SMALL-SCALE FISHERIES
MULTIFUNCTIONALITY
BEST PRACTICES IN THE
MEDITERRANEAN BASIN

II part
FISHINMED
Mediterranean Network of sustainable small-scale fishing communities

European Union
ENPI CBC Mediterranean Sea Basin Programme 2007 – 2013
Project funded under the first call for proposals
Priority 1. Promotion of socio-economic development and enhancement of territories
Measure 1.2. Strengthening economic clusters creating synergies among potentials of the Mediterranean Sea Basin countries
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DISCUSSIONS AND CONCLUSIONS
BACKGROUND

The Ministry of Agriculture of the Republic of Lebanon, in the framework of the project FishinMed “Mediterranean Network of sustainable small – scale fishing community” financed by the European Union through the ENPI CBCMED programme, engaged me with the assignment of executing a survey aiming at collecting international experiences of diversification of activities within the fisheries sector. This engagement follows similar activities carried out in some projects that are recently tackling the development potentialities of the small-scale fisheries (SSF) in the Mediterranean basin (e.g. Ready Med Fish Project, Fish in Med Project and FARNET). Based on that, I tried to better specify the objectives of this study trying to avoid duplication and fruitless efforts. Consequently, the objectives of this study are as follows:

- To ameliorate living conditions of Mediterranean artisanal fishers by providing sets of information on experiences carried out by operators in different Countries. Consumers, tourists and other categories having relations with fishing activities will also benefit from fishing operators aware of their capabilities to provide valuable services (general objective).
- More in specific, the intention of this work is to highlight the inner – I would say innate – capabilities of the SSF to play outside the boundaries of the activities at sea. We should recognise the historical predisposition of SSF to act in the field of primary production but also in the one of service-providing to grab all the potentialities of this sector.
- To highlight the rootedness of SSF to their territories and their ability to maintain an optimal balance between a healthy environment and sensible human footprints, creating – in some cases – unique landscapes and highly viable productions.
- To make fishers aware of those activities of diversification already in force, to allow them to put them appropriately into practice.
- To report experiences of multi-functionality implemented in Lebanon. Country’s fisheries sector is fully based on SSF mainly carried out by small wooden vessels performing their activities in shallow waters. The legislation regulating fishing activities is outdated but no mention of any regulation is
given in the field of multi-functionality. Nevertheless, many experiences of different nature have been identified and reported.

- To report experiences that may be easily duplicated – fully or partially – in disadvantaged areas and/or in the Southern shores of the Mediterranean with or without the financial or logistic support of external institution.

On the other hand, speculations and in-depth analyses on the most important terminology in use in this report, namely the terms “small-scale fisheries”, “artisanal fisheries”, “multi-functionality” and “diversification” are left to other fora. I have tried to highlight the role of single or groups of fishermen that, also without the intervention of institutions, such as cooperatives, NGOs or governmental bodies, are carrying out actions of diversification of primary production activities (e.g. new fishing techniques and gear), diversification of activities within the fish value chain, multi-activity (i.e. traditional fishing and integrative activities, such as fishing tourism or restaurants and catering), diversification of the fisheries area into sectors not directly related to fishing, such as environmental, research, social services, renewable energies or other emerging sectors.

For this purpose, field visits in ports and coastal areas were implemented in Lebanon, Italy and Turkey. Exchange of information via email and telephone contacts occurred with project partners, governmental officers, fishers and researchers in Mediterranean Countries. In Lebanon, field surveys were carried out predominantly in the northern and central sector of the Country.
Inputs consist of pictures, stories and information collected directly, through the support of Mediterranean partners or from sources available on the web. This report consists of an introduction and 38 complete sheets describing practices on multi-functionality in the Mediterranean. Also with the support of the Mediterranean Agronomic Institute of Bari (MAI-B), the outputs of this study will represent a tailored tool to enforce South-South cooperation and strengthen the already existing bilateral or/and multilateral relationships to exchange best practices and expertise, in order to capitalize and to share what has already been successfully done in the Mediterranean region.
INTRODUCTION

The Mediterranean is bordered by 23 countries (including Gibraltar and the Palestinian Territories). There are 69 rivers that flow into the Mediterranean, 46% of which are sedimentary and include important sensitive ecosystems such as beaches, dunes, reefs, lagoons, wetlands, estuaries or deltas (UNEP/MAP-Plan Bleu, 2009). In 2008, the total population of the Mediterranean countries was 464 million, with four countries accounting for 60% of this total: Egypt, Turkey, France and Italy. In the same year, the population of the coastal regions was approximately 157.3 million, i.e. 34% of the total national population of the Mediterranean countries. Italy, Egypt, Spain and Turkey account for 62% of this total.

In the Mediterranean, SSF involve a great number of fishing techniques as more than 50 types of fishing gears are used and include all the metiers that are not typically industrial, such as trawl nets, large seines for large and small pelagic, large longliners and hydraulic dredges for shellfish. The most common fishing gears used in the Mediterranean SSF remain static nets, particularly trammel nets and gillnets. Small scale fishers are important carrier of local knowledge and good practices for co-management and they can have a low environmental impact. Multi-functionality is to be considered an integrative activity that is intended to valorise knowledge and good practices and in no case as a replacement of the main fishery activities. Further to that, side activities may be considered as a pillar of the SSF that in many cases needs to be updated or revamped.

Communities of fishers have existed throughout the Mediterranean basin since time immemorial. There is abundant mention of this phenomenon of civilization in historic, geographic and ethnographic literature. Some also speak of “indigenous fisheries” or “sedentary fisheries”, designating groups firmly linked to what can truly be termed “fishing grounds”. In addition to providing domestic housing for families, such areas also include technical zones for the protection and landing of vessels, the construction and repair of boats, the storing of nets, their maintenance and repair, and the sale, storage and packaging of the catch. Collecting fish from the nets, landing of the boat, packaging of the fish, and repair and maintenance of the gear are all undertaken by an informal group of children and elderly people who are paid
in kind¹. To go back in time, as reported in the first sheet of the present report, in the first centuries CE, the Latin word to identify small-scale fishers (*piscatores*) was the same one used to identify fishmongers. Furthermore, those *piscatores* were associated in the same union with divers, for the reason that many fishers, being familiar with water, were able to dive to collect goods lost or dropped into harbour areas. In this regard, I wish to recall a famous finding in the area of Fiumicino (Rome) that shows the historical mixed nature of SSF. In fact, a small fishing boat was ungrounded in the area of the former harbour of Claudius. This boat shows a small pool just in the middle of the deck used to transfer living seafood from their place of catch (probably along the Tiber River) to the market or to farming areas. In this way, according to different sources, it was possible to consume in Rome red mullets from Corsica or and moray eels from Sicily².

