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Published in:
Marine Policy

DOI (link to publication from Publisher):
[10.1016/j.marpol.2020.104009](https://doi.org/10.1016/j.marpol.2020.104009)

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Publication date:
2020

Document Version
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

Citation for published version (APA):

Said, A., Pascual-Fernández, J. J., Iglésias Amorim, V., Autzen, M. H., Hegland, T. J., Pita, C., Ferretti, J., & Penca, J. (2020). Small-scale fisheries access to fishing opportunities in the European Union: Is the Common Fisheries Policy the right step to SDG14b? *Marine Policy*, 118, Article 104009.
<https://doi.org/10.1016/j.marpol.2020.104009>

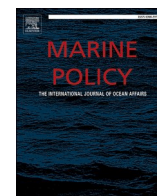
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Small-scale fisheries access to fishing opportunities in the European Union: Is the Common Fisheries Policy the right step to SDG14b?

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ARTICLE INFO

Keywords:

Fisheries quota

ITQs

Social criteria

Equity

SSF Guidelines

Sustainable development goals (SDGs)

ABSTRACT

The profile of small-scale fisheries has been raised through a dedicated target within the United Nations Sustainable Development Goals (SDG14b) that calls for the provision of 'access of small-scale artisanal fishers to marine resources and markets'. By focusing on access to fisheries resources in the context of European Union, in this article we demonstrate that the potential for small-scale fishing sectors to benefit from fishing opportunities remains low due to different mechanisms at play including legislative gaps in the Common Fisheries Policy, and long-existing local structures somewhat favouring the status quo of distributive injustice. Consequently, those without access to capital and authority are faced by marginalizing allocation systems, impacting the overall resilience of fishing communities. Achieving SDG14b requires an overhaul in the promulgation of policies emanating from the present nested governance systems.

1. Introduction

The targets set by the United Nations' Sustainable Development Goals, agreed in 2015, have provided an unprecedented push for the research and policy trajectories in different sectors, based on a comprehensive understanding of sustainability, including the oceans (SDG14) [1,2]. One of the ocean subtargets is SDG14b which calls for the provision of 'access of small-scale artisanal fishers to marine resources and markets'. Such a target specifically dedicated to small-scale fisheries derives from the fact that these are present in almost all countries and account to more than half of total production on average, thus requiring sufficient and distinctive protection in the sustainability trajectories (UN 2019). The main indicator as defined by the UN to monitor the implementation of SDG14b is the progress achieved by countries in applying a 'legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries'

(SDG14b.1).

Achieving SDG14b requires tools and policy provisions which are sufficiently adapted to fit the governance complexities that characterise small-scale fishing systems. It is certainly also contingent on the political will to accomplish the United Nations 2030 Agenda for Sustainable Development as a whole, including the highly relevant SDG 14.6 on the prohibition of fisheries subsidies, which fundamentally underpins sustainable and equitable fisheries [3]. Our focus here is the European Union, and how SDG14b is taking shape, given that the EU Member States (MS) have endorsed the SDGs, and thus require fisheries policy trajectories to achieve this target [4]. The institutional and regulatory framework that determines access to resources in the context of the EU is defined by the Common Fisheries Policy (CFP) [5] - a regional policy which is revised every 10 years to cater for governance needs in the fisheries realm [6]. Chronologically, the latest CFP reform (in 2013) happened two years before the adoption of SDGs (2015), a factor which

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<https://doi.org/10.1016/j.marpol.2020.104009>

Received 14 March 2020; Received in revised form 29 April 2020; Accepted 30 April 2020

Available online 29 May 2020

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might justify why there is no direct link to SDG14, or any of the SDGs, in the CFP (recital or article) text.

However, the Common Fisheries Policy (CFP) does include specific objectives which are in some ways conducive to SDG14b. For example, Article 2 speaks on the need for ‘a fair standard of living for those who depend on fishing activities, bearing in mind ‘coastal fisheries and socio-economic aspects’ (Article 2.5. f). To attain this goal, Article 17 of the same regulation speaks of allocation of fishing opportunities at MS level. Specifically, it states that when allocating fishing opportunities MS *shall use* ‘transparent and objective criteria including those of an environmental, social and economic nature (...) with a consideration to the impact on the environment (...) the contribution to the local economy and historic catch levels.’ Furthermore, the same article establishes that ‘Member States *shall endeavour* to provide incentives to fishing vessels deploying selective fishing gear or using fishing techniques with reduced environmental impact’. Although Article 17 does not specifically mention the terms ‘small-scale’ or ‘artisanal fisheries’, the article is the tool which determines the criteria of access to quota-regulated fishing opportunities across EU countries, and which thus has a leverage on the access possibilities for small-scale fisheries.

With SDG14b putting a clear direction to provide access to small-scale fisheries, it appears relevant to investigate how or whether the EU’s framework is sufficient to reach such a globally-relevant target. Recently, in a European Parliament-commissioned study about the allocation of fishing opportunities, most EU MS affirmed that the ‘social, economic and environmental criteria are considered in setting fishing opportunities, fulfilling the objectives of the CFP’; yet noting that while economic and environmental objectives were easily catered for, ‘social concerns are considered difficult to consider in the allocation process’ [7]. If the social component has been challenging in the allocation of fishing opportunities, is Article 17 – the cornerstone of the EU’s efforts to bring about progress to the small-scale fleets – a sufficient element of the EU CFP to allow or ensure accomplishment of SDG14b?

The small-scale fishing sector in the EU comprises around 75% of the vessels in the EU commercial fleet [8], and considered to consist of small-to-medium-sized enterprises, mostly operating vessels smaller than 12 m not using towed gears [9]. However the sector is quite heterogenous across different EU MS, with many characteristics - including the features of the fleets considered as small-scale - being defined at the national level [10]. Despite such European diversity, numerous studies have demonstrated that the small-scale and coastal fishing communities have faced access issues in the allocation of fishing opportunities to harvest marine resources [11–14]. The overall profitability of the sector has recently been reported to be much lower than the large-scale counterpart [8], and to a large extent this decline appears to have been caused by limited access to fishing opportunities [15].

Fishing opportunities in the EU are determined by multi-scalar governance systems. At the EU level, the Council of fisheries ministers decides on the fishing opportunities, referred to as Total Allowable Catches (TAC) for each MS following the principle of relative stability and scientific advice from ICES or STECF [16]. Once the TAC is allocated to the MS, the responsibility for managing it is with the MS, and no supervisory role is foreseen for any of the EU institutions.¹ Each MS has the discretion to allocate the TAC assigned to it across its fleet segments, small or large scale. Recent research has found that small-scale fisheries are not adequately involved in the allocation process with their needs largely still disregarded [17]. It also states that the allocation of fishing opportunities in the MS still lacks transparency and accountability, and that ‘very few changes have been made in order to allocate quotas according to social and environmental criteria, as required by Article 17

[17]. In this regard it is opportune to investigate the approach of MS to fulfil the objective of SDG14b in the context of the legal framework, specifically Article 17 of the CFP.

In this article, we seek to qualitatively understand what is happening ‘on the ground’. To do so, we draw on four case studies to showcase the issues around “access” for small-scale fisheries by navigating the paradigms of management systems, access to decision-making systems (including governments and the role of fishers’ organizations) and access to capital and to markets. Drawing on Ribot and Peluso’s theory of access [18], we argue that access is determined by ‘the constellations of factors including means, relations and processes that (dis)enable actors to derive benefits from resources’. Thus, understanding access requires an in-depth analysis of how these mechanisms operate to determine one’s ‘ability to derive benefits from things’ [18]. In other words, the extent to which the allocation process provides access to small-scale fisheries is determined by the governance procedures, and the mechanisms that shape the distribution of benefits, which in turn affect resource management and use, efficiency, equity, and sustainability with consequences for well-being, justice, conflict, and co-operation.’ [18].

