Other different legal entities, such as cooperatives, foundations, nautical clubs, or research groups, accounted for 6.5% of all projects (Table 5).

4.2 | Categorization of Environmental Projects Financed by FLAGs

"Air" (Area 1) projects focused on actions to improve energy efficiency, mostly through the installation of solar panels in fishing facilities, although actions also aimed to improve the efficiency of lighting systems through low consumption or LED bulbs, or energy improvements in refrigeration systems in fish markets. Most actions focused on fishing and port facilities, although some projects also focused in public lighting or in other tourist businesses. A second group of four projects corresponded to actions aimed to reduce pollutant gas emissions, especially from vessels. Studies included six research projects aimed at improving energy efficiency through the implementation of electric motors in ships, reduction of energy needed to manufacture products, and analysis of the carbon footprint of fishing fleets.

"Water" (Area 2) projects included two groups of 3–4 projects. One group, "Reduction of marine pollution," included projects that aimed to reduce the discharge of pollutants into water, including monitoring of discharges in fishing areas, installation of a system to combat hydrocarbons in a port, installation of cathodic protection on a fishing vessel to prevent marine pollution from zinc waste, and collection and composting of algae to prevent water pollution in shellfish banks due to uncontrolled degradation. The other group, "Physicochemical modifications," included projects focused on physical and chemical alterations of water bodies, either by modifying currents and sea levels in coastal areas or by changing the salinity of a wetland. The "Studies" group included one study on the impact of boat turbines on zooplankton.

"Habitats and Biodiversity" (Area 3) projects included projects focused on habitats, including a wide variety of actions aimed at protection, conservation, restoration, or surveillance of aquatic coastal habitats, such as the creation of a nature reserve on a beach and protection of nesting areas for seabirds. Biodiversity projects included projects on cetacean stranding and reducing mortality of various species or monitoring fish populations. "Studies" included 10 projects on the assessment of tourism impacts on the environment, a cetacean census, a study on the control of blue crabs, and other studies to improve knowledge of the state of habitat.

"Resources and Waste" (Area 4) projects included three groups. The "Resources" group included seven projects aimed at creating new materials (e.g., meshes), new resources (e.g., algae or microalgae), or monitoring and control of current resources. The "Waste" included 35 projects for collecting, recycling, or recovering rubbish and waste. "Studies" included 15 projects to sample marine residues, conferences on population recovery, and data collection on fishing activities.

"Awareness" (Area 5) projects included two subgroups. The "Awareness Days" group included 21 projects focused on talks or activities to raise awareness and environmental education of the population, children, and professionals about fishing and tourism. The "Informative Materials" group included 22 projects aimed at creating media to disseminate environmental values through posters, documentaries, guides, or catalogs.

TABLE 3 | Areas, typology, and description of environmental projects financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020.

Areas	Typology	No.	Description	No.
Area 1 "Air" No. projects: 61	Energy efficiency	51	Installation of solar panels	27
			Installation of low consumption/LED lighting system	11
			Improvements in refrigeration system (in machine room, cold room, ice production machinery, etc.)	9
			Other facility improvements	4
	Reduction of gas emissions	4	Reduction of pollution from gases emitted by boat engines	4
	Studies	6	Carbon footprint studies	1
			Studies to evaluate the implementation of electric motors on ships	2
			Studies to reduce the amount of energy required to manufacture new products	3
Area 2 "Water" No. projects: 8	Reduction of marine pollution	4	Installation of cathodic protection on vessel to avoid zinc contamination	1
			Algae composting to minimize contamination due to uncontrolled algae degradation	1
			Installation of fire-fighting structures at sea and hydrocarbons	1
			Monitoring and control of spills	1
	Physicochemical modifications	3	Breakwater removal with the recovery of hydro dynamism	1
			Installation of dike to slow sea level rise	1
			Transform low salinity wetland into salt marshes	1
	Studies	1	Study of the impact of boat turbines on zooplankton	1
Area 3 "Habitats/ Biodiversity" No. projects: 32	Habitats	12	Creation of a nature reserve	1
			Habitat protection/conservation/surveillance	8
			Landscape restoration	3
	Biodiversity	10	Establishment/Improvement of stranding protocol	3
			Reduction of incidental capture and mortality of marine vertebrates and birds	2
			Population monitoring	5
	Studies	10	Assessment/Monitoring of habitats and biodiversity status	3
			Assessment of tourism/fishing impact on habitats and biodiversity	2
			Invasive species control studies	1
			Cetacean census	1
			Cartographic/topographic studies and web viewers	3