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According to the notes issued in the framework of the Ready Med Fish\(^3\) project by Bertrand Cazalet, multi-functionality can be classified in four main categories:

1. Diversification of primary production activities (e.g. new fishing techniques and gear) – i.e. diversification within the fishing sector;
2. Diversification of activities within the fish value chain (often regarding those adding value to fish products: short circuits as direct sales, marketing strategies, etc.);
3. Pluri-activity, whereby fishermen and their families continue to obtain income from traditional fishing, whilst also carry out integrative activities, such as fishing tourism or restaurants and catering;
4. Broader diversification of the fisheries area into sectors not directly related to fishing, such as environmental, research, social services, renewable energies or other emerging sectors.

**MULTI-FUNCTIONALITY SURVEY: COUNTRY EXPERIENCES**

The following sheets illustrate experiences of multi-functionality in SSF undertaken in different countries facing the Mediterranean basin. The template was agreed at project level to allow an easy reading while providing basic information on the reported experience. First page is dedicated to general information on the experience such as location, year if the identification, actors involved, beneficiaries and sector(s) of intervention within a list of categories (see fig. 2).

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\(^3\)ENPI CBC MED - R.E.A.D.Y. MED. FISH. “Requalification of Employment And Diversification for Youth in the Mediterranean”, funded by the EU. Applicant: Lega Pesca (ITA).
Second page is dedicated to the narrative description of the reported experience filling in the text boxes, as follows:

1. Please provide a brief description of the activities related to Fisheries Multi-Functionality experiences (max. 800 characters)

2. Please indicate the main constraints and future outlooks for the implementation of the Fisheries Multi-Functionality experiences (legislation, market, culture, credit...) max 800 characters

The sheet is completed with pictures and, where available, with links to other multimedia materials. Each sheet can be read independently to allow readers to focus on the sheet(s) they are interested on.
BEST PRACTICES DATABASE

SMALL SCALE FISHERIES MULTI-FUNCTIONALITY DATABASE
EUROPE 24 - ITALY

AURELIA NAIS (FISHERWOMAN)

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries

<table>
<thead>
<tr>
<th>Country</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Rome</td>
</tr>
<tr>
<td>Year</td>
<td>1st – 2nd century AD</td>
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<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
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<tr>
<td>Actors involved in the implementation</td>
<td>Aurelia Nais, fisherwoman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Consumers of Galba’s warehouse, Roma</td>
</tr>
<tr>
<td>Still running?</td>
<td>☐ Yes  X No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

AVRELIA C[ai] L[iberta] NAIS
PISCATRIX DE HORREIS GALBAE
C[aius] AVRELIBVS C[ai] L[ibertus] PHILEROS
PATRONVS
L[ucius] VALERIVS L[uci] L[ibertus] SECVNDVS

Aurelia Nais, freedwoman of Caius, fisherwoman at the warehouse of Galba; her patron Caius Aurelius Phileros, freedman of Caius; Lucius Valerius Secundus, freedman of Lucius

This inscription carved in a marble altar was presumably related to a funerary context. The Horrea of Galba, a huge storehouse for grain and other food products, was located in the Emporium district along the Tiber River in Rome, in the first centuries CE. The definition of Aurelia Nais’ profession is “piscatrix” that in Latin means fisherwoman or fishmonger (probably in the Galba storehouse). In Roman
inscriptions, there was no word indicating the fish marketing. Therefore, it is likely to deduce that piscatores (fishers) were organised in associations whose members were practicing small-scale fisheries (fishers collecting big fish were called cetarii) also going to the market to directly sell their catch. This indicates that since Roman time, activities of artisanal fishers were not unequivocally bounded to the activities at sea. Fishers/fishmongers were associated in the collegium (association) of piscatores and urinatores (divers) and there are evidences that many fishers were also able to dive to collect goods lost at sea or in river ports, or to service docking areas and submerged infrastructures. (source: Filippo Boscolo (2005) - Aurelia Nais, piscatrix de Horreis Galbae e i piscatores di Roma)

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

According to some researchers, Aurelia Nais was a small-scale fisherwoman who used to directly sell her catch at the storehouse of Galba. Due to her familiarity with the water, she was also able to dive to collect lost goods in one of the ports on the Tiber River. Aurelia Nais is not a mythological creature although nowadays we are not able to delineate exactly what was her profession. What is clear is that small-scale fisheries in Roman times were already differentiated from bigger scale fishing activities while no clear distinctions were given among the different “professions” carried out by artisanal fishers

Is it a success story? X Yes □ No
The inscription of Aurelia Nais carved in the marble found in the area of Testaccio, Rome

Boats on a sea with fishing lines, fishing net and sparrow-hawk. Roman mosaic, Early Empire (27 B.C. to 395 C.E.). Archaeological Museum, Sousse, Tunisia
MAIN KEY FACTORS

The description of this experience stems from an ancient Roman inscription whose interpretation clarify the role of the small-scale fisheries in Roman times. At that time, no clear distinctions was given among the different “professions” carried out by artisanal fishers, such as divers, sellers and fish collectors, showing the historical mixed nature of small scale fisheries.
EUROPE 25 - ITALY

FISHERMEN OF ACCIAROLI

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Acciaroli, Pollica/Campania</td>
</tr>
<tr>
<td>Year</td>
<td>2013</td>
</tr>
</tbody>
</table>

**Sector/s involved in the Fisheries Multi-Functionality related activities**

- Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)

**Actors involved in the implementation**

Fishermen of Acciaroli

**Direct Beneficiaries**

Community of Acciaroli and community of Cetraro

**Still running?**

X Yes □ No

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

In November 2010, the Foundation “Angelo Vassallo, the mayor fisherman” engaged seven vessels (six in Acciaroli and one in Pisciotta) operating in the area called Cilento (Campania) to clean the seabed. Each vessel received supplied containers to collect waste of different nature that is entangled in fishing nets. Once back to the port, glass, plastic, aluminium cans and all the material collected are differentiated in waste categories and consigned to sanitation workers. The initiative was called “Cleaning seabeds”.

Two years later, the initiative was exported to the port of Cetraro (Calabria) where local fishers with the support of the local Municipality were equipped with bags for waste collection to adhere to the experience initiated in the port of Acciaroli.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The territories in which these two experiences are carried out suffer from the infiltration of organized crime. Similar actions intend to increase the awareness of local communities and the involvement of the civil society in community-oriented initiatives. In 2010, Angelo Vassallo, former mayor of the village of Acciaroli, was shot to death by unknown people with nine bullets in his native town.

In January 2012, The Foundation prepared a proposal for a European draft law for the cleaning of Mediterranean seabed. The text was signed along with Gianni Pittella, First Vice-President of the European Parliament and President of the association 'Prima persona', and was submitted to Fraga Estevez, President of the Fisheries Committee, and Guido Milana, Vice President

Is it a success story?  X Yes  □ No

Waste collected by a fisherman in the port of Acciaroli
MAIN KEY FACTORS

The reported initiative was called “Cleaning seabeds”. Fishers from the south of Italy were engaged to collect waste of different nature entangled in fishing nets. Back to the port material collected is differentiated in waste categories and consigned to sanitation workers. Key aspects of this initiative are as follows.

