

**Market opportunities
for artisanal
and small-scale fisheries
products for sustainability
of the Mediterranean Sea
Towards an Innovative
Labelling Scheme**





Market Opportunities for Artisanal and Small-Scale Fisheries Products for Sustainability of the Mediterranean Sea:
Towards an Innovative Labelling Scheme

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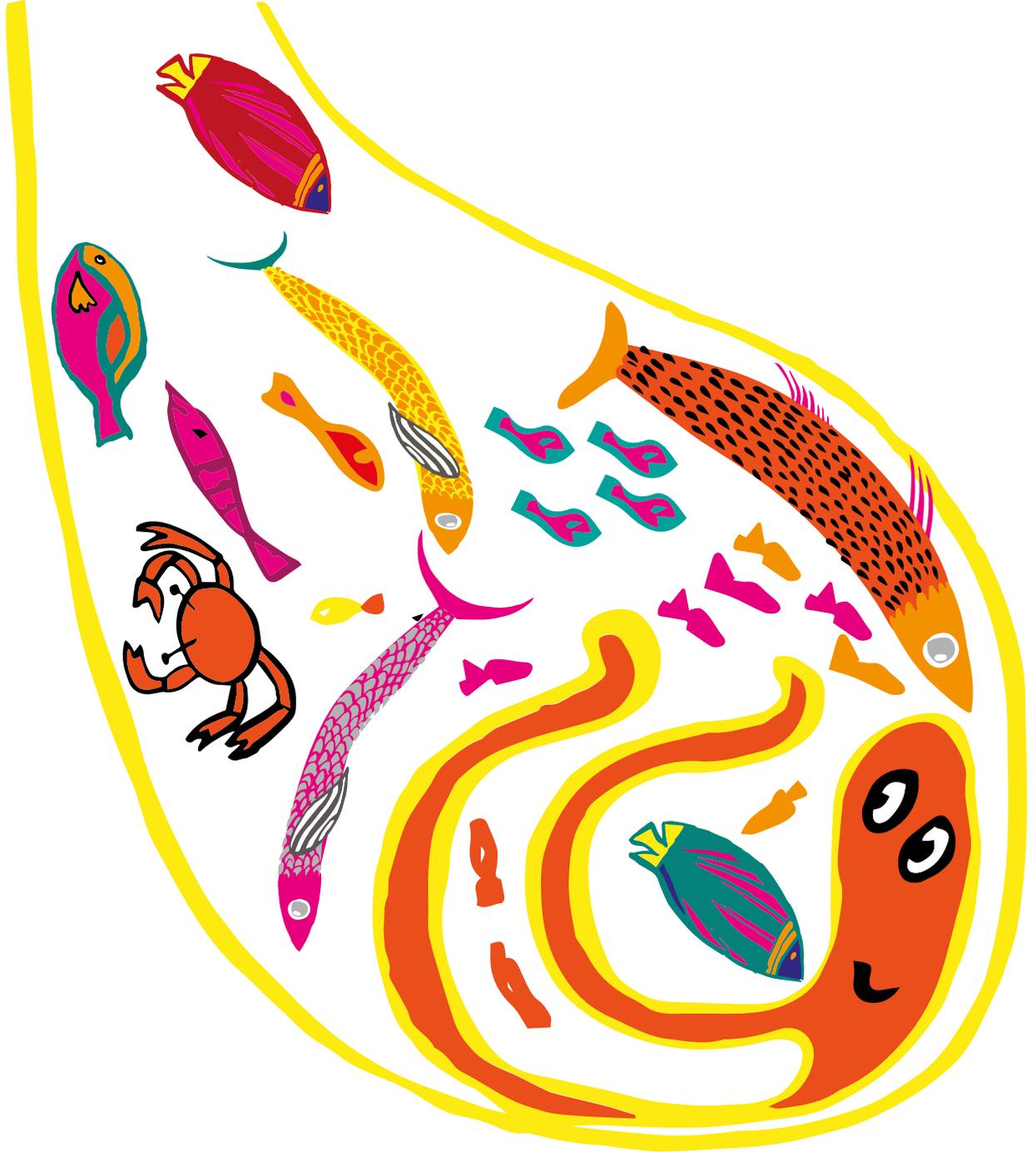
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About this Report

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Executive Summary

With this report the LabMAF project explores the potential of markets to revive and support a socially, economically and environmentally sustainable small-scale fishing sector. Collectively, the LabMAF project and this report aim to point out a gap between the large-scale fisheries industry in Mediterranean countries, and the local and small-scale market for more refined, high-value and sustainably sourced seafood.



Mediterranean small-scale fisheries (SSFs) have always been important to supply local markets with selectively harvested, high-quality and fresh seafood. Moreover, SSFs employ people directly or indirectly with estimated 3 to 5 ancillary jobs ashore for every job at sea. Besides, SSFs conserve an economically and culturally significant heritage of the region. Their importance is recognized in a number of recent policy objectives aimed to reverse unfavourable policies towards SSFs and integrate them better as to improve in the status of fisheries.

Commercially, SSFs products remain often poorly differentiated from products from large-scale fisheries and aquaculture. Freshness, quality and inherent value of SSF products (e.g., authentic cultural aspects, traditionally prepared products, locally produced) are generally under-appreciated. Furthermore, the season-dependent, and quantitatively and culinarily varied nature of SSF products is seen as poor opportunities for market development. The current market is dominated by lack of product traceability, missing capacity to meet requests of sensitive consumers, as well as the overdominance of a few established products. In addition, small-scale fishers¹ remain the weakest in the value chain, lacking a coherent organisation and the capacity to act, leading to little to no control over prices and accept prices, rather than make prices. In summary, existing organization of value chains and market structures fuel a vicious circle of low profitability and increased vulnerability of an aging fisher's workforce, economic uncertainty, environmental risks, consumer alienation and weak trust in institutions.

Responding to these weaknesses, a number of grassroots initiatives have emerged across the Mediterranean. Through a mapping exercise and case studies, the report showcases the geographic extent and the range of initiatives, as well as the main areas of improvements in the existing initiatives: shortening of the value chain; innovation in the distribution channel (usually using ICT); diversification of products; promotion and education about SSF products; brand development; empowerment of SSF communities through improved leadership, ownership, cooperation and coordination. Shared among these initiatives is a bottom-up approach, responding to specific local contexts (e.g. system of organization, local purchasing habits, natural fishing cycles, cultural specificities, historical traditions, the ambition and pace of founders and stakeholders). The report also illustrates good practices and the types of promising actions currently missing in this region.

If capitalised on, we are convinced that the crossover among different initiatives magnifies the potential to accomplish policy goals and achieve a better status of both the oceans



and the fishers. The report identifies the need for greater differentiation of seafood products that recognises the difference in the quality of products and their social and environmental impact. Such differentiation requires an organisational transformation that goes beyond a label. To be successful, the required labelling scheme needs to be tailored to local contexts but must operate on the recognition that each distinct initiative forms part of the same movement.

1. Encourage acceleration and up-scaling of local initiatives, through
 - Shared learning and exchange of good practices among various Mediterranean SSFs as well as encourage formation of new initiatives.
 - Structured capacity-building, via training programs and tailored advice.
 - Implementing ancillary measures, such as provision of infrastructure, promotional campaigns and funding, which benefit SSFs' market development.
2. Establish a standard of good practice, based on inclusiveness and a principle of progression, through:
 - An explicit and accessible guideline, which provide a reference point and a standard for consumers and producers regarding good behaviour.
 - The promotion of such a standard to the consumers and citizens.
 - Peer recognition and support for a shared movement among SSFs.
3. Complement the ongoing shifts in markets with synergistic policy reforms, through:
 - Removing subsidies harmful to SSF.
 - Improving access of SSFs to fishing resources.
 - Altering requirements for documentation and improving the enforcement thereof to improve traceability, which in turn, aids marketing of SSF products as well as consumer and governance decisions.

The LabMAF project has developed new resources to support such shift, notably:

- a draft of a holistic standard (*Guidelines for Responsible Small-Scale Products in the Mediterranean*) as a signpost for action,
- recommendations of future actions for stakeholders,
- communication tools to explain the transition needed to fishers, consumers and policy-makers.

The next step in formalising market initiatives for small-scale fishers needs to be built with sensitivity to local contexts and with an active participation of stakeholders, while emphasizing inclusiveness, co-responsibility and trust. The Participatory Guarantee Systems (PGS) developed in the context of certification of organic agriculture, especially for small-scale farmers, provides as an example of a promising, yet unexplored direction.

A successful SSF sector should look outward for inspiration. Synergising with other small-scale food producers represents an opportunity in terms of capacity-building as well as joint representation in front of policy-makers and consumers. The increased pressures on the space in the Mediterranean Sea originating from large scale endeavors such as the oil industry or large-scale fishing sector, pose an imminent threat on the SSF fishing sector.

¹ Fisher is used as gender neutral term instead of fisherman throughout the document.





1.

Introduction

1.1

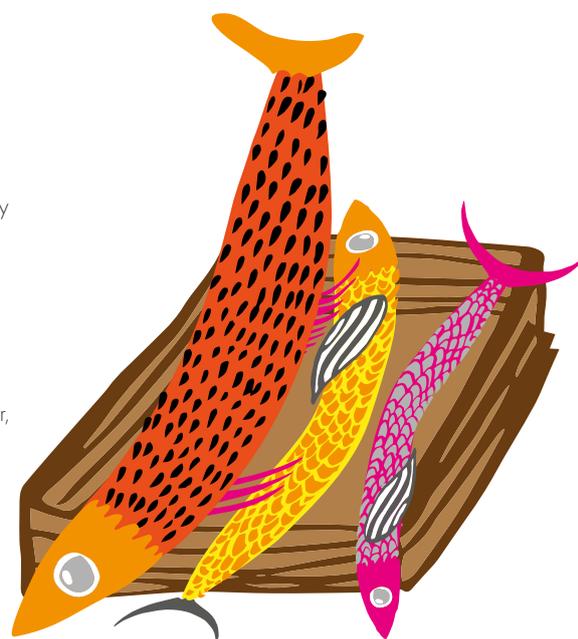
MEDITERRANEAN SMALL-SCALE FISHERIES

There is no universal definition of what constitutes small-scale fisheries (SSF) in the Mediterranean as these fisheries are heterogeneous across different countries. However, FAO classifies small-scale artisanal fisheries as those “involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption” (<http://www.fao.org/family-farming/detail/fr/c/335263/>). The EU, on the other hand, has an administrative definition for SSF which reads: “fishing carried out by fishing vessels of an overall length of less than 12 meters and not using towed fishing gear” (EC 26/2004). Still, the sector is diverse and not easily characterised (Pita et. al., 2020) and in the absence of a uniform (and sometimes formal) definitions at the national level, the informal working definition used here is that SSF are characterised in relation to boat length (most commonly, under 12 meters), gear type (passive or non-towed gears), technical flexibility (polyvalent gears used according to season and grounds), as well as socio-economic characteristics, such as self-employment and typically remunerated depending on the catch (FAO, 2019).

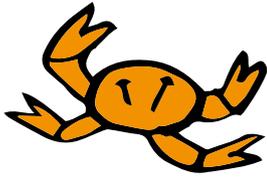
In comparison with larger-scale industrial fishing, most SSFs as defined above are associated with a kind of fishing that is of lower-impact nature (using a set of passive gears, which do not cause irreparable impact on the seabed) and seasonally diverse (in terms of species, fishing grounds and gears). Moreover, according to above definition SSFs operate at a lower production scale. The polyvalent nature and selectivity of gears used generally allow to fish respecting the biological and migratory cycles of different species; SSF are also considered to have low levels of species bycatch and discards.² Also, SSF generate more revenues for invested euro, greater catches per liter of fuel consumed, and more socio-economic added value for every kilo of fish landed (Jacquet and Pauly, 2008). Some ongoing analyses are demonstrating that SSF produces lower ecosystem impacts for every landed kg than trawlers using ecosystem modelling approach (Agnetta et. al., 2019).

Despite the evidence that SSF often have low impacts on ecosystems, this cannot be generally applicable and specific assessments on the sustainability of exploitation need to be done for each case. As an example, clam harvesting in the Venice Lagoon (Pranovi et. al, 2003) is carried out by a fishery that could qualify as SSF by the size of the vessels and the crew, and the use of the gear (Not properly towed gears are used). Further, it demonstrated adaptation typical of SSF by targeting an invasive species (*Ruditapes philippinarum*). Yet, this fishery was quite intensive with a production dimension clearly uncommon (40000 tons of landings per year in 1999 in the Venice Lagoon only), has poor selectivity (high catches of non-commercial benthic invertebrates) and, thus, resulted in large ecological impacts in the Venice Lagoon (Libralato et. al., 2004). Such distortions are usually linked to disengagement of stakeholders from the fisheries resources management, which highlights the relevance of co-management as a factor in sustainability assessments.

In the Mediterranean Sea, SSF is an important sector based on various aspects. In terms of jobs and local economy, SSF sector encompasses over 84% of the fishing vessels and provides large opportunities for employment (74% of total fisheries employment; with each job at sea estimated to create at least 3 to 5 ancillary jobs ashore; FAO, 2018c). However,



² In the Mediterranean, fisheries discards amounts to around 230000 tonnes per year (around 18 percent of total catch) (FAO, 2018c).



while SSF/polyvalent vessels dominate with regards to fishing and employment, they represent only 22.6% of total landings from fisheries, demonstrating the small contribution to fishing capacity and production.

Mediterranean SSFs provide local supplies of fresh fish on a daily basis, including in remote places, and constitute a source of essential/adequate nutrition to the coastal population, contributing to their food sovereignty.³ Like many SSFs worldwide, they display important values that make them a significant component for sustainable fisheries playing a key role in contributing to livelihoods in pre-harvesting, harvesting and post-harvesting stages, and display strong stewardship ethics towards the protection of species and habitats. Moreover, SSF is an important reservoir of traditional ecological knowledge and an important sight for tourism.

Perhaps even more than in other parts of the world, SSF are particularly central to the identity of the Mediterranean Sea. They have played a vital role in the maintenance of coastal communities that constitute a key cultural heritage of the Mediterranean (Raicevich et al., 2018). They are naturally highly adaptable, which is crucial in mitigating impacts of ecological and economic changes (Battaglia et al., 2010), although increasing uncertainty in fish stock dynamics remains a major challenge for the sustainability of SSF exploitation. Furthermore, SSF demonstrated to be highly adaptable to climatic changes and to the changes of species composition (Pranovi, 2003; e.g., due to establishment/appearance of new invasive species).⁴



Sustainable Mediterranean SSF are operating at the intersection of economic, social, environmental dimensions, contributing to the key cultural identity of the Mediterranean

Currently, the Mediterranean, consisting of jurisdictions of EU and non-EU countries, is recognized as the sea with the highest problem of overfishing, problems of traceability, and heightened risks for fisheries sustainability (Hilborn et al., 2020). Looking closely at the role of small-scale fisheries in the region, the existing legacy of stewardship, and the potential for enhancing the socio-ecological sustainability of the Sea, could overhaul the current negative image, and provide space for more vibrant fishery-dependent coastal communities. Markets have an important role to play in the equation to restore the socio-ecological sustainability of Mediterranean fisheries and dependent fishing communities.

³ We contrast here the notion of “food sovereignty” with that of “food security”. Food sovereignty is defined as the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations. Nyéléni Forum 2007- Final declaration. <https://nyeleni.org/spip.php?article375>. Food security on the other hand exists when “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” 1996 Rome Declaration on World Food Security. <http://www.fao.org/3/w3613e/w3613e00.htm>

⁴ E.g. the case of the invasive *Ruditapes philippinarum* in Northern Adriatic Sea.

1.2

PROBLEM STATEMENT

Fisheries act at the intersection of a number of policy demands. They are expected to contribute to ecological, climate and social goals, and to the need to transform the food systems into more sustainable ones. In the Mediterranean Region the situation of fishing stocks is particularly serious with 80% of the scientifically assessed stocks fished beyond safe biological limits (FAO, 2018c) and only 9% of assessed fish stocks fished at levels below MSY (COM(2016) 396).

The causes of this situation are manifold and include long-term fishing pressure, fishing capacity not adapting to environmental changes and, thus, producing overcapacity, competition with other fisheries, the lack of effective management plans, compliance, control, and enforcement (Vasilakopoulos, 2014). The key underlying factor – with a cascading effect on others – is a dysfunctional management design, usually in the form of a centralized, top-down (or “command and control”) model. This has alienated stakeholders from management of decision-making processes and, combined with a lack of capacity and political will at national level to control and enforce regulations, has in turn led to fishing overcapacity and increased competition, encouraging a vicious circle leading to overfishing and unviable and unstructured fishing communities.

The economic pressures reflected through fisheries markets represent one of the main and often forgotten factors leading to intensification of exploitation of fishery resources and the development of bad fishing practices with a direct consequence on the health of coastal ecosystems. For example, low, unstable and uncertain prices for fishers result (in the short-term) in the search for compensate those losses by catching higher volumes of fish and deploying more fishing effort, which in turn results in negative feedbacks in the

long term. The current market system, therefore, represents a relevant source of problems for fishers, including SSF, that directly need to be addressed in the context of sustainable management.

At the same time, markets provide significant opportunities to bring benefits to SSF and, in turn, global sustainability. From a production point of view, systems vary from small-scale production to more industrialized and globalised production systems. Within the fishing sector many different actors operate within distinct social, economic and ecological systems. Yet, the majority of consumers rarely dwell on the issue of who catches fish and how. While SSF could be more easily aligned with the three pillars of sustainable development (social, economic and environmental) than large-scale fisheries this is insufficiently recognised, both among policy-makers and the general public (as per below). This has led several observers to describe the small-scale sector as “the forgotten fleet”. Leveraging on the market opportunities, SSF could become empowered with repercussions for global sustainability. The prominence of markets in contributing to sustainability at large is recognised explicitly as one of SDG targets: SDG 14b.

The multifaceted contribution of SSF to the healthy, productive and resilient seas has been underappreciated by policy. While international law relating to the use of the sea does not differentiate between various fisheries, EU and national policies have somewhat marginalized the SSF over the past few decades and has strongly favored the expansion of the industrial fishing segment. The latter has largely benefitted from both resource access and public subsidies (Schuhbauer et al., 2017), outcompeting the SSF. Decades of favouritism towards industrial fishing meant the marginalization of the small-scale sector and have exacerbated the vulnerability of the latter. The implications are deeply rooted, structural and far-reaching with international and regional management regimes as well as national policies insufficiently sensitive to the contribution and the plight of the SSF. The scholarship has also failed to challenge the conception of the sector as a uniform one, as it has rarely discussed the actors in relation to the design and impact of policies (Symes et al., 2015).

The uniqueness of SSF is also not acknowledged in the markets. Partly as a result of being contingent on the policies, consumers generally do not distinguish between the SSF and industrial products. Fish is increasingly seen as a homogenous product differentiated mainly by the form in which it is sold, as fresh, frozen, canned or smoked. Despite the fact that the SSF generate a lot of employment and positive externalities, they receive a disproportionately smaller share of catches and value of the products. The SSF statistics for the EU indicate that more than half (around 53%) of the direct employment in the catching sector but contribute only 5% of the weight landed and 12,5% of the landed value (STECF, 2019). The low value and appreciation ascribed to SSF is driving a decreasing profitability of the small-scale sector across the EU countries.⁵ SSF products face market competition from large-scale fishery products, foreign imports, and aquaculture products that can assure more continuity and quantity of products. Seasonality, the variety and small quantities of SSF productions are seen as poor opportunities for the market.

To reverse these trends, changes can take place at two levels. One is top-down and it is done through policy that could enhance opportunities of the SSF vis-à-vis industrial and recreational sectors. In that context, access to resources for SSF (Said et al., 2020) or social security of SSF could be improved (FAO, 2019). Regulations should consider the SSF distinguished from other fisheries in order to account for SSF adaptation capabilities, high resilience and low pressure and also SSF weaknesses and sensitivities that are quite different from industrial fisheries. While fisheries policies in the Mediterranean are showing signs of some progress, that progress is slow and incremental at best, proving resilient to

⁵ The recent STEFC report shows that SSF in 14 countries are facing profit losses (STEEFC, 2019).