(Continues)

TABLE 3 | (Continued)

Areas	Typology	No.	Description	No.
Area 4 "Resources/ Wastes" No. projects: 57	Resources	7	Training to identify productive and commercial activities with seaweed and seagrasses	1
			Breeding of microalgae for commercialization	1
			Hiring of a marine biologist to advise the fisher's guild on sustainability	1
			Creation of new biodegradable nets	2
			Vessel to monitor poaching in the shellfish area	2
	Wastes	35	Collection of garbage from beaches, sea, seabed, marshes, shores, etc.	15
			Installation or modernization of waste containers	8
			Valorization/Reuse of marine garbage and fish traps	12
	Studies	15	Improving the sustainability of fishery resource exploitations	6
			Fisheries data collection (discards, bycatch, etc.)	4
			Marine waste reuse	5
Area 5 "Awareness" No. projects: 43	Awareness days	21	Awareness/education workshops/campaigns for the general public	9
			Educational activities/workshops for institutes/schools	5
			Workshops on sustainable fishing	3
			Environmental education for professionals (restaurants, fishermen, sports centers)	4
	Informative materials	22	Posters	2
			Heritage or Biodiversity Guides/Inventory/Catalogs	11
			Photos and videos on biodiversity	5
			Climate change stories/workshops	2
			Vehicle to promote legal fishing	1
			Sculpture with oxidized materials	1

(Continues)

TABLE 3 | (Continued)

Areas	Typology	No.	Description	No.
Area 6 "Others" No. projects: 103	Tourism/ Diversification	85	Routes and trails	21
			Water sports	30
			Creation/rehabilitation of tourist infrastructures (walkways, shaded areas, parks, parking lots, lifeguard booths, etc.)	12
			Tourist accommodations	3
			Other touristic products	8
			Cycling tourism	2
			Ship repair centers	2
			Community or interpretation centers	7
	Socials	16	Accessibility improvements for people with disabilities	6
			Improved employability and inclusion of people with disabilities	6
			Signs adapted to people with blindness and deafness	1
			Activities adapted to people with disabilities (diving, tours...)	2
			Tourist accommodations adapted for people with disabilities	1
	Studies	2	Study to improve fishery management governance	1
			Study on ice factory operation	1