- They were implemented in territories suffering from the penetration of organized crime.
- They can be easily exported to increase the awareness of local communities and the involvement of the civil society in community-oriented initiatives.
- In January 2012, out of this experience, a proposal for a European draft law for the cleaning of Mediterranean seabed was drafted.
EUROPE 26 - ITALY

FISHERMEN OF ORBETELLO

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th><strong>Country</strong></th>
<th>Italy</th>
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</thead>
<tbody>
<tr>
<td><strong>Location/Region</strong></td>
<td>Orbetello, Tuscany</td>
</tr>
<tr>
<td><strong>Year</strong></td>
<td>2015</td>
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<tr>
<td><strong>Sector/s involved in the Fisheries Multi-Functionality related activities</strong></td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
</tr>
<tr>
<td><strong>Actors involved in the implementation</strong></td>
<td>Fishermen of Orbetello</td>
</tr>
<tr>
<td><strong>Direct Beneficiaries</strong></td>
<td>Fishermen and consumers</td>
</tr>
<tr>
<td><strong>Still running?</strong></td>
<td>Yes ☑ No</td>
</tr>
</tbody>
</table>

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

The art of preserving fish in Orbetello was probably introduced by the Spaniards, who in the sixteenth century used to smoke and season eels and other fish with *escabece*, a dip made with vinegar. Also the bottarga in Orbetello is produced by tradition. It is prepared by gently pulling the grey mullet ovarian sacs and putting them in salt for a few hours. After that, they are left drying out. Tender and amber coloured, this bottarga is excellent thinly sliced and with a thin layer of extra virgin olive oil and a touch of lemon.

Orbetello fishermen involved in the production of the bottaga are over 58: they work together in a cooperative, have a laboratory for processing, and manage a shop and a fish market. They also breed sea bass and sea bream fries for restocking purposes, produce bottarga and smoked fillets of mullet and eel. In the evenings, they open a small restaurant overlooking the lagoon where they serve the catch of the day.
cooked “all’orbetellese” (Orbetello way). During the last few years, they also started offering a service of fishing tourism: with a special boat, tourists can explore the lagoon up to the weirs, where marine and brackish waters mingle and mullets are collected. Mullet fishing can be done all year round but culminates in the period of August and September.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The fishermen cooperative with the support of Slow Fish created a joint action group that intends to help the fishermen to work and improve the quality and the marketability of their products while keeping alive and healthy the fragile habitat of the lagoon giving a further chance for the durability of the action. Slow Fish is a campaign as well as an event: it promotes a different approach to the chain production that takes into consideration the respect of the workers, the quality of the fish and the consumption of the "poor fish", culture and traditions related to fisheries, cooking and transformation (http://slowfish.slowfood.it/en/). Slow Fish is part of the broader international network called Slow Food.

Is it a success story?  X Yes  □ No
MAIN KEY FACTORS

58 fishermen from Orbetello are involved in the production of the bottarga:

- They are organised in cooperative
- They have a laboratory for processing
- They manage a shop and a fish market
- They breed sea bass and sea bream fries for restocking purposes
- They produce bottarga and smoked fillets of mullet and eel
- In the evenings, they open a small restaurant
- They offer a service of fishing tourism to explore the lagoon on a special boat
- This experience is supported by Slow Fish
EUROPE 27 - ITALY

FISHERMEN IN THE NATIONAL PARK OF TUSCAN ARCHIPELAGO

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
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<td>Year</td>
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<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
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<tr>
<td>Actors involved in the implementation</td>
<td>Fishermen in the National Park of Tuscan Archipelago</td>
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<tr>
<td>Direct Beneficiaries</td>
<td>Fishermen and consumers</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
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BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The bonito belongs to the family of tuna and little tunny. It has elongated body (can be up to 80 cm in length, wide mouth armed with numerous sharp teeth, and it can be easily recognised by blackish streaks that cross the back obliquely. It is collected in the period from late spring to early summer and again in late September in the entire area of the Tuscan Archipelago.

Bonito is a “generous” fish wrongly considered a poor variety of tuna. Its meat, strongly flavoured and with a slight hint of acidity, can be cooked in various ways: grilled, seasoned with herbs, olive oil, salt, or stewed with tomatoes, parsley, garlic, capers, olives and chilli. However, the classic way to enjoy the bonito is in oil: the biggest specimens collected are boiled after having cut them into strips and then put
in oil with laurel leaves, pepper and chilli. As a result, one can get extremely delicate fillets, similar to those of the tuna.

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

In the past, bonitos in Tuscan sea were collected by long nets with wide meshes called "palamitare" stationed at sea for long periods. Currently, this species is mainly collected by means of large vessels that are overexploiting this resource. Slow Fish has highlighted the sensitivity of this species to stimulate the recovery of less impacting fishing methods (fixed nets) and to promote a full process of transformation of this resource. Fishermen have resumed this fishing metier and those who process this resource have taken over the traditional production of bonito in oil. The bonito in oil collected with sustainable fishing methods has been also advertised in restaurants, and its high nutritional qualities were promoted to prepare traditional recipes as well as innovative combinations. Slow Fish is a campaign as well as an event: it promotes a different approach to the chain production that takes into consideration the respect of the workers, the quality of the fish and the consumption of the "poor fish", culture and traditions related to fisheries, cooking and transformation (http://slowfish.slowfood.it/en/). Slow Fish is part of the broader international network called Slow Food.

**Is it a success story?**  
X Yes  ☐ No
A bonito caught by artisanal fishermen.

One example of bonito in oil produced in the Tuscan sea.

**MAIN KEY FACTORS**

In the Tuscan Archipelago, Slow Fish has highlighted the sensitivity of bonitos to stimulate the recovery of less impacting fishing methods (fixed nets) and to promote a full process of transformation of this resource. Fishers have resumed sustainable fishing metier, have taken over the traditional production of bonito in oil and are promoting this product and its high nutritional qualities in restaurants.
EUROPE 28 – ITALY

ITTITURISMO THE SEA WORD “TOLENGA”

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES – MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Cabras, Sardinia</td>
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<tr>
<td>Year</td>
<td>2008</td>
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**Sector/s involved in the Fisheries Multi-Functionality related activities**
- Tourism (fishing-tourism, recreational/educational areas or activities)

**Actors involved in the implementation**
- Ittiturismo The Sea World “Tolenga”

**Direct Beneficiaries**
- Tourists in the area of Oristano

**Still running?**
- X Yes ☐ No

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

The “Ittiturismo The Sea World” proposes full immersions in the nature, elegant but rural lodging and restaurant serving fresh food produced locally. The cuisine is mostly based on fresh fish, with the possibility of directly participating to the fishing activities. It is possible to eat spaghetti with lobster, octopus salad with potatoes, pasta with squid, mussels, crabs and clams, spaghetti with bottarga or sea urchins, baked red snapper and other local recipes. As fishing tourism activities, customers can practice recreational and professional fishing activities including the visit the coast with shore excursion.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Lunch on board, fishing excursions at night with spaghetti, daytrips to Tharros, Isola di Maldiventre, Bosa and Costa Verde are other amenities that the cooperative is able to provide. To make available such a vast array of options to the guest, it is necessary a strong welcoming culture, flexibility and professionalism on the one hand. On the other hand, a clear legal framework and investments are needed. This experience benefitted from the creation of the Marine Protected Area of Sinis Maldiventre. Funds were made available to subsidy the reconversion of fishing vessels and to provide trainings to the fishermen.

