



# Enhancing the participation of small-scale fishing sector in decision-making: Good practices from Atlantic in EU

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## ABSTRACT

The aim of this research is to provide a comprehensive analysis of the degree of participation and influence of Small-Scale Fisheries (SSF) across the European Union Atlantic Area putting forward a set of good practices and recommendations for policymakers, Non-Governmental Organisations and SSF representatives. The actual margin for enhancing the degree of influence of SSF on decision-making processes is still large. Moving towards community-based management models from the current hierarchical models is compulsory. A set of measures have been adopted in Western Waters following participatory processes, introducing self-management and co-management tools at the local and regional levels. This research goes beyond the governance model addressing issues such as the increase of influence when the final decision-makers promote a certain devolution of power to the local/regional levels carried out in parallel with reinforcing the capacity of the SSF representatives to exercise such power.

## 1. Introduction

The Small-Scale Fisheries (SSF) governability is considered by the European Commission (EC) a serious problem across European Seas which need urgent actions. Precisely, this research looks at it in South Western Waters covering mainly the European Atlantic Area of Spain, France, and Portugal Member States (MS). Kooiman [9] and Kooiman and Bavinck [10] define governability as the overall quality of the governance of any system. Governance does not just consist of defining rules and regulations but also includes interactions among many actors in the society outside the government, in the civil society and the private sector [7]. Among other aspects of the governability, enhancing the participation and influence of the SSF in the decision-making at various levels (local, regional, national, and European) represents an urgent objective to reach promoted by the EC; however, it remains a challenging task. This objective is not exclusive of SSF but also of Large-Scale fisheries, however, SSF present specific challenges being the governance a complex task because these fisheries are too diverse (high number of

vessels, fishing techniques, and developed *metiers*<sup>1</sup> across the year). According to the different nature of the SSF specific research on their governance is therefore required.

The aim of this research is to provide a comprehensive analysis of the degree of participation and influence of SSF across the EU Atlantic Area putting forward a set of good practices and recommendations for policymakers, Non-Governmental Organisation (NGOs) and SSF representatives, among other stakeholders. This pioneer study was financed by the EC for the specific EU Atlantic Area, developed under the context of the MARE 2014/04 pilot project (<https://mare.azti.es/>). This project was developed in close collaboration with the South Western Waters Advisory Council (SWWAC). As a direct result, EC developed the proposal on the European Maritime Fisheries Fund (EMFF) EMFF COM (2018) 390 including a preferential treatment for small scale coastal fishing. [https://www.eumonitor.eu/9353000/1/j4nvhdcs8bljza\\_j9vvik7m1c3gyxp/vkp5wtwxwcezg#p15](https://www.eumonitor.eu/9353000/1/j4nvhdcs8bljza_j9vvik7m1c3gyxp/vkp5wtwxwcezg#p15).

The EC proposes that MSs include in their operational programmes an Action Plan for small-scale coastal fishing, which will have to include, among others, the promotion of the skills and knowledge, innovation

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<sup>1</sup> Métier: a group of fishing operations targeting a similar (assemblage of) species, using similar gear, during the same period of the year and/or within the same area and which are characterised by a similar exploitation pattern (DCF, Reg. (EC) No 949/2008).

and capacity building, an involvement in the participatory management of the maritime space, including Marine Protected Areas and Natura 2000 areas; the diversification of activities in the broader sustainable blue economy; and finally, a collective organisation and participation in the decision-making and advisory processes (Art. 15).

In addition, some regions might expect to develop specific actions. For instance, a regional Plan of Action for SSF in the Mediterranean and Black Sea, which represents half of EU fisheries, (RPOA-SSF) is in place over from 2018 to 2028. A set of actions are being promoted starting by improving the scientific research, but specially covering the SSF data by integrating the fisher's local knowledge in the SSF management. Also advancing towards participatory models for data collection or participatory surveillance, among others. *Besides the RPOA-SSF, which encompass EU and third countries participation, the EC has reinforced the role of the SSF sector through their representation in the Advisory Councils (ACs) and in the internal working groups devoted to SSF. Thus, management measures proposed by the EU or Member States are subject to the opinion and advice by the fishing sectors. In the Mediterranean Sea and Black Sea regions the ACs are key actors for SSF governance due to the predominance SSF modalities in those regions. The EC has provided provisions to improve governance of SSF in all ACs which are particularly relevant for the Mediterranean and Black Sea (EC Delegated Regulation 2015/242). These provisions attempt to ensure representation by reflecting the share of the SSF sector in the respective regional in the general assembly and executive committees, and additional economic compensations to ensure their effective involvement in the work of these consultancy bodies.*

There are fundamental differences in the economic characteristics of the fish production from SSF and Medium Scale Fisheries (MSF). Simple productivity of both capital and labour are on average higher for MSF compared with SSF. Moreover, the SSF and MSF representatives do not have the same economic, human, and technical resources. Interviewed stakeholders comment on the lack of specific human resources devoted to the representation as one of the main problems in the SSF, particularly apparent at higher decision levels. The SSF heterogeneity and lack of data on SSF activities make it difficult to obtain a goodness evaluation which also represents an important obstacle to their representation. The SSF heterogeneity hampers its representation due to the lack of a common definition being the key barrier to establish a distinct SSF channel across the governance structure, needed to improve their degree of influence in decision making processes. This rarely happens with MSF, usually very well identified. Moreover, the SSF reduced mobility implies their high degree of dependence on coastal and territorial waters and, on local and regional ecosystem resources. These all aspects justify the reinforcement of SSF fisheries management systems under a differentiated regime.

This research analyses how the current SSF governance structure and models might contribute to their good governance by evaluating the successes and failures identified by key stakeholders involved in the SWWAC, but also the challenges of improving it through a set of good governance principles and practices. The governability is a complex concept with many dimensions here captured using the well-known governance principles. The basic idea underpinning the analysis presented in this research was to examine the degree of compliance with those good governance principles but also, to provide key good governance examples among a selection of case studies in the Atlantic Area. The lessons learnt from these examples are supported by the results of a Strength, Weaknesses, Opportunities and Threats analysis following a so-called interactive governance perspective [7], which emphasises the need to look for governability problems and challenges within each system. A set of Good Practices were identified and adapted to the needs of the SSF key stakeholders across the Atlantic Area.

