



**DEPARTMENT OF INTERNATIONAL AND  
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**THE ROLE OF SOCIAL INNOVATION FOR  
DEVELOPING SUSTAINABLE SOLUTIONS IN THE  
GREEK FISHERIES SECTOR**

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# The role of social innovation for developing sustainable solutions in the Greek fisheries sector

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In the Mediterranean basin, the status of commercial fish stocks is critical. In this sense, small scale, low impact fishing is seen as one of the ways to redress this balance, as it utilizes methods having minimal impacts on the marine environment, species, and habitats. Furthermore, sustainable small-scale fishing is an important activity for both economic and social reasons. Although low impact fishers make up 95% of the Greek fleet, they manage to reach only about 17% of the total consumers, thereby reaping only a small proportion of the profits. In this paper, we explore how social innovation can support public policies and the private sector in delivering successful and innovative food distribution channels in the Greek fishing sector. Through an innovative evaluation method based on both qualitative information and quantitative indicators we analyse the project “A Box of Sea”, established in 2016 by Greenpeace Greece and fishers in Leros and Lesbos. This initiative provides a novel food consumption and distribution model aiming at making low impact fishing more economically viable, and therefore achieving a triple sustainability for the sector (environmental, social, and economic). Our results shed light on the processes which brought the project to thrive. Moreover, we identify third sector social innovation schemes as key tools to develop novel distribution systems supporting local communities (fostering new networks and collaborations across fishers), while improving governance practices of the current fishing sector creating a fairer market that protects the marine environment.

**Keywords:** Social Innovation; Sustainable Fisheries; Evaluation Framework; Rural Development; Mediterranean; Greece

## 1. Introduction

Overfishing is a result of overexploitation and destructive fishing practices, and one of the most significant driver of fish stocks depletions. According to the New Economics Foundation (2017), restoring 43 out of 150 stocks in the North-East Atlantic to their maximum sustainable yield could, if directed only to human food consumption, could provide enough food for 100 million EU citizens. In the Mediterranean basin, the status of commercial fish stocks is especially critical with only 7.5 % of the stocks being in good status based on a single criterion (fishing mortality and reproductive capacity) and none of the

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stocks being in a good status based on both criteria, mainly due to fishing at biologically unsustainable levels (European Commission, 2020).

According to EU regulation (No 508/2014) of the European Parliament and of the Council on the European Maritime and Fisheries Fund (EMFF), small-scale coastal fishing (SSF) is defined as fishing carried out by vessels of less than 12 metres and not using towed fishing gear (European Parliament and European Council, 2013). The term is usually used interchangeably with terms like “artisanal”, “local”, “coastal”, “traditional”, “non-industrial”. SSF is also recognized as one possible option to mitigate the effects of overfishing, as it utilizes methods with minimal impacts on the marine environment, species, and habitats. The potential of low-impact fishing for improving social and environmental sustainability has been recognized in the 2014 Common Fisheries Policy (CFP) that excludes Small Scale Fisheries (SSF) from transferable fishing concessions schemes and includes a series of measures to support their financial viability. Despite that, the current high mean age of artisanal fishers and low profit from most fishing activities threatens the next generation of fishers (Lloret *et al.*, 2018). Greece accounts for the largest share (23%) of the total European SSF (Macfadyen *et al.*, 2011). According to the latest data from the Hellenic Statistical Authority (ELSTAT, 2019), Greek SSF account for 36% (33,210 tonnes out of the total of 71,372 tonnes of fish) of the national annual fish production and 57% (157,107 euros out of 255,715 euros) of annual value production. Small-scale fishing also provides overall 19,396 full-time positions, bringing Greece in the third place in the EU in terms of employment in the sector. Most of these positions are in remote areas and islands where there is usually no alternative viable employment and source of income. Although low impact fishers make up 95% of the Greek fleet (with 14,000 ships), they are only granted a small fraction of fishing opportunities as they manage to reach only 16.6% of the total consumers, thereby reaping only a small proportion of the profits (Harris, 2016). While having a limited contribution to the Greek gross domestic product (about 3%), low impact fisheries represent a sector of paramount socio-economic importance for coastal areas with a long history of fisheries-dependence (Tzanatos *et al.*, 2005). Furthermore, SSF is an important activity both for economic and social reasons. It can provide tens of thousands of jobs and it is often the main source of income for many families highly dependent on fisheries (Tzanatos *et al.*, 2005). This is especially important for communities settled in remote areas, such as the Aegean islands, in the case of Greece. From a social perspective, SSF activities can enhance social sustainability by promoting thriving coastal communities through the creation of small, often family-run companies or self-employed workers, where the ship-owner is also the master of the vessel (Lazou, 2014).

Social innovation emerges to strengthen actors' ability to respond to environmental, social and economic challenges (Moulaert *et al.*, 2013). They are innovative societal arrangements which aim at reshaping current practices to improve the collective wellbeing (Polman *et al.*, 2017). Only few studies have insofar analysed social innovation initiatives within the fishing sector. Their focus was on community regeneration in periods of economic crises (Eythórsson & Jóhannesson, 2019) or social clashes (Dacin & Dacin, 2019), ecosystem restoration initiatives after overfishing (North Atlantic Salmon Fund; Andersson, 2017). Additionally, certain studies have investigated how social innovations can be fostered in fishing communities through the strengthening of social networks (Soma *et al.*, 2018), social learning (Van Assche *et al.*, 2013), or using participatory approaches (Mazingo, 2017). Social innovation processes can be triggered by a wide variety of innovator groups, including

local communities, private companies, public authorities, and non-governmental or non-for-profit organizations. Furthermore, while the role of communities and public authorities behind social innovation emergence has been widely studied in the literature (e.g. Bekkers et al., 2013; Moulaert et al., 2010), scarce information exists so far on social innovation processes initiated by large Non-Governmental Organizations (NGOs) (Bibu et al, 2012). With this study we want to fill this double-fold knowledge gap by providing a detailed evaluation of an innovative model for fishing, which was initiated in Greece by Greenpeace Greece in 2011, named “A Box of Sea” (BoS). In particular, the paper aims at 1) assessing whether the BoS project can be considered a case of social innovation, according to the definition provided by Polman et al (2017)<sup>7</sup>; and 2) investigating the main social innovation dynamics/processes and impacts, with a special focus on the role played by large NGOs. The ultimate goal is to show whether and how social innovation can support the improvement of the traditional fishing sector, boosting its overall socio-economic sustainability.

## 2. Methods

This section provides details on a) the Box of Sea (BoS) project (sub-section 2.1); b) the geographical areas where the case study is located (sub-section 2.2), c) the sampling design and data collection methods and tools (sub-section 2.3) and d) the data analysis methods (sub-section 2.4).

### 2.1 Box of Sea project

The BoS project seeks to make low impact fishing a more economically viable pursuit, and therefore achieving true sustainability for the sector. It is an experimental step-by-step approach, to create a novel consumption and distribution system to promote fishing practises that could become a paradigm for what a sustainable seafood market of the future could be like. The BoS brings together low impact fishers and citizens who want to take action against overfishing. The aims of this coalition are to create a fairer market that protects the marine environment, to reward those who fish in more moderate ways, to support small fishing communities, and to provide better information to consumers regarding seafood. Despite this approach is applied in many EU countries based on short value chains and solidarity models (e.g. in Italy: "Gruppi di Acquisti Solidali"; Brunori *et al.*, 2012), this is the first time an alternative model as such is being pioneered in the Greek context (Kafetzis, 2016). The coalition consists of a network between:

- Greenpeace Greece, the NGO who first thought the idea as a means to reciprocate fishers' help in several environmental and humanitarian acts;
- fishers that are aligned with sustainable fishing practices and coastal society but find it difficult to channel their fish to the market;
- consumers who are willing to actively participate in this effort and at the same time would benefit from having fresh fish directly at their doorstep.