Is it a success story? X Yes ☐ No

A snapshot of the website http://www.theseaworld.it/.
The coastal area of Cabras.

**MAIN KEY FACTORS**

The cooperative putting into practice this experience benefitted from the creation of the Marine Protected Area of Sinis Maldiventre. Funds were made available to subsidize the reconversion of fishing vessels and to provide trainings to the fishermen.
EUROPE 29 – ITALY

RADOSLAVA PETROVA (FISHERWOMAN)

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES – MULTI-FUNCTIONALITY SURVEY

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<td>Multi-Functionality related activities</td>
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<tr>
<td>Actors involved in the implementation</td>
<td>Radoslava Petrova, fisherwoman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fishers and consumers</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Radoslava Petrova began working for the cooperative of professional fishermen Maestrale, as a clerk. She now skips the vessel Mariemi II, for herself and her four fellow workers: Sabrina, Cristina, Ilaria and Carolina. They made up the cooperative “Bio & Mare”, first and only women fishing cooperative in Italy. They sail every day toward the open sea where they lower their nets.

Radoslava Petrova said that she and her friends decided to “put a pink flag on the fishing sector”. They follow all the production chain from the sea to table, directly selling their catch to consumers. What remains unsold is processed into sauces or gravies, combining “bio” raw materials, like organic tomatoes, with fresh fish from sustainable fisheries using no preservatives or additives.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Radoslava emigrates from Bulgaria to the coastal town of Marina di Carrara, Tuscany. She comes to the decision of practicing fishing activities and in few years, she gets the license to pilot a boat and creates a new approach to fisheries. Women can come to play a key role in the sector, going fishing, selling and processing their catch. She also ensured that this new vision could support other people or communities, creating in 2011 her unique fishing cooperative. Radoslava’s next objective is to buy a new vessel for the cooperative.

Is it a success story?  X Yes  □ No
Radoslava and Bio & Mare Cooperative has been awarded with many prizes and acknowledgments.

MAIN KEY FACTORS

Radoslava Petrova and her four fellow workers established first and only women fishing cooperative in Italy.

- They go at sea on a daily base
- They follow all the production chain from the sea to table
- They directly sell their catch to consumers
- They process the unsold into sauces or gravies, combining “bio” raw materials
ASIA 11 - LEBANON

ABDO FARAH (FISHERMAN)

Infrastructure improvement/management (landing spots, harbour services, market)
The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Dora / Beirut</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Infrastructure improvement/management (landing spots, harbour services, market)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Abdo Farah, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fishermen in Dora</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

The port of Dora (northern suburbs of Beirut) is undergoing a deep renovation to take environmental and structural standards – at least – to tolerable conditions. Mr. Abdo Farah (44 years old) is full-time fisherman who also carries out activities of maintenance of fishing vessels in the port of Dora. He rents a truck-mounted crane from the local Fishing Cooperative to lift those vessels that need maintenance. He can repair wood and fiberglass boats, paint them and repair engines. He also performs, also commissioning services to other local fishermen.

Mr Farah is able to personally run maintenance of a number of vessels ranging between 70 and 100 per year and does not receive any support from any institution or organization.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Farah is responding to the need of the port of Dora for boat maintenance, activating a remarkable business activity that could grow in terms of number of checked and repaired vessels and of services given to the customers. He is ready to invest to have a modern workshop but the absence of adequate infrastructures is slowing the potentialities of his growth.

Is it a success story?  X Yes  □ No

Mr Farah sitting in front of his workshop in the morning.
Local Fishing Cooperative’s truck-mounted crane rented by Mr Farah to implement his activity.

MAIN KEY FACTORS

Mr. Abdo Farah (44 years old) is full-time fisherman who also carries out activities of maintenance of fishing vessels in the port of Dora, Beirut. He is responding to the needs of the territory activating a remarkable business activity that could grow if adequate infrastructures would support his growth.
ASIA 12 - LEBANON

TOUFIC ASSAL (FISHERMAN)

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Batroun, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Toufic Assal, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Scientists and international organizations</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Toufic Assal is a full-time, veteran fisherman in the port of Batroun. In the last decades, he supported scientific activities carried out by the most prominent marine researchers in Lebanon and by the CNRS-National Centre for Marine Sciences based in Batroun. With his 10 meters long vessel, he also guided representatives of international organizations in the waters of North Lebanon. He hosted on board researchers working in the establishment of Marine Protected Areas, in sampling activities and in data collection carried out by divers. He also accompanied the data collection activities carried out with passive gears and tested new fishing gears.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The 10 meters vessel operated by Mr. Assal was able to carry bulky equipments and to resist to bad conditions of the sea. The fisherman’s knowledge of the Lebanese sea and its peculiarities and his capability in providing services with competence and proficiency are well known by the most relevant researchers in Lebanon. Being 69 years old, the age of Mr. Assal represents the constraint for the future implementation of the above described activity.

Is it a success story?  X Yes  □ No

Mr Assal retrieving experimental nets in the framework of the Project PESCA LIBANO, financed by the Italian Cooperation.
Mr Toufic Assal is a full-time, veteran fisherman in the port of Batroun. In the last decades, he supported scientific activities carried out by the most prominent marine researchers in Lebanon. His knowledge of the Lebanese coastal waters and his capability in providing services with competence and proficiency are well known. If not properly supported, coastal communities’ new generations will not follow up the profession of their parents, leading to a loss of technical and cultural knowledge.
ASIA 13 - LEBANON

ELIE ROUHANA (FISHERMAN) AND HIS WIFE

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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<tbody>
<tr>
<td>Location/Region</td>
<td>Batroun, North Lebanon</td>
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<tr>
<td>Year</td>
<td>Since 2008</td>
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<table>
<thead>
<tr>
<th>Sector/s involved in the Fisheries Multi-Functionality related activities</th>
<th>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</th>
</tr>
</thead>
</table>

| Actors involved in the implementation | Elie Rouhana, fisherman, and his wife |
| Direct Beneficiaries                  | Consumers from North Lebanon and Beirut |

| Still running? | X Yes ☑ No |

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

In 2008, Mr Elie Rouhana shifted part of his daily fishing activities toward the management of his family business. He and his wife sell fish products locally collected and, upon request of the consumers, they cook fish in a small kitchen set up in his shop. This generates an extra income of 3.3 USD per kilogram of product. Mr Rouhana asserts that only 10% of his income derives from fishing activities and 90% from selling and cooking. At this stage, he is satisfied with his family income and does not want to expand his business.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Rouhana is satisfied with the income that he generates with his activities. Moreover, being almost 60 years old, he chose to reduce the time spent at sea since having an alternative and stable source of income.