Section 2 of this research presents the general description of the material and methods used including the description of the case studies, the governance principles, and the SWOT analysis. Section 3 introduces the results and provides a set of good practice guidelines. Finally, some general conclusions are provided.

## 2. Material and methods

### 2.1. South Western Waters SSF organisations and pilot studies

The culture of developing a strong participation, including all stakeholders, in the decision-making process might lead to a new-style governance of the South Western Waters area, Map 1, (ICES<sup>2</sup> subareas 8, 9, and 10 (waters around the Azores)) and CECAF<sup>3</sup> areas 34.1.1, 34.1.2, and 34.2.0 (waters around Madeira and Canary Islands). Key countries in those waters, Spain, France, and Portugal are considered to examine the participatory processes involving SSF at different management levels (local, regional, national, and European). *This research starts getting knowledge and collecting the 333 organisations which represent the fundamentals of the SSF governance structure in those countries (covering 18,000 vessels, 65% under 12-m). This research has produced an online interactive database, available at <https://mare.azti.es/action-1/>, which shows the 23% of the organisations do not develop any SSF representation role - networks of fishing workers, fisherman wives, NGOs, and Fisheries Local Action Groups (FLAG)... -. They reach up to 28% when the Producer Organisations (POs) are included developing mainly market-oriented activities. The remaining 72% represent exclusively fishing fleet interests, being the cofradías (30% in Galicia) and federations in Spain, associations of shipowners, federations and confederations in Portugal and fishery committees in France.*

This research has followed a participatory process together with these organisations' stakeholders to reach the main outputs, who have also contributed to the identification of 11 pilot studies (Table 1) represented at Map 1 which are not just narrative descriptions of real-life experiences, but they provide information to help in the identification of a set of good SSF governance practices.

### 2.2. Good governance principles

Improving SSF governance means, among other types of actions, incorporating and complying with a series of principles and values linked to the procedures for formulating and implementing new management proposals and making-decision procedures. One of the objectives of the new governance is to reduce the trust gap between the SSF representatives and public institutions to encourage greater collaboration between them, which can lead to the further strengthening of institutions and, probably, to greater effectiveness and success in the proposals and policies implemented. The main objective of this research is to analyse the extent of SSF representatives' involvement in the decision-making processes using an analytical framework based on the good governance principles: legitimacy and representativeness, accountability, inclusiveness, transparency, among others (Fig. 1) following previous literature Turner et al. [19], Schumann [17], Charbonneau [1], Martín and Berkes [11], Perez de Oliveira [15], Chuenpagdee [2], Jones, Qiu and De Santo [6], Roldán Ortiz [16].

### 2.3. SSF governability status: a participatory SWOT analysis

A diagnostic of the SSF governability with emphasis in the participation and influence of the SSF in the decision-making at various levels was developed performing a Strengths, Weaknesses, Opportunities and Threats analysis (SWOT, [5]). A SWOT allows to improve the understanding of external and internal factors affecting SSF to maintain/reach its good governance status, following previous SWOT applications in marine issues as state [4,14,20]. A key aspect of the research is the participatory approach followed to produce the SWOT, with the engagement of all key organisations (Fig. 2). A set of interviews, meetings and workshops with stakeholders were organised to get information

<sup>2</sup> The International Council for the Exploration of the Sea

<sup>3</sup> Fishery Committee for the Eastern Central Atlantic



Map 1. MARE project area and case studies.

on these factors, but also, to weight the different statements included in the SWOT matrix (usually not considered, [8]). A total of fifty stakeholders attended each of the four meetings between 2016 and 2017 and, two dynamic workshops organized under the framework of the SWWAC regular meetings ensuring stakeholder's engagement. Additionally, more than ten structured personal interviews were developed with stakeholders from selected case studies including boat owners, SSF's representatives and government officers from local administrations.

### 3. Results

#### 3.1. SSF representativeness status in the Atlantic Area

This subsection shows the SWOT analysis results co-created with the key AA stakeholders, the main factors acting as barriers to reach accurate values of each of the good governance principles, both weaknesses and threats. The main helpful factors, both opportunities and strengths, are also identified.

##### 3.1.1. Threat factors

According to the **Legitimacy Principle**, there is not a clear definition of the SSF concept which hampers the potential union of SSF fishers at supra regional levels. In addition, the **Accountability Principle** is mainly threatened by the current government-oriented models (mainly in SP and PT) which offer few opportunities to challenge the rules, which at the same time is closely linked to the administrators' responsibility. Many of the decisions and actions taken by higher-level organisms are of a political character, rather than intended to improve the management of SSF. As a result, a negative empirical perception is produced, e.g., in

regions with many organisations, the representativeness is very atomised (Galicia, SP): the fishers small associations perceive their upper-level representatives – federations – as non-functional organisms, distanced from their real-life problems. At the European level similar perceptions are reported. E.g., the role of the advisory council, SWWAC which does have the power to change the future rules affecting SSF but, it can only provide advice within the framework of different consultation processes, although producing sometimes incidence.

**Inclusiveness Principles** analysis allows to check a low level of SSF active participation in decision making, generally produced due to the weaknesses in the consultation mechanism itself, which usually has not been developed under appropriate conditions of representation. Take for instance the consultative processes promoted by the EC through the SWWAC, not allowing real participation because the EC usually involves SWWAC at the late stage of the proceedings, when only comments on the specific EC proposals can be formulated. In general, fishers usually take part in the decision-making through federations and *cofradías* in Spain, fishing committees in France, and fish associations in Portugal. However, the capacity of the fishers to maintain that participation is very low due to the lack of incentives which implies that few proposals are transmitted in the bottom-up direction.