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<sup>7</sup> For the purposes of this paper, social innovation is defined as “The reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors” (Polman et al., 2017).

## 2.2 Study areas

The BoS project is developed on three main geographical areas: (i) the island of Lesvos (ii) the island of Leros where the fishers are located, and (iii) the region of Attica, where the supporters/consumers are located. Lesvos belongs to the regional unit of Lesvos-Lemnos, and Leros belongs to the regional unit of Kalymnos-Karpathos-Kos-Rhodes, both of which are classified as predominately rural, remote islands, by the EU Urban-Rural typology including remoteness and islands (Eurostat, 2018). Attica is classified as predominately urban

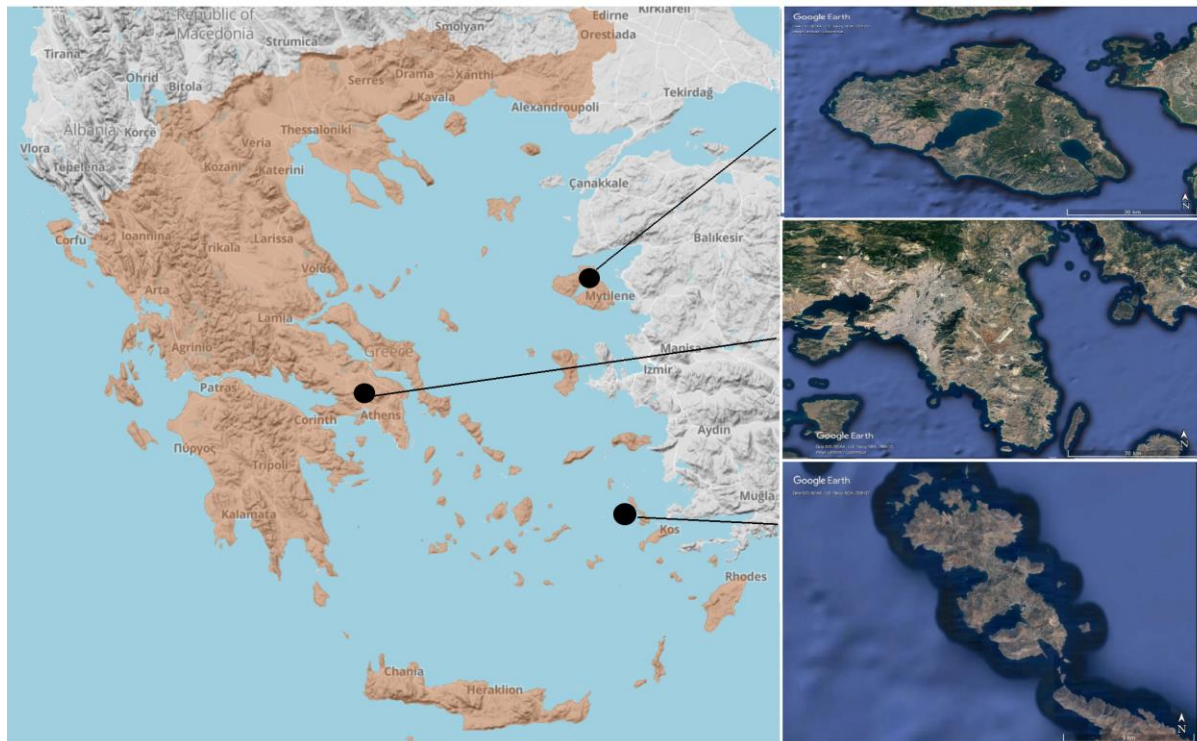
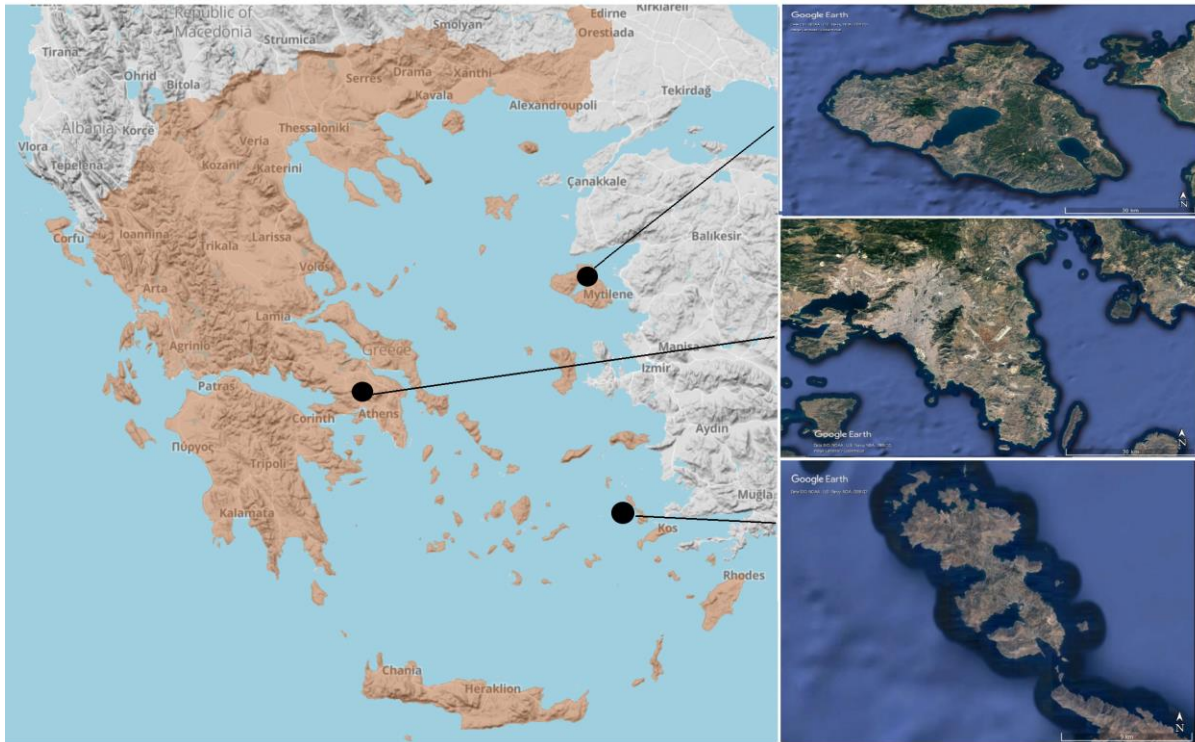


Figure 1).



**Figure 1.** Location of the study areas. From the top right: Lesvos island, Attica region, and Leros island. Source: adapted from Google Earth Pro and MapBox.com.