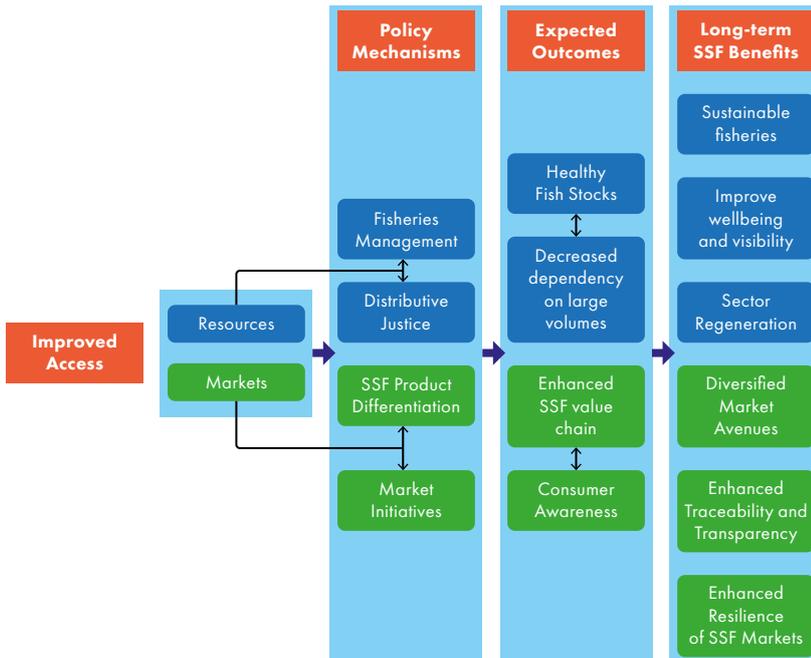
1.3

STRUCTURE

a greater substantive change. Moreover, access to resources without sufficient market instruments does not change much for small-scale fisheries.

But market tools also allow SSF to distinguish, market and sell their products better. Opportunities can also be improved through a bottom-up approach with SSF products being better positioned in the market. If SSF products and their quality are recognized as distinct and with added value, they are likely to be rewarded for their quality. Improved access to resources and markets through the right policy mechanisms for fisheries and markets can lead to improved socio-ecological sustainability, and long-term benefits for small-scale fisheries.

After the introductory section, Section 2 outlines the policy context that provides the ultimate goal of the report. Section 3 analyses the current state of the markets for the SSF products from the perspective of fishers and consumers and indicates the types of responses that can be devised. Section 4 presents some initiatives that have actually been implemented in the Mediterranean, as well as those that represent possibilities for action, as of yet remain unrealized in this region. Section 5 reflects on the future options for action in the regional context. The conclusion wraps up the discussion and entails a set of recommendations for action.



Improving access to resources and markets in line with SDG 14B.

Our central question was how thus far little explored, innovative market opportunities can be beneficial to the SSF in the Mediterranean with the prospect to enhance the sustainability of this Sea and its peoples.

We recognize that the market aspects are embedded in the policy, institutions and governance structures – these certainly motivate the very operation of the markets. The report approaches the issues from the perspective of the markets and directs attention to the ways of improving weaknesses in the organization of the market for SSF products. In the longer term, the strengthening of SSF in the market could ultimately also contribute to the empowerment of SSF and improvements in the status of SSF in the fisheries policies.



2.

*Legal and Policy
Context*



2.1

FISHERIES POLICIES AND REGULATIONS

Obligations on long-term conservation and sustainable use of fisheries resources arise from the UNCLOS (Articles 61-2) and CBD (Art 1), as well as Chapter 17 of Agenda 21 (UNCED 1992), WSSD 2002 (Johannesburg Plan of Action, articles 30-36), UN General Assembly Resolution on “Transforming our world: the 2030 Agenda for Sustainable Development” (SDG 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”). The formulation of policies with that objective originates also from instruments, which have been developed progressively over decades, mostly under the auspices of FAO (Code of Conduct for Responsible Fisheries, the Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, International Guidelines on Bycatch Management and Reduction of Discards etc.).

Further, the Mediterranean states, which are EU member states, are not subject to EU law. The Common Fisheries Policy (CFP) of the EU has been a relative late comer to the Mediterranean, with the first Mediterranean Regulation (EC 1967/2006) adopted in 2006 and being almost entirely ignored by Member States. The CFP is certainly better enforced now with Multi-annual Plans, and a number of other related regulations (the Common Market Organisation and the European Maritime and Fisheries Fund). Its objective is to ensure that fishing activities are “environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies” (CFP, Article 2.1). The European legal framework generally provides a clear objective of sustainably used resources, but this is implemented more in the breach than observance, and where it is applied this is with insufficient rigour or political will. Despite the well-intentioned language in the European legal framework, at national level, both the spirit and letter of the law are watered down, and/or not fully implemented or enforced. Examples include non-application of Article 17, lack of support for SSF Producer Organizations, perverse use of subsidies, etc. The potential of overarching policies to achieve their sustainability objectives are undermined if national and local administrations renege on their responsibilities to apply them. To improve the voice of SSF at the European level, Low Impact Fishers of Europe (LIFE) was established in 2012 and registered as a lobby group in Brussels, while also working on ground to support SSF organisation.

A holistic lens on sustainability suggests responsible fisheries management with, and for small-scale fisheries as a solution. Recent policy statements and commitments relevant for the fisheries policies provide hope that many of the negative trends will be reversed.

⁶ [Sustainable Development Goals](#)

2.2

SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals,⁶ adopted by the UN General Assembly in 2015, provide an overarching policy framework for all states across various environmental and socio-economic indicators. In the years after their adoption, the SDGs have gained very wide support by national governments, local authorities, international institutions, non-governmental organisations and the private sector, and reflect a wide consensus on the ultimate policy objectives. As part of the SDGs, the states have agreed to conserve and sustainably use the oceans, seas and marine resources for sustainable development (SDG 14). More specifically, they have agreed to end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans (SDG 14.4.), as well as to eliminate harmful fishing subsidies (14.6.) – all by 2020. Specifically, one of the targets (SDG 14B) is to provide access for small-scale artisanal fishers to marine resources and markets.

Other SDGs are related to the above targets. The empowerment of SSF resonates with the targets under SDG 2-Zero Hunger that aim at increasing the productivity and incomes of small-scale food producers, including through equal access to productive resources, markets and opportunities for value addition (SDG 2.3.), and sustainable and resilient agricultural practices that help maintain ecosystems, strengthen capacity for adaptation to climate change and natural disasters (SDG 2.4.). It also resonates with the SDGs on sustainable consumption and production (SDG 12), which requires sustainable management and efficient use of natural resources (12.2.) and relevant information and awareness for sustainable development and lifestyles in harmony with nature (12.8.). It further resonates with the requirement to take climate action (SDG

13) that looks at improving resilience and adaptive capacity to climate-related hazards and natural disasters (SDG 13.1) and integrating climate change measures into national policies, strategies and planning (SDG 13.2).



The SDG approach was consistent with the Aichi Biodiversity Targets (SCBD, 2020), adopted earlier than SDGs (in 2010) by the parties to the Convention on Biological Diversity. These strategic objectives aimed – by 2020 – to manage and harvest all fish sustainably, legally and applying ecosystem-based approaches (Target 6), eliminate harmful subsidies and replace them by positive incentives for the conservation and sustainable use (Target 3), respect the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity (Target 18) and have beneficial ecosystem services restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable (Target 14).

Instrumental to the implementation of the 2030 Agenda for Sustainable Development is also the proclamation of a UN Decade of Ocean Science for Sustainable Development 2021-2030 (UN, 2018). The Decade as a political act is intended to mobilise the ocean community to support the protection and sustainable use of the oceans, but also other SDGs beyond target 14, by delivering scientific knowledge, fostering technological innovation, and building capacity (IOC, 2017).

2.3

SMALL-SCALE FISHERIES POLICY INSTRUMENTS

In parallel with the formation of policy documents, the mobilization of the SSF community took place, which resulted in a significant policy document, focusing specifically on SSF. The Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines; FAO, 2015) adopted by the FAO Committee on Fisheries in 2014 represent an overarching document for the redefinition of governance of the SSF across the globe. While they are of legally non-binding nature, they have nevertheless been developed in a long and multi-stakeholder process and represent a broad consensus on the significance of SSF in the context of prioritizing the eradication of hunger and promoting sustainable development.

The objective of the SSF Guidelines are:

- A** to enhance the contribution of small-scale fisheries to global food security and nutrition and to support the progressive realization of the right to adequate food,
- B** to contribute to the equitable development of small-scale fishing communities and poverty eradication and to improve the socio-economic situation of fishers and fish workers within the context of sustainable fisheries management,
- C** to achieve the sustainable utilization, prudent and responsible management and conservation of fisheries resources consistent with the Code of Conduct for Responsible Fisheries (the Code) and related instruments,
- D** to promote the contribution of small-scale fisheries to an economically, socially and environmentally sustainable future for the planet and its people,
- E** to provide guidance that could be considered by States and stakeholders for the development and implementation of ecosystem friendly and participatory policies, strategies and legal frameworks for the enhancement of responsible and sustainable small-scale fisheries, and
- F** to enhance public awareness and promote the advancement of knowledge on the culture, role, contribution and potential of small-scale fisheries, considering ancestral and traditional knowledge, and their related constraints and opportunities.

The Guidelines include a number of highly pertinent actions mostly on the side of governments, from ensuring secure and equitable tenure rights and access to resource, to ensuring decent labour conditions. However, the Guidelines specifically envisage SSF to act in ways that are separate from the intervention of states. In that respect, the Guidelines mention associations of fishers, strengthening support in the post-harvest phase, transformation of value chains, and, especially, regional trade as important approaches complementing state's actions.

With regards to the specific situation in the Mediterranean, here too there has been an increased attention to the SSF. In 2018 Ministerial Declaration aimed at implementing a *Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea* that was signed by 18 Mediterranean and Black Sea countries as well as the EU (FAO, 2018b). The 10-year plan of action aims to provide long-term environmental, economic and social sustainability of SSF by reinforcing the capacities of the sector at various levels. This involves improving fisheries management measures to serve the SSF, reinforce the valorization of SSF products, facilitate direct access to markets, improve participation in decision-making, enhance data collection related to the sector and benefit from traditional knowledge on marine environment, promote decent work and the role of women, and mitigate negative climate and environment impacts.

A very influential factor in setting the policy direction was the launch of the blue growth/ blue economy paradigm. The notion developed on various platforms and at various levels: within the EU, the UfM and the FAO, each time with a different emphasis. For FAO,

the blue growth approach resonated with its ongoing efforts relating to sustainable fisheries. FAO's launch of a "Blue growth initiative" was used to boost the messages of sustainability and to further promote the Code of Conduct for Responsible Fisheries (adopted in 1995) as well as other relevant instruments, such as voluntary guidelines on small scale fisheries (FAO, 2015). FAO's understanding of blue growth also meant a strengthened promotion of aquaculture and certification schemes, and an opportunity to showcase other sustainability practices or develop new ones, such as marking fishing gear, innovative water-saving aquaculture farms or financing instruments, such as green bonds (FAO, n/a).

2.4 BLUE ECONOMY

The Union for the Mediterranean, key regional organization, interpreted blue economy as a force "to promote growth, jobs and investments and reduce poverty, whilst safeguarding healthy seas and developing a clear vision for the sustainable and integrated development of marine and maritime sectors at national and sea basin level" (UfM, 2015). In line with the existing regional priorities, the Euro-Mediterranean understanding of blue economy carries an ambition of having a positive distributional effect and reducing disparities in economic development, research and innovation capacity, skills of the labour force, networking and limited access to finance. Blue economy here represents an integrative tool for the region; increasing both the inter-connectedness among industries, human activities and the ecosystems, and the cooperation between countries (Penca, 2019a). Fisheries and aquaculture have been selected based on their value added and jobs generated among the three leading / priority sectors for blue economy (UfM, 2017).

In the EU, the Blue Growth represents "an initiative to harness the untapped potential of Europe's oceans, seas and coasts for jobs and growth" and the EU's maritime dimension of its internal strategy titled "Europe 2020", which focused on smart, sustainable and inclusive growth (EC, 2012). The EU's discourse related to blue growth marries the maritime and marine opportunities with its priorities of innovation and job creation and create synergies and coherence with its existing policy approaches. The EU indicated five priority areas for blue growth, namely ocean energy, aquaculture, maritime tourism, blue biotechnology and seabed resources (EC, 2017). Fisheries are excluded altogether. The exclusion of fisheries from these priority areas is both factually unjustified and a missed opportunity for the EU's long-term strategy. Fisheries have economic importance and potential for growth, comparable in importance of gross value added and jobs with four of the five other blue growth activities (Stobberup, 2017). Additionally, there are high synergies between fishing and other blue growth sectors. For instance, in the Mediterranean, the main positive synergies were found between SSF and coastal tourism, protected areas and biotechnology, but also with maritime transport through shared facilities and suppliers, and to a more limited extent also with aquaculture (Stobberup, 2017). The synergy between SSF and new market opportunities remains an untapped opportunity which requires further investigation.

The neglect of the SSF's potential in the EU's blue growth strategy poses a risk for conflicts between the more favoured blue growth activities and SSF. For instance, aquaculture and coastal tourism have a direct impact and reduce the available area for coastal fishing. (Stobberup, 2017). There is a further pressure on fishing as a profession arising from recreational fishing. Finally, the fishing (including SSF) sector is generally at risk of bearing the burden of the environmental and socio-economic pressures from other activities.



Small-scale fisheries contributions for the SDGs (Source: WorldFish et. al., 2018).

2.5

SUSTAINABLE FOOD SYSTEMS

Recently, the way we produce and consume food has gained prominence as a policy area. The significant impacts of, both terrestrial and marine, globalized food industry on the environment and climate are well evidenced (Frank et al., 2018; Tilman and Clark, 2014; Willett et al., 2019) and there are clear calls for transformation, in other words, use food systems and agriculture to bring about the required sustainability transformation (SAPEA, 2020; IPBES, 2019). There is also evidence of embeddedness of the agri-food sector in the industrial model and concomitant power imbalances and social injustices (IPES-Food, 2017). In the case of fisheries, the use of destructive, non-selective fishing practices, the practice of discarding, the use of polluting and non-recyclable fishing gear and packaging materials along the value chain and food waste (in fish plants and large retail outlets) are all part of the problem in addition to social aspects in fish value chains. Considering that the global population is expected to continue its steady rise, as well as become ever more urbanised, it is clear that the challenges linked to food systems need to be addressed urgently and transformed in a holistic way, considering the whole food systems at large, from food production, processing, consumption to its waste (SAM, 2019).

The outbreak of the Covid-19 epidemic has laid bare the fragile inter-dependency of globalised value chains and its vulnerability to sudden changes (such as closing of restaurants, schools, or stop of flow of migrant workers due to closed national borders). In fisheries, the Covid-19 pandemic has caused a shock by collapsing markets and shutting down fisheries and left particularly small-scale fisheries struggling to survive economically. The inherent resilience of small-scale fisheries has revealed itself as fragile and vulnerable to sudden shock. Various challenges linked to food systems need to be urgently addressed, from food production, processing, consumption to its waste. Backed by scientific findings, the urge for transformation of the current food systems towards lower-carbon based diets, including more plant-based ones, and notably, more localised production and consumption (SAPEA, 2020) has become a policy priority, particularly the EU. With the adoption of its "Farm to Fork Strategy" in 2020, the EU is demonstrating the commitment to building a resilient, equitable and healthy food system that would act as the global standard of sustainability.

Indeed, responsible and ethical sentiment is emerging among consumers and is coupled with an interest for local quality seafood products. These shifting preferences are only gradually entering the segment of the seafood consumer population, partly because of unavailability of consumer tools in this area. But the trend of rising consumer interest and sense of responsibility is unlikely to be reversed.

2.6

SUMMARY

A holistic lens on sustainability suggests responsible fisheries management with, and for small-scale fisheries as a solution. Historically, SSF have been in an unfavorable position. Nevertheless, recent policy statements and commitments relevant for the fisheries policies have indicated the directions for the reform in fisheries governance and, thus, provide hope that many of the negative trends (overfishing, stocks collapse, marginalization of SSF etc.) will be reversed. The key trends pertain to a demand that the link between sustainable fisheries and livelihoods is enhanced and that sustainable practices of small-scale fisheries are empowered. However, the potential of overarching policies to achieve their sustainability objectives is undermined if national and local administrations do not fully realise their responsibilities. The future prospects for SSF will depend on whether the relevant national authorities will or will not apply the letter and spirit of international and regional legal frameworks and translate them into national laws, integrating them into other national and local policies, implement initiatives for positive change and make available the required funding.





3.

*The State of Play
in Markets*



This section focuses on the creation and operation of the SSF markets as an aspect of the SSF governance. With the previous section having demonstrated that sustainability has taken center stage in the past years, including its specific application to the oceans, this section reports on the extent to which these policy orientations have failed to have an impact on the markets. It presents the scope of the gap between the operation of the small-scale markets and the sustainability goals.

3.1

WEAKNESSES OF MEDITERRANEAN FISHERIES MARKETS

The way in which most supply chains and markets operate today is suboptimal for both the consumer and small-scale fishers; the markets do not create incentives for positive change in the status of fishers and their communities or the status of resources that these fishers traditionally fish. On the contrary, the current dominant market system embodies one of the main and all too often forgotten factors that drive intensification of exploitation of fishery resources and the development of bad fishing practices with a direct consequence on the health of coastal ecosystems. We segment the layers of the multifaceted problem.

WEAKNESS 1

LACK OF TRACEABILITY. Too often, products from small-scale fisheries get mixed in the sales process with those from semi-industrial and industrial fishing, aquaculture and imported markets, and even illegal fishing, including recreational fish (Pascual et. al., 2018). For many of these, their profitability is based on large volumes. On the one hand, the consumer is prevented from obtaining full information on the product they are buying, in particular, its production system, and in practice also the fishing gear used. As a consequence, they are prevented from making a choice on the type of product they buy and rewarding the type of fishing they consider better (professional SSF, industrial or even illicit recreational products). On the other hand, the small-scale fishers are unable to exert any control or influence over the price and, therefore, are not able to present a fair (and ideally premium) value of their products to the consumer. As a consequence, they are unable to

ensure price stability and improve their socio-economic condition and improve their stewardship of the resource. To the contrary, this feeds into a negative cycle of social and environmental consequences. These issues will be looked at in further detail.

WEAKNESS 2

LACK OF TOOLS TO MEET REQUESTS OF SENSITIVE CONSUMERS.

Consumers are becoming increasingly sensitive to the ethical issues implicated in global trade, apart from the concern for quality. A share of them wants to contribute to ethical causes, including sustainability in seafood (McClenachan, Dissanayake & Chen, 2016). Policy-makers have also indicated their expectations for a greater involvement of the consumer in reinforcing the sustainability of fisheries (Penca, 2020). Indeed, the trend of increased awareness, accountability and stewardship of producers and consumers has been less present in the seafood supply chains than in some other commodities (e.g. coffee, cocoa, textile).

Yet, policy tools do not cater for the rise of conscious consumers. The seafood sector had and continues to have very limited tools available to consumers to assess sustainability criteria (Richter & Klöckner, 2017; Jacquet & Pauly, 2007) and they remain lost in the complexity of the whole issue. Awareness-raising campaigns are often too unspecific. Eco-labelling has a limited utility for consumers that are interested in balancing both social and environmental impact of the products they purchased. Specifically, the Mediterranean is a grey zone that various forms of eco-labelling hardly cover. Mandatory labelling could play a certain role but the current mandatory labelling requirements in any country, including the EU under the CMO Regulations (where they are normatively considered to be most advanced because they include the obligation of indicating the fishing gear, but where they are weakly implemented) do not allow the consumer to differentiate consistently the products coming from different production systems.

