

Local partnerships for the development of coastal regions: A review of Fisheries Local Action Groups with focus on the Mediterranean

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Abstract

In the last programming period of the European Maritime Fisheries Fund, Fisheries Local Action Groups (FLAGs) have been in charge of meeting the objectives of Union Priority 4, aimed at boosting territorial cohesion and employment in European coastal areas. These local partnerships have hence received support for the elaboration of local development strategies that should promote both territorial and sectorial projects, balancing the interests of the different stakeholders involved. This article provides for a literature review of the scientific contributions on FLAGs, organizing the main findings according to the six dimensions of the Porter's Diamond Model in the context of the cluster analysis on coastal communities' competitiveness. Moreover, by focusing on FLAGs from Italy, Spain and France, the paper discusses the orientation towards sectorial and territorial interests in the Mediterranean. It emerges that while the literature has mostly emphasized their territorial functions, FLAGs – especially those in areas with relatively higher incidence of employment in fisheries-related sectors – have prioritized projects of sectorial scope.

Keywords: *Fisheries Local Action Groups, Community-led local development, Fisheries diversification, Cluster, Coastal communities.*

1. Introduction

Set up in 2007 under Axis 4 of the European Fisheries Fund (EFF), Fisheries Local Action Groups (FLAGs) are local partnerships that bring together the private sector, local authorities and civil society organizations. Since 2014 FLAGs have been responsible for the implementation of community-led local development (CLLD) in European fisheries, an area-based

approach initiated by Axis 4 of the EFF and subsequently included into Union Priority 4 (UP4) of the European Maritime and Fisheries Fund (EMFF), whose general objective is to increase employment and territorial cohesion in coastal and inland communities which depend on fishing and aquaculture (European Parliament, 2014). Inspired by the LEADER approach applied to rural areas since 1991, CLLD is described as a bottom-up process that “turns traditional ‘top

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down' development policy on its head" (European Commission, 2014) and reflects the change from an exogenous to an endogenous approach of territorial development in the EU (Phillipson & Symes, 2015). The endogenous approach rests on the assumption that the well-being of a territory can be best influenced by the human, physical and intangible resources locally available, through the elaboration of development actions that should be based on the extensive involvement of the local community in their design and implementation (Ray, 1999). As such, FLAGs are most advantageously placed to animate local actors by means of multi-sectoral local development strategies which address the needs of coastal communities (Miret-Pastor *et al.*, 2020). Through the involvement of stakeholders from multiple sectors, the 348 FLAGs (as of 2021), distributed across 19 EU Member States, are responsible for the implementation of both sectoral and territorial development – hence tackling those social impacts of the Common Fishery Policy (CFP) that used to be neglected in favor of biological and economic objectives (Piñeiro-Antelo *et al.*, 2019).

Concerning the interaction between sectoral (i.e. for fisheries and aquaculture development) and territorial functions of FLAGs, Miret-Pastor *et al.* (2020) highlight the fact that four out of five objectives that FLAGs can declare are linked with strategies for territorial development, which is in line with the goal of the UP4 itself. Nevertheless, FLAGs can still finance projects related to sectoral development, in particular through the first objective of the CLLD strategies listed in Article 63 of the EMFF ("Adding value, creating jobs, attracting young people and promoting innovation at all stages of the supply chain of fishery and aquaculture products"). In the literature, the debate over the sectoral or territorial nature of EU funds for fisheries dependent areas has been raised long before the establishment of FLAGs (Symes, 2005). Phillipson & Symes (2015) advocate for a "middle way" in the role that FLAGs should play, thus balancing territorial and sectoral projects depending on the socio-economic attributes of the area where they operate, in terms of its dependency on the fishing sector.

The necessity to improve the performance of European fishing systems in the three domains of sustainability (social, economic, environmental) has been laid out in various policy initiatives making part of the European Green Deal – namely the EU Biodiversity Strategy for 2030, the Farm to Fork Strategy and the Circular Economy Action Plan. Keeping fishing mortality at or under the MSY (European Commission, 2020b), preventing illegal, unreported and unregulated fishing (European Commission, 2020c), and tackling marine plastic pollution caused by fishing gears (European Commission, 2020a) are some of the actions proposed in these documents. In this regard, FLAGs could play an important role for the sustainable transition of European fisheries. Indeed, it has been estimated that the majority of FLAGs have supported at least one project contributing to the Green Deal objectives, especially those related to the promotion of systems with reduced food miles, education about ecosystems and biodiversity, eco-tourism and sustainable fish stocks management (FARNET, 2020).