Equally relevant it is the **Transparency Principle**, threatened because in general, only information on daily issues reaches the bottom-level institutions immediately, bottlenecks emerge at different upper decision levels based on different reasons: (i) the lack of economic resources at the top levels of representation to manage the information, (ii) poor top-to-bottom "return flow" and (iii), among fishers, lack of interest.

Finally, **Resilience Principle** allows to confirm that the procedures

**Table 1**

Governance structure (type and number of organisations representing SSF, Nb. SSF org.) at national level and selected pilot studies at regional level.

National			Regional				Case study	
Country	Governance structure: type of organisations and stakeholders	Nb. SSF org.	Region	Characteristics		Nb. SSF org.	Case study title	Goal reached after SSF influence on decision-making process
				SSF vessels	SSF/LSF vessels			
				Length overall, LOA < 12 m				
France	Committees for Maritime Fisheries and Fish Farming: A National Committee (CNPMM), 14 Regional Committees (CRPMM), 12 Local and interdepartmental Committees (CDPMM or DIDPMM). Some of them taking part at SWWAC. Regional and National administration also involved. Also, other stakeholders as researchers involved at a very high extent	16	Aquitaine	223	73,11%	4	<b>FR1</b> - Regionalisation of technical measures for the clam stock (a self-management)	To get incidence on European space - to reach a regionalisation of technical measures established for the clam stock.
							<b>FR2</b> - Influencing EU EMFF proposal	Influencing the EMFF European proposal. The change affects the aid for modernisation of the SSF fleet engines.
Spain	Cofradías (public corporations) which are the organisations where the owners and crew are associated. These act as consultation and collaboration bodies of the competent authorities. Cofradías are grouped into provincial federations, joined into a national federation. All of them participating at SWWAC. Regional and National administration also involved. Also, other stakeholders, as researchers involved at a very high extent	234	Basque Country	51	25,37%	18	<b>SP_BC1</b> - Enhancing SSF power decision-making at national level using regional high-quality data	To increase the quality of the data and bottom-up information flow, empowering SSF representation at national level. To support the SSF spatially and coastal management by regional administration
							<b>SP_BC2</b> - local SSF fishers' promotion of Barnacle fishery regional management plan	To introduce a regional management plan to diversify the fishing activity
							<b>SP_BC3</b> - local self-management of mackerel fishery quota	To introduce a self-management of mackerel quota avoiding traditional race for the fish, breaking the historical Top-down management model.
			Canary Islands	666	84,84%	44	<b>SP_CI1</b> - Changes in management measures for anchovy and bluefin tuna fisheries	To promote regional management proposals (minimum legal size for anchovy, and fishing season for bluefin tuna) supported by EU bodies (Scientific, Technical and Economic Committee for Fisheries, STECF) and external fisheries bodies (International Commission for the Conservation of Atlantic Tunas, ICCAT)
							<b>SP_CI2</b> - Co-development of an SSF management plan in the waters of Fuerteventura	To develop a SSF management plan in a conservation area. Conservation and fishing control, surveillance, and monitoring issues following a new participatory process promoted by a third part (NGOs)
							<b>SP_G1</b> - New management of the Spider crab	To formulate a bottom-up new proposal for the establishment of annual management plans
			Galicia	3883	85,59%	98	<b>SP_G2</b> - Regional shellfish co-created management plan	A participatory process to define the annual shellfish management plans plan
							<b>SP_G3</b> - Marine Reserve Os Miñarzos an initiative of SSF fishers	The creation of the Marine Reserve of Fishing Interest (MRFI) Os Miñarzos is a pioneer initiative promoted and developed by the SSF fishers. A reference in Europe of a joint-management model (the co-management is equal for all the participants)
Portugal	Associations of ship-owners, private entities that in some cases obtain the status of Producer Organisations. Some of them taking part at SWWAC. Regional and National administration also involved. Also, other stakeholders, as researchers involved at lesser extent	83	Portugal North	523	71,94%	13	<b>PT1</b> - Establishment and management of a compensation fund for fishing professionals	Social nature (economic aid). To assure the economic viability of the sector when fishing is curtailed due to circumstances beyond the control of the fishers.



Principle	Definition and questions related
Legitimacy	Stakeholders must act with integrity and commitment. Legitimacy is related to the processes of representation of an organization or a collective. These processes must be participatory and democratic so that the representativeness of an organization is perceived as legitimate by other actors and institutions.
Transparency	The level and quality of the information transferred from the top to the bottom levels, from the European level to the local level across the governance structure in place. Also, the information transferred from bottom to up levels <i>What is the way of imparting the information? Does the information reach all the represented stakeholders?</i>
Accountability	The existence of a governance structure that allows stakeholders to participate in decision-making. Also, the representatives must have a desire for improvement by promoting a sustainable activity, a sense of responsibility, and commitment. Accountability is a part of the engagement concept <i>Are there ways to challenge the rules? Are there a will, commitment, and responsibility for changes?</i>
Inclusiveness	It is the ability of stakeholders to participate in decision-making. Inclusive management should include the marginalized stakeholders. The term might refer to the mere presence of stakeholders in the different fora (passive) or to their ability to influence the decision-making by active participation. <i>Do SSF stakeholders participate in decision-making? Are SSF fishers and local organizations willing to be involved in decision-making fora? Are they obliged to do so?</i>
Engagement	Engagement includes the accountability and inclusiveness principles. It is the ability to participate in decisions and use the opportunities to challenge the rules.
Fairness	<i>Are all the stakeholders in the same representation system treated fairly?</i>
Connectivity	The representative bodies are effectively connecting with other (governing) bodies. The relationship between the private and public organizations that, despite their differences, are aligned and articulated to achieve the same objective <i>Does connectivity exist between the stakeholders?</i>
Resilience	Resilience is the final goal of the governance. It is the capacity to withstand pressure and adapt to changes in the management environment. It means that the organizations are flexible, can learn, and respond efficiently to the challenges of the socio-economic, political, and environmental character. <i>Does the system have enough resilience to withstand the future changes represented by the SSF? Are there any plans in place?</i>

Fig. 1. Good governance principles.