The amount of information found on the mandatory food labelling does not correspond to the consumers' expectations (Special Eurobarometer, 2018), neither do other policy tools satisfy the consumers' expectations regarding sustainable consumption of seafood (McClenachan, Dissanayake and Chen, 2016). In Spain, for instance, a study (Client Earth, 2018) on the compliance of the obligatory information display in fishery products revealed that 70% of the obligatory information is not provided, especially the production method (which was missing in 75% of the products) and fishing gear (which is excluded from 85% of the products), among others interesting data. Similarly, a study on labelling of seafood in retailers in Slovenia revealed that the vast majority of selling points were not compliant with the regulation, including the key information on fishing gear and fishing area.⁷ While the data collected by fishers is usually complete, the greatest loss of data and information occurs in the post-harvest stage, hindering informed consumer choices.

WEAKNESS 3

MARKET DOMINANCE ON A FEW ESTABLISHED PRODUCTS. Small-scale fisheries products which are not popular or established but are a sustainable alternative to heavily exploited species do not get sufficient marketing attention, with the result that consumers remain dependent on the popular species such as, European hake, giant red shrimp, swordfish, Gilthead seabream, European seabass and salmon. Often these species are imported and come from other production systems such as aquaculture. Along with the parallel local production by large-scale fisheries and aquaculture, the imports of fresh fish have posed challenges to the products of small-scale fisheries, especially in countries where the markets are small and easily saturated. The presence in the market disregarding season, the stable characteristics in size, prize and quality are probably factors that facilitated consumers (and restaurants) to adapt and get used to these few popular highly visible species (in the Mediterranean context, these are especially sea bream and sea bass). Small-scale are frustrated by the fact that their products are assimilated through the supply chain and treated like any other at best, while producing more positive externalities than the competitor.

WEAKNESS 4

FISHERS ARE THE WEAKEST IN THE VALUE CHAIN. An important economic problem is the unequal distribution of power in the value chain with the fishers carrying a disproportional burden. The marketing arrangements tend to favour the interests of the buyer, rather than the fishers, who have little to no control over pricing. Also, the complex, non-transparent and lengthy value chains represent a problem. Producers often do not sell to the final consumer but employ a wide chain of intermediaries and middlemen (fish brokers, fish processors, agents and retailers). Fishers receive marginal earnings for seafood relative to other actors of the value chain, which can be as low as 10% of the final sales price of his product and the intermediaries about 90% of the value (Josupeit, 2016; Purcell et. al., 2017).

Mixing their product in the supply chain is often the involuntary choice of the small-scale fishers, because it is the only option available. This happens when the consumer does not sufficiently recognise the quality and the externalities of the small-scale fisheries product, or do not have the means to find and award it. It also happens when fishers do not have a nearby or constant market to sell to. Travelling several kilometers every day to the nearest point of first sale incurs additional transport cost and time investment that they cannot afford and, if selling in an auction, normally receive the worst selling conditions by selling the last ones.

WEAKNESS 5

LACK OF DEDICATED ORGANISATIONS AND CAPACITY.

It's rather common that small-scale fisher are insufficiently organized in the sales process and they each, rather than collectively, negotiate prices with their clients (such as restaurants). This puts them in the position of price-takers and in competition with each other (other small-scale fisher), resulting in a race within the sector, when there is a prior need to strengthen it as a whole. On top of that, small-scale fishers' sales agreements are normally verbal and fluctuate on a daily basis and disable fisher from having secure prices for a whole year, let alone across years. To implement the agreement, each fishing family or individual fisher has to take care of the logistics and infrastructure, instead of having resources to share. That means that each family has to have a van (preferably isothermal, but this is not always the case) and the possibility to store or process their products. Such fishers usually work long hours, for relatively low and very uncertain revenues, which may on times not even cover the costs of fishing, and the invisible labour included. They might even enter into debts to the sellers, while having few opportunities to break through this cycle of dependency, as they have very limited access to basic accounting tools, credits, micro-finance, and insurance.

WEAKNESS 6

VICIOUS CIRCLE. These tough and uncertain working conditions have wide implications. They make the fishers very vulnerable and lead to the



⁷ Preliminary results from the study in the framework of the project DNA based technology for fraud detection in fishery products with socioeconomic impact assessment (project ID V1-1808).

impoverishment of fishers and their families, or a premature abandonment of the activity. Secondly, they contribute to the fact that the profession is unattractive to the youth and that generational renewal is not ensured (White et al., 2015). This also results in the reduction of future prospects of SSF coastal communities, including for women, whose work remains largely invisible (Frangoudes et al., 2019). Thirdly, as a result of unstable and low prices, fishers may intensify the fishing effort, including by bending the rules or operating on the margins of law in order to compensate the low price with a high volume of catches. This has a depressing effect on prices and, of course, aggravates the situation of overexploitation of marine resources and ecosystems. Fishers may also decide to sell outside the established mainstream markets through direct sales to gain higher revenue. Where direct sales are illegal, this may give them a certain margin of profit in the short-term but will likely result in a negative impact on their revenues in the long-term as well as contribute to a weakening of the trust in institutions.

The presented negative effects are a result of the existing organisation of value chains and the marketing system, the details of which are very local-specific and case-dependent. While some countries have an obligatory system of sale through a fish market (normally using an auction) (e.g. Spain), others do not (e.g. Italy); in some countries, buyers are willing to pay a premium to SSF products; in others, they are not ready yet; in some countries fishers have necessary infrastructure to ensure quality and traceability of products, while others - especially in non-European countries - may not. This report does not present the details implicated in the organisation of value chains in different countries. Instead, it confirms that while problems of suboptimal organisation of value chains and difficulties with markets for SSF are shared across the Mediterranean, the specific reasons may not be.



3.2

MARKET RESPONSES TO WEAKNESSES

The weaknesses of the organisation of seafood markets in the Mediterranean are areas with much potential for improvement. A number of initiatives have been developed by the stakeholders to empower the SSF in existing markets or create new ones. Both, the value chain and awareness of consumers are being targeted. The actions taken are very much local, or at best regional. They involve different tactics, from practices of shortening the supply chain and direct marketing arrangements, developing supporting technology, developing labelling schemes, organizing promotional events and festivals, working with chefs in restaurants or with schools, and empowering SSF sectors to get organised and become effectors of change. These come from different sectors in society and specific goals of activities may vary considerably. One of the repetitive aspects is the re-connection between effectors from different sectors (e.g., bringing consumers in direct contact with fishers, or chefs in contact with researchers), sidestepping mainstream markets and usual ways of doing things. Most of the activities owe their success to investments of time and energy by individuals. Public funding has been crucial for most of the initiatives and appears to be necessary for continuing and upscaling many of them.

While SSF themselves are crucial to ensuring that their products are differentiated and perceived to be of a higher value than seafood from other types of production, the extent to which valorization can materialize is also determined by the capacity of the SSF to get organized and act collectively (branding themselves or selling their products), and by the willingness for national governments to make space and endorse new marketing initiatives and organisations.

These initiatives, especially when they operate successfully, demonstrate the

appetite for the kind of transformations in the supply chain that are requested by at least part of the SSF (supply) and consumers and citizens (demand). They point to the fact that there is a lack of systemic distinction in the seafood markets regarding products' provenance, quality, environmental and socioeconomic impact on producers. These initiatives have a shared timing and underlying rationale, and there might be an exchange of practices taking place on the informal or ad-hoc level, but without any institutional coordination going on between these efforts.

One of key lessons that emerges from the mapping and understanding of the SSF value chains and markets is that each initiative has responded to a specific need or the perceived limitation, which would not necessarily work in the same way in other contexts. For instance, in some cases (e.g., France), fishers find the opportunity in selling directly to the consumer. In many countries direct sales are possible and have indeed provided an important retail channel for SSF. For many fishers, direct sales have resulted in added value, which makes a difference between earning a revenue or suffering a loss. However, this would not be the best response in some other markets (e.g., some Lebanese regions), where knowing the way in which the product was harvested might not necessarily be a priority for the consumer. Here, instead, improving infrastructure and skills to ensure better hygiene conditions of the products and their selling points would better respond to both the needs of the consumer and fishers.

3.3

TYPES OF INNOVATION TO ADDRESS THE CHALLENGES

The purpose of this section is not to present a wide variety of actions but to identify the key **models of responses, or the key types of innovations** that have taken place. This allows a more focused and strategic reflection on the options for action, based on the underlying reasons for negative trends and feasible responses. The actual initiatives may and normally do incorporate more than one of the following models or types of innovation. A combination usually results in a higher impact and increased benefits:

INNOVATION 1

INNOVATION IN THE SHORTENING OF THE VALUE CHAIN.

This type of innovation aspires to reforming the sales system so that it shortens the value chain between the producer and the consumer by reducing the number of intermediaries and ideally reaching the point where the producer is able to serve the final customer directly. The outcome of a shortened value chain is usually a good price deal for both the fisher and the consumer, who receives a better product, probably also at a better price, but also at improved traceability. Direct contact also improves communication; thus, producers are able to better inform consumers about the qualities of their products, and consumers are able to better communicate their requirements. In agriculture, farmers markets, organic vegetable boxes and schemes based on the Community Supported Agriculture (CSA) model are numerous and have enabled consumers to engage directly with smaller producers of quality produce, enabling spreading good practices. In fisheries, similar initiatives are achieving similar success. Examples include **Community Supported Fisheries (CSF), fish box schemes and on-line trading schemes**, although they are fewer in numbers if we compare them to schemes from agriculture. Also, despite targeting the same consumers, very few CSA and CSF schemes seem to interrelate or establish clear synergies, and those

CSA schemes that do offer fish products normally do not follow clear and holistic criteria. Some of these innovations are also linked to using a new distribution channel (online sale, through specific apps, social media pages, WhatsApp, etc.), as described here below. We have seen the coming about of direct sales innovations with the COVID-19 epidemic where local fishers' organizations started online selling and delivering their products directly to the consumers through simple social media channels or more elaborated tools, e.g. Hook and Deliver (Malta), Poiscaille (France). An effective and traditional means of **direct selling is directly off the boat or at a fishers' market** located in marinas or ports. While not quite a case of innovation, these channels serve the purpose of direct sales and should not be overlooked by consumers. Recently, initiatives have emerged to map these direct marketing points at harbour level to inform and promote their uptake by direct consumers (e.g. PleineMer's map in France). Direct sales are allowed in most of the Mediterranean countries, even if they are limited in value in some countries (e.g. in Slovenia, a fisher can sell up to 50kg of fish straight from the boat). However, they are illegal in a few countries, such as Spain or Portugal.

INNOVATION 2

INNOVATION IN THE DISTRIBUTION CHANNEL.

Initiatives may improve sales systems **using ICT (Information and Communication Technology), through apps, online platforms or social media channels** to offer their products and services. ICT is increasingly used in the sale of food and, although it is not at the same level of other types of food such as fruits and vegetables, selling fish products online is also raising attention. Online sale is often accompanied by more traditional systems, such as phone orders. In many *Cofradías* in Spain, for example, fishers have started to sell their products through

the auction sale (every day at 4pm), and reach buyers through the online system. More recently, a very interesting movement of cooperation among online food providers, including vegetable, fruit, cereal etc. can be observed. This provides a more convenient service to the final consumer but also makes the distribution channel more effective. However, fish providers are still quite behind to join these cooperation platforms and with few known examples in the Mediterranean.

INNOVATION 3

INNOVATION IN DIVERSIFICATION OF PRODUCTS.

Initiatives may offer different products to diversify the type of sales. Consumption of fish tends to be concentrated on relatively few species (hake, cod, shrimp, bass, farmed salmon, etc.), which can potentially be overexploited and often not correspond to the local reality and seasonal availability. Initiatives emerged to create new markets, and price lesser-known species in the market, which are an important part of the catch for small scale fishing, have gastronomic value, and help to reduce fishing pressure on overexploited species. Interesting initiatives exist to create new markets for non-indigenous (and usually invasive) species that are increasingly being major catches of the small-scale fishers. This is especially relevant for the Eastern Mediterranean but it is gradually spreading over the whole basin. In some of the initiatives, even the product offered is presented differently by offering them a "fish box scheme", that offers the consumer a certain amount of fish, but not specifying the species, where the species vary according to the fishery on that day in that season, according to the catch of the day.

INNOVATION 4

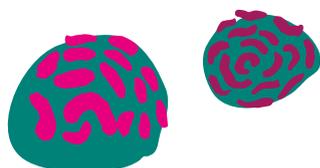
INNOVATION IN PROMOTION OF THE PRODUCTS AND AWARENESS RAISING.

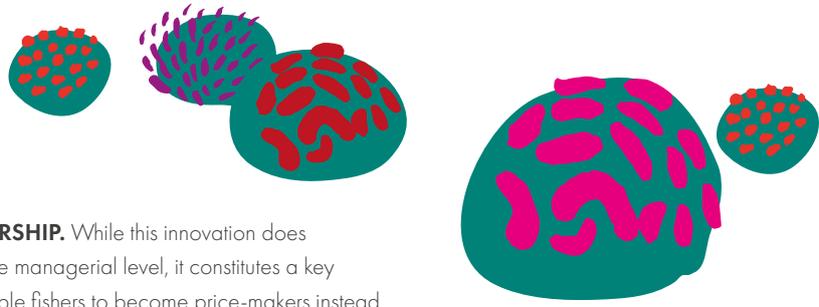
These initiatives involve both in-depth printed or digital materials and hands-on promotional activities, consisting of workshops, gastronomic events, fish festivals and cooking classes, targeting different audiences, from chefs to the general public. These initiatives go beyond providing technical and legal information of the products by explaining the origin and the fishing techniques that brought the fish from the sea to the dish, these activities are promoting the intrinsic value of the product, teaching how it is to be prepared, and explaining the ecological significance of the marine species and the low impact nature of small-scale fishers. The purpose of all those initiatives is to promote local products (zero-miles) to allow the re-connection of the consumer with the small- producer, draw bridges and even allow spaces for interaction among consumers and fishers, enabling mutual understanding, and increasing trust. These initiatives aim also at increasing consumer capabilities to make ecologically sustainable choices when buying marine products or ordering fish dishes. The events have the intent of explaining the value of neglected marine products in order to facilitate consumer to see beyond the popular products they are used to (e.g., seabream, seabass, salmon, swordfish).

INNOVATION 5

INNOVATION BY GENERATION OF A BRAND OR LABELLING SCHEME.

Some initiatives have deployed branding and labelling the products to highlight certain aspects of their production method. Known labelling schemes in the Mediterranean have been initiated by fishers or NGOs, and not by public authorities, even if these have been supportive of the action. They have come in the form of a logo and/or a statement on the product that tells the consumer the food meets the standard of that scheme. The sort of information that the brand or label communicates can be different and has included the origin of the product (geographical indication), the production system (exclusively small-scale), quality and freshness of the products (e.g. fish of the day), and others. These are instances of "self-declaration schemes" (where adherence to a selected commitment is done by the scheme operator themselves, based on their own product standards or criteria). In the Mediterranean, there are very few instances of "third-party certification schemes" (the procedure by which a producer or a group of producers undergo an independent and formal evaluation by a third-party of their production method) (Dankers, 2003). The notion of a "third-party" refers to the fact that schemes rely on an attestation procedure for its members, which is independent from their interference (Dankers, 2003). The most known among such schemes is the Marine Stewardship Council (MSC). Few labels, if any, address all the dimensions of sustainability. Well-known existing certification scheme of Fair trade has not entered fisheries products. Only Slow Food network, which operates a very loose labelling scheme, has addressed social values of fisheries products on top of environmental ones.





INNOVATION 6

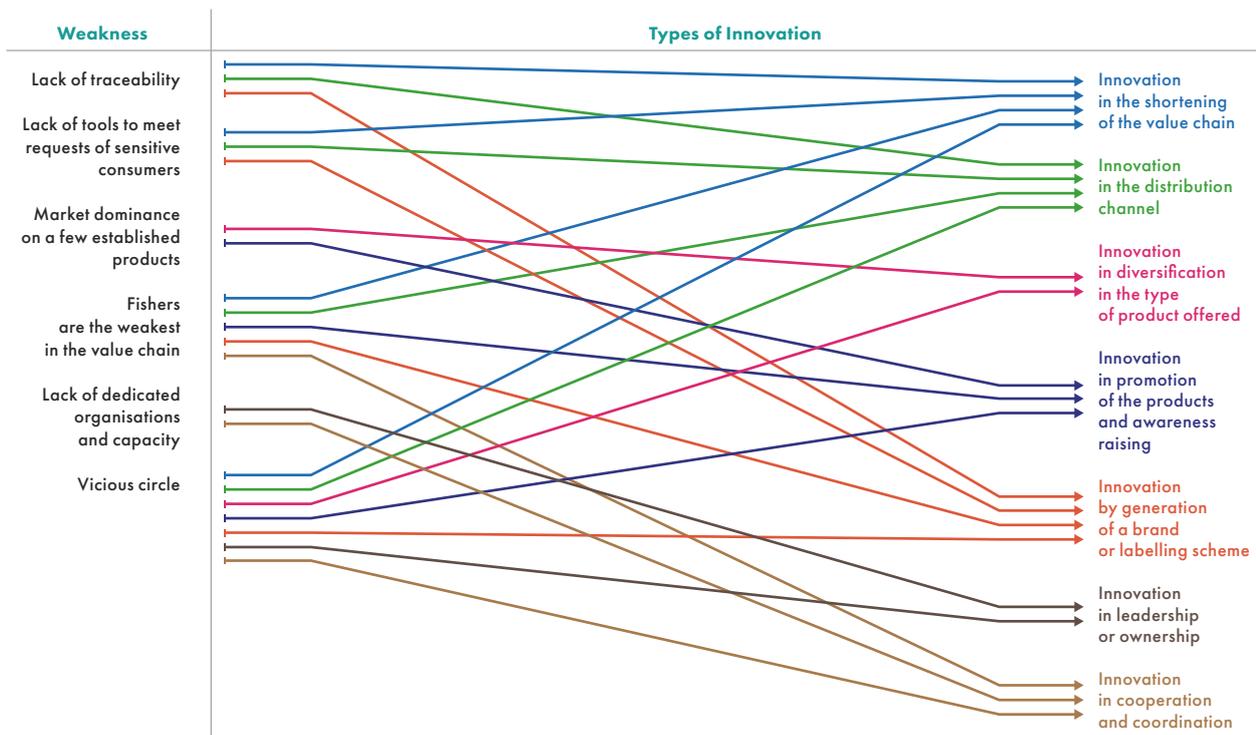
INNOVATION IN LEADERSHIP OR OWNERSHIP. While this innovation does not relate to the product or its sale directly, but the managerial level, it constitutes a key innovation factor to take into account. It can enable fishers to become price-makers instead of being price-takers. In some cases, previous investment in support and capacity building of the sector has become better organized and enhanced the entrepreneurial dimension of their own commercialization initiatives normally combining several of the previous innovations. This not only empowers the SSF sector as actors of change and diminishes the intra-sectoral competence but allows to create fairer prices of their product and reverts directly to the maintenance of their own structures and collective action. Small-scale Fishing Producer Organisations (FPOs) in Europe can play a key role in the management of commercialization structures of SSF Products and increased impact on the sustainability of fishing products, in all its dimensions. However, few Member States’ policies support small-scale fishers to establish dedicated SSFPOs. There are several cases of recent initiatives to establish SSFPOs being stymied by what amounts to at worst a “hostile environment”, or at best “bureaucratic intransigence” with the national authorities. Linked to this is the conditionality for establishing POs that requires high volumes of landings, whereas what is important for SSF is the value addition. STECF data show that SSF land only 5% of the EU catch by volume, but up to 15% by value, with a Gross Value Addition to revenue ratio of just under 70%.