According to the latest census (ELSTAT, 2011), the island of Leros has 7,917 inhabitants, which corresponds to approximately 4% of the Kalymnos-Karpathos-Kos-Rhodes prefecture and 2% of the South Aegean region. The area of the island is 75.2 km<sup>2</sup>, the population density is 105.3 persons/km<sup>2</sup>. The percentage of the economically active population on the island is 39% and the unemployment rate is 16% (2011 census data). 79% of total employment comes from the service sector, 17% are employed in industry and 6% in agriculture and fishing (mainly the latter). The percentage of people at risk of poverty or social exclusion is 22.7% (NUTS 2 level). The Gross Domestic Product per capita (NUTS 2 level) was €18,000 in 2014. In terms of accessibility, Lesvos consists of 21 municipal communes and 52 local communes with a total area of 1,639 km<sup>2</sup>. The island has 86,436 inhabitants, which corresponds to 83% of the Lesvos-Lemnos prefecture population and 44% of the South Aegean Region population. The mean population density is 52.73 persons/km<sup>2</sup> but this varies between communes, ranging from 1,840 inhabitants/km<sup>2</sup> (Municipal Commune of Mytilini) to 1.81 inhabitants/km<sup>2</sup> (Local Commune of Labou-Myli). The population on the island comprises 38% who are economically active and 15% who are unemployed. Of total employment, 69% is in the service sector, 14% are employed in industry and 17% in agriculture and fishing (mainly the former). Fishing is a small sector within the study area within which only a small proportion of the population dedicating exclusively to it. The production of fishing catches is intended for domestic consumption during the summer months while in the winter months a small proportion of it is sent elsewhere, mainly to Athens. The percentage of people at risk of poverty or social exclusion is 22.7% (NUTS 2 level). The Gross Domestic Product per capita (NUTS 2 level) was €12,800 in 2014.

Attica is the most highly populated region of Greece. It consists of 114 local and municipal communes on the mainland, and 7 islands comprising 37 local and municipal communes. Attica covers a total area of 3,814 km<sup>2</sup>. The population of the region is 3,781,274 inhabitants, which is almost 35% of overall Greece's population, while the mean population density is 997 people/ km<sup>2</sup>. The proportion of the population in the area which is economically active is 46%, and the unemployment rate is 18% (2011 census data). Eighty-two percent of total employment is in the service sector, 17% are employed in industry and 1% in agriculture and fishing. The percentage of people at risk of poverty or social exclusion is 16.5%. The Gross Domestic Product per capita (NUTS 2 level) was €22,200 in 2014.

### 2.3. Evaluation framework, sampling design and data collection

The sampling design followed the SIMRA evaluation framework for assessment of social innovation initiatives and their impacts (Secco et al., 2019; Secco et al., 2017). This innovative framework and set of methods was developed with the final goal of assisting practitioners, evaluators and research teams in assessing social innovation initiatives, from their emergence to their development processes to their final impacts on societal wellbeing, environment and institutions. Among others, it provides a set of quantitative and qualitative data collection tools targeting each type of social innovation actors involved in each key dimension of the social innovation initiative. Overall the SIMRA evaluation framework includes nine key dimensions, which can be used for observing and describing the social innovation in its various phases of development (trigger and its related individual and collective needs; perceived context; agents-agency; preparatory actions; reconfiguring and reconfigured social practices; project activities; outputs; outcomes and impacts; learning processes), and five categories of actors, who are involved in different steps and ways (innovators and followers, project partners, and, both direct and indirect beneficiaries) (Secco *et al.*, 2019). While the various types of actors identified in the evaluation framework are described in Table 1, the various dimensions of social innovation are visualized in Figure 2 and their meanings briefly reported in section 3, whenever relevant.

**Table 1.** The five categories of actors assessed in the SIMRA evaluation framework and the population and sample sizes of this study.

Actors	Definition and sampling requirements <sup>a</sup>	Population size	Sample size
Innovators	Key leaders and first drivers of innovation. Innovators are identifiable individuals who had the idea, invented it, discovered it or were attracted to it.  Sampling requirements: census	2	2
Followers	The first to adopt or support the idea of the innovator, they can be co-creators or identify a good idea and identify a practical approach to carry it forward.  Sampling requirements: Census	13	12
Project partners	Individuals, enterprises, organisations, institutions or networks that contribute technically to the social innovation project and are responsible for the implementation of one or several project actions.  Sampling requirements: non probabilistic sampling (Judgement sampling)	<15 <sup>b</sup>	4

Direct Beneficiaries	The people benefiting directly from the outputs and outcomes of the social innovation.  Sampling requirements: random sampling	60-100 <sup>c</sup>	9
Indirect Beneficiaries	The people who have a relationship to the direct beneficiaries and therefore who will benefit indirectly from the outputs and outcomes of the social innovation.  Sampling requirements: none	n/a	0
<b>Total interviews</b>			<b>29<sup>d</sup></b>
<sup>a</sup> Source : Secco et al., 2019 ; Secco et al, 2017. <sup>b</sup> The total number of project partners involved is not available as it includes both internal project partners (those interviewed) and external logistics companies. <sup>c</sup> Beneficiaries reached in the first phase of the BoS project. <sup>d</sup> Total number of interviews does not match the individual components as two informants have been interviewed twice with both structured and semi-structured interviews..			

A combination of data collection tools were applied from May until August 2018, gathering both qualitative and quantitative data. For the focus group, we invited the innovator (a member of the NGO), all 13 followers (fishers) including the project manager (also a member of the NGO) and three project partners (again members of the NGO). From those invited, all members of the NGO and five out of twelve fishers showed up for the focus group. The focus group lasted about four hours and the main purpose was to capture the characteristics of the case study area, identify actors, and set up an overall context and timeline for the social innovation using reporting tool number 2 – “Focus Group with key informants” in Secco *et al.* (2019). . Also, 2 semi-structured interviews (open questions, storytelling) and 27 structured interviews (questionnaires with open and closed questions) were performed. Table 1 summarizes the number of interviews undertaken following the guidelines provided by the evaluation framework on sampling requirements for each group of actors (Secco et al, 2018; 2019). Ad hoc adaptations to the sampling strategy were performed. In particular, we included only those project partners who were internal to the social innovation (four persons from Greenpeace Greece and one from the island of Leros, helping local fishers with logistics) and not external sub-contractors (e.g. logistics companies). This is because these partners had almost no knowledge of the project, treating their tasks within the chain as one assigned by any other typical client. Moreover, two respondents (one project partner and one follower) were not interviewed, due to time and location constrains. Finally, BoS consumers (i.e. the beneficiaries), were randomly chosen from a list provided by the project manager. Secondary quantitative data on the three local contexts/areas were also collected, by searching databases such as Eurostat, Hellenic Statistical Authority and World Bank and focusing on Indexes on level of rurality, physical geography marginality, access to infrastructure as well as social and economic conditions.

## 2.4. Data analysis

The two main types of data (qualitative and quantitative) were analysed differently but merged/triangulated for the purpose of interpretation (Secco et al. 2019). On the one hand, qualitative data, extracted from the focus group and the two semi-structured interviews, were audio recorded, and the synthesis was done using an ad hoc reporting tool (reporting tool number 7- “Interview guideline for innovators and persons involved in the innovation process” in Secco et al, 2019). Due to various levels among participants, focus groups and semi-structure interviews were conducted in Greek language and the main findings and



quotes included in the paper are exact translations from the audio recording. Qualitative information was used for: (i) reconstructing the history behind the origin and further development of BoS and describing in general the initiative (e.g. timeline and chronology, the agents involved – with a focus on the role of the NGO, and other details - presented in section 3.1), (ii) corroborating or contrasting the information based on quantitative findings. All statements reported in italics are extracted from the qualitative tools, and the actors that reported them are indicated with an alphanumeric code. On the other hand, quantitative data was retrieved from the 27 questionnaires and elaborated and interpreted using a pool of innovative ad hoc designed indicators (Secco *et al.* 2017; 2019). All questionnaires were translated in Greek language. In the Appendix, we list all the quantitative indicators employed in this study<sup>8</sup>, which were used to perform the evaluation of the BoS project (focus on the social innovation and its impacts, presented in sections 3.2 and 3.3).