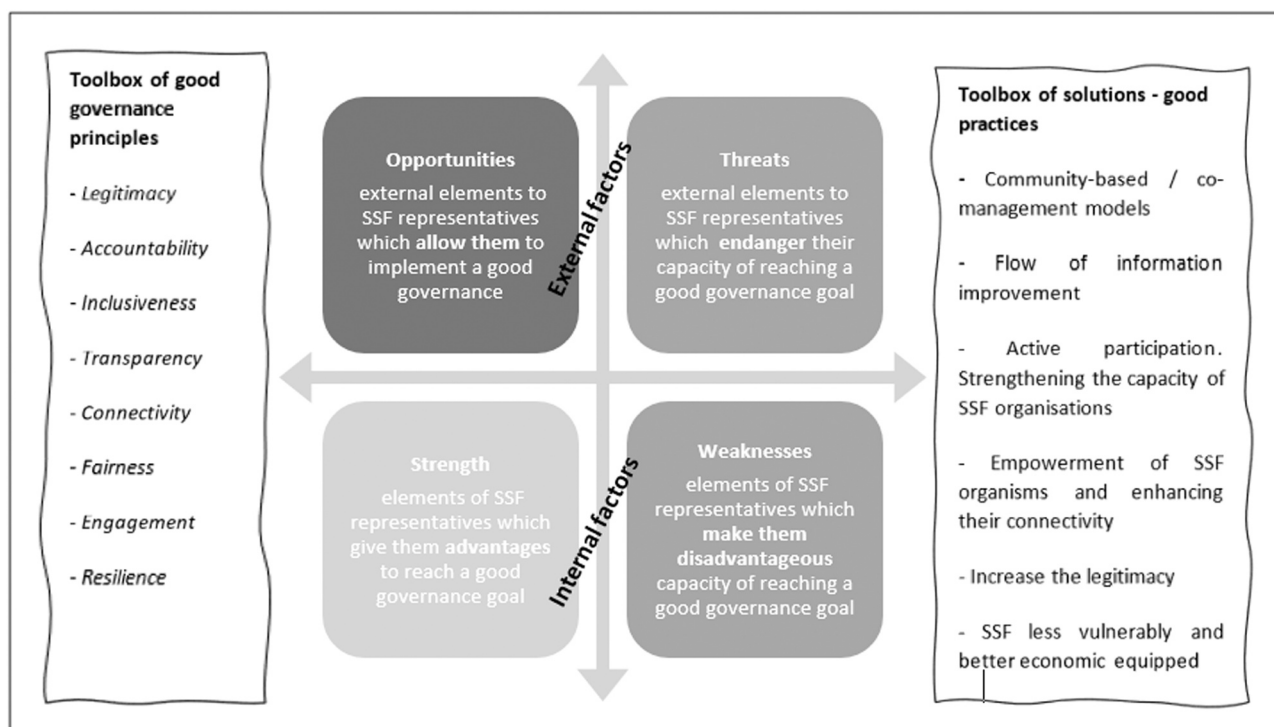


Fig. 2. Ensure participatory - strategic (SWOT) to maintain/reach SSF good governance deal with good governance principles.

and governance structures are very rigid; and therefore, the introduction of alternative proposals is difficult and complex in a consultation-based process. In addition, bureaucratic obstacles hinder the access to the EMFF economical resources, together with low funding eligibility and lack of EMFF actions related to innovation in governance.

### 3.1.2. Weaknesses factors

In Spain, in contrast to Portugal and France the small-scale sector is

very atomised which force the internal legitimacy to be usually broken leading to the creation of non-official associations which results in duplication of efforts in the representation process. The **Accountability Principle** is also far from being reached due to the weak shared-responsibility, low commitment, and lack of willingness to improve the sector sustainability. Some fishers are reluctant to take part in the decision-making process exacerbated by the centralised models. They are usually strongly linked to few topics, fishing possibilities and the



allocation rules for the different fishing technologies and vessels. Moreover, the **Transparency Principle** is difficult to be satisfied: the lack of activity on the Internet and a weak digital culture among the fishers, which make that a part of the available information remains unnoticed even though it is published by the top-level organisations. Also, a scarce-to-moderate bottom-up transfer of the information on the SSF activity. Finally, unfortunately, the fishers are not inclined to read the documents. This can give rise to a chain of misinterpretations, distorting, intentionally or not, the original message.

### 3.1.3. Opportunity and strength factors

**Accountability and Connectivity Principles** are key to understand how some organisations are moving towards a community-oriented model at the local level, which is the only way of overcoming the rigidity of the current government-oriented models. It is also important to remark the good formal governance structure already in place in the AA, with strong channels of connectivity at different levels. No more structure is needed in Spain and France although it might be improved at Portugal creating upper-level organisations. And therefore, **Inclusiveness Principle** is well represented in terms of participation and involvement of the SSF representatives at the different institutions. It is also remarkable the new opportunities for SSF to participate at the European decision level, thanks to the Traditional fisheries Working Group under the SWWAC, which structure allows the fishers to propose measures which are channelled to the EC (although it needs to be improved, as already stated). Finally, the aim through **Resilience Principle** is well covered, thanks to the opportunities launched by the EMFF, which especially differentiates the SSF, and the role of the FLAG. Although, it is needed to overcome previously commented bureaucratic obstacles to access the EMFF.