The scope of this study is not to give a complete picture of the small-scale access issues to fishing opportunities in Europe, but rather to provide detailed insights into common access challenges demonstrated in different countries. In other words, the article provides new knowledge on the complexity that surrounds small-scale fisheries access to resources in the context of local governance systems. Acknowledging the fact that the findings are based on a limited number of examples and exclude many other situations of EU small-scale fisheries, the case studies have been selected by the authors to represent typical or recurrent issues as they happen in different countries. The selection provides insights from different socio-political profiles encompassing different regional seas and fisheries (Mediterranean, Atlantic, Baltic Outermost Regins), which equally showcase that despite the distinctive contexts, realities for small-scale fisheries are similar across the board. In the following section, we define the conceptual and methodological framework to investigate the access issues. Successively we present empirical descriptions of such matters through the case studies, and ultimately we compare and contrast access challenges across the EU context, and provide recommendations for the governance of access paradigms.

2. Conceptual and methodological framework: theorizing the multiple facets of access

This paper is based on a review of existing theories and thinking from published literature, contextualised and substantiated with fieldwork data collected in fishing ports in Denmark, the Canary Islands (Spain), Portugal and Malta. Our methodology combines fieldwork within fishing communities and analysis of policy documents which detail the management systems in the respective MS, to decipher the access issues facing small-scale fisheries. Interviews and participatory observation were conducted with fishers, and such data was complemented with other sources including online forums, media articles, and formal national statements such as management plans, public statements and other statistical information. Through these data sources we detail the challenges and barriers that might be influencing the outcome of access for small-scale fisheries. Empirical analysis here allows us to understand access to resources by SSFs, including the socio-political factors behind them, and how they unfold at the local level. By engaging in in-depth fieldwork and utilizing various published resources, we engage in a process to identify and map the dynamic processes and relationships of access to fishing opportunities (quota). We widen our ‘access lens’ to cater for access to decision-making systems at governmental and fishers’ organization level and access to capital, as well as authority relations, which collectively ‘form strands that constitute and configure webs of access’, and which define the mechanisms by which access is gained,

¹ That the implementation is mostly a matter for MS was also highlighted by the Commission, which noted that ‘the way Article 17 is drafted does not give tools to [the] Commission to do anything drastic’, leaving most of the interpretation to Member States.”

maintained and controlled [18]. By relating the outcomes of access policies to the rubric of the CFP and its implementation, we have been able to showcase the policy gaps and how these have determined the trajectories of access and the fate of small-scale fisheries in different fishing communities across the European coasts.

2.1. Denmark

2.1.1. Management: the vessel quota share system (VQS)

The Danish small-scale fishing sector targets a variety of species with multiple gears across the year; but in general, the SSF fleet targets the same demersal species as the Danish large-scale (demersal) fleet. In 2007, Denmark introduced an ITQ-like market-based fisheries management system, known as the Vessel Quota Share (VQS) system for Danish demersal fisheries, replacing a previous system of periodical catch shares. The initial allocation of quota shares was done on the basis of historical catches and only vessel *owners* were allocated quota (tied to their vessels). Kicking off the process a few years earlier, an ITQ system had been introduced for the more capital-intensive pelagic fisheries. The introduction of the ITQ and VQS systems followed years of failed attempts to bring the Danish fishing fleet capacity in line with biological fishing opportunities and end overcapacity. The national organisation for demersal fishers first argued against an ITQ solution in the demersal fleet, but during the political negotiations the opinion of the board shifted, leaving a large part of the small-scale fishers within the organisation feeling unrepresented.

With the aim of protecting the small-scale fishing fleet in the new market-based management system, the central government² introduced a “coastal fishing scheme” along with the VQS system, to cater for coastal fishing vessels, defined for this purpose as quota share vessels under 17 m with minimum 80% of their fishing trips lasting less than 48 h. Under this scheme, vessel owners sign up for a time-limited period in exchange for additional non-transferable quota calculated on the basis of their own individual amount of VQS (the more one owns, the more one receives). While enrolled, vessel owners can only sell their own quota shares to other enrolled vessels. A fixed amount of quota is tied to the scheme: the more vessels enrolling, the smaller the incentive. In 2014, triggered by a forming alliance between small-scale fishers and environmental organizations, specific provisions for ‘low impact’ fishing gear were added to the coastal fishing scheme. The same year, small-scale fishers formed a new national organization for coastal, low-impact fishers.

Despite the coastal fishing scheme, the VQS system have impacted on the stability of the small-scale segment. According to official statistics, as depicted in Fig. 1, between 2003 and 2016, the small-scale segment (incl. all commercially active vessels) saw a 24% reduction of its share of the value of fish landed - divided between a 33% reduction for the smallest (under 12 m) and a 20% reduction for the ‘larger’ small-scale vessels (here, due to data availability, defined as vessels below 18 m, rather than 17), while the large-scale counterpart (18 m and over) registered a 21% increase of its share, accounting for 64.6% of the total value of landings in 2016, up from 53.3% in 2003. Also within each length category, the share of catch has shifted towards the largest vessels. The changes in the fleet structure has also affected the balance between gears, where trawl is increasingly becoming the dominating gear. Vessels fishing primarily with gillnets, a ‘classical’ Danish SSF vessel, accounted for 14.4% of all Danish landings in 2003, in 2016 this share was reduced to 7.7% Fig. 2.

2.1.2. Access challenges facing small-scale fisheries

Despite the articulated political intention of ‘protecting’ small-scale fishing, the change of management system led to accelerated concentration of quotas on increasingly larger vessels. The coastal fishing

Share of consumption landings (value) by length category

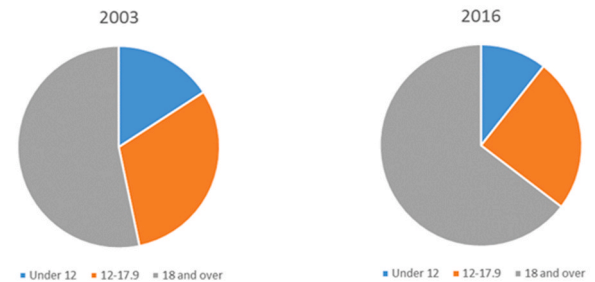


Fig. 1. Share of consumption landings intended for human consumption (value) by length category in 2003 and 2016. The data excludes industrial landings (intended for reduction to e.g. fish meal and oil) and the specialized, blue mussel fishery, but includes pelagic landings for human consumption (mackerel and herring) (based on data from Table 3.11 of the Yearbook of Fishery Statistics of the Danish Fisheries Agency, 2003 and 2016; available at <https://fiskeristyrelsen.dk/english/fishery-statistics/publications/>).

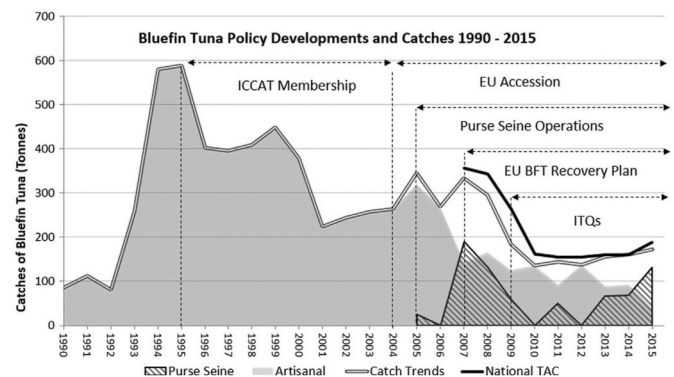


Fig. 2. Maltese bluefin tuna catch statistics between 1990 and 2015 as compiled from the ICCAT database: <https://www.iccat.int/en/t1results.asp?species=BFT&year=1990&year=2014&lflag=EU.Malta&lgear=blank&cgear=all&order=SpeciesCode&lregion=MEDI&btsearch=Search>. The artisanal fishery catches have been predominant between 1990 and 2007 and successively with the reforms of the BFT policies, the catches have declined to commensurate the national total allowable catches, and were mostly caught by the purse seine fleet which was introduced in 2005.