Is it a success story?  X Yes □ No

Mr Rouhana’s shop.
MAIN KEY FACTORS

In 2008, Mr Elie Rouhana shifted part of his daily fishing activities toward the management of his family business. He and his wife sell fish products locally collected and, upon request of the consumers, they cook fish in a small kitchen set up in his shop. This generates an extra income. Nowadays, only 10% of his income derives from fishing activities.
ASIA 14 - LEBANON

ANTOINE YOUNES (FISHERMAN)

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Anfeh, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Antoine Younes, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Consumers from North Lebanon and tourists</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Antoine Younes is the Head of the Fishing Cooperative of Anfeh. He is still an active fisherman and manages a shop where local fishing products are sold. Upon request of the consumers, the salesperson can cook fish in the oven that Mr Younes has recently purchased for his shop or can fry it. This generates an extra income of 3.3 USD per kilogram of cooked product. Particularly in summer, the shop also offers a delivery service of cooked fish for tourists (Lebanese and foreigner) lodging in the numerous chalets and hotels located in the area of Anfeh.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Younes’ business is negatively affected by the decline of touristic presence in the area of Anfeh, due to the political and military tensions related to the Syrian conflicts. Thus, currently it is difficult to figure possible future development for its activity; nevertheless, the location of the shop on the main road and the space available may give the opportunity to start up with additional businesses such as catering, eatery or restaurant.
Is it a success story?  X Yes □ No

The fishing port of Anfeh.

Mr Younes’ shop is supplied with an oven and a cooking station.
MAIN KEY FACTORS

Mr Antoine Younes is the Head of the local Fishing Cooperative, he is still an active fisherman and manages a shop where local fishing products are sold. Upon request of the consumers, the salesperson can cook fish generating an extra income. In summer, the shop also offers a delivery service of cooked fish for tourists lodging in the numerous chalets and hotels located in the area of Anfeh.

His business is negatively affected by the decline of touristic presence, due to the political and military tensions related to the Syrian conflicts.
ASIA 15 - LEBANON

GEORGES SALIM AL DAYAA (FISHERMAN) AND HIS FAMILY

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

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<thead>
<tr>
<th>Country</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Anfeh, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Georges Salim Al Dayaa, fisherman, and his family</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Consumers from North Lebanon and tourists</td>
</tr>
<tr>
<td>Still running?</td>
<td>Yes ☑ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Georges Al Dayaa is a full-time fisherman who – along with his family - runs a fish selling point and a restaurant in the same ample room. He started his business very close to the fishing port of Anfeh about ten years ago, selling local catch collected from different fishers and cooking it for the customers. Following the success of this activity, he decided to enlarge his business placing side by side the selling point and the restaurant that today counts 80 seats. The menu proposes local seafood cooked in many ways including sushi-like, one imported species (the white grouper, *Epinephelus aeneus*, which is particularly appreciated by Lebanese consumers and is usually imported from Egypt) and few Lebanese starters and salads (*meza*). The restaurant is open 6 days per week.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Georges Al Dayaa is succeeding in his business attracting local costumers and being appreciated by foreigners and tourists. This restaurant, as well as similar others in Lebanon, are popular, easy-going and crowded.
However, those who hunt for more sophisticated restaurants (you can visit the website [http://www.nogarlicnoonions.com/](http://www.nogarlicnoonions.com/)) complain for the rough service provided to costumers.

Is it a success story?  X Yes ☐ No

Mr Georges Al Dayaa proudly showing his restaurant.
MAIN KEY FACTORS

Mr Georges Al Dayaa is a full-time fisherman who – along with his family - runs a fish selling point and a restaurant in the same ample room. He started his business about ten years ago, selling local catch collected from different fishers and cooking it for the customers.

Following the success of this activity, he decided to enlarge his business placing side by side the selling point and the restaurant that today counts 80 seats. The menu is basic and proposes seafood and few Lebanese starters and salads (meza).
ASIA 16 - LEBANON

WALID FARES (FISHERMAN)

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Anfeh, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Walid Fares, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Local consumers</td>
</tr>
<tr>
<td>Still running?</td>
<td>Yes ☑ No ☐</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Walid Fares runs a fish market located on the main road of Anfeh. He sells local and imported fish (cultured in Cyprus farms). He is also a full-time fisher who explores offshore fishing grounds located in the area of Chekka and Anfeh, using longlines and fishing rods especially in summer. He is capable to collect a certain number of bluefin tunas (*Thunnus thynnus*). Mr Fares cleans and steams small specimens (less than 10 Kg) of tuna, cuts small fillets and soaks them in a dip made up by vinegar, lemon, oil, garlic, salt and red pepper. After a certain period, he cans the product that is sold for 20$/can. He also produces sardines in oil that he places in small jars.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Fares declares not to have any specific obstacle in running his activity. He sells approximately 15 Kg of sea products per day and supplements his income selling canned tuna. The latter has a limited market and fewappreciators in Lebanon.
Although Mr Fares runs this activity with an unsophisticated approach, he represents one of the few cases in Lebanon of adding value to fisheries products. This experience can represent a good starting point towards more complex and innovative technologies for processing and marketing seafood in the Country.

Is it a success story? X Yes ☐ No
Mr Fares' shop located on Anfeh coastal road.

MAIN KEY FACTORS

Mr Walid Fares a full-time fisher who explores offshore fishing grounds and runs a fish market located on the main road of Anfeh. Every year, he is capable to collect a certain number of bluefin tunas. He cuts fillets of small specimens and soaks them in a dip made up by vinegar, lemon, oil, garlic, salt and red pepper. After a certain period, he cans the product that is sold for 20$/can. He also produces sardines in oil that he places in small jars.
ASIA 17 - LEBANON

GEORGE AND NADIM AL DAYAA (FISHERMEN)

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Anfeh, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>George and Nadim Al Dayaa, fishermen</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Tourists, families and leisure fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

George and Nadim Al Dayaa are full-time fishermen in Anfeh. Since their young age, they are used to give hospitality to people on board their fishing vessels to supplement their income. Especially in summer, when the high touristic season brings Lebanese and foreigners to enjoy the amenities of the Anfeh region, they welcome tourists, divers, leisure fishermen, families that want to tour the promontory of Anfeh and surrounding areas. They can also offer additional services to their customers such as providing equipment for divers (fins, jackets, etc.) and pick-up at the chalets and/or hotel. According to the period, the number of persons and the duration of the activities, they charge between 33 and 67 $ per outing.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr George and Mr Nadim do not face major problems in the implementation of their activity of fishing-tourism although the reduced number of tourists in the past years is slightly affecting their business. They are running a basic endeavour - without any marketing strategy or external support - that responds to the needs of people visiting Anfeh. Although they are not facing any problems with the Authorities, it is worth to mention that in Lebanon is forbidden by law to have non-fishers on board of fishing vessels.
Is it a success story? X Yes  ☐ No

The creek of Taht El Rih (underneath the wind), situated in Anfeh.