### 3.2. Successful governance across key case studies

This section provides key good governance examples provided by the AA stakeholders through a selection of case studies. Some of the successful governance examples reach certain political incidence being almost always transposed into legislation (except in FR1 and SP\_BC3) which favours the Resilience Principle's satisfaction. In general, the local/regional fish organisations act as promoters of new proposals influencing local/regional or even upper levels (except for PT1), being the role of NGOs key in two of the cases (SP\_C12, SP\_G3). The way of reaching the European decision level from very local or regional proposals is through a good collaboration with national bodies and/or using the SWWAC channel (FR1, FR2, SP\_C12). Good collaboration is usually operationalised through the creation of ad-hoc working groups, as fishers' group of reference generally used in the Basque case studies (SP\_BC1, SP\_BC2, SP\_BC3). Notably, in some cases, the external agents, such as the civil society (NGOs) or appropriate research institutes, acted as key drivers being the promoters or leaders of the proposals, and guiding local/regional fishing organisations with technical support (SP\_BC1, SP\_C12, SP\_G3). These external agents increase the technical capacity of the local/regional organisations. For instance, scientific researchers help through the development of pilot projects and reports in some of these case studies, also the introduction of technicians inside the cofradías (SP\_G2, SP\_BC3, FR1). A key driver conducting to a good governance is the existence of clear incentives in place. It is stated case studies' initiatives are associated with tangible incentives, not necessarily linked to the traditional fishing possibilities, which allows increasing the local and regional fishers' responsibility. Incentives as increasing the SSF reputation in comparison to other fishing and non-fishing activities (SP\_BC1), market-based incentives (FR1, SP\_C11), rent-diversification (SP\_BC2), conservation zones regulation (SP\_C12, SP\_SP\_G3), among others. It's crucial to work with a homogeneous group when promoting a new proposal, alternatively, the identification of common incentive/s across heterogeneous groups/interests. Only one of the case studies provides an example of creation a pure joint-

management model [13,18], reference for the whole Europe (SP\_G3), which represent the excellence in good governance being the fishers themselves the promoters of this new model, in contrast to the most traditional rigid top-down management models. Thus, the other case studies promote the co-creation groups of decision as a way of supplying the lack of those co-management or joint-management models. Common aspect across the case studies is the good coverage of the Connectivity but also the Accountability Principles, underlying a high degree of fishers' responsibility in part due to the good clearly stated incentives. A summary of these aspects is showed in Table 2. A detailed description of them is available at the Supplementary Material.

### 3.3. Good practices guideline

This section, based on the participatory SWOT and cases studies outputs, identifies a set of good practices (GP) co-created together with the stakeholders avoiding the one-off consultation at the beginning or the end of the research. Special attention was paid to those GP favouring participatory management models, effective information flow and encouraging the responsibility for SSF governance. Awareness raising on the necessity of adopting a management system based on cooperation. These good practices and specific actions helping their implementation are now exposed.

#### 3.3.1. Accountability principle

**GP 1: Move towards a community-focused governance to exploit the opportunities to change or influence decision-making**, to be enhanced through the adoption of specific actions as: (i) to promote participatory processes by creating (local) working groups for specific topics, engaging the stakeholders, e.g., fishing sector, public sectors, NGOs, research institutes and social communities. (ii) To promote participatory processes by organising workshops, focus groups and meetings with the stakeholders. (iii) To identify groups of fishers by port, with the highest level of responsibility acting as drivers locally. (iv) To identify external agents, e.g., NGOs and trade unions to dynamise participatory processes. (v) To create co-management committees at local and regional levels, advancing decentralisation at these. And (vi) to promote self-management at a local/regional level to regionalise the existing national and/or European legislation.

**GP 2: Empowerment of SSF representatives through co-management by recognising the legitimacy of the participants**. Specific actions: (i) developing mechanisms for equal, inclusive, and proactive participation. (ii) Increasing transparency in communication, building trust. (iii) Establishing mechanisms for horizontal and periodic communication. (iv) Strengthening the sense of the responsibility of the promoter group for the objectives to be achieved. (v) Increasing connectivity with other stakeholders. And (vi) engaging a facilitator, building trust and mediation/conflict management.

#### 3.3.2. Transparency principle

**GP 3: Improvement of top-down - from the EC to local levels - information transfer** promoting that all information used in decision-making is communicated to all stakeholders, reaching the local level. To this end some practices are for adopting: (i) training to improve the level of functional literacy in the sector. (ii) Promoting the use of digital tools to access the European-level information. (iv) Boosting the knowledge transfer related to European issues.

**GP 4: Effective and transparent bottom-up flow of information**. There is an urgent need to reinforce the basic data supply, e.g., the activity-related quality information and its bottom-up flow in real time. Specific actions helping: (i) to promote the use of digital tools to transfer the activity from all SSF vessels. (ii) To training of the fishers in the use of digital tools. (iii) To develop collaborative platforms with representative vessels to collect good-quality data.

Table 2

Promotion/affected level, legal impact, key drivers, and principles conducting good governance across selected case studies.