Source: Said et al., 2016

scheme has not been adequate to sustain small-scale fishing. Since it is possible to withdraw vessels from this scheme and then sell VQS in the ‘open’ market, the scheme failed to stop the drain of quotas from the small-scale, coastal fishing segment [19–22]. Similarly, the relative shares of quotas ‘connected’ to various ports have also shifted from smaller to larger ports with severe consequences for some local communities [23]. The decrease of the small-scale or coastal fleet was, as evident from the data, an issue already present before the introduction of the VQS system but before 2007 it followed more or less the general trend of the fleet. In other words, the implementation of the VQS system facilitated and accelerated a number of dynamics that in the past ten years has put Danish coastal fishing under unprecedented pressure. The system was – explicitly – introduced as a means to reduce overcapacity. It was therefore from the outset the expectation that the new system would result in a significant reduction of the collective capacity of the fleet. The question was, however, how the capacity reduction would be distributed across fleet segments; a main parameter turned out to be access to ‘external’ capital.

Looking back, it was a problem that a market-based system had been introduced earlier in the capital-intensive pelagic sector without proper

² Region divisions in Denmark deal mainly with the health sector.

ring-fencing between that and the demersal sector. The pelagic fishermen thereby got a head start in learning to navigate the new management system and the acquisition of quota – in effect they thereby had superior access to both capital as well as knowledge resources on how to manoeuvre in the system. Today, many of the large quota holders in the demersal sector are fishers who started in the pelagic fisheries. As opposed to under the previous system, the VQS system enables vessel owners to use quota shares as collateral for loans. Anyone – small or large – can do so, but evidence shows that larger vessel owners have access to loans (capital) at lower interest rates than the smaller. This affects both the small-scale fishers but also the next generation, who either have to find the financial support to buy into an expensive quota market or have to rent quota shares from fishers, who have been favoured by the market-based systems, and are now also earning money from renting out their quota shares [23].

In December 2016 – prompted by the new national organization for small-scale fishers – a majority in the Danish parliament agreed to introduce further measures to support, among other things, the declining coastal fishing sector, as a way of giving ‘life’ back to the decaying fishing ports and the local economies therein. The agreement, wherein small-scale fishers skilfully injected their ideas on policy preferences – through support from environmental NGOs – contained a new coastal fishing scheme operating alongside the original one [24]. However, contrary to the original, the new scheme does not have an opt-out possibility: enrolled vessels remain permanently in the scheme along with their VQS – thereby restricting the power of ‘large-scale privileged access’ to capital. The incentive for joining – and never be able to sell VQS to (larger) vessels outside the scheme – is a substantial extra quota allocation based on and relative to existing VQS. Only vessels under 15 m or vessels under 17 m that only use the defined low-impact gear types may join.

The fixed amount of quota set aside for the new scheme is about four times the amount distributed in the original scheme in past years [25]. One can argue that this might be the only real strategy to improve access to small-scale fisheries to address the situation of their sustainability, however, its effect to truly entice younger generations is hard to predict. In fact, in its first year, only 58 vessels joined the scheme, presumably due to the risk of tying themselves to lower selling prices of VQS [20,24,25]. In 2019, both coastal fishing schemes were evaluated, and it was decided to increase quota allocations for low-impact vessels in the new protected scheme making the incentives to join indefinitely this scheme even stronger [26]. The benefits accrued by the SSF through the most recent policy adjustments remain to be seen in the near future.

2.2. The Canary Islands (Spain)

2.2.1. the TAC management system

In the past 30 years in Spain, bluefin tuna fishing has become dominated by the large-scale purse seine fleet and tuna traps (almadrabas), which, due to their intensive fishing capacity have muscled out the hook-and-line fleets who were finding less tuna to catch. Intensive bluefin tuna fishing across Atlantic and Mediterranean by both purse seiners and industrial long-liners has in fact led to the collapse of this species, triggering the International Commission Conservation for Atlantic Tuna (ICCAT) to enact a multiannual recovery plan from 2007 to 2022 through a number of measures including the establishment of global TAC that saw the allowable catch decrease by nearly 50% between 2009 and 2012 and the imposition of fishing capacity restrictions. Spain, represented in ICCAT through the EU, was assigned with a TAC which the national administration distributed to the fleet according to the ‘recent’ historical records, the years in which the bait boats from northern Spain, purse seine large-scale fleet and tuna traps had been the most active fleets. As a result, the main quota recipients have been the purse seine fleet and the almadrabas (large fish traps), collectively having nearly 60% of the national TAC.

Other fleets like the pole and line fleet of the Canary Islands only had

access to bycatch quota for many years (with the requisite that bluefin tuna had to be under 10% of total tuna catch onboard) in very limited amounts. The allocation of TAC has marginalized the local hook-and-line fleets of the Canary Islands, even though this hook-and-line fleet had been quite active as a fishery before the purse seine fleets took over in the mid-1980s. Statistics show that between 1965 and 1980, the Canary Islands caught 16% of the total catches of bluefin tuna in Spain [27]. Given that the historical records used for the quota distribution was based on the more recent history, the Canarian fisher organizations were not able to claim their right to the quota, also because the Canarian government could not influence the allocation process which was managed by the central government in Spain. At the time of writing there are two main company groups that control most of the bluefin tuna for fattening purposes within tuna ranching farms, a very lucrative industry focused on foreign markets such as Japan and the USA. This makes the management of the bluefin tuna quota a highly politicized arena where the access to the small-scale fleet remains a contentious issue despite the existence of historical rights and the presence of legal criteria that should be taken into account for the quota distribution in line with Article 17 of the CFP.

2.2.2. Access issues facing small-scale Fishers

Small-scale fisheries in the Canarian fleet has been able to secure only an average of 2.5% of the national TAC between 2008 and 2015 which they could declare only as bycatch [27]. The small-scale segment has not been able to access more quota because the criteria that the Spanish government considered when calculating the fleet quota was based only on the last years of catch records before 2008, a time when small-scale fishers were not as active as the large-scale counterpart due to collapsing stocks. In this regard, small-scale fishers were not accounted for as ‘historical users’ with fishing rights, despite having an important role in bluefin tuna fishing before the stocks, and their catches, started dwindling due to intensified large-scale operations. So, in principle, the national administration, which used only recent historical records to assign TACs across the fleet segments, did not have the responsibility to assign quotas to the Canary Islands. In line with the established law, the fleet could only benefit from a bycatch quota, known as contingency catches that could be used in cases where bluefin tuna is caught along with other types of tuna species.