In the literature that has investigated the application of CLLD in the EU through FLAGs, some aspects of these organizations have been associated with the key elements of Social-Ecological Systems (SESs). The sustainability of SESs has been extensively studied by means of a holistic framework, developed over several years and continuously updated (Ostrom, 2007, 2009; McGinnis & Ostrom, 2014), which has often been applied in the case of fisheries (Basurto *et al.*, 2013; Leslie *et al.*, 2015; Partelow & Boda, 2015). Linking FLAGs and SESs, Furmankiewicz *et al.* (2021) claim that the establishment of localized cross-sectoral partnerships for the promotion of bottom-up decision-making processes in the EU should be related to the influential works by Elinor Ostrom on the importance of cooperation at the local level for the management of common-pool resources. Similarly, Linke & Bruckmeier (2015) review the characteristics and benefits of co-management schemes and analyze the potential of FLAGs to develop fisheries co-management in Europe. While investigating on FLAG's potential to promote fishing tour-

ism in Greek small-scale fisheries, also Kyvelou & Ierapetritis (2020) utilize the term SES to convey the embeddedness of traditional fishing activities within the local socioeconomic, cultural and environmental context.

Although FLAGS' interventions are not limited to one specific branch of the fleet, it is argued that the small-scale fishery (SSF) sector tends to be the "natural partner of most FLAGS", since these organizations tend to be located in coastal areas characterized by the strong presence of artisanal fisheries (FARNET, 2017). There exists a solid bond between this type of fisheries and the development of coastal communities (Pita *et al.*, 2020), since the total economic value of artisanal fishing should include "non-commodity outputs" such as the contribution to coastal employment, food security and cultural heritage, among others. These aspects characterize the so-called "multifunctionality" of SSFs (Mulazzani *et al.*, 2019) and have led authors to conclude that the economic viability of this type of fisheries cannot be easily summarized through measures of financial profitability (Schuhbauer & Sumaila, 2016). For instance, Mulazzani *et al.* (2017) have applied the cluster approach to analyze the competitiveness of six coastal communities in the Mediterranean mostly reliant on SSFs. Their work is based on the analytical framework presented by Malorgio *et al.* (2017), which allows for the inclusion of a variety of external factors that may affect the performance of SSFs-based territories (e.g. presence of related and supporting industries, demand and inputs conditions, role of governmental institutions and others). Such factors have been derived from the so-called "Diamond Model" first developed by Porter (1998) in his attempt to explain the evolution of successful industrial clusters. Nevertheless, as demonstrated by Malorgio *et al.* (2017), the multidimensionality of the Porter's Diamond makes it instrumental in studying the role of SSFs in coastal communities, since it encompasses other approaches that are

more specific (i.e. Blue Growth or ecosystem services). For these reasons, not only can CLLD be contextualized within the SES framework, but it could be argued that also the cluster approach to the development of coastal communities provides a useful tool for understanding the contribution of FLAGS to both sectorial and territorial development.

Since no review has yet been performed on FLAGS, this article attempts to address this gap in order to understand (rather than the effectiveness these organizations had in implementing CLLD strategies) which aspects of FLAGS have been mostly emphasized in the literature. In addition, we want to focus on the differences that characterize the Mediterranean FLAGS from Italy, Spain and France, especially with reference to their organization and strategy. The choice over these three countries is based on their homogeneity with regard to the socio-economic relevance of the Blue Economy, in terms of its contribution to both Gross Value Added and employment at the national level.¹ The study has hence been motivated by the following research questions: 1) Which characteristics of FLAGS have been emphasized in the literature with regard to the six dimensions of the Porter Diamond? 2) Concerning the FLAGS of the Mediterranean basin from Italy, Spain and France, are sectorial and territorial interventions equally prioritized? Results from the two research questions provide for an understanding of the various strategies pursued by FLAGS to foster the socio-economic development of coastal areas taking into account the perspective of both the scientific community and the FLAGS themselves, therefore examining the relation between the two within the Mediterranean region. Considering that the EMFF programming period (2014-2020) has come to an end, the results from this study may provide useful insights for the application of CLLD in the European Maritime, Fisheries and Aquaculture Fund (EMFAF) period 2021-2027.

¹ Suffice it to say that in the other countries facing the Mediterranean Sea the relative weight of the Blue Economy tends to be much larger. Taking for instance the relevance of employment, its contribution to national jobs reaches 9.8% in Croatia, 10.3% in Cyprus and 15.3% in Greece, well above the EU level (2.3%) (European Commission, 2021).

2. Methodology

First, a literature review has been performed in order to identify the scientific literature that has studied FLAGS. To do so, the search TITLE-ABS-KEY (“fisher* local action group*”) was entered in the Scopus database in February 2022, which resulted in 24 articles already published on the subject. Each of the articles was then analyzed with the aim of extrapolating its methodology, scope of the research, number of FLAGS investigated, geographical area and findings. In order to summarize the main findings related to FLAGS, it has been decided to organize the results section following the analytical framework presented by Malorgio *et al.* (2017) and applied by Mulazzani *et al.* (2017) in their comparative analysis of Mediterranean coastal communities. As previously discussed, the variety of interventions pursued by FLAGS and discussed in the literature can fit within the several dimensions of the cluster analysis on coastal communities’ competitiveness. The six dimensions, derived from Porter’s Diamond Model, include *i*) Context for fishermen strategy and rivalry, *ii*) Factors’ condition, *iii*) Related and supporting industries and services, *iv*) Demand conditions, *v*) Government, *vi*) History and chance.