Region	Case study	Promoter Level <sup>a</sup>	Influenced Level <sup>b</sup>	Legal impact <sup>b</sup>	Promoter stakeholders	Drivers conducting a good governance	Governance principles notes
Aquitanie	FR1	L	L	N	Local fishers Regional scientists National fishing committee, CNPMM SWWAC	<i>Few fishers involved (homogeneous group)</i> <i>Fishing interests</i> of the group are similar Urgent needs due to the lack of updated/new biological/economic impact assessment reports. <i>Strong incentives</i> : high economic relevance for SSF, poor biological state of the clam stock and potential difficulties in controlling and enforcing the minimum sizes – market problems.	<b>Accountability</b> high degree of fisher responsibility supported by strong incentives <b>Connectivity</b> good collaboration between French fishery committees, regional scientists and SWWAC <b>Inclusiveness</b> no response from the EC after many years of demanding the change. <b>Resilience</b> the proposal still exists and high capacity from local to national representatives to influence on decision-making. No legal impact
	FR2	R	L, E	Y	Regional fishing committee, CRPMM National fishing committee, CNPMM SWWAC	The initiative associated to <i>great incentives</i> to SSF. <i>Strong role of co-legislators</i> .	<b>Connectivity</b> good collaboration between French fishery committees, CRPMM, CNPMM and SWWAC <b>Transparency</b> good transference of information related to European matters - draft text of the EMFF <b>Accountability</b> high degree of fisher responsibility although no immediate effect on the SSF but it might have effects in the future <b>Resilience</b> No legal impact at EC, eventually, a legal impact will be felt due to the co-legislators.
Basque Country	SP_BC1	R	R and N	Y	Regional research institute Regional administrations SSF local and regional representatives (Federations, Cofradías) SSL fisher group of reference	<i>Strong involvement</i> at the local level (collaboration between a research institute, regional administration and SSF fishers and their representatives) <i>Economic support</i> in place thanks to EFFM to support the proposal. <i>External facilitator</i> – the regional research institute acted as a facilitator Identification of a <i>SSF fishers group of reference</i> at key ports (no official) <i>Incentive in place</i> : The incentive of improving the reputation of the segment in comparison with other potential maritime users.	<b>Accountability</b> high degree of fisher responsibility. Self-imposed measures for data collection on board, in real time. Co-design of new data-collection devices <b>Connectivity</b> very good connectivity between fishers, scientists, and administration at local/regional level <b>Inclusiveness</b> high ability of regional stakeholders to participate in local decision making <b>Inclusiveness</b> loss of opportunities at national level due to lack of real-time data on quota use. <b>Transparency</b> to improve the bottom-up transfer of catch data usually poor (from local to regional and national levels). <b>Resilience</b> local political incidence
	SP_BC2	L	L	Y	Local fishers Local representatives (cofradía) Regional scientists Regional government	<i>High economic incentives: new diversification way.</i> <i>Scientific supported. A pilot project</i> , developed by scientists, promoted to support the necessity of protecting the species, and develop its exploitation by small-scale fishers. The measure is adopted in internal waters where the regional administration has <i>exclusive competence – easier to progress</i> . Very few vessels involved, and the group is very homogeneous with common interest. <i>A fisher's group of reference</i> in the region	<b>Connectivity</b> good and direct collaboration between cofradías, regional administration and the regional research institute. <b>Inclusiveness</b> high ability of regional stakeholders to participate in local decision making and influence national space <b>Resilience</b> local political incidence
	SP_BC3	L	L	n.a	Regional representatives (Federations) Local fishers	High number of different vessels but with a <i>common and concrete interest</i> to good manage the mackerel fishery, during a short time (conservation and economic). An informal group/ commission is created for SSF to manage mackerel quota	<b>Legitimacy</b> <i>high trusted</i> fishers 'representatives' (Federations) which is key to organise a common pool of mackerel quotas (not looking for political incidence, just a self-management common trust agreement) <b>Accountability</b> the traditional top-down model for managing fishing possibilities is changed in favour of self-management at the local level.

(continued on next page)

Table 2 (continued)

Region	Case study	Promoter Level <sup>a</sup>	Influenced Level <sup>b</sup>	Legal impact <sup>b</sup>	Promoter stakeholders	Drivers conducting a good governance	Governance principles notes
Canary Islands	SP_CI1	R	R	Y	Local Fishers National and regional administrations SWWAC (Insular WG) ICCAT RFMO	<i>Market incentive: Opportunity to exploit resources with established market acceptance</i> <i>The proposal is supported by technical documents and advice from ICCAT and RFMO. The role of the SWWAC and the evaluation of the STECF were key factors.</i> The fisheries consist of homogeneous fleets involved in small-scale fishing	High degree of fisher responsibility <b>Resilience</b> no legal incidence is expected
	SP_CI2	L	L	Y	NGO National, regional, and local governments Fishers' representatives (cofradía)	Hard incentives: The fishing activity in a conservation zone needs to be regulated. The region has limited marine space for small-scale fishing activity; there is a threat of illegal fishing The fishery consists of a homogeneous fleet involved entirely in small-scale fishing. An external agent (NGO) promotes the initiative A working group engaging a large variety of stakeholders, e.g., fishing sector, public sector, NGOs, academia co-design the management plan	<b>Legitimacy</b> the promoter is legitimated to participate and play a leading role even though it does not an agent belong to the fishing sector. <b>Accountability</b> the Spanish government provides sufficient flexibility to accommodate a management plan led by an external actor. <b>Inclusiveness</b> - All actors concerned participate in the development of the management plan.
Galicia	SP_G1	R	R	Y	Regional administration Provincial Federation of Cofradías	A bottom-up proposal Mutual trust Common goals in the area	<b>Accountability</b> a top-down management introduced by regional administration with no influence possibilities. Thus, to improve it a bottom-up proposal is launched. <b>Transparency</b> lack of transparency creates problems in connectivity which are improved using the mutual trust and common goals. <b>Resilience</b> local political incidence
	SP_G2	L-R	L- R	Y	Regional administration Shellfish-collecting groups, Gatherers' representatives (Provincial Federations)	Regional administrator promotes the initiative but working groups are created Co-developed with stakeholders Incorporation of technicians into cofradías to support the sector Incentives: sustainability and professionalisation of the sector	<b>Accountability</b> high degree of responsibility; the sector is involved in decision-making through working groups. <b>Inclusiveness</b> the sense of belonging to working groups is strong, decisions are taken collectively. The sector is helped by technicians and the regional administration. <b>Transparency and Connectivity</b> – high degree. <b>Resilience</b> local political incidence
	SP_G3	L	L	Y	Local cofradía NGO	Successful past experiences of the Cofradía of Lira Confidence in an external collaborator in the process who led the process dynamisation. Employment of tools and actions to reinforce motivation. Incentives: the creation of a Marine Reserve of Fishery Interest – sustainable resource management Creation of a joint management	<b>Accountability</b> strong motivation of fishers and high receptivity of all political parties. <b>Connectivity</b> external actor dynamises the process of participation of fishers together with the regional administration. <b>Resilience</b> local political incidence
Portugal	PT	N	N	Y	National administration	Economic and social incentives. A participatory management committee (act as working group) is created in which the administration and fishing sector take part.	<b>Accountability/Inclusiveness</b> a management committee of the fund with fishing-sector participation. <b>Transparency</b> good level of transparency. <b>Resilience</b> political incidence is not a goal

<sup>a</sup> Promotion and affected levels: (local (L) /regional (R) /national (N)<sup>b</sup> Existence (Y), not (N) or not applicable (n.a.) of legal impact.