Not all initiatives for marketing small-scale fisheries products need to be owned and led by small-scale fishers, social entrepreneurs or non-profit organizations can take over the role. This is not to say that fishers should be less engaged; in fact, their close engagement and feeling of co-ownership is of utmost importance as promotes co-responsibility, shows the sector as a dynamic and active stakeholder to look for solutions and in their role as custodians of the sea.

INNOVATION 7

INNOVATION IN COOPERATION AND COORDINATION.

Initiatives have been set up that seek to coordinate efforts, replicate and scale-up the previously mentioned innovative initiatives to allow a greater impact and enhance visibility. These are initiatives of second level (networks, etc.) that try to give visibility and connect several initiatives and try to simplify messages given the complexity of the whole subject for the general public. This is, for example, the case for Restauramar⁸ in Galicia (Spain), a network of restaurants committed to an ethical code, which promotes awareness and capacity building of the main stakeholders or others of international nature detailed later in the following sections.



8 Restauramar website: www.restauramar.org





4.

Types of Initiatives

This section presents innovative actions that were introduced to promote SSF products and markets. The main goal is to present the geographic extent of such action in the Mediterranean, the range of innovations introduced and to outline the key features of good practice.

We have deployed a dual approach. First, in the mapping exercise, we sought to identify, through stakeholder engagement, internet search and an open call, all the cases of good practice both within and outside the Mediterranean, limiting ourselves the presentation of cases to those which are more recent or ongoing. The result of this mapping is presented in Table 1, which provides basic information on the location and type of innovation of initiatives, as per the categorization outlined in section 3.3. The list is not exhaustive. All the initiatives from the mapping exercise that are found in the Mediterranean region, are presented on the map.

List of some initiatives aimed at increasing market opportunities for small scale fishery products.

Basic features			Type of innovation							
Name of the initiative	Location, Range of action	Focused solely on SSF?	Shortening the value chain	Distribution channel	Product diversification	Promotion and awareness raising	Generation of brand, label, certification	Leadership or ownership	Cooperation	
LOCAL/NATIONAL INITIATIVES WITHIN THE MEDITERRANEAN										
 CONCHA DE LA COSTA	Concha de la Costa	Malaga, Spain	✓	✓	✓	✗	✗	✓	✗	✗
 PESCADOS CON ARTE	Pescados con arte	Almeria, Spain	✓	✓	✗	✓	✓	✗	✓	✗
 PEIX NOSTRUM	Peix Nostrum	Eivissa, Spain	✗	✓	✗	✓	✓	✓	✓	✗
 EL PEIX AL PLAT	El peix al plat	Barcelona, Spain	✗	✓	✓	✓	✓	✗	✗	✗
 EMPESCA'T	Empesca't	Escola i Estarrit, Catalunya, Spain	✓	✓	✗	✓	✓	✓	✓	✗
 PEIX DE CUSTODIA	Peix de custodia	Maresme province, Catalunya, Spain	✓	✗	✗	✗	✓	✓	✗	✗
 GALION	Galion	Languedoc Roussillon, France	✓	✓	✗	✓	✗	✓	✓	✗
 PLEINE MER	Association pleine mer	France	✓	✓	✗	✗	✗	✗	✗	✗
 POISCAILLE	Poiscaille	France	✓	✓	✓	✓	✗	✗	✗	✗
 THON ROUGE	Thon rouge de ligne	France	✗	✗	✗	✗	✓	✓	✗	✗
 INTERREG ITALY - CROATIA ADRI SMART FISH	AdriSmartFish	Coorle Fish Market, Italy	✓	✗	✗	✗	✗	✓	✗	✗
 FISH BOX	Fishbox	Italy	✗	✓	✗	✗	✗	✗	✗	✗
 FRESH FISH ALERT	Fresh Fish Alert	Sicily, Italy	✓	✓	✓	✓	✗	✗	✗	✗
 INTERREG ITALY - CROATIA PRIZEFISH PROJECT	Prizefish Project	Italy and Croatia (Adriatic Basin)	✗	✓	✓	✓	✗	✓	✓	✗
 MARE E SALUTE	Mare e Salute	Gulf of Trieste, Italy	✗	✗	✗	✗	✓	✗	✗	✗
 FISHERS' AGREEMENTS WITH HORECA	Fishers' agreements with HORECA	Istria, Croatia	✓	✓	✓	✗	✗	✗	✓	✓
 PICK THE ALIEN, iSEA	Pick the Alien, iSea	Greece	✓	✗	✗	✓	✓	✗	✗	✓
 ISTANBUL BIRLIK FISHERY COOPERATIVE	Istanbul Birlik Fishery Cooperative	Istanbul, Turkey	✓	✓	✓	✗	✗	✗	✓	✗
 ΕΝΑ ΚΟΥΤΙ ΘΑΛΑΣΣΑ	A box of the Sea	Greece	✓	✓	✓	✓	✗	✗	✗	✗
 FISH FOR TOMORROW	Fish for tomorrow	Malta	✗	✗	✗	✓	✓	✗	✗	✗
 EAT FRESH FISH	Eat Fresh Fish	Malta	✗	✗	✓	✓	✗	✗	✗	✗
 EAT THE LION FISH	Eat the Lionfish initiative	Lebanon	✓	✗	✗	✓	✓	✗	✗	✓
 CLUB BLEU ARTISANAL	Club Bleu Artisanal	Tunisia	✓	✓	✓	✓	✓	✓	✗	✗
GLOBAL INITIATIVES WITH IMPACT IN THE MEDITERRANEAN										
 MARINE STEWARDSHIP COUNCIL	Marine Stewardship Council	Global, with presence in Mediterranean	✗	✗	✗	✗	✗	✓	✗	✗
 OPEN FOOD NETWORK	Open Food Network	Global, with presence in France, Spain and soon Italy	✗	✓	✓	✓	✗	✗	✗	✓
 SLOW FOOD	Slowfood presidia	Global with 18 fishery presidia in the Mediterranean	✓	✓	✗	✗	✓	✓	✗	✓

Note: ✓ (yes), ✗ (no)



Map indicating the geographic locations of the different initiatives.

In the second phase, we decided to present case studies of innovative market responses as means to advance the study of this complex research topic. They cover both the breadth of responses in the Mediterranean, but also responses that the region is missing – two specific instances of ways in which weaknesses of the markets have been tackled outside the region, but which are promising to be explored also in the context of the Mediterranean. Cases were sought where we received cooperation of the actors involved in the initiatives, allowing us to offer the description of the cases and the claims asserted. As data on these initiatives is extremely scarce, our main criterion for presentation was that cases are or can be evidenced in a written form, and capable of generating

some evidence of commendable factors leading to successful outcomes. We present examples according to no particular template, in short, semi-structured form, but cover analytically important elements that characterise the cases. Key aspects of the chosen cases are described, including a brief background of the fishery, how the challenge was tackled and what the results are. Due to lack of data, we do not claim to present full-blown case studies here. We are also aware that the following selection of cases is not representative of all initiatives and projects taking place in the Mediterranean. It

should be noted that some new initiatives are constantly appearing across the Mediterranean and more broadly, and more analyses and documentation is likely to emerge in the future. The intention is that these examples inspire reflection and allow for some preliminary conclusions about the learned lessons to be drawn.

4.1.

INNOVATION IN THE SHORTENING OF THE VALUE CHAINS

4.1.1.

FISHERS' AGREEMENTS WITH HORECA, Istria, Croatia

Contribution from
Danijela Mioković

Small-scale vessels in Croatia constitute 84% of the active fleet (5.085 vessels), their contribution in gross tonnage is 22% and in engine power 43%. Total value of landings of small-scale fishery in 2017 was EUR 7.43 million, covering 13% of total value of landings. Total weight of landings of SSF is about 1.600 t (total for Croatia is 60-70.000 t, white fish total is 3.300 t, plus 1.000 t for cephalopods; STECF, 2019). SSF in Croatia uses 15 different types of fishing gear targeting around 100 different fish species across different seasons.

The market for SSF products is mostly domestic, except for the Istria region where the export to the Italian market is significant and has an important influence on the price fishers get for their products. The described initiative with the HORECA (hotels, restaurants, catering) sector was developed because fisher wanted to depend less on the export (and prices dictated by the foreign buyers) and sell more on the local market. There was also a demand coming from the HORECA sector for high quality local products with a steady supply and delivery. The important factor for HORECA is the benefit of getting all seafood products in one place, through the role of the Istria Cooperative.

The Cooperative Istria is comprised of 50 and owns a fish processing plant as well as a purification and dispatch center for bivalve molluscs. The processing turns the catch to ready-to-cook frozen products like fish fillets, gutted and cleaned fish, chucked and cleaned scallops, cleaned squid and cuttlefish. The processing plant can produce special requests and orders

for hotel and restaurants. It has a facility for smoking and mincing, as well as cooking. Apart from processing the seafood, HORECA also provides delivery of products directly to the buyers. The principle of this initiative is that the fishers' cooperative in Istria collects the catch from its members, but also from other local fishers who are looking for buyers. The fish are sorted, and the catch is stored at the approved refrigerating facility that also has a direct retail and wholesale area for HORECA buyers.

The cooperative offers a possibility to order a direct delivery, and this option is mostly used by hotels. About 15% of buyers come to the wholesale storage center in person, while 85% of orders are made by telephone. 80% of prices are fixed, while prices for some fish that is not available throughout the year (like some high priced, large white fish) are negotiated at the moment of the purchase.

This initiative has shortened the supply chain, because it eliminated one intermediary between the fishers and HORECA sector. The fishers' cooperative is owned by the fishers and, therefore, controls the prices that are offered to HORECA buyers. At the same time, the issue of seasonality of the catch and supply of fresh products during events of bad weather are overcome by offering frozen products.

This initiative also enabled the fishers to enter the domestic market in a more stable manner, and maybe even more importantly, created an offer of local products easily available to restaurants. In this way, the restaurants and bars that offer street food can add local fish to their menu and can rely on a steady supply chain and delivery.



Examples of product on offer.



Seafood processing plant.

4.1.2.

FISH BASKET SCHEME, CABAZ DO PEIXE, Portugal

Contribution from
Cristina Pita

Fish basket of fish box schemes are present in various parts of the world, including the Mediterranean (e.g., Kouti Thalassa/Box (full of) sea in Greece). While the present case study is from outside the region, the principles are shared.

Small-scale fisheries in Portugal account for almost 80% of the fishing sector, conducting short-fishing trips, employing a variety of (mostly static) gear and catching a variety of species. While some species fetch relatively good prices at auction, a number of species remain underutilized and undervalued. The initiatives of fish baskets have been set up to address that challenge. There are three comparable fish basket initiatives in Portugal. We will describe the “Cabaz do Peixe” initiative.

The objective of the “Cabaz do Peixe” fish basket is to promote the consumption of local fish, caught in a sustainable manner by the artisanal local fleet, involve fishers in the marketing of their catch, value unknown species and value species that (at times) would be discarded otherwise due to not having a market. The objective is to eliminate the middlemen, shorten the value chain and bring fishers closer to consumers with benefits to both. The “Cabaz do Peixe” fish basket sells fresh fish from around 80 artisanal vessels (varying from 3-17 meters in total length) from Sesimbra fishing harbour and operating in the seas around Sesimbra. The initiative was started in 2015 and the area of operation has been increasing ever since. The initiative is run by the Sesimbra fishing association.

The Portuguese law demands all fish to be sold in auction. Fishers take their catch to the auction and the Sesimbra fishing association (to which the fishers belong) buys this fish. Customers order online by

filling in a form. They first choose the number of baskets they want and specify species not wanted (customers do not choose the fish they want but can choose three species that they do not want included in the basket). Lastly, the customers choose the frequency of the delivery (every week, every two weeks, one-time-off) and the place of delivery.

The basket costs €25, and is made of 3 Kg of three or more species, paid in cash upon delivery. The fish is delivered clean and gutted, ready to be cooked. The baskets are taken to the customers. Delivery can take different forms. In the case of this initiative there are delivery points organized in different locations and customers go to these meeting points to pick-up their orders, in other initiatives the basket is taken to customers’ houses. One of the characteristics of this initiative is the diversity of seafood. The basket is always composed of three different species, depending on the season, from a list of up to 26 different species.

The benefits of the initiative include:

- Educate consumers about seafood products;
- Consumers receive fresh fish at a reasonable price;
- Promote the use of undervalued species, by including unknown, low value species in the basket, which otherwise would be discarded due to not having a market;
- Bring fishers and consumer closer together;
- Increase the value of seafood products and revenue to fishers.

Difficulties of this initiative include:

- Illegality of direct sale (in Portugal);
- Need of fishers’ associations to register as buyers in auction, which increases production costs;
- Lack/low management capacity of fishing associations (requires training);
- Publicity costs to bring new consumers into the initiative;
- Access to appropriate consumers and change of consumer preferences (lack of preference for whole/unprocessed fish);
- Keeping supply consistent (due to bad weather in the winter, artisanal low production, etc.)

More information at <http://www.cabazdopeixe.pt/>



Catch for the “Cabaz do Peixe” fish basket.



Distribution of the “Cabaz do Peixe” fish basket.

4.2.

INNOVATION IN THE DISTRIBUTION CHANNELS, INITIATIVES USING ICT

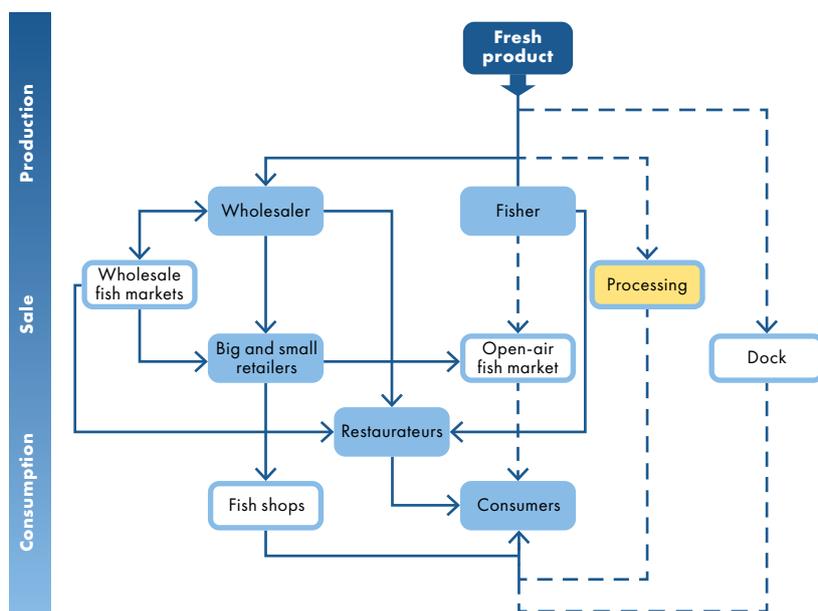
4.2.1.

APPS FOR CONSUMERS, FRESH FISH ALERT, Sicily (Italy)

Contribution from
Iuri Peri

The fishing sector in Sicily represents 23% of the Italian fleet, and it is responsible for 18% of national fish production and 26% of revenues. At a national level, the Sicilian fleet is the most representative of small-scale fishing, both in terms of capacity (number of boats and overall tonnage) and activity (fishing effort and catches). Small-scale fishing characterizes the regional fishing sector best, being an important segment in terms of fishing units with approximately 2.000 vessels, equivalent to approximately 67% of the Sicilian fleet. The employment corresponds to about 40% of the entire regional fishing sector, with more than 3,000 fishers.

The marketing circuit of the fresh caught product coming from small-scale fishing shows that those fishers are oriented to a local market, consumers or restaurants through direct sales. On the other hand, fishers belonging to bigger fleets present more complex distribution circuits, where there is a consistent use of wholesalers and intermediaries. The species caught at sea during fishing trips (lasting a few hours), are almost all marketed as fresh products. Only a small percentage (anchovies and Bluefin tuna) is destined for processing.



Scheme of the general market circuits in Italy.

The Fresh Fish Alert Project was conceived and implemented by the University of Catania, financed by the Sicilian Region, the European Maritime and Fisheries Fund and in collaboration with the Low Impact Fishers of Europe. After completing a series of territorial and market surveys on the small-scale coastal fishing activity and on supply chain in Sicily, a mobile application for Android and iPhone smartphones was developed capable of establishing a direct link between fishers and consumers to enable virtual marketing. On the one hand, this was aimed at improving the competitiveness of small-scale fishery businesses and, on the other hand, guarantee consumers transparency, information and small-scale fish products, caught within a set of social and environmental guidelines.

The project aims to reduce the serious gap that is common in micro agri-food businesses and small-scale fishing in particular. A constantly declining sector, which, more than any other, is in a dramatic crisis, falls victim to an onerous and complex regulation, a complex and difficult work activity, a constant evolution of the consumption models that increasingly look at processed products and to low prices imposed by the retailers. The final objective of Fresh Fish Alert, therefore, is to enhance small-scale fisheries value chains and increase the resilience of the sector.

While returning back to port from their fishing trips, the fishers access the App with the mobile phone and take photos to communicate following information in real time: the species of fish caught, fishing gear used, quantity expressed in kg, sale price, place and landing time. On the other hand, the consumer can consult the App for information on the catch of the day and book their favorite pick by choosing where to collect it. Fish can be delivered and picked up by the consumers in specific sales points. On the App one can also consult information about the fisher's activity (fishing boat and related licenses, etc.) and the marketed species, including useful indications on nutritional characteristics.

Twenty fishers from the Riposto, Stazzo, Aci Trezza, Ognina di Catania, Catania and Brucoli Ports have been involved and trained to participate in the App development. The App is open to the inclusion of additional professional small-

ETICHETTA FRESH FISH ALERT

Il prodotto riporterà tutte le informazioni obbligatorie previste dalla normativa europea.

Esempio di etichetta per un prodotto fresco non trasformato e preimballato

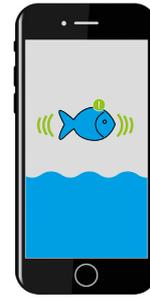
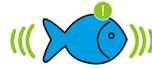


- | | |
|----|--|
| 1 | Denominazione commerciale e nome scientifico |
| 2 | Metodo di produzione |
| 3 | Zona di cattura |
| 4 | Porto di sbarco |
| 5 | Data di sbarco |
| 6 | Termine minimo di conservazione / data di scadenza |
| 7 | Condizioni di conservazione |
| 8 | Etichetta di certificazione |
| 9 | Contrassegno di identificazione |
| 10 | Peso netto |
| 11 | Operatore del settore alimentare |
| 12 | Categoria di attrezzi da pesca |

Un modello di Action-Research

Il progetto coinvolge le marinerie siciliane operative nel Golfo di Catania che praticano prettamente la piccola pesca artigianale. Le azioni previste dal progetto mirano a migliorare la capacità delle imprese della pesca costiera artigianale a trattenere una quota più elevata del valore delle catture effettuate favorendo la trasparenza del mercato e la tracciabilità del prodotto.

FRESH FISH ALERT



PROGETTO FRESH FISH ALERT

Informazioni real-time sul pescato, trasmesse direttamente dai pescherecci.

www.freshfishalert.it
info@freshfishalert.it

Progetto sviluppato dal Dipartimento di Agricoltura, Alimentazione e Ambiente (D3A) dell'Università degli Studi di Catania, finanziato dalla Regione Siciliana con fondi FEAMP 2014-2020, bando di attuazione misura L26 "Innovazione nel settore della pesca".

www.freshfishalert.it
info@freshfishalert.it

FRESH FISH ALERT

Il pescato fresco garantito subito con un click.

Fresh Fish Alert è un progetto sviluppato dal D3A - Dipartimento di Agricoltura, Alimentazione e Ambiente dell'Università degli Studi di Catania, e finanziato dalla Regione Siciliana con fondi FEAMP 2014-2020, bando di attuazione misura L26 "Innovazione nel settore della pesca".

Il progetto ha coinvolto le marinerie siciliane operative nel Golfo di Catania che praticano prettamente la piccola pesca artigianale. Il suo obiettivo generale è lo sviluppo di un modello organizzativo e logistico avanzato per la commercializzazione dei prodotti della pesca costiera artigianale, e di pertinenti tecnologie di comunicazione e informazione.