The second part of the article, focusing on the Mediterranean FLAGS from Italy, Spain and France, is based on the information available on the FLAGS factsheets and provided by the FARNET Support Unit. In particular, for each FLAG the following information were extracted: Country, Surface area, Population density, Total employment in fisheries (Fishing, Aquaculture, Processing), Total public budget allocated to the FLAG for 2014-2020, Presence of fisheries actors in the partnership/general assembly, Presence of public actors in the main decision-making body/board and Strategy. Concerning the information contained in the variable Strategy, at the beginning of the 2014-2020 EMFF period FLAGS were

asked to indicate those subthemes that would be included in their development strategies. FLAGS could choose up to five fields among thirty subthemes, which belong to the objectives of the UP 4 listed in Article 63 of the EMFF: 1) Adding value to fisheries; 2) Diversification; 3) Society and culture; 4) Environment and 5) Governance and management. For each of these macro themes, the variable Strategy indicates how many times they have been declared by the FLAG. The dataset includes those (62) FLAGS that fully reported on each and every single of the above-mentioned variables, coming from Italy (43), Spain (12) and France (7). Concerning the Mediterranean basin, the sample analyzed in the study covers 81% of the Italian FLAGS and the totality of French and Spanish ones. In addition to a qualitative comparison of the selected FLAGS, it is proposed to analyze the FLAG orientation towards sectoral activities in order to understand the relation between the priorities declared by the partnership and its organization. As previously stated, this topic has already been raised in the literature. For instance, the framework by van de Walle *et al.* (2015) on the role of FLAGS for the resilience of fishing communities can be used to understand whether the organization has been more oriented towards sectoral, territorial development, or a mix of both.² In this article, it has been decided to concentrate our analysis on those FLAGS that showed a strong inclination towards sectoral activities. Since all the FLAGS investigated have reported at least one sectoral action, we estimate a logit model where the dependent variable is a dummy taking value 1 if the FLAG declared a minimum of two sectoral activities belonging to the category “Adding value to fisheries” and 0 otherwise. The explanatory variables include the area covered by the FLAG, the ratio of fisheries-related FTEs over the population, the 2014-2020 budget, the percentage of public actors in the FLAG decision-making body, the percentage of fisheries actors in the partnership and the country.

² More specifically, the framework categorizes FLAGS’ interventions along an axis which goes from actions focusing on sectoral development – *i*) Sector structure and organization, *ii*) EFF local antenna, *iii*) Small scale fisheries outreach, *iv*) Supply chain integration – to territorial development, *v*) Benefits from blue growth, *vi*) Catalyst for innovation/redevelopment – passing through those interventions where an overlap of both domains takes place, *vii*) Place of sector within a territory, *viii*) Ensuring benefit from local economic development, *ix*) Entry point to local governance.

3. Results

Table 1 shows the information regarding the 24 articles that resulted from the literature review. As expected, most of the articles focus on those countries where the number of FLAGs is higher, namely Spain (8 articles), Poland (6) and Italy (5). Moreover, it emerges that in the majority of cases qualitative methods of analysis have been

preferred, especially through the use of questionnaires and in-depth interviews with FLAGs members (16 articles) and reviews of technical documentation (12). After presenting the main findings according to the six dimensions of the Porter's Diamond, the sectoral/territorial interpretation of FLAGs in the literature is related to the analysis of these partnerships in the Mediterranean Sea, in particular in Italy, Spain and France.

Table 1 - Summary of the information provided by the reviewed articles.