This situation of allocation, which has been pervasive for around 10 years, was seen as unfair by fishers, and through their organizations (Cofradías and Producer Organizations) engaged in a series of protests towards the national government. They participated in the national media and featured in the 2017 LIFE³ Documentary ‘Blue Hope Tuna’ where, together with other fishers from around the Mediterranean, they called for improved access of bluefin tuna to small-scale fishers. These undertakings, which were supported by the Regional Government and the Fishers Organizations (with the new *Regional Federation of Cofradías*), greatly increased the visibility and the voice of the Canarian fleets in their request to overhaul the status quo. Further support was sought from the academic realm, with the Canarian Government requesting the Universities to develop reports about historical catches and environmental impacts of the Canarian fleet. By accessing this ‘hidden’ knowledge, the Canarian sector and the Regional Government, gained a new form of ‘knowledge/power’ that bestowed them with sufficient authority to take the national regulations to court. Such an appeal at the highest levels of authorities in Madrid were crucial for the Canarian fleet to bring home some quota for the people on the islands.

With an increase in the national TAC in 2018 (following signs of recovery in the species at the ICCAT level), the Canary fleet benefitted from 255 tonnes in 2018 and more than 400 tonnes in 2019. The amount

³ Low Impact Fishers of Europe, an international organization that integrates small scale fishers organizations from around Europe (Percy and O’Riordan 2020 (in press)).

of TAC, however, still does not compare to the quotas that are assigned to other fleets, and to the position/catch rate that the Canarian fleet had in the bluefin tuna sector before the 1980s. In fact, in 2018 the whole fleet of the Canary Islands (more than 240 boats) was given less quota (255t) than what is assigned to one purse seiner (260t). Moreover, access issues were felt at the fleet level due to the manner in which the TAC assigned to the Canary fleet was handled. Although implemented as an open-access fishery with good intentions to give equal opportunity to all vessels to fish collectively until the quota is depleted, research shows that access was not ascertained for those with smaller vessels, or for vessels in islands where bluefin tuna schools swim into their waters later in the season - and are thus not able to compete on an equal level playing field. For obvious reasons, those with large or mid-sized vessels and who are seasonally-better positioned to catch tuna are favoured by such TAC system, leaving not much hope amongst other fleet participants to benefit from the fishery.

Moreover, this sort of open-access strategy has demonstrated to be a market disaster, because the large amount of catches in a short period saturated the markets and prices plummeted. For 2019, discussions have been in place to assign specific quotas to different vessels to avoid the race to fish and the market saturation that the open TAC system was leading to. However, this has instigated a number of conflicts over the allocation criteria at the vessel level. Since no agreement was reached between the fisher organization and the regional government, the national government intervened and assigned individual quotas to each boat, taking into account only its length, thereby preferring the larger vessels but including many smaller boats that had not fished habitually bluefin tuna, and creating further access issues and fragmentation within the fleet. Due to these inconsistencies the quota for 2019 for the Canarian fleet was not exhausted in the expected period, opening a new window for the fishery from 4th November to 13th December, open to all registered boats for bluefin tuna until quota exhausted. Evidently, the complexity of the fishery as a socio-political system, and the heterogeneity of the sector makes access matters both sensitive and difficult to manage.

2.3. Portugal

2.3.1. TAC management system

In 2009, following an ICES recommendation, the EU established a TAC for all skates (*rajiformes*) and forbade the landing of three species, one of which was undulate ray [28]. The undulate ray is classified as an endangered species in the IUCN red list of threatened species and this prohibition was implemented as a precautionary measure due to the lack of data on the state of skate's stocks in the EU. Portugal was among the MS without statistical records at the species level - as before 2009 landings were registered for skates as a group [29]. Despite the lack of data on undulate ray, it is well known, mostly through fishers' and local scientists knowledge, that this species has been captured mainly by polyvalent small-scale local vessels (under 9 m, responsible for 95% of landings; the rest being landed by trawlers) and is an important species due to its relatively high commercial value at first auction [30].

Following contestations by Portuguese fishers associations who claimed that undulate ray is an abundant resource in Portuguese waters, in 2014 the Portuguese Institute for Fisheries Research (IPMA) started a research project, in collaboration with two fishing associations from harbours near Lisboa (Setúbal and Sesimbra⁴) in order to start collecting data on undulate ray. Based on the results from this project the Portuguese government has managed to negotiate a specific precautionary 12-tonne quota with the EU. With the quota, a set of management measures were established by the Portuguese government [31], such as the implementation of a biological closure, monthly compulsory reporting

of catches, and a minimum (78 cm) and maximum (97 cm) landing size. Besides, these management measures special permits, named "experimental fishing licenses", were assigned to fishers on an annual basis, starting in 2015 and continuing until today [32]. The permits are allocated following negotiations with the sector's representatives. Vessels with the special license permits can catch up to 30 kg of undulate ray per trip, whilst those without a license can land one undulate ray per trip [31,32].

In 2015, 50 licenses were assigned, and the recipients of licences were vessels whose owners were collaborating with the ongoing research project. At the time, licenses were only given to the local fleet, fishing with trammel nets and with a historical track record of skate landings prior to 2016 [31], excluding trawlers from the experimental licence allocation. Since 2017 the quota increased to 15 tonnes, and the number of licenses to 60. In 2019, the allocation criteria changed, increasing the national coverage and allowing also vessels without large historical landings of skates (but with a historical track records of landings of soles and flounders) to also apply for the experimental license. The 60 permits attributed were distributed only to the small-scale fleet in the three main regions of the Portuguese coast (north, center and south), with more licenses attributed to harbours with a higher track record of skates' landings. Those who have licenses are obliged to collaborate in scientific studies conducted by IPMA [32].

2.3.2. Access issues facing small-scale Fishers

The main issue is related with the existence of the precautionary quota itself rather than the allocation of the quota, although the latter factor cannot be disregarded. Fishers criticize the precautionary quota mainly because it was established without scientific data or studies, and without including the local knowledge of fishers about the state of the stocks in the decision. The top-down management process brings to light the tensions in access to knowledge and power, mainly concerning the inability of fishers' knowledge to intercept and influence both the hegemonic scientific knowledge and the supranational policy-making realms where this specific quota have been established. With the coming about of an unrealistic quota that does not equate the small-scale's previous catch rates, the issuance of special permits caused some divide between those who got quota and those who did not, creating feelings of injustice. Many fishers claim that the quota is too low and should be higher and open to all, and then closed when the quota is caught. In general, there is a feeling that some measures are too protectionist and that the social and economic consequences of these measures are not taken into consideration. Even though the Portuguese administration recognized the importance of this fishery for the small-scale fishing sector and made an effort to get a quota, even if a small one, many fishers still feel that Portugal does not have a strong capacity to negotiate quotas at the EU level.

Further access challenges result from the fact that the small-scale sector is not well organized and as a result remains poorly represented in the decision-making process [32,33], which influence the distribution of special licenses for undulate ray. The lack of "Associativism", i.e. culture of identification, trust, and active participation in associations, has hampered any form of collective action [34–36]. Despite being able to press the Portuguese government to get a quota, fishers associations still do not have a strong position in the management of their activity so fisher's have been unable to bring about effective change on their own through individual resistance. The lack of access to decision-making fora is further reinforced by the way that management authorities have dealt with the matter. Authorities see fisher's associations mostly as entities to be consulted or as mediators in defining the allocation of quotas, rather than active decision-takers. This results in a situation where fishers' views on allocation are not well recognized, and they perceive the policies as illegitimate. In some cases, they are not hesitant to resist such laws and land undulate ray given that this forms an important component of their livelihood.