### 3. Results

#### 3.1 BoS chronology in relation to phases of the development of a social innovation

Figure 2 presents the overall timeline of BoS. This project emerged as a response of multiple positive and negative triggers. The trigger may take the form of a natural disaster (e.g. drought, natural resources depletion), financial crises or a new policy which provides unexpected additional resources (Secco *et al.* 2019). In our case study, the trigger was first and foremost the decline in fish stocks in the islands of Lesbos and Leros that led to lower catches for local fishers and consequently declining incomes. Fishers' needs and environmental issues (individual and social needs associated to the decline of fish stocks) came into the attention of Greenpeace Greece during 2011-2013, when they started to work together in an effort to grasp the issues related to small fisheries, as part of their involvement in The Low Impact Fishers of Europe (LIFE) platform. The idea behind the platform was helping fishers to get motivated and politically involved in Greece and in Europe, through the creation of a low impact fishers group that could potentially put some pressure on the Common Fisheries Policy reform that was taking place at that time. Additional multiple negative triggers emerged in 2013. The first (negative) trigger came from The effects of the economic crisis on fisher communities' incomes. The combination of lower catches with reduced demand and the intensification of competition from additional labour force that turn into the primary sector due to the rise in unemployment was detrimental for the fishers' wealth. This was aggravated by increasing foreign trawlers crossing the Greek sea borders in the Aegean, taking advantage of the reduced sea patrolling by the coastguard. This was due to a rising refugee's influx crossing from Turkey to the Aegean islands, a pattern that started in 2013 and continued in the years to follow (Triandafyllidou, 2015).

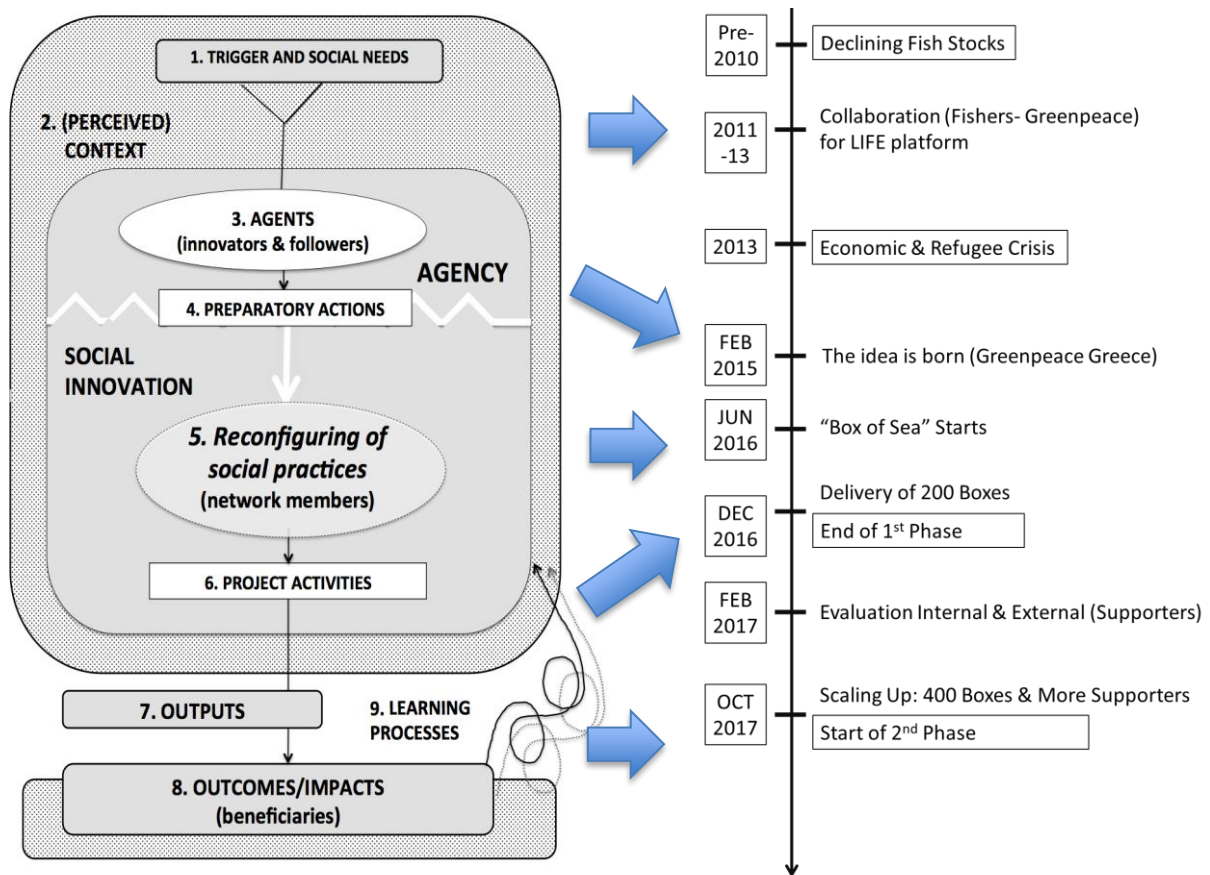
However, the refugee crisis was also a positive determinant (trigger) for the emergence of BoS. On multiple occasions, Greenpeace Greece members and fishers worked together, building refugee shelters and saving refugees from the sea when accidents occurred. This situation deepened the trust between the two parties and amplified the feeling of gratitude

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<sup>8</sup> Although we do make reference to the numerical value and the code of the relevant indicators, we point the interested reader to Secco *et al.* (2019) for details on the range of each indicator, the sampling tools used for each indicator and other related information.

from the NGO towards fishers. At this point, Greenpeace Greece had already decided that something should be done to help local fishers' communities, and initiated to formulate the idea at the basis of the social innovation – thus being the key agents for starting the process (i.e. the innovator, according to Secco et al. 2019). The idea behind BoS finally emerged in 2015, followed by a series of meetings (3-4) where several groups of SSF from both islands were introduced to the concept by Greenpeace Greece members and were invited to join the initiative. Those who accepted the invitation and decided to join can be seen as the initial followers. The BoS concept can be articulated in four main steps. The BoS project would provide an online platform for purchasing boxes of fish from both islands (Greenpeace Greece, 2020). Consumers in the Attica area would receive fish caught daily by low impact fishers to their doorstep. Final consumers would also help to test out different tools and logistic details in order to establish a novel distribution system that will be operated exclusively by the fishers in the future. Even if they partially contributed to test and refine the project, consumers are intended to be the final beneficiaries of the project according to Secco et al. 2019, receiving the main outputs (boxes of fresh fish distributed by the fishers). Finally, an ordering process would allow consumers to visit a dedicated website to place an order for a box, with 2 options (1 kg or 2 kg), select a delivery date based on available time slots, and make payments for their order.

The core group of the initiative (made up by innovators and the initial followers) was formed in a very short period and it immediately started recruiting additional fishers up until June 2016 when the project finally built a network of 11 local, low impact SSF from the islands of Lesbos and Leros (including one woman) and officially started. According to the applied evaluation framework, this network is intended as part of reconfigured social practices: a new network created after a reconfiguring process, in which many changes occurred, including the emergence of new attitudes and governance arrangements (Secco et al. 2019). In the first 6-months, about 200 boxes (project outputs) were delivered to consumers (beneficiaries), a fact that marks the end of the first phase of the project. The end of the first phase was followed by an internal evaluation of the project in a joint meeting with Greenpeace, the fishers, and the consumers. The evaluation was taken into account for the design of the 2<sup>nd</sup> phase of the project that included the development of a new, more user-friendly platform, the design of more attractive and eco-friendly boxes (packages) with printed information on the fisher and type of vehicle used for the specific delivery, the recruitment of a van dedicated to delivering the boxes to consumers and the inclusion of a wider variety of fish into the boxes. The second phase started in October 2017, based on a learning process that allows to up-scale the project (Secco et al. 2019). By the time we conducted the focus group and the interviews (May 2018), it was close to a successful completion.