Anfeh is called “little Greece” for the architecture of its seaside. This picture, taken from a fishing vessel, also shows the isthmus signing the beginning of the archaeological peninsula (right side of the picture).
MAIN KEY FACTORS

George and Nadim Al Dayaa are full-time fishermen in Anfeh. Since their young age and especially in the high touristic season, they welcome tourists, divers, leisure fishermen and families that want to tour the promontory of Anfeh and surrounding areas. They can also offer additional services to their customers such as providing equipment for divers and pick-up at the chalets and/or hotel.

They run a basic endeavour without any marketing strategy or external support that responds to the needs of people visiting Anfeh. Although they are not facing any problems with the Authorities, it is worth to mention that in Lebanon is not allowed by law to have non-fishers on board of fishing vessels.
RAFIC MAROUN (FISHERMAN) AND HIS FAMILY

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
### SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kfar Abida</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Rafic Maroun, fishermen, and his family</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Tourists, families and leisure fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
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</table>

### BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Rafic Maroun is the Head of one of the two fishing cooperatives cohabitating in the small village of Kfar Abida (50 Km north Beirut). The signboard of his restaurant is clearly visible from the coastal road that leads to the town of Batroun. Coming from a family that started living from fisheries at the beginning of the previous century, he naturally prolonged his family predisposition for sea life. In the 90s, he opened his fish market as family business. Today, the restaurant is run by Rafic, his wife, daughter and sons. Next to the kitchen, he placed a small pool where he stows living specimens of Mediterranean slipper lobster (*Scyllarides latus*) caught locally that he serves to buyers and costumers. The fish market is still active and the restaurant offers only local seafood along with few Lebanese starters and salads (*meza*).

### MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Maroun’s eldest son is coming back to Lebanon after a working experience abroad. His son is a cook; therefore, Mr Rafic expects to offer a wider array of dishes to the customers and to attract more people with innovative recipes by summer.
2016. What, in his opinion, could significantly improve the capacities of his business is to transfer his fish market next to the highway that connects Beirut with Tripoli.

Is it a success story?  X Yes  ☐ No
Mr Rafic Maroun is the Head of one of the two fishing cooperatives of Kfar Abida (50 Km north Beirut). In the 90s of the previous century, he opened his fish market as family business. Today, he runs the restaurant along with his wife, daughter and sons.

Next to the kitchen, he placed a small pool where he stows living specimens of Mediterranean slipper lobster caught locally that he serves to buyers and costumers. The restaurant offers only local seafood along with few Lebanese starters and salads (meza). The fish market is still active.
ASIA 19 - LEBANON

SAYED NAKHOUL AND HIS BROTHER (FISHERMEN)

Others (manufacturing of artisanal fishing gears)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
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<tbody>
<tr>
<td>Location/Region</td>
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<tr>
<td>Year</td>
<td>2015</td>
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<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Others (manufacturing of artisanal fishing gears)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Sayed Nakhoul and his brother, fishermen</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Lebanese fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
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</tbody>
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BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Sayed Nakhoul is a fisherman in the port of Kfar Abida and along with his brother manufactures fishing traps. These traps are quite diffuse all over the Lebanon’s ports and he is able to produce and sell approximately 200 units per year. He manufactures two size traps: 65 cm diameter suitable for very shallow waters targeting mainly siganids (cost 23$/trap), and 120 cm diameter targeting more valuable species such as sea breams and common pandoras at 30 meters depth (100$/trap).

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Nakhoul sells his products all over Lebanon. He runs a family workshop that seems to have reached its maximum manufacturing capacity. Due to the relevance of his activity, he claimed to receive financial support (loan) from the Ministry of Agriculture.

Is it a success story? X Yes □ No
The workshop of Mr Nakhoul.

The traps (65 cm ø) manufactured by Mr Nakhoul and sold all over Lebanon.
MAIN KEY FACTORS

Mr Sayed Nakhoul is a fisherman in the port of Kfar Abida and along with his brother manufactures fishing traps. These traps are quite diffuse all over the Lebanon’s ports and he is able to produce and sell approximately 200 units per year.

He manufactures two size traps targeting siganids or (as for the biggest ones) more valuable species such as sea breams and common pandoras. Mr Nakhoul sells his products all over Lebanon and runs a family workshop that seems to have reached its maximum manufacturing capacity.
ASIA 20 - LEBANON

HABIB FADOUS (FISHERMAN)

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kfar Abida, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
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<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Habib Fadous, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Markets, restaurants and private costumers</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

With his sixty years of experience, Mr Habib Fadous is the doyen of the fishermen of Kfar Abida. Since decades, he sells his catch directly to restaurants, markets and private consumers. He is able to offer a vast array of fish products such as sea breams, groupers, deep valuable species that he collects by means of nets, traps, bottom and drifting longlines.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Fadous is well known and respected in his community. He can easily sell all his daily catch and for this reason, costumers regularly call him on his mobile when he is still at sea to assure for themselves part of the catch.

Is it a success story? X Yes □ No
Mr Fadous during our visit to the Fishermen Cooperative of Fadous.

Mr Fadous (on the right side of the picture) during a celebration at the port of Kfar Abida.

Photo by Coopérative Des Pécheurs Fadous
MAIN KEY FACTORS

With his sixty years of experience, Mr Habib Fadous is the doyen of the fishermen of Kfar Abida. Since decades, he sells his catch directly to restaurants, markets and private consumers. He is able to offer a vast array of fish products, easily selling all his daily catch.
ASIA 21 - LEBANON

JOSEPH TANNOUS (FISHERMAN)

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

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<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kfar Abida, North Lebanon</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
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<tr>
<td>Sector/s involved in the Fisheries</td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
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<tr>
<td>Multi-Functionality related activities</td>
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<tr>
<td>Actors involved in the implementation</td>
<td>Joseph Tannous, fisherman</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Lebanese and foreign tourists</td>
</tr>
<tr>
<td>Still running?</td>
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</tr>
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</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Joseph Tannous owns a 12 meters long vessel used to exploit offshore fishing grounds to collect big pelagic species. Thirty years ago, when his activities were located in the port of Jbeil, he started offering his vessel to the tourists to explore the picturesque coastal areas surrounding Byblos (Jbeil). Nowadays, Mr Tannous is based in Kfar Abida where he welcomes on board tourists, divers, anglers, families and youngsters over a period of 4 month between June and September. With his vessel, he guides his clients over coastal waters located between Jbeil (South) and Chekka (north). He can also offer additional services such as cooking of the fish that the customers/anglers collect during the navigation. Mr Tannous charges 50$ per hour of navigation.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The Lebanese law does not regulate the activities of fishing tourism (*pesca turismo*). In addition, the law does not allow non-fishers to navigate on professional fishing vessels. As a result, the service that Mr Tannous offers to the customers is subject to uncertainty and diverse requests and inquiries by the Authorities. For this reason, Mr Tannous paid to obtain a license for the transportation of the public on his vessel from the Ministry of Transport. Moreover, before weighing the anchor, he oversees
the collection of his customers’ IDs to secure the clearance to the navigation from the Authorities.