Although the quota allocation for undulate ray is experimental and

⁴ Setúbal Pesca fishing association; APACS, shipowner's association. The ethnographic data presented was collected with Setúbal Pesca and its members.

not representative of the usual allocation of quotas in Portugal, it follows similar criteria for distribution, based mainly on historical landings. The system has not changed since the CFP reform in 2013. However, as pointed by Carpenter and Kleinjans [17], regarding the implementation of Article 17, the Portuguese government stated in its submission to the commission, that licensing accounts for the economic dependence of communities involved in traditional fishing and the history of compliance. Indeed, in the particular case of undulate ray the allocation of licenses, and consequently quotas, benefits small-scale fisheries, instead of other segments of the fleet (trawling), thus one can argue that it is in compliance with Article 17. Nonetheless, the extent to which the policy provides access to small-scale fishers at large through social justice criteria, and thus to the sustainable continuation of the sector, remains questionable.

2.4. Malta

2.4.1. The TAC management system

The management of tuna in Malta, like in the case of the Canary Islands emanates from the ICCAT and EU regulations, through which Member States implement national management plans to assign quotas to the fishing fleet. The dawn of the management plan in the island recognized fishers whose catches were officially registered through the government's department, which included around 100 fishers comprising 10% of the fleet, with some fishers arguing that the figure was incorrect as it did not account for fishers using other markets to sell their catches. The fishing opportunities, as negotiated with the representatives of fishers' cooperatives, have been distributed according to historical records since the inception of the bluefin tuna recovery plan in 2009. The purse seine (PS) fleet, which made inroads into the sector in 2005 and had no historical records to benefit from a national TAC was able to become an active segment by leasing quotas from fishers owning ITQS, a market-based governance system that was introduced in 2009 through the Bluefin tuna recovery plan. With the implementation of ITQs, the purse seine fishery became the largest operator which controls the market in terms of ITQ leasing, as well as the export market, making the small-scale fisher totally dependent on it [14]. Between 2009 and 2015, there has been a concentration in the ownership and benefits gained from the quota, which predominantly favoured the PS, which is the fleet with the highest level of access to economic and political power in the tuna sector. The PS, which is also involved in the ownership of tuna ranching systems, has been purchasing ITQs of the smaller and least wealthy ITQ holders. These companies now possess the quota and the fishing permits of many artisanal vessels, and since 2014 have enjoyed the annual TAC increments that have been assigned on each artisanal permit by the government.

2.4.2. Access issues facing small-scale Fishers

The allocation system of the BFT categorized the fleet into large-ITQ-holders, medium-ITQ holders, small-ITQ-holders and non-quota holders. In 2010 over 50% of quota was held by 16% of fishermen and until 2015, the ownership of ITQs has become even more concentrated. This is because between 2014 and 2016, the accumulation of fishing rights and windfall gains of TAC increments has favoured few enterprises that own multiple permits based on historical records, whereas fishermen with no permits or with small/medium quotas have been unable to acquire quota since the prices of fishing permits and quota have escalated to unaffordable ranges. Fishers wishing to partake in the fishery could do so by purchasing permits already in the market, however this was very unfeasible due to the price tag attached to these fisheries, and thus determined by one's access to capital. With the increase in TAC since 2017, some new fishers were able to participate in the fishery through a

specific TAC assigned by the government to no-permit holders. Further changes happened in 2018, with a little TAC devoted for newcomers, and a higher increase in 2019 with an ostensible widening of the net. Recent Ministerial decisions informed that after 10 years of the bluefin tuna recovery plan, the Government will issue new bluefin tuna permits for fishers who have records in the swordfish sector [37]. This decision has given the possibility of around 50 new fishers to benefit from bluefin tuna, however it has raised some commotion amongst fishers using trammel nets for demersal fisheries, who argued that the implementation of bluefin tuna quotas in parallel to swordfish catches directly excludes them from getting a permit to fish tuna. Some have argued that such decision was triggered by those closest to power within the fishing co-operatives, who are likely to gain from such a scheme. This system, although widened the prospects for more fishers in the sector, has closed the doors for potential entrants who do not have swordfish quotas, and the younger generations who would like to start-up in fishing ventures.

As things stand, the purse seining fleet and the concomitant tuna ranching industry will remain the major players in the fleet as they own the largest component of the quota, and have relatively better access to capital and power. So although the tuna is coming back, the fishing communities are not the main beneficiaries, also because historical policies have shaped and institutionalized quota control patterns. Also, throughout this time, the sector, which was before engaging in collective action to protect the sustainability of the fleet has transformed, with fishers fragmented by tuna rights fishing systems that has turned them into individualistic opportunity-seeking enterprises that derails their ability to come together and fight back for the communities. This is likely to perpetuate the access challenges for small-scale fishers and their inability to change the status quo, unless sufficient attention is deployed on small-scale fisheries at multi-governance scales, and a realistic redistribution of quotas is implemented.

3. Discussion

This article uses four EU jurisdictions to investigate access matters in fisheries quota allocations, and the role of Article 17 in determining access for small-scale fisheries, as expected in SDG14b. Although having distinctive socio-political contexts and targeting different fisheries, all case studies indicate a level of inequality in access to natural resources and the management of them. Such inequities are resulting from the highly-politicized nature by which Article 17 of the CFP is being interpreted and implemented at the national level. This, we argue, indicates that access cannot be simply understood or determined by a simple formula prescribed in legal provisions. Instead, access should be perceived as a 'power game' where access to knowledge, authority, and capital [18], determines one's ability to benefit from the fishing access opportunities. The level to which small-scale fisheries are benefitting from the resources, thus, requires a closer and nuanced look of the on-the-ground, material realities of how access to fishing opportunities is orchestrated by these vary interconnected strands of access within the national systems.

The case studies show that the systems governing access – which include (i) national administrations negotiating with fishers' organizations, or (ii) producers' organizations who have legal jurisdiction on the allocation process - rarely include all fisher members groups equally. In fact, these seem to benefit larger-scale fleets, who tend to be better organized and more vocal than the small-scale counterparts in decision-making fora [38]. Here we demonstrate how the 'access to authority' is being predominantly controlled by individuals who also have 'access to knowledge/power' and the skills to determine how policies are crafted to fulfil particular agendas [39]. By maintaining their presence around the decision-making tables, those with knowledge/power are able to

influence and define how rights and ownership of fishing opportunities are formed and legalized through national legislative texts [40]. Even though we saw indications of small-scale fishers organizing and becoming more professional at 'playing the access game' in the political arena (e.g. Denmark and Canary Islands), their ability to benefit from increased quotas was limited. This happens mostly due to the resistance triggered by existing 'powerful' players towards new inclusive policies based on 'redistributive' [41], and 'regrabbing' schemes [42]. The outlier in this aspect is Portugal's undulate ray fishery as small-scale fishers have been preferred over large-scale trawlers in the allocation of quota, although this story is not representative of all Portuguese fisheries quota systems.

Access to capital has also been fundamental to determine one's position in the fishery, especially in the case of tradable quotas which permits high-capital fleets to concentrate quota ownership through market transactions. Having highlighted this, however, it is also noteworthy that the transferability is somehow pushed by obligatory technical measures which require MS to reduce the national fishing capacity (number of vessels) to commensurate with fishing opportunities. This efficiency-driven fisheries governance model tend to reward fleet segments of a larger-scale nature as they are often better-positioned to invest and enlarge their fishing capacity and control of quota [12]. These policy-induced effects - having their origins in a CFP and national regulations oriented towards the 'economic efficiency' of the European fishing fleets - have somewhat created 'institutional path dependencies' [43] that do not easily permit new and inclusive forms of allocation systems at the MS level. As fisheries policy is dependent on the initial decisions and resources historically committed, starting policies from scratch is hardly possible, and only incremental change is feasible. So, in simple terms, any "new system" is only half-way new.