**Figure 2.** A simplified version of the SIMRA evaluation framework (based on Secco et al. 2019 – mod.) and the corresponding timeline of "A Box of Sea" (based on focus groups and interviews). The arrows show the correspondences between the phases of social innovation as identified in the general framework and the specific case study.

### 3.2 Perceived context

Information on the perceived context was analysed using tools 3,4,5 in Secco et al. (2019). Perceived opportunities and threats existing in the context that BoS faced in its early establishment are balanced as about four threats identified compared to five opportunities, highlighting the structural crisis of the local territory but also the active engagement to react of the early local actors (the Greenpeace Greece team). The main enabling factors identified were the funding availability from Greenpeace Greece (economic), the active solidarity for the islands and the good organization of the working team (social) and the new institutional framework regarding fishing (institutional). The main constraining factors on the other hand were the limited financial resources (economic), the negativity/pessimism of some of the actors (social), overfishing (environmental) and uncertain market system (institutional).

The importance of supportive policies in contributing to the success of the initiative is low (Tools 3 and 4, Bb2=3.4 in the range 1-10). It seems indeed that A Box of the Sea started without any reference to specific enabling policies. Also, as long as Greenpeace is involved, policies that might have acted as barriers are bypassed without posing any threat to the social innovation. As a result, the role played by the existing governance system in the

establishment of A Box of Sea is perceived as low (Tools 3 and 5, Bb3=42.9 in the range 1-100). The main positive elements mentioned both by the clique and the project partner members were open stakeholders' consultation and new policy initiatives, both of which reflected the participation of Greenpeace Greece and some of the SI members in The Low Impact Fishers of Europe (LIFE) platform, who actively took part in the consultation regarding the CFP reform at the infancy of the social innovation.

### 3.3. Identification of BoS as a social innovation initiative

The characteristics of the BoS initiative have been evaluated with respect to the social innovation definition proposed by Polman et al. (2017). We thus identify in this section whether BoS: (i) has determined a process of reconfiguration of previously existing social practices (e.g. new networks, new attitudes, new governance arrangements), (ii) provides responses to existing societal challenges, (iii), has positive outcomes on social well being, and finally (iv) involves actively the civil society. The values of quantitative indicators calculated for the various aspects considered are reported in Tables A.2 and A.4 in the appendix. Their meanings are detailed in the Appendix – Table A.1 and A.3 while their codes, values and explanations are mentioned also in the text whenever appropriate.

#### i) Reconfiguration of existing social practices

On the one hand, results show that the individual perception of the interviewees concerning the extent to which BoS had reconfigured social practices, i.e. new relationships established, change in personal attitudes and personal empowerment is moderate (SIR1=6.6 in a range of 1 to 10). This indicator represents the actors' individual perception of the effectiveness of the social innovation process: the higher are the individual perceptions, the greater is the capacity of the social innovation process to determine a reconfiguration, e.g. a change with respect to the previous conditions. On the other hand, collective perception of the reconfiguration is a bit lower (SIR2=5.9 in the range of 1 to 10). This concerns the level of inclusiveness of actors of the network who are normally not included in the community initiatives, improvement in actions of actors who are members of the public and improvement in the attitudes of the actors of the social innovation. Looking at the actors' perception of the extent of the reconfiguration process in terms of number of reconfigured practices per actors, less than one out of three changes is perceived as having taken place thanks to the BoS project (SIR3=0.7 in the range of 0 to 3). 2 details the most common changes as emerged from the interviews.

**Table 2.** Summary of the main changes perceived by BoS actors (data from structured interviews; quotations from qualitative interviews and focus group; in brackets, the code assigned to quoted respondent)

Changes observed in..	Most common
...the innovative network	<ul style="list-style-type: none"> <li>- Direct contact between fishers and consumers in Athens</li> <li>- Proactiveness and increased enthusiasm (also of consumers)</li> <li>- Stronger collaboration and cooperation of the fishers network</li> </ul>

	<p>"Also, I learnt that the collaboration among fishers is feasible" (SEA001)</p>
...attitudes	<ul style="list-style-type: none"> <li>- Learning process (fishers are now aware of low impact finishing practices, and consumers of the difficulties fishers face in their daily life</li> <li>- People believe now in the BoS project and want it to continue in the future</li> <li>- Willingness to risk and invest</li> </ul> <p>"we [innovators] wanted to support other ways of fishing less harmful for the sea while supporting their marketing in Athens." (SEA001)</p>
...innovative Governance Arrangements	<ul style="list-style-type: none"> <li>- New system of online orders</li> <li>- Direct communication between fishers and consumers without intermediaries</li> <li>- Home delivery in Athens</li> </ul> <p>"I believe that it (BoS) is a good channel of communication between consumers and producers. It helps consumers trust producers and be sure that they will receive fresh fish" (SEA003, Focus Group)</p>

In terms of perceived level of innovation of the BoS, the indicator score is high (SIR4=8.8 in a range of 1 to 10), showing that the actors perceived the process established in Leros and Lesvos islands as innovative for the current development of the regions. This is also reflected in the focus group discussion:

"the idea was not unique in the world, but it was something new for Greece." "...Moreover, we wanted consumers to get to know the variety of fish that sea can offer expect from the known fish that consumers used to buy in stores"

"Consumers got to know a new model of fishing and a new way that they could buy fish and really embraced this initiative."

Lastly, the extent to which the initiatives undertaken in BoS improved social practices, i.e. the level of improvement determined by the social innovation process, is moderate-high (SIR5=2 in a range of 0 to 3). The indicator highlights two major improvements: (i) an increased density of the collaborations when comparing the density of the pre-existing (i.e, before 2011) collaborations among actors and the collaborations during the social innovation process and (ii) an improvement in the governance arrangements.

## ii) Responses to societal challenges

Concerning the ability of BoS to respond to existing European societal challenges (European Commission, 2020), it appears that the BoS can tackle about one third of the different challenges present in the territory (SIS1= 29.6 in a range of 0 to 100). The challenge mentioned by both innovators is Income, Jobs and Education. Other additional challenges mentioned without consensus (i.e only supported by few participants) were *Sustainable agriculture and food security*, *Smart, green and integrated transport*, *Environment and climate change*, as well as *Inclusive and innovative societies*. The perceived improvement in all mentioned these challenges is limited (SIS2= 18.2 in a range of 0 to 100), as it was expected considering the small size of the initiative. However, if the beneficiaries' perspective is taken into consideration (SIS3 = 43.9 in a range of 0 to 100), the perception of improvement increases, including high scoring for additional challenges as: *health, incomes, job, and education*.

## Outcomes on social well-being

The effect on social cohesion and well-being of BoS as perceived by the beneficiaries of the project is positive and high (SIO1=1.1 in a range of -1 to 2), and mainly focused on the effects outside the local territory rather than its impact inside of the territory. The idea behind the BoS is to promote and illustrate a new business model that is both financially and environmentally sustainable. As a result, the outcomes are expected to benefit society as a whole more than its “localised” implementation in a specific territory. The contribution of the BoS to good governance is instead perceived as limited (SIO2= 25.5 in a range of 0 to 100), and mainly focused on giving more options for citizens engagement, and transparency.