<i>Article</i>	<i>Methodology</i>	<i>Scope</i>	<i>FLAGs included in the study</i>	<i>Country</i>	<i>Findings related to FLAGs</i>
Cortese <i>et al.</i> (2021)	Questionnaire to consumers, descriptive statistics and Multiple Correspondence Analysis	Understand consumer behavior with reference to local fish consumption	1	Italy	Consumers pay attention to the sustainability of their diet and the environmental impact of fishing techniques. These aspects should be considered by FLAGs with the aim of promoting gastronomic tourism
Czarkowski <i>et al.</i> (2012)	Literature review, legal and strategic documents	Discuss the potential of recreational fishing for tourism development in two Polish provinces	4	Poland	FLAGs should provide the assistance in the management of EU funds for the development of infrastructure associated with recreational fisheries
De Boni <i>et al.</i> (2018)	Application of the multiple criteria decision aiding framework Promethee II, questionnaires to FLAGs' members	Propose a decision tool to assess the sustainability of FLAGs' coastal development plans	6	Italy	Funds distribution should vary among FLAGs, as projects must adapt to the environmental and socio-economic features of the area. It is better to fund projects in different sustainability fields
Distaso <i>et al.</i> (2020)	Interviews with FLAGs' directors, Analytic Hierarchy Process Methodology	Evaluate the role of the local FLAGs at improving the quality of life in one Italian region	6	Italy	FLAGs should organize activities to increase social capital and provide diversification opportunities
Freeman & Svets (2022)	Quantitative assessment through surveys and semi-structured interviews with local stakeholders and FLAG members	Study the impact of FLAGs on women's empowerment	113	EU-wide, focus on Estonia, Croatia, Spain	FLAGs are active in promoting the empowerment of women in fishing communities (especially in the domain of diversification projects) but in many cases they are still dominated by male perspectives, thus underrepresenting women's contribution to SSFs survival
Furmankiewicz <i>et al.</i> (2021)	Review of technical documentation, content analysis and text mining	Analyze whether CLLD strategies in Poland address issues related to climate change mitigation and adaptation	36	Poland	FLAGs' strategies do not sufficiently include efforts for mitigation and adaptation. Communities are only aware of local impacts on fishing activities and disregard the involvement in European initiatives

<i>Article</i>	<i>Methodology</i>	<i>Scope</i>	<i>FLAGS included in the study</i>	<i>Country</i>	<i>Findings related to FLAGS</i>
Felicidades-García & Piñeiro-Antelo (2021)	Review of technical documentation	Analyze cooperation projects in Galicia, in terms of their scope and weight within local development strategies	7	Spain	There is an increase in cooperation projects by FLAGS, but their number is still too limited. Plus, efforts should be made to extend their geographical coverage
Kurowska <i>et al.</i> (2014)	Hellwig's taxonomic method to combine socioeconomic indexes into four levels of local development	Assess the impact of FLAGS on the socioeconomic development of Polish coastal regions	9	Poland	The socioeconomic development level in FLAGS areas increased between 2004 and 2012
Kyvelou & Ierapetritis (2020)	Review of technical documentation, survey and interviews to FLAGS' members and other stakeholders	Evaluate the benefits and challenges of establishing marine spatial plans promoting fishing tourism	17	Greece	FLAGS should collaborate with marine spatial planning authorities and other marine sectors for the creation of multi-use schemes, especially fishing tourism due to its environmental and socioeconomic value
Linke & Bruckmeier (2015)	Literature review on co-management, policy documents analysis, talks and interviews with FLAGS' members and other stakeholders	Identify those conditions that allow the implementation of co-management schemes in European fisheries	Not specified	Denmark, Finland, Sweden	FLAGS have the potential to empower local fishing communities, provided that they integrate knowledge from all relevant stakeholders. Involving FLAGS in higher-level decision-making processes is key
Miret-Pastor <i>et al.</i> (2018)	Review of technical documentation, questionnaire sent to FLAGS' managers, descriptive statistics	Analyze fisheries diversification projects in Spain and evaluate their effectiveness	24	Spain	Most of FLAGS' leaders acknowledge the importance of diversification projects for the development of coastal areas. However, actions should not be limited to tourism and include social and environmental issues
Miret-Pastor <i>et al.</i> (2020)	Review of technical documentation	Study the use of EFF funds in Spain to provide for diversification opportunities by connecting the tourism sector, recreational and professional fishing	31	Spain	Fishing tourism projects are still scarce. The following points should be addressed by FLAGS: fishermen involvement, use and improvement of existing infrastructures, communication at the community level, participation in governance processes and training to share knowledge with different actors
Miret-Pastor <i>et al.</i> (2020)	Review of technical documentation	Study the distribution of project funds on UP4 objectives among FLAGS from eight European countries	131	Denmark, Estonia, Finland, Ireland, Latvia, Poland, Spain, Sweden	Most of the expenditures addressed three objectives (adding value, diversification, socio-cultural promotion). But new indicators to measure the impact of FLAGS' projects should be developed