Even if MS attempted to move beyond the grandfathering technique by widening the net of opportunities through new policies, there has not been significant changes in the benefits that small-scale fishers gained from the fisheries resources. This is because any well-intentioned strategy 'on paper' is equally determined by parallel factors/influences played by the 'invisible' roles of (i) the market which governs quota transactions within and across the sector, and which facilitates concentration [44]; (ii) the leadership in fishers' organizations which might not be representative of the sector at large, thus leading to distributive injustices [45], and the (iii) 'inertia' of political bureaucracies as coined by Congleton [46] - which means that institutions may not be sufficiently adaptive to respond to complex and dynamic factors that surround access strategies [47]. In other words, these dynamic market and fishers' representative systems and their effects on access remain outside the purview of the governments when innovative access schemes are implemented. Even if innovative schemes have been present in, for instance, Denmark, which is probably the 'most' advanced quota-distribution system in these case studies, its effectiveness has been far from remarkable to engender enhanced access for small-scale fisheries.

The qualitative insight into the various governing paradigms determining small-scale fisheries access to fisheries resources, and their ability to benefit from such resources, shows that access is shaped by multiple layers of complexity emanating from the CFP and national regulations. This prompts questions on whether the problems of access resulting from the lack of political will or ability to enact inclusive policies, are also emanating from the lack of greater precision on allocation by Article 17. While the article 'obliges' MS to include social criteria, it only requests the MS to 'endeavour' to provide fishing opportunities to low-impact fishing sectors - i.e. mostly those which are of a small-scale nature. This wording does not exactly bestow a legal responsibility on MS to engage with the needs of small-scale fisheries. While such an approach is in line with the principle of subsidiarity that empowers MS to make decisions regarding the economic and social dimensions of their fisheries policies at national level, Article 17 may be disappointing from the point of view of not delivering fundamental

changes to the small-scale sector. Moreover, from the case studies, it is evident that due to the lack of clear guidance of social elements to consider when implementing access criteria, the MS are unlikely to move much beyond the status quo [48].

Here we suggest that a more promising tool for visible progress would be to have the CFP specify more explicitly the social goals of the protection of the small-scale fleet, and to determine the tools to achieve them, such as a disclosed set of social criteria indicators embedded in the principles of equity and justice [49]. Currently, the list of social indicators informing the access criteria for fishing opportunities, comprise 'employment generated', 'contribution to local economy' and 'social corporate responsibility' [7], neither of which are directly and explicitly linked to social justice principles. In other words, the essential elements of what 'socialness' should be about in fishing opportunities seem to be absent⁵ [48]. Indicators which can bring more effective and distributive change are needed if SDG14b ought to be fulfilled. Such indicators could be developed through already-established working groups,⁶ also facilitated by the state-of-the-art framework of allocation developed by Smith et al. [50]. Parallel efforts would also be necessary in the EU data collection framework (DCF) through a wider lens for social data that goes beyond the current datasets, which are merely demographic in nature.

For example, more focus on data to study social wellbeing [51] could provide an in-depth understanding of on-the-ground quota access realities of small-scale fisheries and coastal communities - similar to what has been gathered in this study. This data could then furnish MS with knowledge on how best to align fisheries allocation processes to the complexity of their fishing communities. We argue that such propositions could be considered in the next round of CFP revisions - the redrafting of Article 17- and the DCF, also in the consideration of effecting the pathway for SDG14b. On these lines, the forthcoming CFP negotiations could also draw more on the FAO Voluntary Guidelines for Sustainable and Secure Small-Scale Fisheries [52] which, through the principles on 'tenure' provide a more human-rights based approach to the allocation criteria for small-scale fisheries. Otherwise, as long as the improved share for the small-scale fisheries in the EU remains couched in terms of encouragement/tentative possibility and ambiguous social criteria - as is currently provided in Article 17 - small-scale fishers would continue to struggle under the existing structural issues. Moreover, given the historical tendency of lack of accountability and transparency in the decision-making processes of quota allocation systems [53], Article 17 and SDG14b may at best be used to reinforce the rhetoric on paper and government discourses, but not to bring about a significant change.

In the end, effective change depends on the commitment at various governance levels, and the political will to enact the required overhaul. It is our contention then, that the success of Article 17, and the concomitant target set in SDG14b ultimately depends on the vision of MS and how they decide to utilize the legislative tools to enact the necessary changes. Evidently, this article shows that in truly effecting transformation through new access paradigms, a wider fisheries governance lens is required to delve beneath the legislative text and gain a closer look at what else requires to change and how. It demonstrates that it is fundamental to study and monitor how quotas are assigned and through which decision-making systems (government, fishers, markets), and in parallel decipher how historical trajectories of privatisation and long-existing participatory governance systems could be interfering with newly-enacted systems of (re)distribution [41,42]. Recognizing these

⁵ The human-rights based approach is mentioned in the CFP recitals, however linked to the fisheries partnership agreements done between EU and third countries, not specifically to the fishing allocation legislative text.

⁶ The working groups on social indicators of the (i) Scientific, Technical and Economic Committee for Fisheries, and of (ii) International Council for the Exploration of the Sea.

inherent political processes through empirically-driven conceptual insights is necessary to achieve real differences in the way governance of access is implemented for small-scale fisheries both in EU and beyond [54].

4. Conclusion

This article is based on four EU case studies to provide insights into the multiple facets of access currently operating within and through the national fisheries governance systems responsible for the allocation of quotas, and how these are implicating on small-scale fisheries sustainability. It reveals that the malleable provisions of Article 17 of the EU CFP has not been sufficient to ensure access to small-scale fisheries, and thus cannot be relied upon to achieve SDG14b on the ground. We argue that the obligation for Member States to devote attention to social criteria in the allocation of fishing opportunities, and the endeavour towards allocating incentives to fishing vessels utilizing low-impact gear, indicate the right factors to address in the journey towards SDG14b. But while Article 17 may represent a right step for the accomplishment of the objective of empowering small-scale fisheries within the SDG 14b, its success is heavily interrelated with a number of access-determining factors, including access to authority, knowledge and power, that underlie and influence the allocation systems. Among them are the historically determined issues of representation, incrementalism and uncertainty. Not less important are the political inertias that have mostly had a focus on medium or large scale fleets, and disregarded the small-scale sector as increasingly irrelevant.

These trends have been reinforced by the inadequacy of piecemeal government attempts to support small scale fishers, and for which, we argue, a systemic overhaul is needed to reduce recurrent access inequities. Given that the rate of 'success of access' through Article 17 is contingent on a number of other factors, we demonstrate the need for empirically-driven nuanced analysis that deciphers the politicized nature of the fishing allocation process. Specifically, focus is necessary to understand the various negotiations which rarely involve small-scale fisheries effectively, and flexibility-ridden supranational policy tools that further disempower them. With limited representativeness of the case studies, the narrative provides a broad representation of access issues emanating from different management systems and for different fisheries regulated by the CFP. In this way, it provides novel knowledge on the theory of access in the context of fishing opportunities, and contributes to the perennial questions of social justice in quota distribution both within EU MS and beyond. Empirically, the analysis also highlights the need to attend to on the ground details to understand inequities that can result, even where national decision-making may be well-intentioned. This is necessary to inform what potential governance transformations are needed, and through which channels should such changes be effected, to enhance access for small-scale fisheries in line with SDG14b.

Funding

Funded by the Horizon 2020 Framework Programme of the European Union.



Author statement

AS devised the project, the main conceptual ideas and proof outline. AS, JPF, VA, TG, MH and CP contributed to the implementation of the research, to the analysis of the results and to the writing of the manuscript. JF and JP contributed to the theoretical and discussion insights of the manuscript.