## Engagement of the civil society

Finally, as far as the engagement of the civil society is concerned, the BoS is an initiative that involves a well-diversified set of members of the civil society (SIE1= 0.7 in a range of 0 to 1) , with a large majority of citizens (i.e. the consumers in Athens), and for-profit business entrepreneurs (i.e. fishers). However it appears that the role played by the local community for the success of the initiative is rather minimal (SIE2=0.7 in a range of 0.1 to 10) if weighted with the other success factors the respondent have identified (as for example the support of the core group, of member of the network, and of project partners). This indicate the important role the Greenpeace team in running and establishing the initiative:

*“Many people from Greenpeace office were involved in order for this project to run with success.”*

Aligned with above findings, the share of civic organizations (i.e. Greenpeace) in the network is high (SIE3=1.7 in a range of 0.1 to 10) and balanced with the presence of social enterprise actors. The network engagement driven by “serving a good cause” is one of the main reported factors, with about 67% of the respondents agreeing with it (SIE4= 66.7 in a range of 0 to 100). This is also reported by Greenpeace Greece (the innovators):

*“We [innovators] wanted to support other ways of fishing less harmful for the sea while supporting their marketing in Athens.”*

Moreover, all network members were moderately active in participating in project meetings (SIE5=41.8 in a range of 0 to 100). The percentage of voluntary work done by interviewed network members is 31% (SIE7). This is mainly because voluntary work was not necessary for the implementation of the project; the majority of actors (fishers) were just supposed to do business-as-usual. Also, voluntary work has been undertaken by actors outside the network (not interviewed). This is also supported by the following statement from the focus group:

*“In every delivery, 4-5 people from Greenpeace Greece used their own cars and delivered the boxes throughout the city for several hours. So, in the first phase of the project, delivery was based solely on us”*

## Overall assessment

Overall, the level of innovativeness of the BoS is assessed as moderate-high by the actors of the initiative (SII1=8.8 in a range of 1 to 10;), and as moderate by the external experts participating in the focus group (SII2=58.3 on a scale from 1 to 100). In particular, they mentioned that BoS is a new idea for the Greek context, where a new way of communication between consumers and producers (fishers) is developed. Nonetheless Greenpeace has implemented similar projects in Europe. They also believe that it generates new attitudes both of consumers, who feel now safer regarding products and trust fishers much more due to the direct selling, and of fishers who got to know sustainable fishing techniques. Additionally, consumers feel more secure with regards to products' freshness and cleanness, and get an increased utility from eating more seasonal fishes and from different species and increase their environmental awareness.

As a social innovation, BoS is reported to provide new solutions, such as the direct communication of fishers-consumers without intermediaries or the development of a new and sustainable economic model. Moreover, fresh fish to consumers and fishes harvested can be considered as new (improved) products. Additional innovative elements of BoS were the need to increase the market shares of fishers from remote communities. These innovative characteristics have also been stressed by the informants interviewed:

*"the idea was not unique in the world but it was something new for Greece."*

*"Consumers attitudes changes and now they know that they have different options for their food and where they can find it."*

### 3.4 Evaluation of BoS outcomes and impacts

The outcomes of the BoS mentioned by the interviewed actors are mainly five: (i) a new and more sustainable fishing model, (ii) new markets opportunities for fishers, (iii) increasing fishers' income, (iv) a new network of collaborations among fishers, and between fishers and consumers and (v) the change of consumers' attitude towards sustainable fishing and rural economies.

The perceived impacts of the BoS are diversified and imply a low ability of reducing the marginalization of the islands (I3= 2.1 in a range of 1 to 10). In particular, the main improvement on constraints reported concerned issues related with island connectivity (2.3 in a range of 1 to 10), with mountain areas (1.5 in a range of 1 to 10), and aridity (1.5 in a range of 1 to 10). This, as presented before related to the better position fishers and remote communities have in the fishing market thanks to the linkages developed in the BoS. Also, a high perceived governance improvement (I4=69.4 in a range of 1 to 10) with a specific focus on citizens' engagement, transparency, overwhelming bureaucracy, inflexible public administrations, and inefficient and poor quality of public services.

No impacts on socially excluded citizens from the local community (I5) have emerged, as the primary focus of the BoS is fishers. The initiative reaches a low number of final indirect beneficiaries (an average of 4 estimated, I6), which approximately are identified in being the families and relatives of the interviewed beneficiaries. In relation to the European societal challenges, BoS appears to have considerably (I7=66.7 in a range from 1 to 100) improved

EU challenges as: *Income, Jobs, Education, Sustainable agriculture and Food security, Environment and Climate Change*; and to a minor extent : *Health, Smart, Green and Integrated Transport, Inclusive societies, and Innovative Societies*.

Concerning the elements that the initiative has impacted in four domains (environmental, economic, social and institutional) (Secco et al. 2019), the results show that the strongest positive are about double the strongest negative elements identified (I11= 2.1 in a range of 1 to +∞). Positive impacts are greatest for the social domain (100%) were no negative impacts have been identified, followed by the economic and institutional/governance domains (85.7%), and by the environmental domain (75%) (I10). The elements that emerged to be more widely associated with positive elements during the interviews were: (i) the support to traditional and sustainable ways of fishing and the environmental and sea protection (environmental domain); (ii) the improved fishers ‘and wider local communities’ income (economic domain); (iii) the direct support to marginalized fishers and local communities (social domain); (iv) improved networks and social cohesion (social domain) and (v) the improved connections between urban areas and rural communities (institutional/governance domain). The only strongly negative elements within the four domains was the consolidation of existing activities in the economic domain. Table 3 summarizes the main positive and negative impacts associated to the four domains as identified in BoS.

**Table 3.** Elements of the four domains with strongly positive and negative impacts of BoS’s activities. (data from focus group; quotations from qualitative interviews and focus group)

Domain	Strongly positive elements	Strongly negative elements
Environmental	None identified	None identified
Economic	Consolidation of existing activities’ network  <i>“I would suggest this to be among the strongly positive as we never before had such a strong collaboration with fishers”</i>	Consolidation of existing activities’ network  <i>“ ... some of the fishers faced problems with local retailers that held the knife in their throats[sic] to leave the project or to keep the high-quality fish for them ... ”</i>  <i>“ ... this is common practise for all retailers ... ”</i>  <i>“ ... I think their trying advantage of the project and threaten to get lower prices... ”</i>
Social	Community solidarity  <i>“... some of the most important achievements of the “Box of sea” are [...] the network and the collaboration among fishers [...] I learnt that the collaboration among fishers is feasible...”</i>	None identified
Institutional/gov ernance	Sharing of data, knowledge and experience  <i>“In order to develop the idea of “Box of sea” we had to work on it for many hours all together to see how this idea can be implemented and what we need to do so. So</i>	None identified



*we had to search and get ideas and rethink how we can implement this in Greece from the laws to logistics and many other details”*

*“For us [Greenpeace], this was a very positive element as the whole idea was based on creating and sharing knowledge for similar future actions”*

Transparency and accountability of both private and public organisations.