<i>Article</i>	<i>Methodology</i>	<i>Scope</i>	<i>FLAGS included in the study</i>	<i>Country</i>	<i>Findings related to FLAGS</i>
Mulazzani <i>et al.</i> (2017)	Consultation of an interdisciplinary research team and local stakeholders	Build a model based on the ecosystem service framework and the Bayesian network approach to simulate the socio-ecological outcomes under different scenarios	1	Italy	The application of the proposed model by FLAGS represents an opportunity to empower the local community due to its participatory approach
Padín <i>et al.</i> (2016)	Tourist surveys and interviews with FLAGS' members and local skippers	Assess two fishing tourism projects in Galicia	2	Spain	FLAGS' members highlight the positive effects of fishing tourism on fishermen's environmental awareness, social image and diversification opportunities
Pawlewicz <i>et al.</i> (2014)	Surveys, audit visits and interviews with FLAGS' members and other institutional representatives	Analyze the activities performed by Polish FLAGS concerning environmental protection	41	Poland	Despite FLAGS' potential, the number of projects to protect the natural heritage in Poland is low. The influence of the public sector and the lack of involvement of private parties represent an obstacle
Phillipson & Symes (2015)	Interviews with FLAG's members and other stakeholders from the local community and fishing sector, review of technical documentation	Examine how FLAGS projects can balance sectoral and territorial development	1	United Kingdom	The targets of EFF Axis 4 funds should be redefined. A typology of fisheries dependency is proposed to help FLAGS plan their investments conditional on the place of the fishing sector within the local economy
Piñeiro-Antelo & Lois-González (2019)	Review of technical documentation, interviews with members of the local fishing sector	Analyze the contribution of CFP funds to the generation of social innovation	1	Spain	The FLAG generated social innovation locally, but it was limited by community resistance, unequal representation of interests and pressures from the administration
Piñeiro-Antelo <i>et al.</i> (2019)	Review of technical documentation, interviews with FLAGS' members and project managers	Assess the activity of two FLAGS, in terms of their ability to be socially inclusive, sectorally balanced and autonomous in the distribution of funds	2	Spain, Portugal	FLAGS have promoted positive social innovations, but they were limited by the scarcity of funds, the influence of local administrations and the unequal weight given to their members
Piñeiro-Antelo <i>et al.</i> (2020)	Review of technical documentation, interviews with FLAGS' members and participation to a FLAG workshop	Study the role of FLAGS in territorial governance processes in the context of the Evolutionary Governance Theory framework	13	Ireland, Spain	FLAGS have been effective in empowering local actors and create synergies among different economic sectors, but their influence depended on the existing governance system, especially in terms of pressures from local authorities

<i>Article</i>	<i>Methodology</i>	<i>Scope</i>	<i>FLAGS included in the study</i>	<i>Country</i>	<i>Findings related to FLAGS</i>
Romeo & Marciànò (2019)	Interviews with vessel owners and FLAG's members, budgetary analysis, multi-criteria analysis in a fuzzy environment	Assess the economic performance of the main fishing gear types active in the FLAG area	1	Italy	FLAGS should perform microeconomic analysis of the local fleet to help plan local development strategies
Szamrowski <i>et al.</i> (2014)	Surveys, audit visits and interviews with FLAGS' members and other institutional representatives	Analyze the activities performed by Polish FLAGS regarding environmental protection	4	Poland	The number of projects aimed at protecting the natural heritage in Warmia and Mazury is low. Most of the funds are allocated to the objective of increasing the competitiveness of fisheries areas
Thuessen & Nielsen (2014)	Focus groups with LAGs and FLAGS' board members and coordinators	Study the contribution of the EU LEADER approach in a multi-level governance setting at the LAG and FLAG level	3	Denmark	LAGs and FLAGS represent an opportunity to develop local development strategies in bottom-up decision-making processes
van de Walle <i>et al.</i> (2015)	Interviews with FLAG's members and review of the FLAG technical documentation	Describe the projects that the Pays d'Auray FLAG has pursued to respond to pressures on the local fishing sector	1	France	FLAGS represent an important forum to mitigate the fragmentation among different fisheries actors and to advocate for the needs of the local fishing sector

Context for fishermen strategy and rivalry

This dimension includes the performance of the local fishing fleet and the relationships both among fishermen and within the value chain. The work by Romeo & Marciànò (2019) constitutes the only example of a study on FLAGS with the aim of assessing the performance of the fleet. The article provides for a methodology to aggregate scores of financial indicators derived from budgetary analysis of the vessels into a measurement of the economic performance of the main gear types adopted in the area, thus helping the local FLAG planning a development strategy that addresses the issues and potentials of the different fishing systems. With regard to the nature of the relationships within the fishing industry, it has been emphasized that FLAGS represent a forum to overcome the fragmentation of the fishing sector (van de Walle *et al.*,

2015) and promote regional cooperation (Felicidades-García & Piñeiro-Antelo, 2021).