Acknowledgments

This article/publication is based upon work from COST Action CA15217 - Ocean Governance for Sustainability - challenges, options and the role of science, supported by COST (European Cooperation in Science and Technology). COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.www.cost.eu. V. Amorim wishes to acknowledge to FCT/MEC for supporting her research through the PhD fellowship (SFRH/BD/119788/2016) and to LIVEPOLITCS project (PTDC/SOC-ANT/32676/2017). C. Pita acknowledges FCT/MEC national funds and FEDER co-funding, within the PT2020 partnership Agreement and Compete 2020, for the financial support to CESAM (UID/AMB/50017/2019).

References

- [1] B. Neumann, K. Ott, R. Kenchington, Strong sustainability in coastal areas: a conceptual interpretation of SDG 14, *Sustain. Sci.* 12 (2017) 1019–1035, <https://doi.org/10.1007/s11625-017-0472-y>.
- [2] S. Sarvajayakesavalu, Addressing challenges of developing countries in implementing five priorities for sustainable development goals, *Ecosys. Health Sustain.* 1 (2015) 1–4, <https://doi.org/10.1890/EHS15-0028.1>.
- [3] M. Cisneros-montemayor, Y. Ota, M. Bailey, C.C. Hicks, A.S. Khan, A. Rogers, U. R. Sumaila, J. Virdin, K.K. He, Changing the narrative on fisheries subsidies reform: enabling transitions to achieve SDG 14, and beyond 6 (2020) 8–10, <https://doi.org/10.1016/j.marpol.2020.103970>, 117.
- [4] A. Said, R. Chuenpagdee, Aligning the sustainable development goals to the small-scale fisheries guidelines: a case for EU fisheries governance, *Mar. Pol.* 107 (2019), <https://doi.org/10.1016/j.marpol.2019.103599>.
- [5] Council of the European Union, Council Regulation (EC) No 1380/2013 of 11 December 2013 on the Common Fisheries Policy, 2013.
- [6] M. Salomon, T. Markus, M. Dross, Masterstroke or paper tiger – the reform of the EU's Common Fisheries Policy, *Mar. Pol.* 47 (2014) 76–84, <https://doi.org/10.1016/j.marpol.2014.02.001>.
- [7] R.B. Blomeyer, Sanz, Kim stobberup, maría dolores garza gil, aude stirnemann-relot, arthur rigaud, nicolò franceschelli, criteria for allocating access to fishing in the EU, *Eur. Parliam. Dir.* 91 (2015) 399–404.
- [8] STEFC, The 2019 Annual Economic Report on the EU Fishing Fleet (STECF-19-06), 2019, <https://doi.org/10.2760/911768>.
- [9] Council of the European Union, Council Regulation (EC) 1198/2006 of 27 July 2006 on the, *European Fisheries Fund*, 2006.