Fresh Fish Alert è anche una piattaforma web fruibile sia dai pescatori che dai loro clienti finali alla quale potranno accedere tramite sito web o applicazione per dispositivi iOS Apple e Android.

Fresh Fish Alert mira dunque a generare un circolo virtuoso rispondendo alle necessità di garantire uno sbocco al pescato locale al fine di migliorare la competitività delle imprese e di tutelare i consumatori in termini di sicurezza alimentare riducendo le asimmetrie informative.

Enti coinvolti

- D3A dell'Università di Catania
- Dipartimento della Pesca Mediterranea, Regione Siciliana
- Associazione Ketos
- Associazione Pesca 2000
- Sinergia Pesca Soc. Coop.
- Cooperativo del Golfo

FFA

Una piattaforma web in grado di stabilire un filo diretto tra pescatore e consumatore.

Il Sistema Informativo prevede una sezione dedicata alla catalogazione delle specie ittiche commercializzate, e un'area interattiva per mezzo di una APP denominata **Fresh Fish Alert**, nella quale sarà possibile trovare informazioni real-time sul pescato del giorno, che saranno trasmesse direttamente dal personale di servizio sui pescherecci.

PROFILO PESCATORE
es. Gianni Neri

PROFILO PESCATORE
es. Gianni Neri

PROFILO ACQUIRENTE

VALORIZZAZIONE DEL PESCATO

Rilascio di sottoprodotti della pesca, scarti inclusi.

Valorizzazione del pescato locale.

Promozione del pescato minore e stagionale.

PROMOZIONE E SENSIBILIZZAZIONE

Sostegno alle piccole imprese.

Promuovere i mercati del pesce e la pesca artigianale.

Organizzazioni di produttori.

Creazioni di raggruppamenti inter professionali.

Connessione di attori.

Creazione di reti d'impresa.

Divulgazione, informazione e formazione.

VENDITA DIRETTA E CIRCUITI BREVI

Raggruppamento di attori dell'intera filiera pesca locale.

Creazione di marchi di qualità locali.

Creazione di organizzazioni interprofessionali.

Ricerca di gruppi di consumatori consapevoli (es. S.A.S.).

Consegna a domicilio.

Vendita diretta on line.

Promozione tramite Social Media.

Creazione di portali dedicati.

Leaflet of the Freshfishalert.it application and main features.

scale fishers who fish in the Catania Gulf. It is hoped that a large part of the fishers and their family members in the area will be involved. The system is currently in beta testing and will soon be available on the App stores for the whole community. In the next phase of work more complex logistics and management logistics will be established, such as infrastructure to semi-transform and delivery of the catch, and creation of home delivery circuits among others.

The project aims to improve the profitability of fishing by promoting the consumption of fish obtained from selective fishing systems, in compliance with the minimum sizes and according to the principles that characterize traditional small-scale fishing, creating a new alliance between fishers, their families and consumers. The pilot project supports and guarantees improved profitability to a sector of small-scale fishing, which is heavily suffering to obtain a sales price sufficient to cover the production costs.

The main challenge is to involve the fishers to organize themselves in the management of

the activities and to build the capacity of the SSF sector from being only fishers to develop their business and organise collectively. Much effort, time and resources are needed to appropriately assist them. Finally, fundraising to have the start-up investments is a challenge to be overcome.

More information:

<http://www.freshfishalert.it/>

4.2.2.

MULTIMEDIA FISH GUIDES, Malta

Contribution by
JD Farrugia

The Quickfish Guide is a consumer tool produced by fish for tomorrow and an NGO from Malta, with the support of European funding for youth. The Guide aims to help people make environmentally conscious seafood choices. The first guide was launched in 2014 as a printed pocket guide ([printable version here](#)) and as a more comprehensive guide on the fish4tomorrow website ([here](#)). The Guide contains 45 seafood items which are rated on a three-point scale; Recommended, Eat with Caution, and Avoid. Information for the Guide was obtained through various sources (incl. IUCN Red list, government/EU information and legislation, scientific articles on specific species, similar guides from around the Mediterranean, websites like www.fishbase.org, conversations with local experts and scientists, GFCM reports) and the fish was ultimately rated based on health of fish stocks, fishing methods and social consequences, as well as any other environmental impacts of e.g. fishing, farming, importation. Fish4tomorrow is currently looking to issue an updated guide, most likely with a different approach from the previous one, by using more first-hand information from local fishers.



Videos are a powerful way to encourage people to try some of the lesser-known fish that are among the more sustainable choices. A series of videos called A Guide to Fish have been produced to equip people with the knowledge, inspiration, and confidence to buy these fish from their fishmongers and prepare them in their own kitchens. The videos (which can be found on [Facebook](#) or [YouTube](#)) are beautifully made, easy-to-follow, and contain instructions in Maltese and English. The videos provide information about learning how to choose fresh fish, how to fillet fish, and how to prepare traditional recipes such as comber (serran) baked over a kapunata. The A Guide to Fish repository is an ongoing project so it will continue to grow over time.



4.3.

INNOVATION IN DIVERSIFICATION OF PRODUCTS

4.3.1.

POPULARISING EDIBLE INVASIVES, EAT THE LIONFISH BY DIARIES OF THE OCEAN, Lebanon

Contribution from
Jina Talj

Invasions of non-indigenous species are a significant danger to local biological systems and to worldwide biodiversity. The common lionfish, *Pterois miles* is viewed as one of the most invasive species on the planet, causing a lot of negative impacts in its invasive range (Albins and Hixon, 2008). In the Mediterranean, *P. miles* was first recorded in 1991 in the Eastern Mediterranean Sea (Golani and Sonin, 1992). However, it was not until 2012 that the species was recorded again in the basin in Lebanon (Bariche et al., 2013). Since 2012, *P. miles* has been continually extending, invading new territories as demonstrated by various reports from nations of the Eastern Mediterranean - Lebanon, Turkey (Turan et al., 2014), Cyprus (Kletou et al., 2016), Greece (Turan and Öztürk, 2015), Tunisia and Italy (Azzurro et al., 2017). The species is now considered as invasive in all of the Eastern Mediterranean, raising genuine worries for the potential effects on nearby marine environments and local species. The tropicalization of the Mediterranean Sea because of climate change will most likely increase lionfish numbers and those of other Lessepsian fish.

Invasive species are a major danger to biodiversity and one of the most pressing environmental issues of our times, costing local communities around the world millions of dollars. The public has a very important role to play in relief and management procedures of invasive species by supporting applicable approaches and policies. The common lionfish is a beautiful specimen which attracts public attention. It is exceptionally well known among divers and, yet, it is very damaging to local ecosystems, representing a genuine risk to economically significant species as well as to endemic and vulnerable species.

The most sophisticated action plan in the East Med is available in Cyprus, thanks to the EU funded project RELIONMED-LIFE (Preventing a lionfish invasion in the Mediterranean through early response and targeted removal). The NGO Diaries of the Ocean is working towards the same goal in Lebanon – science-based wide action. It has also established partnerships with stakeholders in the West Atlantic and the Caribbean regions to benefit from their experience with the lionfish since the 1980s.

Popularising the consumption of the delicious lionfish offers an opportunity for transforming a problem into an advantage. Lionfish has firm and gentle meat, which is considered of high quality. There is potential for lionfish to provide high market value and many incentives for harvesting. It is a healthy choice of fish to eat as it has a higher concentration of heart-healthy Omega 3 fatty acids and a lower concentration of Omega 6 fatty acids. Nutritional studies have also found lionfish to be high in lean protein, and that compared to many other popular fish, it contains lower levels of heavy metals such as mercury. All this makes it a very healthy choice and a sustainable seafood for human consumption.

The aim of the project is to create fishing pressure on the intrusive fish and, thus, control its population by diminishing its density and abundance in the long term. As per experience learned from the Atlantic coasts, extraction is right now the most efficient management technique used to control lionfish populations. For lionfish removal activities, the initial step ought to be determining sites of interest, for example, ecologically sensitive areas, spawning aggregation zones, nurseries, marine protected areas and tourist sites. Directed removals can lessen *Pterois* spp. numbers in certain areas and, hence, remove direct effects

of lionfish away from vulnerable areas of the ecosystem.

Contribution by a number of stakeholders is needed in identification and control efforts. Diaries of the Ocean has established rapport with all the key stakeholders. Volunteers, derbies, fishing and angling clubs, diving clubs, researchers and academics involved in lionfish studies, NGOs, and so on have been trained to help detect and control the population. Lionfish monitoring, and removal can present an opportunity for tourism industry, which can contribute to the local economy, especially where



One of many events thrown for the public to introduce marine invasive species and the lionfish, and to promote its consumption.

there are fishing clubs and diving centers. Over the course of 2 years, it has directed fishers in several ports across the coastline to hunt the lionfish and sell it on their fish markets. Fish restaurants have also been targeted by the campaign, and many now offer lionfish dishes on their menus. Diaries of the Ocean has partnered with a local dietician to produce a recipe book specifically for the lionfish and who confirmed the above-mentioned nutritional value of the lionfish to be found both in print and online at <https://www.diariesoftheocean.org/>. Documentaries, podcasts and public talks have been produced as part of the campaign and talks with fishers and divers are ongoing to collect data on lionfish sightings and catches.

Dealing with the lionfish invasion requires broad support from the public, necessitating a significant investment in outreach and education. But the lionfish issue is also an excellent tool for educating the public about invasive species, as well as a starting point for other topics such as marine biology and marine conservation.

Current and future plans of the Diaries of the Ocean team:

- Encouraging and promoting best practices of fishing methods of introduced and invasive species.
- Identifying and conveying important messages related to lionfish impacts, controls, and consumption.



One of many events thrown for the public to introduce marine invasive species and the lionfish, and to promote its consumption.



Infographics created for lionfish education.



Fishermen send photos of their lionfish catch.

- Supporting the development of curriculum in schools and community service projects by relating lionfish to ecological principles about invasive species for both national and local levels.
- Promoting conservation behavior through outreach focused on the human role in causing and exacerbating the lionfish invasion, as well as highlighting the success of ongoing control efforts and partnerships.
- Working with other organizations in the East Mediterranean and creating a lionfish working group to coordinate response activities.

We focus on the following indicators of success:

- Number of lionfish studies produced
- Number of students doing research on the lionfish
- Number of restaurants that add lionfish to their menus
- Number of fishmongers selling lionfish
- Cooking shows creating lionfish recipes
- Ban on spearfishing lionfish lifted
- Culling events/derbies
- Medical centers adding protocol for lionfish sting
- Native fisheries bouncing back to healthy populations with shifting harvest pressure towards the lionfish.

Challenges we are facing and expect to face throughout our work are financial obstacle. Finding funds has not been easy and without a steady income to hire full time staff, the implementation of the above strategy will take more time than planned. Another challenge is the reluctance of governmental institutions to cooperate. Unfortunately, governmental institutions do not realize the urgency of the problem and the ecological and economic case for decisive early action. They believe that lionfish is not an urgent problem, despite showing them how other countries in our region are responding to what might become an ecological disaster.

Citizen science may provide data that is not 100% accurate or reliable, but since we will be depending on communities to provide us with a lot of the data, we need the Diaries of the Ocean team to validate the acquired data with dives and evaluations. This will cost us time and money but will ensure we have better information.

More at:

<https://www.diariesoftheocean.org/>

4.3. Innovation in diversification of products

- Organizing information days in fresh fish shops and consumer associations, to inform about seasonal and local fish species caught using traditional fishing methods as to teach people how to read labels and to inform them about different fishing methods.
- Carrying out educational tours (e.g., “Marine biodiversity and artisanal fishing”) aimed at educational centers and citizen associations in order to learn about the ecological values of marine reserves and Natura 2000 network areas in the project’s area of action, the activities compatible with the conservation of marine biodiversity and to raise awareness of the importance of participation in their conservation.
- Creation of a network of sustainable restaurants that include seasonal, local fish species caught with artisanal fishing gear in their menus.
- Publication of a guide to seasonal, local fish species caught with artisanal fishing gear, which includes aspects of the biology of the species, the artisanal fishing gear(s) used to catch it, local ecological knowledge, practical aspects of differentiating it from other species or consuming it and recipes.

The initiative is innovative in that it gives voice to artisanal fishers, works on the concept of “seasonal species” for seafood and promotes ethnographic heritage as an opportunity for the fishing sector and the catering sector, in particular, and the tourism sector, in general.

The impact and benefit that the initiative has had varies. The initiative attracted a high number of people. More than

2000 students have taken part in the itineraries, more than 900 participants in cooking workshops, 16 fresh fish shops and twenty restaurants. In economic terms, they observed a slight increase in demand for some species, but this is not very noticeable yet. Crucially, an increased awareness among consumer groups about overfishing and protection measures was noticeable. This initiative has empowered the fishers: They received better social recognition from the immediate area, including greater recognition of the fishers’ association by the administration and better relations between them.

The success of the initiative has brought the SSF of Almería to advance and organize themselves into a more formal business structure to arrange a direct marketing scheme, on which they are finalizing to design its Business plan.

Pictures of the Project development.



4.4.

INNOVATION IN PROMOTION OF THE PRODUCTS

4.4.1.

INTERACTIVE PUBLIC PRESENTATIONS, Trieste, Italy

Contribution by
Simone Libralato

The North-Eastern Adriatic Sea (Gulf of Trieste) is characterized by the predominance of SSF using gill nets and pots with great variability in tools in order to follow the seasonality of main target

and economic sustainability of local SSF, increase consumption of ecologically sustainable products, and to contribute to the general sustainability of human fish consumption (zero nautical mile). The activity is based on one-off presentations of local fisheries with their technical aspects. The discussions involve both the experts and general public. The presentations show the ecology of target species, making it clear that one product is ecologically more sustainable than others. Notably, the same species caught with different gears can be two different products. Furthermore, the discussions highlighted that some discards can be quality products, and that other variables including season, gear used, size of the specimen, local origin, and type of species need to be considered when opting for ecologically sustainable products. Local, social and economic sustainability is, thus, directly associated with ecological sustainability. To simplify the consumers' choice a simple A3 brochure guide was provided. The guide contains information on seasonality, gears



10 May 2019, event FAIRSEA and MARE e SALUTE at Antico Caffè San Marco (Trieste).

species. In the area a few lampara purse seines are also active, which mainly target anchovy and sardine when migrating through the area (roughly from April to October). The critical situation of the sector lies in the influence of imports arriving from other areas of Italy or abroad as well as of farmed species, which affect the demand for local products.

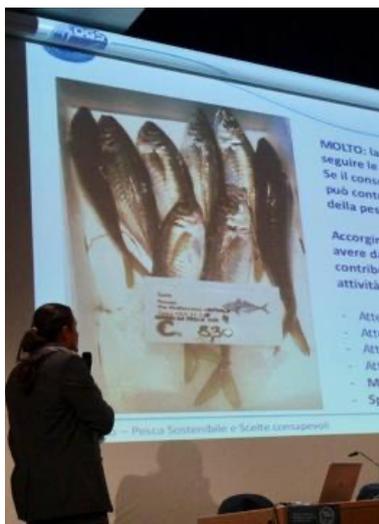
An initiative was set up by OGS – the Italian National Institute of Oceanography and Applied Geophysics – to promote the consumption of local fish as a general way to increase social

and species name that are specific to the local area and is valid at the very local scale (the estimated validity is 30 km). It would need to be, however, considerably refined if exported to other areas (even in the same region).

The problems of the initiative are that it:

- Needs to be reiterated continuously to keep consumers aware;
- Needs to make compromise with species locally abundant/important for the market but indicated as in critical situation at larger scales according to stock assessment or IUCN lists (e.g., the case of small sharks);
- Works well for species already present in the market and for which the consumers can improve demand (e.g., *Trachurus* spp.), but it is difficult to have impact for species not yet established or not readily available in the market (e.g., *Belone belone*);
- The increased demand for some products might further stimulate imports;
- One of the potentially critical points is the identification of ecologically sustainable fisheries practices/species, which is always partially subjective even if based on scientific evidence (e.g. the case of *Chamelea gallina*).

The initiative is generally well-received among those attending the events. However, the impact is difficult to quantify. While several hundred people/consumers have been reached, the economic impact is not easy to quantify. The benefits of the initiative include the fact that it is easy to implement, does not need a governance of complex scheme to be adopted, can be improved and is flexible to adjust to changes in the context (changes in time or in space). The activity is carried out by OGS thanks to projects FAIRSEA (Fisheries in the Adriatic Sea – a Shared Ecosystem Approach; interreg IT-HR); PRIZEFISH (Piloting of eco-innovative fishery supply-chains to market added-value Adriatic fish products; interreg IT-HR); MARE e SALUTE (funded by Region Friuli Venezia Giulia).



10 April 2019, event FAIRSEA and MARE e SALUTE at Museo Revoltella (Trieste).



Flyers events for MARE e SALUTE.

4.4.2. CULINARY EVENTS WITH CHEFS, Malta

Contribution by Alicia Said and JD Farrugia

Small-scale fisheries in Malta compose over 80% of the fishing sector, conducting short-fishing trips a variety of species including demersal and pelagic fisheries. While certain fish, such as bluefin tuna, swordfish, rockfish, groupers, fetch good prices at the local market, a number of species remain underutilized and not valuable for the sector. Recent statistics also show that imported species, such as salmon, are eaten more than local fish in the Maltese context (Demarco, 2017). Various initiatives, both by governmental and non-governmental organizations, have been put in place to create a positive momentum for small-scale fisheries.

The government-commissioned *Eat Fresh Fish – It's a Healthy Dish* campaign focused on educating people about various unpopular species and different ways to prepare them with the ultimate aim of reducing dependence on exploited stocks such as swordfish, bluefin tuna and other species. The campaign, conducted over 6 months in 2014, was implemented through a trailer visiting a number of schools, fish fairs and other locations around Malta and Gozo, as illustrated in the promotional material. Recipes and other information were distributed, accompanied by events where chefs showed the public how to easily cook tasty recipes at home. Health benefits were also explained. The campaign encompassed TV, internet and radio dissemination. The media strategies and marketing campaigns drew a lot of crowds to the events, as these also provided consumers the opportunity to taste the different fish types. However, a general critique was that the fish that were promoted also included fish-farmed products. Fishers explained that some fish remain unknown amongst consumers including skate, ray, frigate mackerel, mackerel, parrot fish, types of eels and

other demersal species and, thus, their prices remain very low.

Further information about this can be found at <https://eatfreshfish.com.mt/>



Promotional material used for Eat Fresh Fish campaign.



From Our Sea event.



Notable among the non-governmental efforts was the project *Rediscovering Maltese Culinary Heritage Through Sustainable Seafood* (funded by the Arts Council Malta and implemented by fish for tomorrow in collaboration with the Mediterranean Culinary Academy). This project started from the discovery that many old Maltese seafood recipes utilise local, seasonal, and sustainable seafood generally caught by small-scale fishers. The project aimed to identify Malta's culinary heritage in relation to seafood, showcase it and give the general public access to the information and the skills to carry on the tradition through the videos as well as the event.

In the initial research stage traditional Maltese seafood recipes, which utilise sustainable and/or underutilised fish, were collected from old Maltese recipe books as well as conversations with food historians, local chefs, and the older generation of locals. Some recipes were turned into videos. In the next stage of the project, an interactive culinary event was organized, where attendees helped prepare one of their first courses as part of a dining experience. Participants were treated to a tasting menu of local, seasonal and sustainable seafood.

The idea of pop-up seafood dining experiences has extended beyond the project. The idea behind the events is to give people a chance to try the seafood from local sources and prepared by some of Malta's top chefs. There have been fifteen events so far that have taken place at restaurants around the island as well as some very special locations including vineyards, overlooking the Grand Harbour or on a rooftop in Mdina. The chefs, who have undertaken the challenge of preparing a tasting menu using seafood, which is recommended by fish for tomorrow have had the opportunity to showcase their skills and creativity. Dishes like lampuki cooked in clay, woodchip smoked mackerel, and even a dessert featuring grey mullet bottarga have all been big talking points.