*“There are no public organizations involved but from our side [Greenpeace] this is true”*

## 4. Discussion

Our first aim was to assess whether the BoS project can be considered a case of social innovation. According to our results, it is possible to say that BoS is a social innovation because it determined a process of reconfiguration of its existing networks. The perceived response of the project to the social needs is deemed as satisfactory (especially for consumers). As a result, the outcomes are expected to benefit society more than its “localised” implementation in the specific territory. Due to the small scale of the project and the low numbers of fishers and areas involved, the contribution of the BoS in this very broad context is perceived as limited for the time being. Whether it can grow in size or become a dominant model remains to be seen, depending on the success and viability of the project over the next few years, since this is the first time such an attempt is made in the Greek seafood sector. Although there has been an upsurge in sustainable and ethical consumption in the organic and fair-trade food sector in the last few years, the adoption of bottom-up initiatives/movements in fisheries are not widespread in the markets. This is mainly due to the lack of consumer awareness and producer’s capacity to drive such movements. Greenpeace (2018) provides several examples of fair fisheries initiatives from other EU countries but to our knowledge, the literature has not yet explored the effects of the adoption of these models in terms of supporting local economies. Regarding governance, the main contribution of the BoS project is increasing the power of small-scale, low-impact fishers within the supply chain, also enabling consumers to control the sea-to-fork process, in a clear and transparent way.

We observe how this project includes diverse representatives of the civil society, thus touching upon issues of engagement and in particular in favouring alliances and supporting intra-stakeholder groups with the final aim to promote common goals and foster the development of collaborative solutions (e.g. Fassin et al., 2017). These collaborations include at first the entrepreneurs, as represented by all the SSF taking part in the project; then a growing body of citizens, involved as consumers/supporters making orders through the platform and helping in shaping the project and promoting it to other family members, friends, etc. Finally, there is Greenpeace Greece being an NGO, whose members acted as innovators at the beginning of the project and project managers to this day. The combination of external and internal knowledge was an important factor for the development of the innovative activities. Local knowledge seems to be crucial for development of the social innovation and to find novel practices to deal with overfishing and reduction in community incomes. The viability of the activities is based on civic engagement as well as on the novel market approaches which were integrated into the existing system. The model of

development can be characterised as neo-endogenous development (Ray, 2001) where extra-local factors are recognised and regarded as essential but where endogenous-based development is based on the belief in the potential of local areas to shape their future. An element of the innovation that came up during the focus group and interviews is that a main aspect of “A Box of Sea” is the continuous engagement of fishers and consumers in all links of the food chain.

At the moment, the impact of BoS on the marginalization of the areas involved in the innovation is considered limited. This is reflected as an improvement of the island connectivity to the mainland, through the creation of new markets opportunities for fishers. Socio-economic impacts are mainly associated with improvement of income for those who participate, while food chain governance improvement has to do with enhanced citizens' engagement, transparency in cooperation, avoiding overwhelming bureaucracy and inflexible public administrations. Although one of the main drivers of the social innovation is environmental protection, there is minimal impact of the project on environmental elements, mainly because the initiative is at its infancy but also because it has a much wider scope (sustainable development, consumer/producer education on sustainable fisheries) that extends beyond the limits of the project scope. Nevertheless, this cannot be considered as a failure of the project. Fishers taking part in the BoS were already operating in manner that is consistent with sustainable development and in fact, that is one of the reasons they have attracted the attention of an environmental NGO like Greenpeace Greece. As a result, the project per se was never meant to have immediate and measurable environmental benefits. However, it started to showcase that there is a need for balancing economic growth and precautionary principles concerning the environment and to become the new standard in terms of a strategy towards blue growth. This is also reflected in the triggers and needs listed above in subsection 3.2. Given that the environmental aspects of the project were already satisfied (by the selection of the SI members), all the efforts and perceptions are based on social and economic effects, because these are easier to measure in the short term but also because they will become the vehicle to achieving a wider adoption and thus trigger the wider change in attitudes towards fish stocks overexploitation and destructive fishing practises. Another indirect environmental impact (although again in a very small scale) is achieved by changing consumers' attitude towards sustainable fishing and rural economies and thus building a demand for such products/services that, upon reaching a critical mass, could potentially act as a pull marketing strategy, attracting new businesses or existing ones that are willing to make a shift.

At the planning stage, i.e. at the beginning of the social innovation process, the objectives set were production-driven, namely protecting the sea using sustainable fishing practices and improving the opportunities of small-scale coastal fishers. Later, as beneficiaries came along, the need for a more holistic approach that included consumption side needs (i.e. fresher fish, healthy nutrition) emerged. This recognition did not lead to abandoning the original sustainable production principles, but rather to make them more profound, as they were aligned with the beneficiaries' profile, being the main reason for choosing to participate in the project in pursuing the satisfaction of their consumption needs. Overall, the social innovation is perceived extremely well-capable to address consumption needs. Despite the project being on track in meeting the objectives set in terms of production, there is a need to scale up it in order to achieve the long-term impacts intended by the innovators (improved marine ecosystem health, establishment of a new sustainable model for fisheries and wider

awareness of the public – and subsequent behavioural changes – on related environmental issues).

Since the size of the social innovation is very important for guaranteeing its success in all aspects, all involved parties expect that it should grow fast. This is essential for fishers, as a higher number of orders will make a difference in their income position but also will make them less dependent on traditional food chains which take advantage of their limited power due to the market fragmentation. A larger number of deliveries is also expected from beneficiaries, in order to satisfy a perceived increasing demand. By internalizing this demand for fresh fish, BoS could achieve a higher level of welfare through higher production. Finally, the innovators believe that the only way the objectives of the social innovation can be accomplished is through awareness of the initiative's output on a larger scale. The success stories behind this "experiment" are in fact believed to help in spreading the knowledge about this social innovation and urging other territories/fishers/supporters to engage in similar initiatives. The intention of the actors is to scale up the operations of the social innovation, involving more fishers and islands, thereby allowing for more deliveries to a larger pool of consumers. In addition, the innovators (Greenpeace Greece), intend to eventually hand over the operation of A Box of Sea to the fishers (potentially structured as a fishers' cooperative). The social innovation is currently at a crucial stage, as it undergoes expansion long term plans and structures are being developed to safeguard the future operation of the initiative

## **Conclusions**

Coastal fishing accounts for 80 % of the European fleet and represents a socially and environmentally sustainable form of fishing that has considerable potential (Stobberup et al., 2017). However, European small-scale fisheries are facing numerous challenges both from an economic and an environmental point of view. To this respect, the purpose of this study is to gain a better understanding of the process through which social innovations promoting low-impact fisheries can emerge and evolve as a more sustainable, fair and ethical model of seafood production and consumption while at the same time support the local communities. The study of the BoS project also highlights the multiple facets of the beneficial role a respectable organization (like Greenpeace Greece) can have at making such attempts. Such NGOs can mobilise local resources, attracting other actors but also help in nurturing initiatives, by hedging initial concerns and financial constraints. Also, they can have a key role in bypassing the existing fundamental gaps in policy structures until enough pressure is put on the policy makers to adapt existing policy frameworks. On the same note, policy structures seems to be a key area of concern that has been highlighted by many actors relevant to the social innovation. In particular, a lack of clarity and awareness of the relevant policies, as well as considerable bureaucracy associated with the establishment of the initiative. This could also pose a potential barrier to the future expansion of BoS or other similar initiatives. Finally, using a novel evaluation framework (Secco et al. 2017, 2019), this article seeks to provides a foundation upon which future evaluations of similar projects can build and compare. Such comparisons among multiple cases are crucial in determining patterns related to the innovation transfer process.

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## Appendix

**Table A.1.** Quantitative indicators employed in this study – social innovation assessment.  
Source: Secco et al., 2019.