- [10] J.J. Pascual-Fernández, C. Pita, M. Bavinck (Eds.), *Small-Scale Fisheries in Europe: Status, Resilience and Governance*, Springer (forthcoming), Dordrecht, 2020.
- [11] S. Gómez, J. Lloret, M. Demestre, V. Riera, The decline of the artisanal fisheries in Mediterranean coastal areas: the case of cap de Creus (Cape Creus), *Coast. Manag.* 34 (2006) 217–232, <https://doi.org/10.1080/08920750500531389>.
- [12] J. Host, Governing through markets: societal objectives, private property rights and small-scale fisheries in Denmark, in: S. Jentoft, R. Chuenpagdee (Eds.), *Interact. Gov. Fish.*, 2015, pp. 319–336, <https://doi.org/10.1007/978-3-319-17034-3>.
- [13] C.S. White, Getting into fishing: recruitment and social resilience in north Norfolk's 'cromer crab' fishery, UK, *Sociol. Rural.* 55 (2015) 291–308, <https://doi.org/10.1111/soru.12101>.
- [14] A. Said, J. Tzanopoulos, D. MacMillan, Bluefin tuna fishery policy in Malta: the plight of artisanal fishermen caught in the capitalist net, *Mar. Pol.* 73 (2016), <https://doi.org/10.1016/j.marpol.2016.07.025>.
- [15] J. Lloret, I.G. Cowx, H. Cabral, M. Castro, T. Font, J.M.S. Gonçalves, A. Gordo, E. Hoefnagel, S. Matic-Skoko, E. Mikkelsen, B. Morales-Nin, D.K. Moutopoulos, M. Muñoz, M.N. dos Santos, P. Pintassilgo, C. Pita, K.I. Stergiou, V. Ünal, P. Veiga, K. Erzini, Small-scale coastal fisheries in European Seas are not what they were: ecological, social and economic changes, *Mar. Pol.* 98 (2016) 176–186, <https://doi.org/10.1016/j.marpol.2016.11.007>.
- [16] E. Penas Lado, *The Common Fisheries Policy: the Quest for Sustainability*, John Wiley & Sons, United Kingdom, 2016.
- [17] G. Carpenter, R. Kleinjans, Who Gets to Fish? the Allocation of Fishing Opportunities in EU Member States, 2017, <https://doi.org/10.13140/RG.2.2.28940.51845>, London.
- [18] J.C. Ribot, N.L. Peluso, A theory of Access, *Rural Sociol.* 68 (2003) 153–181, <https://doi.org/10.1111/j.1549-0831.2003.tb00133.x>.
- [19] Kystfiskerudvalget, Evaluering Af Kystfiskerordningen 2007 – 2009, Kystfiskerudvalget, 2009 accessed, http://wkshop.bakuri.dk/filarkiv/dkfsk.die.dk/file/Evaluering_af_Kystfiskerordningen_2007-2009.pdf. (Accessed 8 December 2018).
- [20] Udenrigsministeriet, Reguleringsbekendtgørelsen, BEK No. 1270 Af 30/10/2018 Gældende, 2018 accessed, <https://www.retsinformation.dk/Forms/R0710.aspx?id=203641>. (Accessed 7 December 2018). Eur. Legis. Identifier/Eli/Lta/2018/1270.
- [21] Aftale om Fødevareministeriet, Ny Regulering Af Dansk Fiskeri 3, Fødevareministeriet, 2005. November 2005 accessed, <http://www.dr.dk/NR/rdonl/yes/5604A5CF-8588-4648-936B-8DBA9EB71607/1824068/Endeligregulering.pdf>. (Accessed 7 December 2018).
- [22] Miljø- og Fødevareministeriet, Bekendtgørelse Om Regulering Af Fiskeriet I 2014-2020 (2014), Bil. 18, 2015 accessed, <https://www.retsinformation.dk/Forms/R0710.aspx?id=169131#Bil18>. (Accessed 9 December 2018).
- [23] J. Host, Market-Based Fisheries Management: Private Fish and Captains of Finance, Springer, Switzerland, 2015, <https://doi.org/10.1007/978-3-319-16432-8>.
- [24] R.V., S.F. Socialdemokratiet, Dansk Folkeparti, Politisk Aftale om en Vækst- og Udviklingspakke til dansk fiskeri, Altinget, 2016 accessed, http://www.altinget.dk/misc/Endelig_Politisk_aftale.pdf. (Accessed 8 December 2018).
- [25] Eurofish Magazine, Reviving the Coastal Fishery, 2017 accessed, https://issuu.com/eurofish/docs/eurofish_magazine_2_2017. (Accessed 9 December 2018).
- [26] Miljø- og Fødevareministeriet, Skånsomt Kystfiskeri Styrke I Ny Politisk Aftale, 2019 accessed, <https://mfvm.dk/nyheder/nyhed/nyhed/skaansomt-kystfiskeri-styrkes-i-ny-politisk-aftale/>. (Accessed 5 December 2019).
- [27] Á. Díaz de la Paz, J.J. Pascual Fernández, C. Dorta Morales, Á. Díaz Rodríguez, Evaluación histórica y socioeconómica de la pesquería de las cinco principales especies de túnidos en Canarias, Universidad de La Laguna-Fundación General Universidad de La Laguna, L. Laguna, 2017 (accessed March 11, 2020), <https://orfish.eu/library/evaluacion-historica-y-socioeconomica-de-la-pesqueria-de-las-cinco-principales-especies-de-tunidos-en-canarias>.
- [28] Council of the European Union, For 2009 the Fishing Opportunities and Associated Conditions for Certain Fish Stocks and Groups of Fish Stocks, 2009. Council Regulation (EC) No 43/2009 of 16 January 2009 fixing.
- [29] ICES, Report, Of the Working Group on Elasmobranchs, 2017, p. 31. May-7 June 2017, Lisbon, 2017.
- [30] B. Serra-Pereira, C. Maia, N. Lagarto, I. Figueiredo, A investigação realizada no IPMA de suporte ao aconselhamento científico para a gestão de espécies de raia, 2018 accessed, <https://www.ipma.pt/export/sites/ipma/bin/docs/publicacoes/ipma/rct-ipma-sd-21.pdf>. (Accessed 11 March 2020).
- [31] Ministério do Mar, Portaria nº 96/2016, de 19 de abril, Diário da República n.º 76/2016, Portugal, 2016.
- [32] Ministério do Mar, Portaria nº 4/2019, de 3 de janeiro, Diário da República n.º 2/2019, Série I, Portugal, 2019.
- [33] C. Pita, J. Pereira, S. Lourenço, C. Sonderblohm, G.J. Pierce, The traditional small-scale Octopus fishery in Portugal: framing its governability, in: S. Jentoft, R. Chuenpagdee (Eds.), *Interact. Gov. Small-Scale Fish. Glob. Reflections*, vol. 13, Springer, MARE Publication Series, 2015, pp. 117–132, https://doi.org/10.1007/978-3-319-17034-3_7.
- [34] C. Pita, M. Gaspar, Small-scale fisheries in Portugal: current situation, challenges and opportunities for the future, in: J.J. Pascual-Fernández, C. Pita, M. Bavinck (Eds.), *Small-Scale Fish. Eur. Status, Resil. Gov.*, Springer, MARE Publication Series, 2020.
- [35] M. Rangel, C. Pita, M.M. de Oliveira, M.H. Guimarães, R. Rainha, C. Sonderblohm, P. Monteiro, F. Oliveira, M. Ballesteros, J.M.S. Gonçalves, G.J. Pierce, K. Erzini, Do Fisher associations really represent their members' needs and opinions? The case study of the octopus fishery in the Algarve (south Portugal), *Mar. Pol.* 101 (2019) 276–284, <https://doi.org/10.1016/j.marpol.2018.04.011>.
- [36] P. Silva, H. Cabral, M. Rangel, J. Pereira, C. Pita, Ready for co-management? Portuguese artisanal octopus Fishers' preferences for management and knowledge about the resource, *Mar. Pol.* 101 (2019) 268–275, <https://doi.org/10.1016/j.marpol.2018.03.027>.
- [37] A. Said, D. MacMillan, 'Re-grabbing' marine resources: a blue degrowth agenda for the resurgence of small-scale fisheries in Malta, *Sustain. Sci.* 15 (2020) 91–102, <https://doi.org/10.1007/s11625-019-00769-7>.
- [38] C. Pita, G.J. Pierce, I. Theodossiou, Stakeholders' participation in the fisheries management decision-making process: Fishers' perceptions of participation, *Mar. Pol.* 34 (2010) 1093–1102, <https://doi.org/10.1016/j.marpol.2010.03.009>.
- [39] M. Foucault, *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, Pantheon Books, 1980.
- [40] G. Carpenter, R. Kleinjans, S. Villasante, B.C. O'Leary, Landing the blame: the influence of EU Member States on quota setting, *Mar. Pol.* 64 (2016) 9–15, <https://doi.org/10.1016/j.marpol.2015.11.001>.
- [41] R. Myers, C.P. Hansen, Revisiting A theory of access: a review, *Soc. Nat. Resour.* (2019) 1–21, <https://doi.org/10.1080/08941920.2018.1560522>, 0.
- [42] A. Said, D. MacMillan, 'Re-grabbing' marine resources: a blue degrowth agenda for the resurgence of small-scale fisheries in Malta, *Sustain. Sci.* (2019), <https://doi.org/10.1007/s11625-019-00769-7>.
- [43] A. Schlüter, S. Wise, K.S. Mánez, G.W. De Moraes, M. Glaser, Institutional change, sustainability and the sea, *Sustainability* 5 (2013) 5373–5390, <https://doi.org/10.3390/su5125373>.
- [44] B. Mansfield, Neoliberalism in the oceans: "rationalization," property rights, and the commons question, *Geoforum* 35 (2004) 313–326, <https://doi.org/10.1016/j.geoforum.2003.05.002>.
- [45] N.L. Gutiérrez, R. Hilborn, O. Defeo, Leadership, social capital and incentives promote successful fisheries, *Nature* 470 (2011) 386–389, <https://doi.org/10.1038/nature09689>.
- [46] R. Congleton, A model of asymmetric bureaucratic inertia and bias, *Publ. Choice* 39 (1982) 421–425, <https://doi.org/10.2307/30023634>.
- [47] S. Jentoft, Institutions in fisheries: what they are, what they do, and how they change, *Mar. Pol.* 28 (2004) 137–149, [https://doi.org/10.1016/S0308-597X\(03\)00085-X](https://doi.org/10.1016/S0308-597X(03)00085-X).
- [48] A. Said, R. Chuenpagdee, Aligning the sustainable development goals to the small-scale fisheries guidelines: a case for EU fisheries governance, *Mar. Pol.* 107 (2019) 103599, <https://doi.org/10.1016/j.marpol.2019.103599>.
- [49] T. Belschner, J. Ferretti, S. Sarah, R. Döring, G. Kraus, A. Kempf, C. Zimmermann, Evaluating fisheries systems: a comprehensive analytical framework and its application to the EU's Common Fisheries Policy, *Fish. Fish.* 20 (2018) 1–13, <https://doi.org/10.1111/faf.12325>.
- [50] S.L. Smith, W. Battista, N. Sarto, R. Fujita, D.C. Stetten, R. Karasik, M. Burden, A framework for allocating fishing rights in small-scale fisheries, *Ocean Coast Manag.* 177 (2019) 52–63, <https://doi.org/10.1016/j.ocecoaman.2019.04.020>.
- [51] A. Charles, E. Allison, R. Chuenpagdee, P. Batha, Well-being and fishery governance, in: A.L. Shri-Ver (Ed.), *Pro-Ceedings Sixt. Bienn. Conf. Inter-Natl. Inst. Fish. Econ. Trade*, July 16–20, 2012 Dar Es Salaam, Tanzania, 2012, pp. 1–6.
- [52] FAO, Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication [Policy Support and Governance] Food and Agriculture Organization of the United Nations, 2015. Rome, <http://www.fao.org/3/a-i4356e.pdf>. (Accessed 3 October 2015).
- [53] L. Van Hoof, Design or pragmatic evolution: applying ITQs in EU fisheries management, *ICES J. Mar. Sci.* 70 (2013) 462–470, <https://doi.org/10.1093/icesjms/fss189>.
- [54] R. Chuenpagdee, S. Jentoft, Transforming the governance of small-scale fisheries, *Maritain Stud.* 17 (2018) 101–115, <https://doi.org/10.1007/s40152-018-0087-7>.