Is it a success story? X Yes ☐ No
Leisure activities on fishing vessels in the area of Kfar Abida.

MAIN KEY FACTORS

Mr Joseph Tannous owns a 12 meters long vessel used to exploit offshore fishing grounds to collect big pelagic species. He is based in Kfar Abida where he welcomes on board tourists, divers, anglers, families and youngsters over a period of 4 months between June and September. He can also offer additional services such as cooking of the fish that the customers/anglers collect during the navigation.

In Lebanon, the law does not allow non-fishers to navigate on professional fishing vessels. As a result, the service that Mr Tannous offers to the customers is subject to uncertainty and diverse requests and inquiries by the Authorities.
ASIA 22 - LEBANON

RAFIC BAKHOS (FISHERMAN)

Infrastructure improvement/management (landing spots, harbour services, market)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

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<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kfar Abida, North Lebanon</td>
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<tr>
<td>Year</td>
<td>2015</td>
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<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Infrastructure improvement/management (landing spots, harbour services, market)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Rafik Bakhos, fisherman</td>
</tr>
<tr>
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<td>Fishermen of Kfar Abida</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Mr Bakhos provides different services to his colleagues at the port of Kfar Abida. More in specific, he manufactures different kinds of nets assembling raw material (nets, floats, leads, etc.) and traps. Furthermore, he performs maintenance on broken nets and paints fishing boats lifted on land in winter.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Mr Bakhos clearly stated that he still relies more extensively on the fishing activities as a source of income. On the other hand, the services provided to the other fishermen insure a lower but steady source of income making this activity crucial for the correct management of his revenues.
Is it a success story? X Yes ☐ No

Mr Bakhos while giving details on the services he provides at the port of Kfar Abida

Photo by Coopérative Des Pêcheurs Fadous
Mr Bakhos while painting a vessel at the port.

MAIN KEY FACTORS

Mr Bakhos provides different services to his colleagues at the port of Kfar Abida, such as manufacturing nets and traps, assembling raw material (nets, floats, leads, etc.), repairing broken nets and painting fishing boats lifted on land in winter. These side activities insure a low but steady source of income.
ASIA 23 - LEBANON

FISHERMEN COOPERATIVE OF DBAYEH

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

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<table>
<thead>
<tr>
<th>Country</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Dbayeh, Metn</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
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<table>
<thead>
<tr>
<th>Actors involved in the implementation</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>Metn coastal communities</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
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</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The Fishermen Cooperative of Dbayeh supports one of its members in the management of a fish restaurant adjacent to the port. The seafood is simply prepared (grilled or fried) and can be complemented by few Lebanese appetizers (*meza*). The restaurant offers local fish coming by the catch of fishermen of the region (Dbayeh, Dora, Jbeil, etc.). Costumers are mainly people living in the neighbourhoods and owners of the leisure boats moored in the port.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

After a long period of renovation, the restaurant just recently opened to the public. At present, the business shows a scarce capability of attraction of tourists and people coming from different regions. This is probably due to a number of reasons (the recent inauguration, the absence of advertisements and the proximity to a military polygon) that do not allow a clear understanding of the potentiality of this experience.
Is it a success story?  X Yes □ No

The structure where the restaurant is located is adjacent to the port of Dbayeh.
Bluefin tuna purchased by the Cooperative from an auction held at another port. The specimens will be cleaned, eviscerated, filleted and partially sold at the restaurant.

MAIN KEY FACTORS

The Fishermen Cooperative of Dbayeh supports one of its members in the management of a fish restaurant adjacent to the port. The seafood is simply prepared (grilled or fried) and can be complemented by few Lebanese appetizers (*meza*). The restaurant offers local fish coming by the catch of fishermen of the region.

At present, the business shows a scarce capability of attraction of tourists and people coming from other regions.
ASIA 24 - LEBANON

FISHERMEN IN DALIEH

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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<tbody>
<tr>
<td>Location/Region</td>
<td>Dalieh, Beirut</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
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<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
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<td>Actors involved in the implementation</td>
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<tr>
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<td>City dwellers and tourists</td>
</tr>
<tr>
<td>Still running?</td>
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</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The small peninsula of Dalieh (Beirut) encompasses two harbours dedicated artisanal fishing activities. In 1995, Maritime Authorities officially recognised the one located in the southern region and the fishermen were registered with Ras Beirut-Dalieh Fishermen Cooperative. The small port of Dalieh is a tiny inlet neighbouring the posh sea-front apartment blocks of the West Beirut seafront. Few fishing vessels are still operational having suffered from the constant urbanization of the surroundings, the oil spill of 2006 and the disputes on the public use of the small peninsula of Dalieh. Here, few fishermen and their families had been running informal cafes and popular fish restaurants where, for few decades, tourists, city dwellers and sea-goers found their destination. In this way, they were able to increase their income and to provide a service to the users of this area.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The peninsula of Dalieh is privately owned. Recently, owners’ instances lead to a rapid transformation of Dalieh’s social and economic life: fishermen were evicted from some areas (probably against pecuniary compensations) and fences now limit the access to the peninsula. On May 1st 2015, kiosks and huts—that were operated
by tens of fishermen’s families - were bulldozed on the northern side of Dalieh. In this area, those families were unlawfully running cafes and restaurants offering fish, beverages and *arghile*. Numerous clues point to the forthcoming threat of a luxurious private development to take over the zone and switch it to similar developments that have mushroomed along the Lebanese coast. The connections among private owners and their interests, the inalienability of the beach as a public domain, the protection assured to the area by the law in force and the scarce accessibility and usability of the area could lead to a mismanagement of the site and its potentialities. The future appears full of uncleanness. Nevertheless, it is worth to mention that some people and organizations are committing themselves towards the preservation of Beirut’s shared spaces to advocate for the preservation and enhancement of the role of Dalieh as an open-access shared space for all city dwellers and visitors.

Is it a success story?  X Yes  ❌ No

Debris of huts and kiosks still visible after one month from the eviction of the few fishers’ families still living in the area of Dalieh.
The small port of Dalieh is nestled in the renowned seafront of West Beirut.

MAIN KEY FACTORS

The small port of Dalieh is a tiny inlet neighbouring the posh sea-front apartment blocks of the West Beirut seafront. Few fishing vessels are still operational having suffered from the constant urbanization of the surroundings, the oil spill of 2006 and the disputes on the public use of the small peninsula of Dalieh. Here, few fishermen and their families had been running informal cafes and popular fish restaurants where, for few decades, tourists, city dwellers and sea-goers found their destination. In this way, they were able to increase their income and to provide a service to the users of this area.