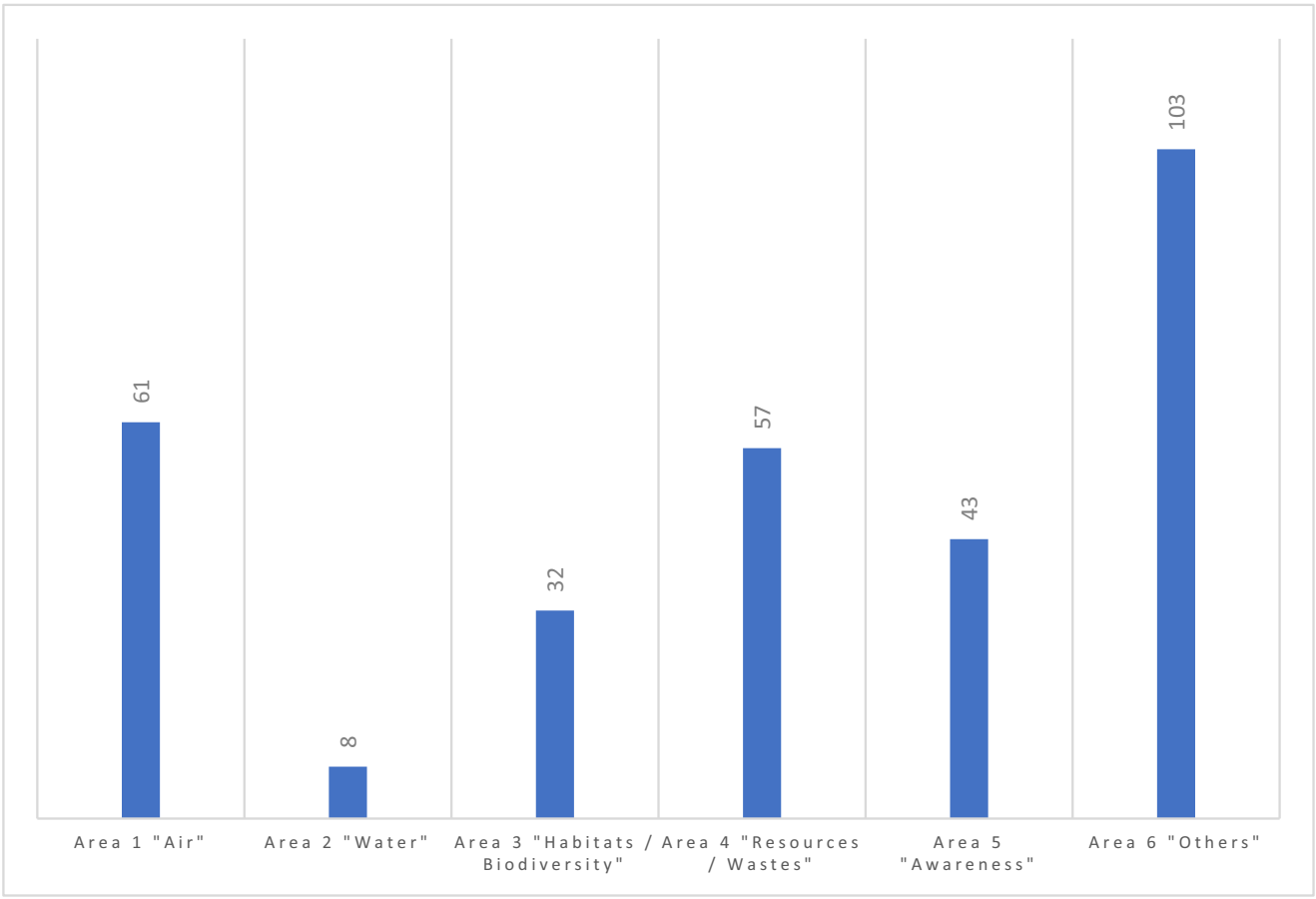

FIGURE 1 | Number of environmental projects by area financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020. Source: Own elaboration.

TABLE 4 | Total cost (TC) and average cost (AC) of environmental projects financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020.

Area	Total cost	Average cost
Area 1 "Air"	3,412,536€	55,943 €
Area 2 "Water"	206,089€	25,761 €
Area 3 "Habitats/Biodiversity"	1,740,316€	54,385 €
Area 4 "Resources/Wastes"	2,920,897€	51,244 €
Area 5 "Awareness"	912,058€	21,211 €
Area 6 "Others"	9,962,732€	96,726 €
Total	19,154,628€	63,008 €

"Other" projects (Area 6) included very diverse projects that could have been categorized in other categories, such as added value, diversification, sociocultural, or governance. In particular, diversification projects were clearly associated with tourism (a couple of nontourism diversification projects focused on boat repair businesses). Of 85 "Tourism or Diversification" projects, most were related to nautical sports, followed by routes and guided visits. Numerous projects focused on tourist infrastructures, such as walkways, shaded areas, interpretation centers, museums, parks, and a car counter in a parking lot. Three projects related to the creation of tourist accommodation. "Social" projects included 16 projects related to measures to adapt spaces, improve accessibility, or create activities adapted to people with physical and mental disabilities. Two projects in the "Studies" group could have been included in categories for "added value" or "governance," including a study that aimed to reinforce the role of fishing communities in the governance of fishing resources, and a study to operate an ice factory.

5 | Discussion

New forms of institutional support within modern multilevel fisheries governance are urgently needed to address the decline of coastal fisheries (Salmi et al. 2022; Chuenpagdee and Jentoft 2018). In this line, concepts such as fisheries comanagement (Jentoft 2005) or community-based fisheries management (CBFM) (Wiber et al. 2004; d'Armengol et al. 2018) have marked much of the fisheries policy initiatives throughout the world in recent years. In this same line, FLAGs and European funds based on CLLD are a key opportunity to activate a local response to global problems affecting coastal zones (Phillipson et al. 2024). The projects financed by the EMFF aim to help coastal communities to tackle, from their own initiatives, the numerous challenges they face and in that line numerous studies show how a large part of the projects have been directed

TABLE 5 | Number of "Environmental" projects by ownership of the promoter of environmental projects financed by Fisheries Local Action Groups (FLAGs) in Spain during 2014–2020.