4.5.

INNOVATION IN ESTABLISHING NEW BRANDS OR LABELS, AND INNOVATION IN LEADERSHIP OR OWNERSHIP

4.5.1.

BRAND GENERATION, "PEIX NOSTRUM", Eivissa Island, Balearic Islands, Spain

Balearic Islands, like most of the Mediterranean, celebrate a long tradition of organized fishing, dating back to the Phoenicians and Cartagena and before the Roman Empire. The fishers back then harvested many species that are still found there today using similar gears than now, except for the trawlers.

In 2008, the professional fishers from two ports of Ibiza registered the trademark PEIX NOSTRUM (*our fish*). The purpose of the brand was to ensure that fishers participate in the way fish is sold in the island, ensuring that fishing has a positive impact and guaranteeing the traceability of products. In 2015 they started using a ribbon to trademark lobsters. Now there are 23 species using this patented ribbon. Around 80 fishers that use small vessels and passive gear, as well as 4 trawlers use the label.

The label PEIX NOSTRUM is applied visually through a badge, stuck to the products (for high-value species, such as lobster, grouper, john dory or dentex), or to boxes (in case of more abundant species), allowing visible identification of products caught and marketed by the staff of the fishing organization, and distinguishing it from some imported products with uncertain freshness and hygiene standards. It attests to the product's premium quality, its freshness, traceability and the efforts of professional fishers in applying self-regulation, including respecting closure times and the rules of marine protected areas, improvements in fishing gear that aims to be more selective and less impactful on the ecosystems.

The premise of the project is to work on the quality and differentiation of the local fish, rather than quantity and increasing pressure on fishing grounds. Thus, the work of the PEIX NOSTRUM does not so much focus on promotion as it does on

ensuring the differentiation and highlighting the quality of the product and the ecological values that are important to fishers beyond the price itself. The participating fishers believe that the future of fishing lies in ensuring less fishing effort, greater selectivity, less aggressive fishing gear, less energy consumption, quality in the handling process, selection and identification. All of these environmental benefits will ultimately lead to greater profitability and recognition of their sector.

PEIX NOSTRUM builds on a traditional/historical approach, as fish in Ibiza was never sold through an auction and a formal association of fishers was established to market and distribute fish in a manner that avoids unfair and unnecessary competition and the overexploitation of fishing grounds, while at the same time getting the best product prices. The negotiation and establishment of a set of prices per season every year, common for all its clients has allowed to reach certainty and stability to the fishers, a major key success. In the past, an important benefit of the association of fishers was to provide schooling to the children of fishers beyond the standard. Overall, the label follows-up on many of the traditions from the past but also provides a number of benefits in today's context, such as better revenue to the local fishers and a better protection of the traditional fishing grounds against poachers targeting high-value species.

PEIX NOSTRUM is expanding the activities beyond the label. In 2015, an annual festival of "gerret" (*Spicara smaris*) was launched, bringing together the islanders, from individuals and families to restaurants. The festival includes a contest in preparing a dish from this traditional product. Similar fairs and festivals have been celebrated as well to promote the seasonal species, usually unknown.

More information at: <https://www.peixnostrum.com/peix-nostrum/>



4.5.2.

DEVELOPMENT OF A TRADEMARK, GOLION, French Mediterranean

Contribution by
Bertrand Cazalet

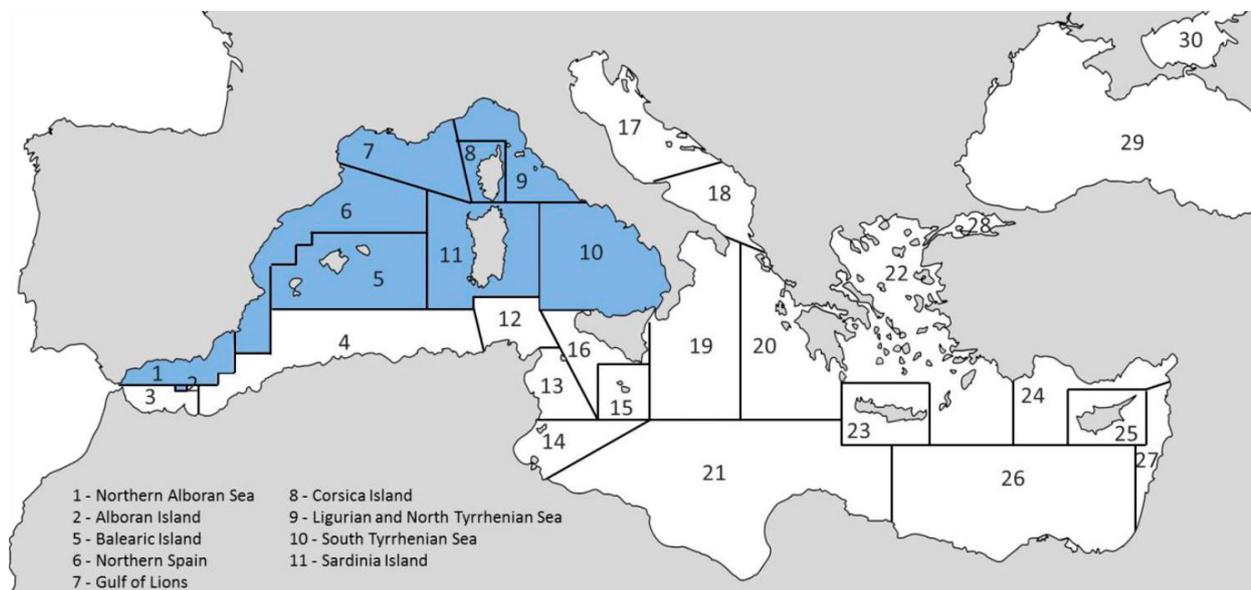
The GOLION project was developed in 2014 by the Union of Professional Small-scale Fishers of Languedoc Roussillon (since 2018, *Syndicat Professionnel des Pêcheurs Petits Métiers d'Occitania* – SMPO), in partnership with the Occitania Region, and with thanks to a grant from the Daniel and Nina CARASSO Foundation. The Union has about 80 active fishers working in the FAO zone 37 of the GFCM, both in coastal areas and lagoon (salted waters). GOLION activity zones cover the three regions of the French Mediterranean (Occitania, PACA and Corsica) in the Subarea 37.1 Western Mediterranean: Division 37.1.2 Gulf of Lion; Division 37.1.3 Sardinia for the Corsica region.

and about 40% of catch landing. SSF are the least productive and must therefore optimize the economic valuation of their products. Aquaculture activities are also well developed in this area, mainly for shellfish (oysters, mussels) in lagoons and in the open sea. Some farmers also practice small-scale fishing complementarily.

Here, the fish can be sold in three main ways: direct sale, auction and fisher-wholesaler / fisher-fishmonger / fisher-restaurant. Except for direct sale, small-scale fishers have little influence on the post-catch networks and markets. Thus, large fluctuations in product prices do not always allow SSFs to guarantee sufficient profitability. Other key factors affecting the quantity of landings and revenues must also be considered: variation of supply (seasonality and species diversity/abundance) and demand (tourism), low level of competition of professional buyers and little differentiation in the quality of product. These negative aspects are accentuated when the small-scale fisheries products are sold at the same time as other products from industrial and semi-industrial fisheries, whose profitability is based on the importance of volumes landed at average low prices.

All these difficulties led the SPMO members to consider ways to improve their control of the value chain and the promotion of their products. They drove the design and implementation of the project GOLION around four main objectives:

- Improve the identification and traceability of small-scale fishery products (tagging, labeling);
- Improve promotion of products (quality, diversity, seasonality), of practices of small-scale fishing and strengthen better vertical integration in the fish value chain. Particular effort was put on species that have a weak image or reputation with the public and distributors and those whose sizes are of “portion” size (between 300g and 500g for the most part);



GOLION activities focus on Geographical Sub-Areas 7 and 8 (Source: EC, 2018).

In the French Mediterranean, the small-scale fishing (called “petits métiers”) is practiced by very multipurpose (versatile) vessels with a length of less than 12m, whose trips do not exceed 12 hours and do not include trawling. It represents 84% of the fishing units, 70% of embedded staff

- Contribute to a more sustainable management of these fisheries through better articulation of fishing effort (individual and collective) and development of the market (“fish better to sell better”);
- Develop a Franco-Spanish dimension of collaboration and exchange on valorization/marketing practices in coastal areas of Spanish Catalonia (this component was subsequently implemented as part of a new project called SYNEPESCA also supported by the Carasso foundation).

The strategy was to enable identification, marking and traceability of small-scale fishery products and valorize small-scale fisheries products. This requires a better balance between supply and demand by opening up new markets to professional buyers who are sensitive and receptive to SSF: GOLION's clients must adapt to the low productivity of its members (reduced fishing effort and irregular landings). In return, GOLION offers a sustainability approach, with very wide variety of products, sometimes little or poorly known, and an optimal quality of freshness.

To distinguish and to visually identify its products, the SPMO developed its own logo GOLION as a trademark registered at the INPI (National Institute of Industrial Property). The logo contains several symbolic elements of the small-scale fisheries and the geographical location of ships and products (The technical versatility through the two main practices (gears) of the net, the hook, and their many variations; a particular typical species of coasts and lagoons, the gilt-head (sea) bream (*Sparus aurata*), stylized by the yellow line which "make up" his eyes; a triptych of colors combining the sea (blue) with the Occitania Region (yellow and red) and its historical cross.



The logo GOLION (trademark) in color and black and white version

The marking methods are of two types as shown in the pictures below. The **marking of storage/transport bins** for all small-scale products targeted by SPMO fishermen (about 30 species) as part of their versatility (about 10 techniques). The **hooked fish marking** can identify each fish caught by these techniques (can, line or longline).



Marking of storage/transport bins.



Tags for individual hooked fish marking.

In addition to the labelling requirements by the national rules and the European Union (which require the statement of common name and Latin name of the species, area fishing, fishing gear and sender), the GOLIION products indicate the following information at the back of their tags: name / first name of the fisher, his port base and the day of catch (dater punches for storage/transport bins tags only).

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To explain its approach and the characteristics of its fisheries (versatility, seasonality and diversity of its products, freshness), the GOLIION has deployed a number of communication channels: posters, commercial flyers, press, meetings (travel, conferences) and website (www.golion.fr – under construction). Both the public and professional stakeholders have been targeted.

In parallel, SPMO structured its commercial activities. The aim is to improve its internal organization and its external visibility to offer its brand and its products to professionals of the sector. The SPMO has no commercial skills and decided to create in 2014 an economic interest grouping (EIG) entitled “GOLIION, small-scale fishermen of the Gulf of Lion” as the depositary of the trademark and logo GOLIION. This is a legal arrangement that allows each member of SPMO to also join the EIG GOLIION, if he/she wishes to use the trademark, logo and receive identification tags. Membership was free during first years and then in 2019 an annual subscription was introduced, as well as the repayment of a tax of 3% on the value of sales made by the common trademark. To date, EIG comprises nearly 60 SSF members. The EIG is not exclusive and each member remains free to using modes of sale of its own (including direct sales).

Additionally, EIG seeks to support fishers in the monitoring and quality of their products and increase average price and ensuring regular price during auctions and deals with traders. Above all, the group provides essential logistical support for fishermen since all commercial work is carried out by a person specially assigned to this function: intermediary between fishermen and buyers, validation of orders, reception of products, preparation, packaging, weighing, labeling, shipping, tracking and invoicing.

To date, the brand has become known to professional buyers of the sector in France, mainly in Paris and Occitania Region. In 2019, GOLIION has strengthened its marketing capacities through the rental of a fish wholesaler from the managing authority of the fishing port of Port la Nouvelle (GOLIION’s head office); obtaining sanitary approval from the veterinary services; and the purchase of a refrigerated vehicle for the transport of GOLIION products at the local level. This vehicle is intended both for the collection of members’ products destined for the fish wholesaler and for the delivery to customers (restaurants) from the fish wholesaler. Jointly, these structuring efforts has enabled EIG GOLIION’s turnover to double in 2019. The aim is to maintain this growth in 2020 and 2021, although the Covid-19 crisis worsened the outlook for the current year.

GOLIION is marketing its products as ensuring extra quality (freshness and shipping on the same day or D + 1), small fishing provenience and traceability. The prices are fixed in advance and average prices are higher than those identified in the usual sales channels. The calculation used for determining the sale price is mainly based on the level of profitability established by the fisher himself (“according to expert” approach). This is somewhat of an “ideal” price to reach for the professional but not systematically acquired and obtained during the sale process. The price is also influenced by the buyer, depending on available volumes, quality, size, transportation, season, etc. The average price recorded in auction is considered as a reference for the establishment of GOLIION products prices, which seek to be higher by at least 1 Euro/kg. For some products, the prices can be by 2, 3 or 4 Euros/kg higher than those in auction. A fisherman using the GOLIION brand to sell his products over the counter makes an average profit of 12% higher than that made at auctions.

The success of the trademark has brought the GOLIION members to take a step forward and organize themselves into a more formal business structure. They have submitted a file to establish themselves as a “Producer Organisation” in the French Mediterranean, a PO that will be entirely composed of small-scale fishers. The request is being investigated with the Ministry of Fisheries and the response is expected at the end of 2020 or beginning of 2021.

4.6.

INNOVATION IN COOPERATION AND COORDINATION

4.6.1.

SLOW FOOD SEAFOOD PRESIDIA

Contribution from
Paula Barbeito

This initiative encompasses many of the innovations described in the sections above, including that it is visible as a label. Most importantly, it provides a network of support and visibility to local initiatives (and local labels), harmonizes criteria and promotes cooperation among different stakeholders in the value chain (i.e., producers, cooks, and consumers).

The Slow Food movement brings together pleasure and responsibility. It promotes “good, clean and fair food”. With regards to “clean”, it stands for respecting the fertility of the land and of hydrographic ecosystems, excluding the use of synthetic chemical substances, maintaining traditional farming and land management practices. With regards to “fair”, it defends the producers to have an active role and total autonomy in the management of their activity, they must collaborate and together define the rules of production and forms of product promotion, possibly joining together to form collectives.

The three fundamental pillars that define the concept of sustainability, as per Slow Food understanding, are:

- Social sustainability: the ability to provide access to services considered to be fundamental (e.g., safety, health, education) and welfare conditions (e.g. enjoyment, happiness, sociability) in equal measure within communities.
- Environmental sustainability: the ability to maintain quality and the fertility of natural resources over time, preserving biodiversity and guaranteeing the integrity of ecosystems.
- Economic sustainability: the ability to generate revenue and work overtime and to achieve eco-efficiency, in

the rational use of available resources and the reduction in the use of non-renewable resources.

Slow Food Foundation for biodiversity began the Slow Food Presidia project in 1999. After cataloguing the first hundred products at risk of extinction (with the Ark of Taste Project), Slow Food took a step further, entering the world of the production process to learn about the areas of origin, meet producers, promote their products, skills and knowledge. Over the years the Slow Food Presidia project has become one of the most effective instruments to put Slow Food’s politics on agriculture and biodiversity into practice.

The “Slow Food Presidium” is now a registered brand, including a graphic logo and guidelines which producers voluntarily subscribe to, committing themselves to respecting the production protocols and to work in line with the Slow Food philosophy. There are currently 592 Presidia around the world. 31 of them are fish and seafood Presidia, placed in 11 countries, 19 of which are established in the Mediterranean (mostly in Italy).

A Slow Food Presidium protects:

- A traditional product at risk of extinction (an Ark of Taste Product);
- A traditional processing method at risk of extinction (e.g., in fishing, animal husbandry, food processing and farming);
- A rural landscape or ecosystem at risk of extinction.

To set up a Slow Food Presidium, it is necessary to verify environmental sustainability (the “clean” element) and social sustainability (the “fair” element).

What does the Slow Food Presidium do?

- Organizes training activities: to improve the quality of the product and the sustainability of the production chain, to sharpen the producer’s sensory capabilities, help create associations between the producers involved and develop eco-compatible packaging.
- Promotes and supports their products and their local areas, showcasing them during international events, making them known to chefs (through the Slow Food Cooks’ Alliance project) and fostering direct retail (through community-supported agriculture initiatives or Earth Markets).
- Communicates: telling the story of the products, producers and their lands through all of the Slow Food Foundation of Biodiversity’s means of communication: websites, e-newsletters, publications, videos, photographic exhibitions, press office...
- Creates a platform for Slow Food Presidia producers to interact with producers in other regions or parts of the world, with chefs and retailers, experts (e.g., agronomists, veterinarians), universities, journalists and simple consumers.

There is an established protocol with its subsequent guidelines for various product categories. These have been drawn up by the Slow Food Foundation for Biodiversity, in collaboration with experts and producers. They are regularly updated on the basis of suggestions from local coordinators and producers. Slow Food has clear guidelines on baked goods, beekeeping and honey production, animal welfare, cheese and dairy products, cured meat and pig farming, drinking milk, meat breed, plant varieties and salt. Although they have guidelines on fisheries and aquaculture products Slow Food is now in the process of revisiting the guidelines and modify them in order to better capture the spirit of small-scale fishers.



4.7.

PROMISING INITIATIVES FROM OUTSIDE THE MEDITERRANEAN

4.7.1.

DIGITAL LOGBOOKS, TRACEABILITY PLATFORM AND DIGITAL MARKETPLACE: ABALOBI SUIT OF MOBILE APPS, South Africa

Contribution from
Serge Raemaerkes

The initiative has been developed in the South African context, but due to its holistic and ambitious approach as well as demonstrated success, it is presented in this report. The potential of this initiative is indeed already being explored in the context of the Mediterranean, with a few known pilot projects (Albania, Italy).

The South African small-scale fishing sector has been characterized by decades of vulnerability and marginalization through colonisation and apartheid. Also, post-apartheid commercial fisheries reforms paid very little attention to the specific needs of small-scale fishers, leaving these fishing communities in positions of poverty, and food and nutrition insecurity, despite living in a country with considerable natural wealth. ABALOBI is a social enterprise that was set up in 2017 to engage with small-scale fishers with the specific intention of aiding them to participate meaningfully in the economy, as well as resource governance. It has chosen to take a radical approach to disrupting and re-inventing seafood supply chains and related food systems in South Africa.

ABALOBI developed a suite of mobile apps linked to a community-based deployment program that relates to seafood traceability and full fisheries documentation of small-scale fishers in order to achieve a fair and transparent supply chain, community development and long-term ecological sustainability.

The mobile app suite and platform include an electronic catch documentation and

traceability platform, a MARKETPLACE (featuring Seafood with a Story), and an integrated digital transactional system. Essentially, the app offers benefits on two fronts – recording data and marketing of the product. First, it allows the fishers to document their fisheries, collect vital fisheries data and, if wanted, share this data to improve collective fisheries (enhancing data by all SSF) and personal business management (e.g., following own fishing and sales records). For instance, ABALOBI has the ability to showcase to fishers that it can make economic sense to spread harvesting effort across a range of marine species. Second, it allows the fishers to sell their catch to the markets directly, mostly to restaurants. At the same time, this enables the consumers to be able to fully trace their seafood. Each catch is delivered with its traceability code – the QR code that travels from the fishers' logbook through the value chain to the patron.

Additionally, the platform facilitates electronic payments directly to the fishers with full transparency on the return they receive and on the component of the selling price allocated to a logistics fee that covers delivery of the fish to the chef's door. ABALOBI considers this high degree of transparency in value chains critical to enable small-scale fishers to realise a fair value for their catch and build tangible market incentives for responsible fishing practices.