Related and supporting industries and services

A recurring topic raised in the literature is the importance of improving the connection between the fishing and tourism sectors. In their analysis of fishing tourism projects in Galicia, Padín *et al.* (2016) claim – based on interviews with local FLAGS' managers – that these initiatives are especially beneficial in enhancing the social image of fishermen, changing it “from a predatory role to a resource manager”, and spreading environmental awareness among both tourists and the fishing sector. Kyvelou & Ierapetritis (2020) investigate the benefits and problems related to the co-existence of artisanal fisheries and tourism and present fishing tourism as an effective diversification strategy for Greek small-scale fisher-

ies. The authors stress the role that FLAGs could play in the establishment of marine spatial plans through a multi-use approach that guarantees the coexistence of different economic sectors. Miret-Pastor *et al.* (2020) illustrate practical examples of activities that may connect recreational and professional fishing and claim that the number of projects that unite these two sectors in Spain is still too limited. While evaluating the distribution of Spanish diversification funds in the period 2007-2014, Miret-Pastor *et al.* (2018) report FLAGs' opinion that restoration and gastronomic events are the two diversification activities that generated the highest profits for the fishing industry. Lastly, Czarkowski *et al.* (2012) encourage Polish FLAGs to provide assistance in managing EU funds for the promotion of recreational fishing in lakeland regions, in terms of infrastructures designed for anglers.

Demand conditions

The elaboration of adequate strategies for the development of a successful marine cluster should also take into account the level and characteristics of local as well as tourist demand. As previously discussed, sectorial aspects like marketing strategies and consumer analysis have been only partially investigated in the literature concerning FLAGs, stressing once again the territorial development function of these organizations. The only exception is represented by Cortese *et al.* (2021), whose objective is to provide for an analysis of consumer behavior in the area of one FLAG in Southern Italy. The study, meant to help planning local programmes of gastronomic tourism, highlights the association that tourists make between small-scale fishing activities and the sustainability of the production process. A tourist survey is present also in Padín *et al.* (2016), although in this case the objects of the analysis are two diversification projects of fishing tourism. Regarding the strategies to improve the attractiveness of the cluster, van de Walle *et al.* (2015) claim that one of the key factors in the case of the Pays d'Auray FLAG was the presence of "active fishing harbours and working shellfish farms", hence warning – following Martindale (2014) – against those forms

of tourism that tend to reduce the fishing industry to some sort of cultural heritage rather than a dynamic economic activity.

Factors conditions

This dimension is related to the availability and quality of those inputs that contribute to the development of a successful coastal cluster, like natural and physical capital and labor. The literature that has investigated on the link between FLAGs and the management of such factors includes a limited number of articles and is mainly focused on investments for the enhancement of environmental assets and climate change mitigation, which belong to the fourth objective of Article 63 of the EMFF. In their analysis covering eight EU Member States, Miret-Pastor *et al.* (2020) show that FLAGs have assigned to environmental projects the lowest priority among the five objectives of the UP4, with Swedish FLAGs constituting one exception due to their large geographical coverage, which allows them to have access to the larger funds needed to address complex issues like environmental management. Investments in the area of environmental protection are explored also in Szamrowski *et al.* (2014) and Pawlewicz *et al.* (2014), where it is argued that the level of funds dedicated to these activities by Polish FLAGs is too low. Furmankiewicz *et al.* (2021) have reviewed Polish FLAGs' development strategies to study the relevance given to climate change mitigation and adaptation activities. After showing that these issues have been only marginally discussed, the authors advocate for interventions favoring the development of environmental awareness on the most concrete effects of climate change among local stakeholders and the tangible benefits deriving from investments in renewable energy.

Government

The capacity of institutions to influence the development of maritime clusters should be broadly conceived, as it embraces a variety of activities such as financial support, environmental legislation and community empowerment. In this regard, the literature tends to stress the positive

contribution that FLAGs have made to the implementation of CLLD across Europe. For instance, in their analysis of Irish and Galician FLAGs, Piñeiro-Antelo *et al.* (2020) claim that these organizations have fostered the evolution of local territorial governance, by giving greater prominence to local actors and generating synergies among different sectors. However, the authors also stressed that FLAGs' effectiveness and acceptance is heavily influenced by the already existing territorial governance framework. Likewise, the weight of local elites and public administrations in the choices over funds allocation has been reported as a limiting factor in Piñeiro-Antelo *et al.* (2019) and Szamrowski *et al.* (2014). In this regard, van de Walle *et al.* (2015) argue that it is the overrepresentation of fishermen within the board composition that has successfully allowed the Pays d'Auray FLAG to mobilize the concerns of the local fishing industry, at the expenses of other sectors whose interests are already widely represented. Similarly, Thuessen & Nielsen (2014) hold that the establishment of (F)LAGs has developed multilevel governance settings in Denmark "in the form of leverage, democratization and bottom-up decision making".

History and chance

Even if it is believed that historical events external to FLAGs (e.g. indirect drivers of change like economic crises and political instability) should be considered during the elaboration of local development strategies (Mulazzani *et al.*, 2017), no general conclusions can be drawn from the reviewed articles over the influence of history and chance on FLAGs. Nevertheless, in several studies the discussion on FLAGs is contextualized within external factors of change like anthropogenic pressures (van de Walle *et al.*, 2015), declining fishing profitability (Kyvelou & Ierapetritis, 2020) or the inclusion of Axis 4 in the CFP (Piñeiro-Antelo *et al.*, 2019).