Indicator	Indicator explanation <sup>a</sup>	Range	Data source (actor type)
<b>Reconfiguration of existing practices</b>			
SIR1	Actors' individual perception on the effectiveness of the social innovation process. The higher are the individual perceptions, the greater is the capacity of the social innovation process to determine a reconfiguration.	[1-10]	Innovators, followers, transformers
SIR2	Actors' collective perception on the effectiveness of the social innovation process. Some rationale as SIR1, but with a focus on collective perception.	[1-10]	Innovators, followers, transformers
SIR3	Actors' perception of the extent of the reconfiguration process. Number of reconfigured practices perceived per actors. The higher is the number of perceived changes, the greater is the reconfiguration of the social innovation.	[0-3]	Innovators, followers, transformers
SIR4	Perceived level of innovation in the social innovation process. The higher is the innovation perceived, the greater is the reconfiguration capacity of the social innovation.	[1-10]	Innovators, followers, transformers
SIR5	Level of improvement determined by the Social Innovation process. The higher is the level of improvement, the greater is the likelihood for the social innovation of generate changes.	[0,1,2,3]	Innovators, followers, transformers
<b>Responses to societal challenges</b>			
SIS1	Capacity of the social innovation to tackle multiple European societal challenges. The higher is the capacity of the social innovation the greater is the possibility that it will spread effects	[0-100]	Innovators, followers, project



	to multiple domains.		partners
SIS2	Improvement in European societal challenges thanks to Social Innovation initiative: the actors' perception. Same as SIS1, but with a focus on actors' perception.	[0-100]	Innovators, followers, project partners
<b>Outcomes on social well-being</b>			
SIO1	Beneficiaries' perception on social cohesion and well-being. The higher is the beneficiaries' perception the greater is the possibility that the social innovation has generated outcomes on social well-being.	[-2;+2]	Beneficiaries
SIO2	Contribution of the Social Innovation initiative to the improvement of governance aspects. The higher is the improvement in governance, the greater is the likelihood the initiative will generate positive governance and institutional changes.	[0-100]	Innovators, followers, project partners
<b>Engagement of the civil society</b>			
SIE2	Social Innovation initiative success attributed to local community. The higher is the perceived success thanks to the community, the greater is the capacity of the initiative to produce effects on multiple actors.	[0.1-10]	Innovators, followers, transformers
SIE4	Motivation for engagement linked to a good cause. The higher is the motivation to engage, the greater is the ability of the initiative to produce concrete results.	[0-100]	Innovators, followers, transformers
SIE5	Concrete engagement in network meetings. The higher is the actors' participation in meetings, the greater is the overall level of engagement.	[0-100]	followers, transformers
<b>Overall assessment</b>			
SII1	Internal validation of the innovativeness of the Social Innovation initiative. The higher the internal validation of innovativeness of the Social Innovation initiative, the higher its likelihood to produce innovative results	[0-10]	Innovators and focus group participants

SII2	External validation of the innovativeness of the social innovation initiative. The higher is the innovative perceived externally (participants of the focus group), the higher is the likelihood in producing innovative results.	[0-100]	Innovators and focus group participants
<sup>a</sup> Source: Secco et al., 2019.			

**Table A.2.** Indicator results – social innovation assessment

Indicator	Results	Indicator	Results	Indicator	Results	Indicator	Results
<b>SIR1</b>	6.6	<b>SIS1</b>	29.6	<b>SIE1</b>	0.7	<b>SIE6</b>	34.4
<b>SIR2</b>	5.9	<b>SIS2</b>	18.2	<b>SIE2</b>	0.7	<b>SIE7</b>	30.6
<b>SIR3</b>	0.7	<b>SIS3</b>	43.9	<b>SIE3</b>	1.7		
<b>SIR4</b>	8.8	<b>SIO1</b>	1.1	<b>SIE4</b>	66.7		
<b>SIR5</b>	2	<b>SIO2</b>	25.5	<b>SIE5</b>	41.7		

**Table A.3.** Quantitative indicators employed in this study – outcomes and impacts. Source: Secco et al., 2019.

Indicator	Indicator explanation <sup>a</sup>	Range	Data source (actor type)
<b>Outcomes</b>			
Hb1	Deadweight effects of the Social Innovation initiative in the territory. The greater the uniqueness of the Social Innovation initiative in satisfying the needs of the territory, the lower the likelihood of deadweight effects	[0-100]	Innovators, followers, transformers
Hb2	Substitution effects of the Social Innovation initiative on other actors. The lower the extent of negative effects of the Social Innovation initiative on external actors, the lower the likelihood of substitution effects	[0-100]	Innovators, followers, transformers
Hb3	Displacement effects of the Social Innovation initiative outside the territory. The lower the extent of negative effects of the Social Innovation initiative outside the territory, the greater its overall positive effects	[0-100]	Innovators, followers, transformers
<b>Impacts</b>			
I3	Proportion of marginalisation problems improved by the Social Innovation initiative, as perceived by stakeholders. The higher the proportion marginalisation problems improved by the Social Innovation initiative in recent years, the greater the perceived impact of the Social Innovation initiative in the territory	[1-10]	Project partners, project manager
I4	Proportion of the number of impacts of the Social Innovation initiative in the four domains which were positive, according to	[0-100]	Project partners, project manager

	the stakeholders. The higher the proportion of elements positively impacted by the Social Innovation initiative of the total number of elements impacted, the greater the impact of the Social Innovation initiative, according to the stakeholders		
15	Balance of positive to negative significant impacts of the Social Innovation initiative in the four domains, according to perception of stakeholders. The more the positive impacts exceed the negative ones, the greater the perceived positive impact of the Social Innovation initiative, according to the stakeholders.	[0-100]	Project partners, project manager
16	Level of effects of the Social Innovation initiative in the four domains according to the actors. The higher the level of effects of the Social Innovation initiative inside and outside the territory in the four domains, the greater the perceived positive impact of the Social Innovation initiative according to the actors.	[0-inf]	Beneficiaries
17	Level of effects of the Social Innovation initiative inside the territory in the four domains according to the actors. The higher the level of effects of the Social Innovation initiative inside the territory in the four domains, the greater the perceived positive impact of the Social Innovation initiative according to the actors.	[0-100]	Beneficiaries
18	Level of effects of the Social Innovation initiative outside the territory in the four domains according to the actors. The higher the level of effects of the Social Innovation initiative outside the territory in the four domains, the greater the perceived positive impact of the Social Innovation initiative according to the actors.	[0-100]	Focus Group participants
110	Perceptions of actors of the level of improvement in governance aspects due to the Social Innovation initiative. The higher the level of the perceived improvement in governance aspects, the greater the perceived impact of the Social Innovation initiative in governance.	[0-100]	Focus Group participants
111	Perceptions of actors of the level of improvement in European societal challenges due to the Social Innovation initiative. The higher the value of the perceived improvement in European societal challenges, the greater perceived impact of the Social Innovation initiative in European societal challenges.	[0-inf]	Focus Group participants
<p><sup>a</sup> Source: Secco et al., 2019.</p>			

**Table A.4. Indicator results - outcomes and impacts.**

<b>Indicator</b>	<b>Results</b>	<b>Indicator</b>	<b>Results</b>	<b>Indicator</b>	<b>Results</b>
<b>Hb1</b>	29.5	<b>I5</b>	0	<b>I10</b>	<b>Overall</b> 85.7
<b>Hb2</b>	32.1	<b>I6</b>	3.9		<b>Environmental</b> 75
<b>Hb3</b>	44.4	<b>I7</b>	66.7		<b>Economic</b> 85.7
<b>I3</b>	2.1	<b>I8</b>	0		<b>Social</b> 100
<b>I4</b>	69.4	<b>I11</b>	2.1		<b>Institutional/ governance</b> 85.7