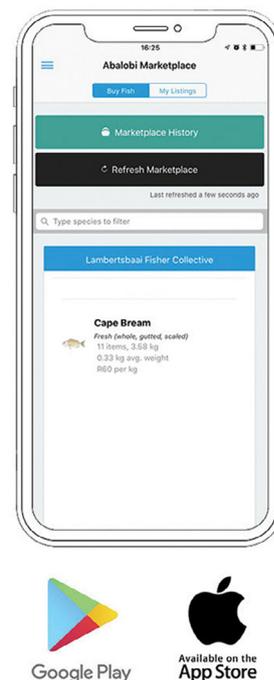
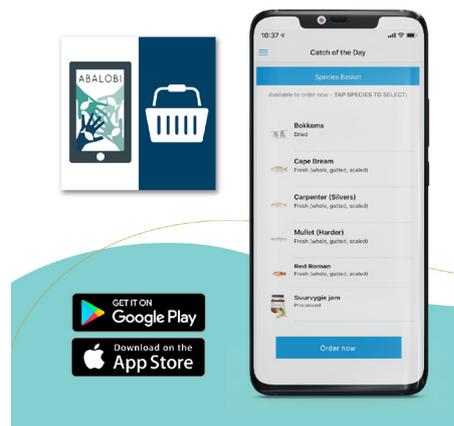
ABALOBI started its approach in 2015 as a research project within the University of Cape Town. By co-designing technology with small-scale fishers, the team sought a human-centered approach for fishers to collect reliable data and to benefit from the use of such data in terms of improved accounting and fisheries management. In 2017, the first prototype of ABALOBI MARKETPLACE was built and in that same year fishers from the west coast of South Africa utilised the platform to sell directly to a Cape Town-based restaurant, initiating South Africa's first Restaurant-Supported Fishery. ABALOBI MARKETPLACE today encompasses nine fisher groups from small-scale fishing communities between Lambert's Bay and Arniston, impacting the livelihoods of close to 350 fisher families. Several times a week, although weather dependent, these fishers supply fully traceable, seasonal and local Catch of the Day via ABALOBI MARKETPLACE to 350 chefs in the Cape and Johannesburg. Recently, ABALOBI opened up the MARKETPLACE for the public via a home delivery system. Within its first week, more than 1000 individuals registered to access 'fish with a story'.

ABALOBI set off a groundswell From Hook to Cook movement. It has successfully worked with chefs to develop a market appetite for lesser known, undervalued species. Chefs participating in the From Hook to Cook movement have undertaken to honour the local ecosystem, adapting their menus to represent what the sea yields on any given day during a particular season. This ensures market access for the diversity of species in the basket of resources that small-scale fishers harvest using low-impact and traditional fishing methods. These species have the Agulhas and Benguela current as integral part of their ecosystem, as expressed in their seasonal flavours, which in turn stimulates chefs to create locally inspired dishes and promote South African cuisine.

While a movement by chefs has emerged, so have changes in fishing communities and practices taken place. Data collected through the platform shows that the overall financial well-being of fisher families has improved, opening opportunities for debt repayment, vessel maintenance and enhanced safety at sea, improved food and nutrition security, and schooling. Fishers' fishing practices have begun to shift back towards a more diverse basket of resources – placing less pressure on 'higher value' species that are considered over-exploited. As the fishers are able to obtain better prices for high-quality, traceable catch of the day, the general trend in fishing practices has begun to shift towards a decrease in fishing effort.

The empowerment has effects on the preservation of cultural heritage. Several traditional coastal products developed and prepared by female fishers, have begun to be sold through the co-development of ABALOBI PANTRY – representing and preserving the coastal cultural ecology and proud heritage of the many small-scale fishing communities dotted along the South African coast. ABALOBI represents the first fully documented fishery and fully traceable supply chain to exist in South Africa. It is working further to achieve transparent, equitable and responsible supply chains, with the intention of catalysing small-scale fisheries improvement and sustainable fisheries management. The next step in this pathway is to engage stakeholders to realise how the status of critical fish stocks can be improved through the empowerment of small-scale fishers. In order to rebuild stocks, fishers must play an integral role in decision-making, share their catch data (in different ways to different stakeholders as local knowledge must be respected) and channel their harvests through traceable value chains. In the current regulatory environment, this is not possible without market support and positive incentives. ABALOBI maintains that it critical that restaurants and consumers alike do not disengage

from species that are considered ‘ecologically unsustainable’ but rather that they find a meaningful way to contribute towards transitioning these species towards an ecologically sustainable state. Although this is seemingly a complicated journey to navigate, it is a vital one for involving fishing communities in the fight for the health of our oceans and seafood stocks.



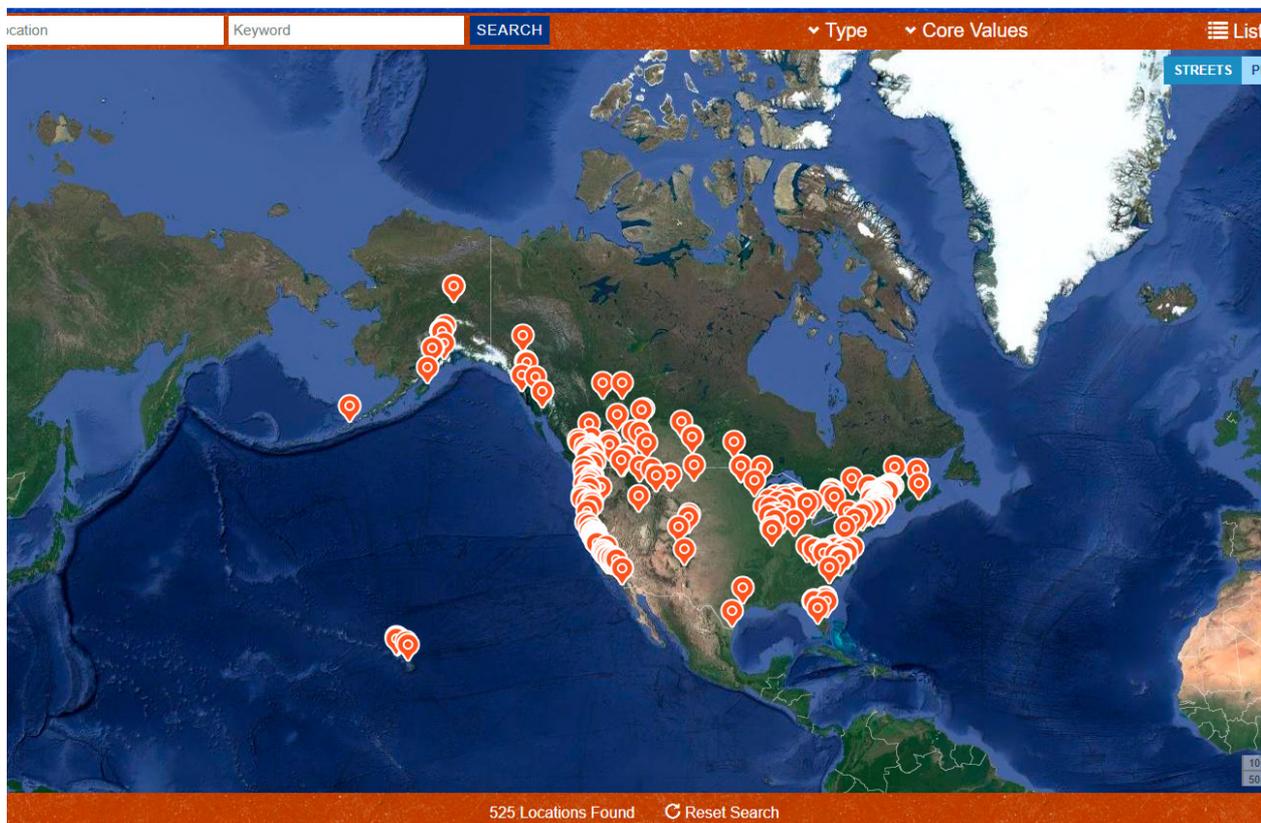
4.7.2.

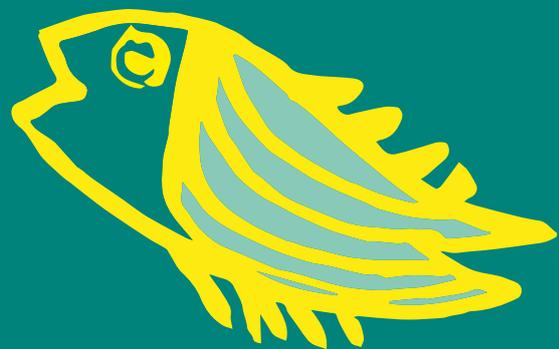
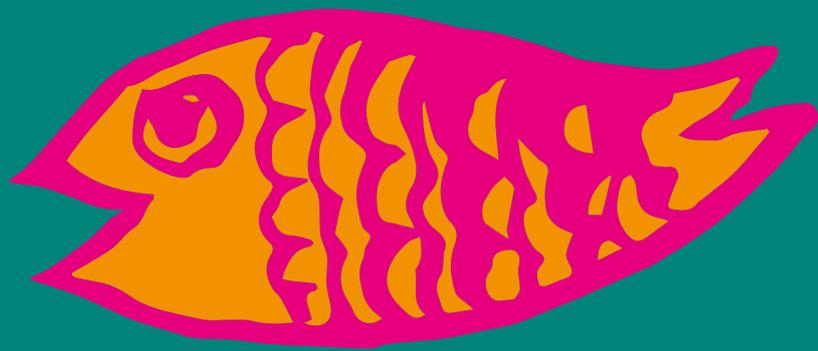
COMMUNITY OF PRACTICE, LOCAL CATCH NETWORK, North America

The Local Catch Network is a Community of Practice made up of fishers, organizers, researchers and consumers from across North America that are committed to providing local, healthful, low-impact seafood via community supported fisheries and direct marketing arrangements in order to support healthy fisheries and the communities that depend on them. Based on core values and principles, the network seeks to increase the visibility and viability of small-scale fisheries from North America and aim to provide assistance to individuals and organizations that need support envisioning, designing, and implementing locally relevant businesses that work towards social, economic, and environmental sustainability.

Local catch has successfully put together a “seafood finder” that joins profiles, information and contact from around 500 Community Supported Fisheries and Direct Marketing arrangements in North America, while providing general information to consumers on the values and benefits of these type of arrangements. At the same time, it has organized capacity building summits with the aim to (1) facilitate knowledge sharing, mentor relationships, and networking within our community and with new partners; (2) identify and develop innovative strategies for protecting, operationalizing, and promoting the core values; (3) increase localcatch.org’s capacity to directly support small-scale fishers and values-based seafood businesses.

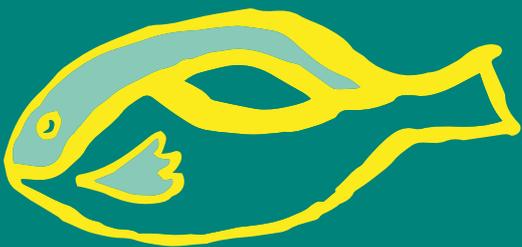
For more information: www.localcatch.org





5.

*Options
for Action*



This section explores the options to leverage on the ongoing initiatives which are taking place at local or regional scales.

But given that policy objectives are regionally set can SSF products be valued across a broader geographical area and in an international context? The analysis consists of two-steps; the first one relates to articulating the rationale for desirability of any action (versus no action apart from allowing the development of bottom-up local initiatives), and the second one is to examine the tools that are most promising in the context.



5.1. INTERVENING IN BOTTOM-UP INITIATIVES?

Do the mushrooming initiatives designed to be beneficial to SSF require any proactive action? At the grassroots level, many initiatives have emerged in the Mediterranean to respond to policy failures and market opportunities. They operate at the local level in various countries in the Mediterranean. They have spanned over better marketing, improved and shorter supply chains, better communication between producer and consumer, better visibility for SSF products and their characteristics and organisation and empowerment of the SSF sector across the entire Mediterranean. These initiatives are seemingly diverse because they respond to different local contexts. However, they become much more similar when considered as responses to the same policy opportunities (section 2.2.-2.5) and common challenges that are shared in the region (sections 2.1. and 3.). As such, the described initiatives form part of the movement for the greater recognition of the SSF product and reveal an overall pattern to address existing challenges by deploying one or several types of innovation categorised in this report (described in section 3.3).

Not only is there an established link among different initiatives, we advocate that there is a greater potential for accomplishing policy goals and achieving better status of the seas if the efforts are capitalised on and if collective presence of SSF market initiatives is leveraged.

Establishing a strong link between simultaneously occurring initiatives is likely to bring about at least two important benefits. On the one hand, this would empower responsible SSF production. We would expect cross-pollination of initiatives and shared learning. New context-sensitive initiatives are likely to be set off in new places and further progress is to be expected in the existing initiatives. On the other hand, this would involve the consumers in the required transformation of holistic sustainable and

fair food systems. With more widespread responsible initiatives by SSF and real options for supporting responsible fisheries the consumers will become sensitized and willing to implement behavioural changes.

In the long term, all these processes are drivers of social and environmental change. Enabling small-scale fishers to obtain a fair price for their catch (i.e. a price that enables a fair income for decent livelihoods) and acknowledging the ecological and social value of SSF is likely to ensure a better engagement of fishers in a gradual process towards sustainable harvesting of resources and ensure thriving coastal communities. Addressing the shortcomings of the current dominant market system is central to reversing the prevailing unsustainable and unfair status and to moving towards a fish production system, which respects the responsible and sustainable utilization of the available marine resources. Such a system fosters and is based on resilient small-scale coastal communities fishing in a low impact manner through an approach that allows all local stakeholders to be involved and held responsible so that communities can exert greater control over the resources, on which they depend, especially for food production.

5.2.

ACTIONS TO ENHANCE TRANSNATIONAL IMPACT

How can responsible fishing practices and small-scale fisheries' supply chains be enhanced? From the social, ecological and governance/economic point of view, what are the best tools for increasing the visibility and value of small-scale fisheries products in order to support a sustainable small-scale fishing sector in the Mediterranean? A number of interventions seem desirable, at various levels of governance:

5.2.1.

Encourage acceleration and scaling up of local initiatives.

Existing initiatives have scope to be further improved (e.g., add more criteria that are respected) and innovative initiatives can appear in new places without a strong SSF market presence yet, **through:**

- a) **Cross-pollination and experience-sharing** among the proponents of good practices in various parts of the region. The LabMAF project itself demonstrated a great appetite on the side of SSF to exchange good practices and challenges overcome. Shared learning will result in increased strength of existing initiatives and broaden the geographical application of working examples;
- b) **Structured capacity-building**, via training programs and tailored advice;
- c) **Implementing ancillary measures for their development**, such as investment in meaningful infrastructure (e.g., processing plants), promotion of SSF products in public procurement and ensuring start-up funding.

5.2.2.

Establish a standard of good practice, based on inclusiveness and a principle progression. In the process of proliferating initiatives that are considered desirable, it is important to clarify the principles of appropriate behavior and keep an emphasis on the idea of continuous improvement. A number of criteria are considered to constitute the sustainability "package",

which has a local and cultural character. Different SSF may exercise their dedication to various sustainability criteria differently, not least because of variable starting points. The key is to maintain an acknowledgment of diversity and commitment to the same principles and push for inclusion as well as continuous progress in their accomplishment, instead of opening the door to exclusivity or ratcheting down. This can be accomplished **through:**

- a) **Establishment of explicit and accessible protocol/code of conduct/guidelines/principles, providing a reference point for consumers and producers regarding good behaviour.** While there is a set of implicit criteria as to what sustainability means in the context of the Mediterranean, a clear standard seems to be missing currently, although it would be desirable to connect various stakeholders. Wide validation and acceptance among the stakeholders are prerequisites.
- b) **Promotion of the accepted standard to the consumers and citizens** and efforts to raise awareness of the nature of responsible SSF and their viability, as part of ocean literacy.
- c) **Peer recognition and support** to foster an awareness among the SSF that there is a shared movement, a network or a community of practice that is capable of encouraging, providing advice and healthy competition.

5.2.3.

Complement the ongoing shifts in markets with synergistic policy reforms. The focus on promoting bottom-up market initiatives should not obscure the fact that many challenges of SSF and sustainability are a result of historical governance. The harmful policies should be replaced, in particular through:

- a) Removing subsidies harmful to SSF.
- b) **Improving access to fishing resources by SSF** – an issue that is highly relevant to the organisation of markets, as access ensures that SSF markets can operate.
- c) **Adjusting requirements and enforcement for documentation and traceability processes** to support marketing of SSF products and decisions of consumers. This will allow governments, consumers and fishers to jointly navigate towards improving the status of fish stocks and ensuring sustainable fishing.

In recommending the establishment of a standard (2), we have reflected on the establishment of existing standards. Certainly, the MSC is the clear front-runner scheme for (third-party) certification of fishery sustainability, using a science-driven environmental standard and a thorough third-party verification process that also audits product traceability to provide reliable information to consumers. However, MSC is subject to several criticisms for the lack of a social dimension in assessment (Ponte, 2012; Foley, Okhyere and Mather, 2018) and the selection of its environmental criteria (Thrane, Ziegler and Sonesson, 2009), as well as governance, accessibility and appropriateness, all of which are generally extremely challenging for small-scale fisheries (Stratoudakis et al., 2015; Wijen and Chiroleu-Assouline, 2019). Indeed, the uptake of MSC has not been proportionate, either geographically or in terms of size of operators. As a result, small-scale fisheries have generally not benefited from the MSC scheme (LeManach et al., 2020). In the Mediterranean, there is currently (as of October 2020) only SATHOAN small-scale fishery certified or none undergoing the MSC certification. In recent years, having recognized the issue itself, the MSC is dedicating considerable effort to accessibility for SSF, mostly through facilitating pre-assessment and the running of FIPs. This approach continues to be underpinned by the commitment to the existing MSC principles and more broadly the model of a third-party certification process. In practice, the MSC is neither attracting the SSF communities nor reflective of their multiple values other than the three ecological principles of the MSC.

Based on the values observed among the Mediterranean SSF and the actually emerging bottom-up initiatives, a much more suitable approach for a standard seems to be one that highlights local geographies and values and acknowledges the differentiation of standards based on local realities and products. Locally diversified standards can still play a role of a standard (Penca, 2019b). In that context, a very promising scheme is that of Participatory Guarantee Systems (PGS) in use in organic agriculture for smallholders. The idea of PGS was developed by IFOAM, which defines PGS as “locally focused quality assurance systems [certifying] producers based on active participation of stakeholders and are built on a foundation of trust, social networks and knowledge exchange.” The PGS scheme is considered an alternative and complementary tool to third-party certification. It requires that an initiative operates in accordance with the key principles of the sector but is otherwise reflective of the ongoing involvement in local environments. It offers a low-cost, local system of quality assurance with a heavy emphasis on social control and knowledge building. PGS has become especially crucial to poorer smallholder farmers.

The rejection of the “one-fits all” approach and instead encouragement of a diversity of particular standards, embeddedness to local realities and products, and the potential for promoting a sense of ownership by the operators are crucial advantages of the PGS approach also in the context of SSF. PGS is certainly worth exploring as a viable tool to support thriving SSF and their local markets. An identified risk is that the scheme provides insufficient clarity to the final consumer and does not serve to facilitate and ease the consumer decision.

The LabMAF’s proposal of *Guidelines for Responsible Small-Scale Products in the Mediterranean* seeks to strike a balance between the need to provide a coherent narrative and framework that is easily understood by the general public and potential consumers and allowing for specific local initiatives to articulate their more specific principles. The Guidelines emphasise a holistic view of the fishing activity, including environmental, social, economic, cultural, safety and governance criteria and imply a common ultimate vision of responsible SSF shared across the Mediterranean. The Guidelines are suggested to act as a reference point for further actions and considerations, including their revisions and improvements in the future.

Following up on these options for action requires dedicated resources, interdisciplinary and international effort.

5.3.

LABMAF CONTRIBUTION TO FUTURE ACTION

ACTION REQUIRED	LABMAF RESOURCES AS STARTING POINTS
Cross-pollination and experience-sharing among the proponents of good practices in various parts of the region	This report with models of innovation, description of good practices and options for future action and website
Implementing ancillary measures for their development	This report with suggestions of possible policy measures
Establishment of explicit and accessible protocol/code of conduct/guidelines/principles, providing a reference point for consumers and producers regarding good behaviour	Guidelines for Responsible Mediterranean Small-scale Fish Products / Annex 1, which can be further elaborated
Promotion of the accepted standard to the consumers and citizens	2-page leaflet and website





6.