### 3.3.3. Inclusiveness principle

*GP 5: Improve the active participation in decision-making by strengthening the capacity of representative organisations and fishers*, using specific actions as (i) to provide technical reports supporting the proposals. (ii) To promote technical assistance. (iii) To facilitate the inclusion of external agents (e.g., NGOs, trade unions or scientific research institutes), who may help in promoting and leading the proposals. (iv) To identify incentives beyond allocation of fishing possibilities, its own professionalisation, or its higher visibility. (v) To conduct training activities to overcome the lack of knowledge of scientific, legal and policy matters. And (vi) to facilitate access to economic resources.

### 3.3.4. Connectivity principle

*GP 6: Empowerment of SSF organisms and enhancing their connectivity*. The networks of fishing workers and the associations of fisher wives and net-menders, among others, can support the connections between stakeholders. However, these networks represent less than 2% of the current organisations and therefore, it is required: (i) to create cross-border networks and promote the connection of already existing organisations. (ii) To promote the participation of the newly created networks in the decision-making processes. Or (iii) to create unofficial SSF committees under the umbrella of the existing organisms.

### 3.3.5. Legitimacy principle

*GP 7: Empowerment of the SSF identification and visibility under a common interest framework to increase the legitimacy*. With this aim: (i) fora for collaboration within and between fishing sectors and with other actors. When the knowledge is shared, the actions are perceived as legitimate. In addition, it is necessary to agree on the definitions (e.g., SSF definition) to be adopted in specific contexts/proposals. It is not necessary/possible to establish a definition for all purposes.

### 3.3.6. Resilience principle

*GP 8: Make the SSF less vulnerable and economically better equipped to face the governance changes*. Specific actions: (i) to make sure that the regional operative programmes include eligible costs related to the coastal SSF Action Plans. (ii) To promote the innovation in governance as a part of the coastal SSF Action Plans. (iii) To consider obtaining technical assistance to access to the EMFF economic resources. (iv) To interest the SSF representatives in the use of EMFF support and its advisory services.

### 3.3.7. Other practices

*GP 9: Enhance the access to the European decision level*. The consultative processes promoted by the EC through the SWWAC is key for the SSF to favour its active influence. However, that consultative processes should benefit from a set of good practices: (i) proposals from the EC to the SWWAC should be anticipated, and advice sought at the early stages of their preparation and accompanied by a background overview document describing the context. (ii) The mechanisms of decision processes should be explained to the stakeholders, with all the stages clearly outlined and, to what extent the proposal can be affected by SWWAC should be clearer by EC. (iii) The proposals from the EC should reach the SWWAC within time margin sufficient to translate them and to prepare and deliver the relevant SWWAC comments.

*GP 10: Enhance the active participation of SSF representatives in the European decision-making via the Traditional Fisheries Working Group (SWWAC)*, with actions like (i) to define the specific objectives of this group. ii) To introduce participatory tools. (iii) To provide the group with scientific and technical support. (iv) To encourage the use of EMFF to facilitate the participation of all representatives in the working group.

## 4. Conclusions

The governance theory identifies good governance principles which helps to address the weaknesses and threats that limit the participation

and influence of the SSFs in decision-making at different decision levels. It can also be used to establish the key features needed in the design of good SSF governing systems. The SSF governance problems are not necessarily linked to a lack of representation but to the degree of compliance with governance principles; being the representation only one of the aspects.

The cases described here and the lessons to be learnt vary considerably, even within the same country (e.g., the atomised SSF in the region of Galicia compared to c COom SSF in the Basque Country). The information gained from such analysis could help to improve the SSF governance by following a common set of good practices applicable to SSF governance in all regions regardless of geographical location or specific singularity of the SSF. This research includes a list of actions for putting in practice the transition towards more participatory models, co-created together with the key stakeholders aiming a better acceptance of them.

The study emphasises the increasing necessity of adopting more participatory systems, such as community-based or even co-management models like the joint-management model reached to manage the Marine Reserve Os Miñarzos (Galicia). Regions are moving in the right direction getting good local or regional SSF governance, even when rigid European or national top-down governance models are already in place. The pathways towards enhancing the SSF participation in decision-making should be based on strengthening and continuing drive towards local/regional empowerment of the SSF representatives, a certain “devolution of power” [12]. Also, empowering the representatives and stakeholders by using external contacts (e.g., the civil society) and developing new networks are effective ways of improving the quality of governance. The solution at the local and regional levels is not to create more organisations to represent SSF but to reinforce their connectivity by creating new networks, platforms, or even non-official commissions/working groups with the already existing bodies. Only a substantial enhancement in the responsibility of both fishers and representatives can assure improved SSF governance. However, increasing the level of responsibility is a challenging task, given few opportunities to engage these stakeholders unless establishing a set of incentives different from the quota allocation.

Economic support is also necessary to increase the technical capacity of the SSF representatives. As a direct result of this research the EC proposes that MS include in their EMFF related Operational Programmes an Action Plan for small-scale coastal fishing, which will have to include promotion of skills, knowledge, innovation and capacity building; involvement in the participatory management of the maritime space, including Marine Protected Areas and Natura 2000 areas; and collective organisation and participation in the decision-making and advisory processes (Art. 15 EMFF COM (2018)390).

Some of the examples discussed here indicate the involvement of external agents improves the SSF governance, especially in atomised areas where the efforts to improve the governance processes are hampered by the differing interests of (even legitimate) SSF representatives. It often helps to involve third-party stakeholders in the SSF governance (e.g., the civil society: NGOs, trade unions...), who might even have different primary aims, such as leading a new process or providing knowledge from a different point of view.