FLAGs in the Mediterranean basin - Italy, Spain and France

With regard to the regional analysis on FLAGs, Table 2 provides some information

concerning the structure and organization of these partnerships in Italy, Spain and France. When looking at the geographical extension of FLAGs, it emerges that the seven French groups in the Mediterranean basin tend to be characterized by a relatively wider coverage in territories with scarce population densities. Moreover, in these areas the frequency of fisheries-related jobs seems lower if compared to Italy and especially Spain. Indeed, Mediterranean Spanish FLAGs are the ones that have received the greatest allocation of funds, thus reflecting the socio-economic relevance of the Blue economy in the country (4.9% of national jobs in terms of employment and 3.0% of national GVA) (European Commission, 2021). The presence of public actors in the decision-making board – whose excessive control on the organization's activities has already been discussed in the literature review – is another characteristic that tends to vary among the three countries, reaching its peak in French FLAGs (43%). On the contrary, substantial homogeneity can be found when looking at the priority that FLAGs have assigned to the UP4 objectives. With respect to their strategy, the relatively low attention to environmental issues – as already highlighted in the literature review – tends to be a common characteristic of FLAGs in the region. On the contrary, the theme "Adding value to fisheries" has been declared at least once by all the 62 FLAGs investigated and also the theme "Diversification" has been frequently included in the strategy (77% of FLAGs). In absolute terms, actions belonging to the theme "Adding value to fisheries" have been declared the highest number of times (119), followed by "Diversification" (61), "Society and culture" (52), "Governance and management" (51) and "Environment" (29). Indeed, it emerges that FLAGs have prioritized sectoral interventions over territorial ones. Nevertheless, it is important to remark that there is a relevant number of FLAGs that have declared a number of actions under "Diversification" at least equal to or greater than those falling under "Adding value to fisheries" (32.6% of FLAGs in Italy, 75% in Spain and 42.9% in France).

To complete our investigation of Mediterranean FLAGs in Italy, Spain and France, it is sug-

Table 2 - Descriptive statistics of the variables contained in the FLAGS' factsheets of the selected countries. Only coastal FLAGS in the Mediterranean are included.

	<i>Italy</i>	<i>Spain</i>	<i>France</i>
N. FLAGS analyzed (% coverage)	43 (81%)	12 (100%)	7 (100%)
Average population density	495	468	288
Average surface area (km ²)	619	450	1055
Average frequency of fisheries FTEs in the population	0.60%	0.91%	0.36%
Average public budget allocated to the FLAG for 2014-2020	1,683,439 €	2,485,936 €	1,451,059 €
Average presence of public actors in decision-making body	33%	28%	43%
Average presence of fisheries actors in partnership	32%	32%	37%
FLAGS with at least one environmental subtheme declared	17/43	6/12	4/7
FLAGS with at least one diversification subtheme declared	32/43	11/12	5/7
FLAGS with at least two sectoral subthemes declared	30/43	3/12	4/7

Table 3 - Results of logistic regression analysis to explain the sectoral orientation of FLAGS.

<i>Variables</i>	<i>Coefficients</i>	<i>SE</i>
Constant	.442207	1.444075
Surface area	.0002399	.0004698
FisheriesFTEs/Population	3.434852	1.595712 *
Public budget	-9.02e-08	4.61e-07
% of public actors	-.0033469	.0281803
% of fisheries actors	-.034999	.020311
France	1.09413	1.085201
Spain	-.1641071	1.015635

gested to analyze the relationship between the main characteristics of the organization and the preference towards sectoral interventions rather than territorial ones. Considering the small sample size (62 FLAGS), we apply the Firth's (1993) penalized maximum likelihood estimator, which allows for a reduction in both the bias and the variance that affect maximum likelihood estimates of logit models for small samples (Rainey & McCaskey, 2021).

It results that the only independent variable which is statistically significant at the 5% significance level (p -value = .031) is the ratio of fisheries-related FTEs over the population of the FLAG territory. As expected, an increase in the frequency of local workers employed in Fishing/Aquaculture/Processing sectors is estimated to lead to a higher chance of a strong

presence of sectoral priorities in the FLAG strategy. None of the other variables seem able to predict the sectoral/territorial dimension of FLAGS in the selected countries of the Mediterranean Sea.