Conclusions

While comprising over 80% of the Mediterranean fishing fleet, providing employment and contributing to high-quality seafood, small-scale fisheries are under-represented as a distinct production sector both politically and on the market. There is a link between the two aspects. The political under-representation of SSF means that specific characteristics and needs of the sector are poorly understood, as they tend to be included in organizations controlled by, and catering to the needs of, larger scale fishing interests. These stand to lose from formal differentiation of SSF products often scoring better on various indicators from quality of the product as well as the environmental and social aspects of production.

The existing legal provisions as well as governance structures have yet to lead to the development of a fishing sector that would support a healthy and sustainable Mediterranean Sea. More recent strategic and policy documents at the global and regional levels speak a more ambitious language and advocate holistic approaches and integration of economic, social and environmental goals. The policy focus on sustainable development and the food systems approach favour a stronger role for sustainable SSF than previously. While differing in political force and in scope, they jointly highlight the significance of responsible small-scale fishing practices to sustainability and offer a window of opportunity for their recognition.

Against the background of a more favourable policy context for the growing contribution of SSF to sustainability, various initiatives segment small-scale fisheries markets have emerged. We have examined many in the course of the project and this report has presented some in more detail. Further, it has categorised them and explained how they respond to the weaknesses in the SSF markets. Common to all the initiatives we examined is **a bottom-up approach responding to specific local contexts, such as the system of organization, purchasing habits, natural fishing cycles, cultural specificities, historical traditions, the ambition and pace of founders and stakeholders.** The individual initiatives conceal a number of difficulties if they were to be transposed to other contexts. They are focused on “getting it right” in local contexts (ensuring stakeholder engagement, ensuring sustainability of initiative) rather than target a particular method. Just as there are large differences across SSF in the Mediterranean (in terms of gears, technical tools, targets, areas of exploitation, capacity and catches), the initiatives empowering the SSF markets are various, while working with the same ultimate purpose – a greater segmentation of the market for seafood products that would recognise the differences in the quality of fish products and their social and environmental impact.

Such differentiation of products indeed requires paying attention to the local nature of SSF / Paying attention to the local nature of SSF is key to the expansion of SSF product differentiation. This requires rejecting general assumptions about the nature of SSF and accepting that advice will have

a locally scope. Accounting for the local specificities (social, cultural, economic, ecological) foremost requires detailed empirical knowledge of the existing struggles and opportunities, needs and circumstances. Likewise, ecological sustainability of SSF exploitation should continuously be subject to scrutiny and not assumed *a priori*. Equally, not every SSF market may need an improvement. The local-specific character of SSF and the solutions to empower them speak against the assumption that one model fits all. It also defeats the temptation to replicate the existing initiatives uncritically.

While defending a diversity of means to accomplish the objective, this study finds a case for a harmonizing approach to these initiatives with the view of guiding stakeholders towards sustainability, involving environmental and social aspects as the ultimate goals. **We defend accelerating the bottom-up initiatives, while establishing a clear standard of practice.** The LabMAF project has secured some resources required for the indicated shift: it has suggested of a holistic **standard** (“Guidelines”, Annex 1) as a signpost for action, recommended future actions, and produced a set of **communication tools** to explain the transition needed to fishers, consumers and policy-makers. Further work is required with regards to the finalization, endorsement and circulation of the regional standard among the stakeholders. Also, initiatives need to be further developed through knowledge exchange, capacity-building and their joint promotion, as well as improving the policy on SSF access to the resource and synergistic policies that favour responsible SSF.

All these actions would benefit from supportive policy measures, Notably an enabling environment and funding.

Reaching SSF to work collectively, moving from price-takers to price-makers, establishing their own direct commercialization structures and empowering them for being agents of change on sustainability of the sea is not automatic. Small-scale fishers are used to individual and autonomous nature of work and accustomed to years of disengagement in collective action in the management and marketing of their products. In addition, the transition from their role of being only fishers to being also salesmen requires of a change of mindset, which is not easy, especially taking into account the high age of the workforce. In the transition towards higher valued products, small-scale fishers require **assistance and support**, where – for reasons indicated above – **peer review** could be a key tool of success.

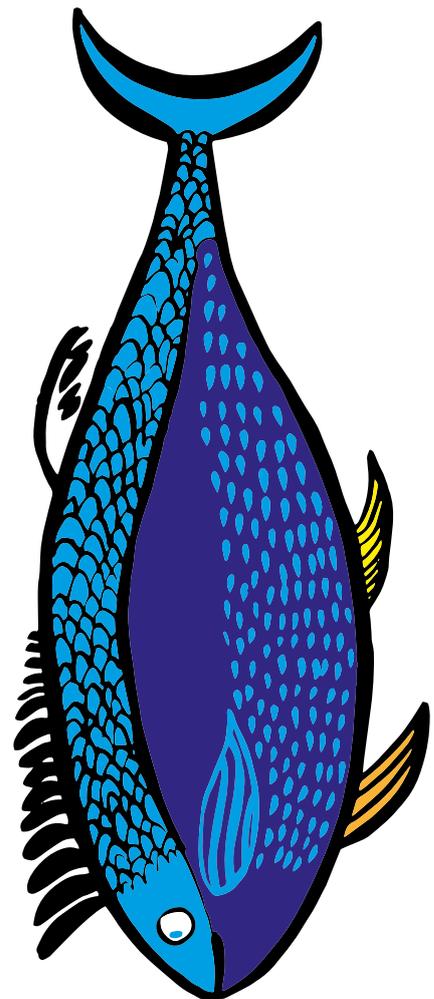
Further, adequate funding and endorsement from national policies to reach those objectives are significant. In this respect the establishment of SSF Producer Organisations can play a crucial role in European Countries. Activities of tourism fishing,

sustainability information actions and marine protected areas seem to be particularly suitable for creating synergies in order to increase visibility of responsible SSF and to gain the trust of consumers. They could add to SSF income generation, while enhancing public awareness of the role of responsible SSF as guardians of the sea.

Eventual formalisation of the market initiatives for small-scale fishers should **build from the key feature of local sensitivity/local-embeddedness, sense of ownership and active participation of stakeholders, while reinforcing co-responsibility and trust**. The fact that a number of market initiatives are already running while many others are yet to be set-off speaks in favour of an **inclusive framework that encourages incremental voluntary progress** rather than sets the bar so high as to act as exclusionary and exclusive. An adequate model should not prescribe standardised indicators and instead allow initiatives to suggest their own criteria for success in the context of sustainability. The model of **Participatory Guarantee Systems (PGS)**, developed in the context of certification of organic agriculture and especially for small-scale farmers, is a very promising direction to be explored in the context of the Mediterranean SSF.

A critical challenge for the efforts in building up the distinctiveness of SSF products (mostly everywhere, but especially in the Mediterranean) **is to systematically link these to data-supported understanding of value chains and integrate them in the management decisions**. Better marketing, branding and retailing of SSF should be linked to improved documentation of the catches and stocks in order to allow for fine-tuning of governance regimes at any time. Small-scale fisheries continue to be regarded as data-limited, but too little is done to address that deficiency and move towards accomplishing fully documented fisheries and their full traceability. Technology-based initiatives, including those at grass-roots level, of which the Abalobi suit provides an example, can be instrumental in such a shift, especially if they use the fishers' data to address their needs rather than for surveillance purposes only. Fair and sustainable supply chains can only be claimed when these are transparent and supported by data. A more data-driven scheme is likely to lend the necessary legitimacy to improved governance of marine resources, including improved socio-economic status for fishers and reduced pressure on critical fish stocks.

Finally, the considerations of SSF markets and the sector should not lose sight of the external factors. **Synergising with other small-scale food producers** is an opportunity for SSF initiatives in terms of capacity-building as well as joint presentation in front of policy-makers and consumers, where a wider range of products with shared values can be offered. At the same time, **the increased pressures on the space in the Mediterranean Sea present an imminent threat** on the SSF fishing sector. In the context of increasing pressures at sea from a variety of sources, the most notable are ambitions for gas and oil extraction in the East Mediterranean, which would heavily impact on the fishing grounds and with pollution. The SSF markets can be as strong as they are successful in securing the sector a future.



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GUIDELINES FOR RESPONSIBLE MEDITERRANEAN SMALL-SCALE FISH PRODUCTS

To contribute to sustainable development of the Mediterranean, the LabMAF project seeks to engender a socially, economically and environmentally sustainable small-scale fishing sector in the region and promotes a revival of the vibrant small-scale and low-impact fishing communities that form an integral part of the rich history of this region. The project promotes small-scale and low-impact fisheries in so far as they promote fishing practices based on sustainable development principles and enhancement of livelihoods of fishing communities.

The document sets out principles and standards of behaviour for responsible practices with a view to encouraging a respectful use and stewardship of the Mediterranean. It provides a reference point for the promotion of good practices often conducted by the Mediterranean small-scale fisheries relating to low environmental impact, ecosystem approach, concern for social justice and local benefits, and protection of cultural heritage. As such, the guidelines are addressed at **fishers** who can use them to advance and consolidate responsible practices; at **citizens and consumers** who can use them to discern and value the products by low-impact small-scale fishers of the Mediterranean, and to **policy-makers** who can understand them as a recommended direction for improving policies and other legal and institutional frameworks and instruments.

The idea of the guidelines is to encourage **incremental progress**. Further, they should always be interpreted in a manner that is sensitive to **local specificities**. The guidelines should be revised regularly.

PRINCIPLE ON FAIR LIVELIHOODS AND FAIR TRADE

OBJECTIVE:

To allow the fishers to lead decent livelihoods and ensure fair payment across the supply chain

This principle seeks to ensure that the food chain is simple, short, traceable and transparent, consumers can access healthy and sustainably produced food, while generating fair economic returns in the supply chain and fosters resilient, cohesive and interconnected small-scale producing communities, promoting fair trade and access to resources. A system that fosters a new governance where all local stakeholders are involved and held responsible, so that communities can exert greater control over the resources on which they depend, especially for their food production. A system that makes visible and rewards the role of women and attracts young generations.

POSSIBLE MEASURES:

- Improve value of responsible small-scale fishers' products and their revenues and competitiveness
- Shorten the supply chain and ensure more direct sales (by enhancing the use of community supported agriculture and fisheries schemes -CSAs and CSFs-, dock-pick-ups and other direct marketing arrangements)
- Tap into new markets for fishers' products
- Promote the purchase of local high-quality fresh fish caught by responsible small-scale fishers
- Promote better information, awareness and visibility of small-scale fishers' products and its value added
- Expand economic opportunities and reduce fishers' vulnerability through diversification of activities (e.g. sustainability information actions and marine protected areas)
- Secure stability of the price and income for fishers (e.g. by ensuring contractual sales to clients, increasing storage capacities, preservation, processing of products or adequate market tools)
- Improve social cohesion, cooperation and self-organization of SSF to ensure quality, and fair price of products (through fishers collective agreements, shared resources, creation of dedicated organisations and/or collective business opportunities, etc.);
- Engage in transfer of skills to the younger generations to enhance inter-generational sustainability of traditional fishing/exploitation and related job opportunities (including in the post-harvest subsector) in coastal communities
- Promote actions that will attract the younger generation into the sector
- Involve and increase visibility of relatives, spouses or colleagues into the fishing activities and/or trading to enhance intra-generational sustainability, with particular attention to equitable recognition of women and vulnerable groups
- Promote transparency, fairness and accountability in the value chain, i.e. in fisher-buyer relationships, incl. by application of regulations, monitoring and regulating unfair trading practices,
- Promote co-management and participatory approaches in governance of resources
- Organize or participate in capacity-building for fishing communities on potentials of value-added products
- Promote cooperation in cooperatives and among fisher cooperatives or fishing communities to ensure quality and fair price of products
- Contribute to positive social impact in the local community
- Promote the interconnectedness and synergies with other small producers in-land

PRINCIPLE ON CULTURAL HERITAGE

OBJECTIVE:

To maintain and protect traditional fishing practices, knowledge and livelihoods while embracing innovation and creativity

Without anchoring too much in the past or neither devaluing the modernization, this principle seeks a good balance, recovering and valorizing the traditions and techniques which are compatible with sustainability components, preserving local and traditional knowledge, while promoting innovation, creativity and social entrepreneurship.

POSSIBLE MEASURES:

- Ensure consumption of traditional healthy Mediterranean diets and improve food sovereignty
- Contribute to discerning and recognizing the value of the local quality from the Mediterranean
- Showcase a historically-diffused technique traditionally used by local fishers or processors
- Acknowledge traditional local ecological knowledge of fishers
- Contribute to the preservation of that knowledge (e.g. by training in traditional gear manufacturing and mending) and promotion to others (e.g. by disseminating information on techniques, natural seasonality of products when promoting the product, through culinary

practices)

- Demonstrate fishing livelihoods and practices (e.g. through knowledge centers, museums of fisheries, historical fishing, festivals, workshops)
- Contribute to revival/recuperation of a lost low impact technique
- Promote innovation, creativity and social entrepreneurship
- Contribute to community-building of coastal fishing communities (e.g. by networking with other cultural entities and social fabric of coastal communities, supporting local in festivities and celebrations, investing in appropriate infrastructures, organizational structures and capacity development)

PRINCIPLE ON ENVIRONMENTAL SUSTAINABILITY

OBJECTIVE:

To support low-impact fisheries practices and ensure ecological sustainability of fisheries

The principle seeks to ensure that the food chain has a low environmental impact, respecting seasons, preserving the sea-based resources on which the food system depends; helping to mitigate climate change and adapting to its impacts and reversing the loss of biodiversity and food waste, taking into account the interconnectivity of ecosystems.

POSSIBLE MEASURES:

- Improve selectivity, ensure polyvalence and seasonality in fishing, and respect maturity of species/species' life-cycles
- Ensure no impact on the sea-bed
- Diversify the catch to offer underutilized fish species
- Control fishing effort and fishing mortality according to ecosystem carrying capacity
- Mitigate or prevent interaction with endangered and vulnerable species
- Address the issue of non-indigenous species and other effects of climate change (e.g. develop an economic value of invasive species, contribute to programs of climate change mitigation)
- Prevent and mitigate ghost-fishing (prevent discarding and abandoning fishing gear and remove the lost gears from the sea,)
- Promote the fight against IUU (by e.g. voluntary control and enforcement system, promote enforcement)
- Promote fully documented fisheries and efficiency of data collection systems
- Encourage lower carbon footprint of fishing and of product once landed (e.g. local consumption, delivery, attention to packaging and materials used)
- Prevent marine water pollution during operation and boat maintenance when possible (e.g. explore alternative materials in fishing operations, prevent disposal of solid waste at sea, avoid toxic antifouling paints on boats, avoid disposal of paint into the sea during boat maintenance)

PRINCIPLE ON HEALTH AND SAFETY

OBJECTIVE

To ensure a safe and quality working environment of fishers and offer good quality and safe product

This principle seeks to contribute to food security, nutrition and public health – making sure that everyone has access to sufficient, nutritious, sustainable food that upholds high standards of safety and quality, while ensuring occupational health, safety and fair working conditions;

- Ensure quality of fresh product (e.g. through a chain of cold, icing, cold rooms for storage) and processed product
- Take measures to ensure healthy and safe working environment (secure safety equipment and adequate communication system, such as vessel geo-location systems)
- Provide training on safety measures on vessels including first aid, and food handling courses to ensure hygiene practices are internalized in fishing operations

WHO ARE MEDITERRANEAN SMALL-SCALE FISHERIES (SSFs)?

In the Mediterranean, SSFs represent 80% of vessels and 70% of fishers

Polyvalent fishers (using different fishing gears around the year, according to seasonality, target species, conditions of the environment and stocks, etc.)

Self-employed and remunerated according to catch

Mostly use passive gear and never use towed fishing gear

Making short fishing trips close to shore

Involving fishing households (not commercial companies)

Artisanal small vessels (up to 12 m)

Low productivity, high diversity of products

THE VALUE OF SSFs

Fishing heritage and traditional food preparation, forming an integral part of Mediterranean identity

Socially well-integrated, home-grown employment

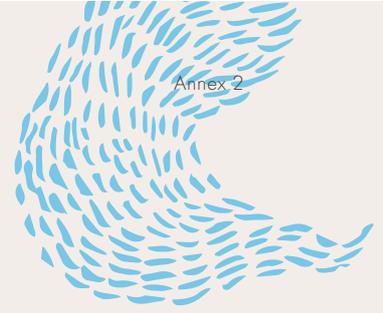
Largely selective and seasonal harvest

Local food provision

But in the market it is difficult to distinguish the SSFs product from that of industrial fisheries, aquaculture and even illegal fisheries. How to award social and environmental advantages of SSFs?

WEAKNESSES OF SSFs

CONSUMERS



WHAT CAN YOU DO?



BE DIRECT

Explore ways to connect more directly between you and the fishers, where SSF settle a fair price.



BE LOCAL

Buy and eat local fish, lower your carbon footprint and appreciate local specialties wherever you go. Explore also festivals, go on a fishing tour and chat with chefs about the provenance of the fish they use.



BE SUSTAINABLE

Support selective, seasonal fishing of a variety of different species, which are not threatened. Adapt your demand to the supply and not the other way around.



BE ADVENTUROUS

Search for diversity in your dishes and explore seasonal and unfamiliar catch.



BE INFORMED

Keep yourself updated on the options to buy seafood, also those less conventional (using apps, social media, etc.).



BE HEALTHY

Consume fresh and unprocessed fish species and combine it with a healthy lifestyle.



BE CURIOUS

Meet fishers in the fishing port, ask about species they catch and how to prepare them, learn more about fishing traditions, and how SSF fishers guard our ocean.



BE BOLD

Do you want to set up a consumer group to sustain community-supported fishing?

Examples of initiatives of SSF products around the Mediterranean that:

- Shorten the value chain
- Innovate in how they distribute catch
- Offer new types of products
- Promote their products in a novel way
- Distinguish their products with a label
- Cooperate successfully with other food producers



PRODUCERS

THE VALUE OF SMALL-SCALE FISHERIES (SSFs)



Socially well integrated home-grown employment

Fishing heritage and traditional food preparation, forming an integral part of Mediterranean identity

Diversity of catch

Local food provision

Largely selective and seasonal harvest

WEAKNESSES CAN DRIVE INNOVATIONS

Weaknesses

- Insufficient recognition of environmental and social advantages of SSFs
- Lack of power to establish direct sales at fair prices, leading to a negative circle that keeps fishers vulnerable
- Poor product traceability and differentiation from industrial and farmed products
- No cohesive market representation by SSFs
- Markets often require regular supply of specific products

Types of Innovations

- Shortening of the value chain
- Diversification in the type of products offered
- Promotion of products and awareness-raising
- Branding and label creation
- Innovation in the distribution channel
- Innovation in ownership or cooperation



WHAT CAN YOU DO?



BE PROUD

Promote the social and ecological advantage of you as a small-scale fisher and the quality of your products, especially of commercially underappreciated seafood which often are hidden delicacies.



GO DIRECT

Explore ways to shorten the value chain between you and customers and connect directly to them, including via chefs and HORECA professionals.



BE VISIBLE

Embrace branding and labelling schemes, appear at festivities or gastronomic events.



BE TECH-SAVVY

Could existing technology and other tools (e.g., apps, social media) work for you in reaching the consumers more efficiently?



BE INFORMED

Keep yourself updated on how other SSF communities have overcome their challenges and which solutions could work for you. Reach out to them or join a network.



COOPERATE

Coordinate with like-minded fishers to improve your situation. Is there any scope to improve your organisation, leadership or business sides?

Examples of initiatives of SSF products around the Mediterranean





LabMAF

DEVELOPING A LABELLING SCHEME
FOR MEDITERRANEAN SMALL-SCALE
AND ARTISANAL FISH PRODUCTS