Several actions can be recommended for governing the SSF in the Western Waters starting with a participatory democracy. The stakeholders should be involved at the very beginning of any new management planning process, not just at late stages of the final analysis. This requires a clear definition of the rules, guidelines, and timing at all the decision levels, which should be efficiently disseminated to the stakeholders. To increase the exchange of information on Europeans issues between the local and national levels, new tools are urgently needed. This applies mostly to the top-down data/information flow, but also to the bottom-up transference of data/information. The SSF representatives must be well organised; otherwise, their opinions might appear fragmented or even contradictory, as has been shown by real-life

examples from atomised SSF sectors.

This research includes a good practice list addressing these concerns co-created with key stakeholders involved in the SSF representativeness and management in the AA. The future step will rely on the assessment of the degree of implementation of the proposed set of good practices already transferred to all stakeholders involved in the SWWAC.

#### CRediT authorship contribution statement

**Arantza Murillas-Maza:** Leadership, Conceptualization, Methodology, Resources, Writing - Review & Editing. **Antonio García-Allut:** Leadership, Conceptualization, Methodology, Resources, Writing - Review. **Martin Aranda:** Conceptualization, Methodology, Resources, Writing - Review. **César Pazos:** Conceptualization, Methodology, Resources, Writing - Review. **Ane Iriondo:** Conceptualization, Methodology, Resources, Writing - Review. **Miriam Montero:** Resources, Writing - Review.

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#### Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.marpol.2021.104533](https://doi.org/10.1016/j.marpol.2021.104533).

#### References

- [1] A. Charbonneau, Integrated coastal management: ‘wicked’ problems and ‘clumsy’ solutions, *Arbutus Rev.* 3 (1) (2012) 23–36.

- [2] R. Chuenpagdee, Interactive governance for marine conservation: an illustration, *Bull. Mar. Sci.* 87 (2) (2011) 197–211.
- [4] L. Freire-Gibb, R. Koss, P. Margonski, N. Papadopoulou, Governance strengths and weaknesses to implement the marine strategy framework directive in European waters, *Mar. Policy* 44 (2014) 172–178.
- [5] M.M. Helms, J. Nixon, Exploring SWOT analysis—where are we now? A review of academic research from the last decade, *J. Strateg. Manag.* 3 (2010) 215–251.
- [6] P.J.S. Jones, W. Qiu, E.M. De Santo, Meta-analysis of pharmacogenetic interactions in amyotrophic lateral sclerosis clinical trials, *Neurology* 89 (2017) 1915–1922.
- [7] S. Jentoft, R. Chuenpagdee, Interactive Governance of small scale fisheries. *Global Reflections*. MARE Publications Series N13, Springer International Publishing, 2015.
- [8] M. Kajanus, P. Leskinen, M. Kurttila, J. Kangas, Making use of MCDS methods in SWOT analysis—Lessons learnt in strategic natural resources management, *For. Policy Econ.* 20 (2012) 1–9.
- [9] J. Kooiman, Governability: a conceptual exploration, *J. Comp. Policy Anal.* 10 (2) (2008) 171–190.
- [10] J. Kooiman, M. Bavinck, Theorizing governability—the interactive governance perspective, in: M. Bavinck, R. Chuenpagdee, S. Jentoft, J. Kooiman (Eds.), *Governability of Fisheries and Aquaculture: Theory and Applications* Dordrecht, Springer, New York, 2013.
- [11] M. Martín, F. Berkes, Network approach for understanding small-scale fisheries governance: the case of the Chilean coastal co-management system, *Mar. Policy* (2010).
- [12] P. McConney, R. Pomeroy, R. Mahon, A novel framework for analyzing conservation impacts: evaluation, theory, and marine protected areas, *Ann. N. Y. Acad. Sci.* 1399 (2017) 93–115.
- [13] J.R. Nielsen, P. Degnbol, K.K. Viswanathan, M. Ahmed, M. Hara, N.M.R. Abdullah, Fisheries co-management—an institutional innovation? Lessons from South East Asia and Southern Africa, *Mar. Policy* 28 (2) (2004) 151–160.
- [14] J. Patricio, S. Little, K. Mazik, K. Papadopoulou, C.J. Smith, H. Teixeira, H. Hoffmann, M.C. Uyarra, O. Solaun, A. Zenetos, G. Kaboglu, O. Kryvenko, T. Churilova, S. Moncheva, M. Bucas, A. Borja, N. Hoepffner, M. Elliott, European Marine Biodiversity Monitoring Networks: strengths, weaknesses, opportunities, and threats, *Front. Mar. Sci.* 3 (2016) 161, <https://doi.org/10.3389/fmars.2016.00161>.
- [15] L. Perez de Oliveira, Fishers as advocates of marine protected areas: a case study from Galicia (NW Spain), *Mar. Policy* 41 (2013) 95–102.
- [16] Roldán Ortiz, A.M. (2013). Alternativas y retos para la gobernanza de la pesca artesanal: una revisión al enfoque de manejo basado en derechos para el Pacífico colombiano. Trabajo de Grado. Pontificia Universidad Javeriana. Colombia.
- [17] S. Schumann, Application of participatory principles to investigation of the natural world: An example from Chile, *Mar. Policy* 34 (6) (2010) 1196–1202.
- [18] S. Sen, J.R. Nielsen, Fisheries co-management: a comparative analysis, *Mar. Policy* 20 (5) (1996) 405–418.
- [19] R.A. Turner, C. Fitzsimmons, J. Forster, R. Mahon, A. Peterson, S.M. Stead. Measuring good governance for complex ecosystems: perceptions of coral reef-dependent communities in the Caribbean, *Glob. Environ. Change* 29 (2014) 105–117.
- [20] C. Zoppi, Integration of conservation measures concerning natura 2000 sites into marine protected areas regulations: a study related to Sardinia, *Sustainability* 10 (2018) 3460, <https://doi.org/10.3390/su10103460>.