4. Discussion

Results from the literature review have stressed the role that FLAGS could play in the development of successful maritime clusters according to the Porter's Diamond Model. In particular, it seems that scientific contributions on FLAGS have highlighted the importance of these partnerships in the establishment of linkages and collaborations between the fishing sector and other industries and services of the Blue Economy in the area where the FLAG operates. According to Article 3 of the EMFF Regulation, such a territory should be "an area with a sea, river or lake shore, including ponds or a river basin, with a significant level of employment in fisheries or aquaculture, that is functionally coherent in geographical, economic and social terms and is designated as such by a Member State". Considering that the additional selection criteria that Member States have adopted in their operational programmes tend to require some local characteristics of economic disadvantage with respect to the rest of the regional territory, FLAGS have the potential to provide for diversification opportu-

nities in fisheries-dependent communities with declining socio-economic conditions.³

Connecting the previous results from the two research questions, it can be said that there is an evident contrast between the role of FLAGs that has been most commonly emphasized in scientific articles and the actions that these organizations have prioritized during the 2014-2020 programming period. If on the one hand territorial actions are the ones that received most of the attention in the literature (as demonstrated by the interest on themes like environmental protection, community empowerment and fishing tourism), on the other it is clear that FLAGs have prioritized projects of sectorial scope. Nevertheless, as already stressed by Miret-Pastor *et al.* (2020), this type of analysis is limited by the fact that the interpretation of the definitions of the five objectives of Article 63 of the EMFF tends to vary among countries, hence FLAGs from different Member States may declare diverse UP 4 objectives for projects that are actually similar in their scope.

It is argued that further attempts to analyze FLAGs' activities and organization should take into account the relevance of the Blue Economy in the territories under investigation. In this regard, the last EU Blue Economy Report (European Commission, 2021) includes detailed socio-economic data describing the evolution of its established sectors (Marine living resources, Marine non-living resources, Marine renewable energy, Port activities, Shipbuilding and repair, Maritime transport and Coastal tourism). Explaining the development strategies that FLAGs from different countries have established should probably take into consideration also the long-term dynamics within the sectors of the Blue Economy. For instance, combining data on local opportunities for diversification (especially in the tourism sector) with the information on the FLAGs' composition and development strat-

egies may help explain the partnerships' prioritization of either territorial or sectorial interests. This suggests the validity of the cluster approach to the study of maritime communities due to its inclusion of several dimensions that may affect the competitiveness of the local economy where the FLAG intervenes.

5. Conclusions

The present paper provides for a literature review of those scientific articles that have analyzed the role of FLAGs for the sustainable development of coastal communities. It has been attempted to organize the main findings from the literature according to the six dimensions of the Porter's Diamond, thus interpreting the FLAG as a factor that can contribute to the emergence of successful maritime clusters in the European Union. Although in the literature it is possible to find examples covering all the dimensions of the diamond, issues related to the ability of FLAGs to establish links with other industries and services of the coastal economy (in particular the tourism sector) received special attention. Overall, most of the articles tend to focus on the territorial dimension of FLAGs, hence stressing the four non-sectorial objectives that FLAGs can receive support for according to Article 63 of the EMFF on the implementation of CLLD strategies. However, when looking at the priorities declared at the beginning of the 2014-2020 programming period by FLAGs belonging to the Mediterranean basin from Italy, Spain and France, it results that sectorial interventions connected to the theme "Adding value to fisheries" were given precedence. In order to link the choice over sectorial or territorial functions with the characteristics of the FLAGs from the three selected countries, data provided by the FLAGs' factsheets from

³ As an example, the Italian operational programme for the programming period 2014-2020 (Mipaaf, 2015) requires fisheries and aquaculture areas to present at least one of the following socio-economic attributes to be eligible for CLLD funding: *i*) a reduction in the fishing fleet of more than 10% in relation to the value in 2007, in terms of either gross tonnage or engine power and/or a reduction in the value of production of more than 10% in relation to the value of 2007, *ii*) population density equal to or lower than the regional average, *iii*) unemployment rate equal to or higher than the regional average.

FARNET were used to explain the preference towards sectoral interventions. In this regard, the relevance of employment in fisheries-related sectors in the territory where the FLAG operates seems to be the only significant variable positively affecting the prioritization of sectoral activities. Further research may address this point by extending this type of analysis to other countries of the Mediterranean or the European Union. Considering that Member States are currently facing the challenge of translating the new EMFAF regulation into their national operational programmes, predicting the likely allocation of funds for which FLAGs will receive support (now under Priority 3, “Enabling a sustainable blue economy in coastal, island and inland areas, and fostering the development of fishing and aquaculture communities”) may translate into a more effective application of CLLD in European maritime regions. To conclude, it can be claimed that the bottom-up approach to territorial governance through FLAGs represents an important contribution to the endogenous development of coastal regions in the European Union, but the effectiveness of these partnerships is highly dependent on the context where the FLAG operates. The use of the Porter’s Diamond to guide the definition of local development strategies may thus constitute a valuable tool at FLAGs’ disposal. Nevertheless, improving the coordination between the private and public sectors and strengthening the role of local partnerships in terms of operational planning represent two significant points to be addressed in order to fully capitalize on the socio-economic and environmental potential of coastal communities. The renewed support aimed the sustainable development of maritime regions expressed by the EMFAF and the other European Funds can promote this transition.

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