	Public	Private				
Areas	**Municipalities**	**Fisher guilds**	**Associations**	**Private companies**	**Individual entrepreneurs**	**Others**
Area 1 "Air"	3	37	6	10	4	1
Area 2 "Water"	1	3	1		1	2
Area 3 "Habitats/Biodiversity"	8	6	12	1		5
Area 4 "Resources/Wastes"	14	9	15	13		6
Area 5 "Awareness"	14	2	23	1		3
Area 6 "Others"	47	2	18	19	14	3
Total	87	59	75	44	19	20

Source: Own elaboration.

to diversify and improve the local economy (Miret-Pastor, Svels, and Freeman 2020; Budzich-Tabor 2014), however a significant percentage of the financed projects have also been for environmental projects, although this analysis focused on the Spanish case, has shown that we must go beyond the figures and carefully analyze the typology and characteristics of these projects.

We found that little more than 50% of projects classified as environmental were directly related to environmental improvements. Our finding likely results from the fact that projects were classified as environmental based on the objectives of EMFF that appeared in its Article 63 (EU 2014). Specifically, the wording "enhancing and capitalising on the environmental assets of fishing and aquaculture areas, including operations to mitigate climate change" (EU 2014) can lead to an interpretation that tourism projects based on the use of environmental assets are environmental operations. In places like the Spanish coast, where beaches are the main tourist resource (Valls et al. 2017), tourist projects that contribute little or nothing to environmental improvement are passed off as environmental projects. More specific wording could avoid problems in classifying projects and avoid situations such as having to consider the construction of apartments or the improvement of a parking lot as environmental projects. In addition, diversification projects, specifically tourism projects, are the most numerous in Spain (Miret-Pastor et al. 2018), so environmental projects are rare. Although environmental issues appear in strategies of all FLAGs, projects of this type were difficult to find in practice. Drafting of FLAG strategies is usually carried out with an objective to cover all possible areas, projects are often classified as environmental to include more objectives. However, such misclassification could also be an attempt to invoke environmental actions that have little or nothing to do with a project (greenwashing). Lack of specificity in EMFF regulation on typology of financeable actions favors this confusion (EU 2014). Greenwashing has become popular recently to question many measures and policies sold as sustainable. The concept first came into use when applied to investment funds that claimed to meet environmental, social, and governance (ESG) criteria (Fletcher and Oliver 2022), but is now being applied to many sectors, including greenwashing in the ecolabeling and fisheries management (Højrup 2021).

Our findings contribute to a discussion of governance of small-scale fisheries and effects on communities (FAO 2015), the so-called Blue Justice, and specifically how different fisheries policies (and funds that finance them) harm small-scale fisheries (Jentoft et al. 2017). Our research confirmed that the management of FLAGs sometimes presented an excessively territorial vision that ended up using a large part of fishing funds to support other sectors than fisheries with greater economic weight and better capacity to manage funds, such as tourism (Bugeja-Said et al. 2022). This was evident in our study, especially in higher-cost funded projects, similar to studies in Spain (Miret-Pastor et al. 2018) and several European countries (Bugeja-Said et al. 2022; Miret-Pastor, Svels, and Freeman 2020).

We found that few environmental actions were financed by the EMFF UP4 but this does not mean that no environmental actions were financed by the EMFF or other European funds. Other EMFF lines are designed to carry out actions aimed at achieving more sustainable fishing (UP1) or aquaculture (UP2) (EU 2014). On the other hand, environmental actions focused on the territory are usually expensive and it may be much more logical to finance them through other European funds such as the ERDF or through programs such as LIFE. Along these lines, other countries where more environmental projects were located and were higher in AC were countries where FLAGs were multifunded. In Sweden, for example, nine of 13 Swedish FLAGs were multifunded during the EMFF period (Salmi et al. 2022). Such projects are better placed to fund bigger projects related to wide complex issues (Miret-Pastor, Svels, and Freeman 2020). In any case, the Swedish model was changed for the current EMFAF period (Linke and Siegrist 2023).

To conclude, we can affirm that environmental projects have been part of the local development projects addressed by the Spanish FLAGs, but a detailed analysis leads us to raise questions that go beyond this particular case. On the one hand, as in the case of local development policies, it is important that marine environmental policies are bottom-up and involve local stakeholders (Fraser et al. 2006; Mizuta and Vlachopoulou 2017). The LEADER experience has shown that forging local community partnerships that yield

tangible benefits takes time (Phillipson and Symes 2015). Environmental projects led by local communities can play a key role in sustainability. However, the analysis of the environmental projects carried out by the Spanish FLAGs shows that although there are very positive experiences, an effort should be made to specify the type of environmental projects to be considered and prioritized.

Ethics Statement

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available in Red Española de Grupos de Pesca at https://regp.pesca.mapama.es/proyectos. These data were derived from the following resources available in the public domain: Proyectos DLP REGP, https://regp.pesca.mapama.es/proyectos.

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