Recently, land owners’ instances lead to a rapid transformation of Dalieh’s social and economic life: fishermen were evicted and fences now limit the access to the peninsula.
ASIA 25 - LEBANON

FISHERMEN IN TABARJA

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
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</tr>
<tr>
<td>Year</td>
<td>2015</td>
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</table>

<table>
<thead>
<tr>
<th>Sector/s involved in the Fisheries</th>
<th>Tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Functionality related activities</td>
<td>(fishing-tourism, recreational/educational areas or activities)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Actors involved in the implementation</th>
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</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Direct Beneficiaries</th>
<th>Tourists, coastal communities</th>
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<thead>
<tr>
<th>Still running?</th>
<th>X Yes □ No</th>
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BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

After leaving Jounieh Bay on the coastal route to Tripoli, the first village encountered, beside a picturesque little bay and fishing boat harbour, is Tabarja, 28 Km north of Beirut. The fishing port is historically known as Saint Paul who is said to have set sail on one of his missionary trips to Europe. Tabarja today is a popular summer resort town, which features a dramatic deep-water cove dominated by a 14th-century watchtower. Tabarja is well nestled among different Mount Lebanon touristic attractions such as Jounieh, the upscaling touristic hub of Byblos (25 minutes driving) and at short distance - the Casino du Liban, sandy beaches and Roman ruins. In this context, at least five professional fishermen (Henry Nassar, Elias Zaynoun, Jossef Demian, George Allam and Michael Demian) welcome tourists, divers, anglers and families in summer on their vessels for short trips or full-day on board of their vessels.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Tabarja is a historically relevant town threatened by modernisation and indifference for the local history. Centuries old limestone churches and traditional houses stand beside contemporary – sometimes-unsightly - constructions. Cobblestone and dirt streets have been replaced with crackling tarmac, and new construction continues to threaten the town's rich history. No conservation efforts have, to date, been put in effect, and the town – not differently from many other areas along the Lebanese coast - is considered by many as an example of unregulated modernisation. In the long run, this is threatening the ecosystem and the cultural environment that constitutes traditional fishermen’s background, jeopardising their effort to disclose beauties and memories to tourists and coastal dwellers.

Is it a success story? X Yes ☐ No
MAIN KEY FACTORS

In the summer resort town of Tabarja, at least five professional fishermen welcome tourists, divers, anglers and families in summer on their vessels for short trips or full-day on board of their vessels.

Tabarja is a historically relevant town threatened by modernisation and indifference for the local history. No conservation efforts have, to date, been put in effect, and the town – not differently from many other areas along the Lebanese coast - is considered by many as an example of unregulated modernisation, jeopardising the effort to disclose beauties and memories to tourists and coastal dwellers.
ASIA 26 - LEBANON

FISHERMEN IN JAL EL BAHER

Tourism (fishing-tourism, recreational/educational areas or activities)
## SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Location/Region</td>
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</tr>
<tr>
<td>Year</td>
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<tr>
<td>Sector/s involved in the Fisheries</td>
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<tr>
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<td>Actors involved in the implementation</td>
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<td>Direct Beneficiaries</td>
<td>Tourists, city dwellers</td>
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<td>Still running?</td>
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### BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The small port of Jal el Bahr is a tiny port outlined by an L-shaped concrete dock. In the port, a small number of fishing vessels find a shelter next to the American University of Beirut right in the core of Beirut. The waterfront overlooking the port is a popular destination for swimmers, walkers, joggers and bikers. Vendors offer an array of local snacks and drinks and many restaurants and hotels overlook neighbourhoods. In this context, at least eleven professional fishermen ranging from 27 to 64 years old welcome tourists, divers, anglers and families especially in summer on their vessels for short trips or full-day on board of their vessels.

### MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES
The waterfront of Beirut (so called Corniche) suffers from massive solid waste pollution, mostly due to litter thrown by passers-by and from the organic marine pollution due to the absence of sewage networks and treatment plants. Moreover, the port of Jal el Bahr is located along a straight coastline and the safeguard of the boats from wave power rely only on the L-shaped dock. This means that activities are de facto almost impracticable during numerous months when storms, high waves and strong winds are more frequent (December to April). Fishing-tourism-like activities carried in the centre of Beirut should be advertised and promoted in nearby hotels and restaurants to easily increase the number of potential customers and to disclose the relevant potentialities that this activity can have in this specific area.

Is it a success story?  X Yes  □ No

Fishermen in Jal el Bahr working on their nets in the month of May.
Winter stormy conditions oblige fishermen to remove their boats sometimes also from the proximities of the port due to the extreme intensity of the waves.

MAIN KEY FACTORS

A small number of fishing vessels find a shelter next to the American University of Beirut right in the core of Beirut, in the tiny port of Jal el Bahr. Here, at least eleven professional fishermen ranging from 27 to 64 years old welcome tourists, divers, anglers and families especially in summer on their vessels for short trips or full-day on board of their vessels.

The Beirut waterfront (so called Corniche) suffers from massive solid waste pollution, mostly due to litter thrown by passers-by and from the organic marine pollution due to the absence of sewage networks and treatment plants. Nevertheless, fishing-tourism-like activities carried out right in the centre of Beirut appear to have big potentialities of expansion.
ASIA 27 - LEBANON

FISHERMEN OF BATROUN

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Lebanon</th>
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<td>Location/Region</td>
<td>Batroun, North Lebanon</td>
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<tr>
<td>Actors involved in the implementation</td>
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<tr>
<td>Direct Beneficiaries</td>
<td>Lebanese fishermen and scientific community</td>
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<tr>
<td>Still running?</td>
<td>Yes ☑ No ☐</td>
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**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

Between 2007 and 2010, as part of a project for the socioeconomic development of the fishing community of Batroun implemented by an Italian NGO, fishermen of that community were trained in the manufacturing of fishing traps targeting deep seashrimps (*Plesiönika edwardsii*). Tests at sea were carried out by fishermen and researchers providing interesting results in terms of yields obtained. The so-called Spanish traps are low-cost, easy-to-manufacture fishing gears that can provide an additional income for those fishermen who exploit the upper sector of the continental slope or can represent a valid alternative for those small-scale fishermen who want to explore new fishing grounds. Similar experience was carried out by the same NGO in the years 2006-2007 in the port of Tyre, South of Lebanon. Detailed report is available on the website [www.ongrc.org](http://www.ongrc.org).
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Although the materials needed to build the Spanish traps are cheap and of common use in Lebanon, researchers had found some difficulties in obtaining the most suitable plastic nets from the local market. According to some studies, the colour of the nets wrapping the iron rib can affect the yields of the traps. In Lebanon, where the trawling fishery is completely absent, deep water resources appear to have great potentialities for a future sustainable development also aiming at reducing the fishing pressure on coastal and shallower waters. Nevertheless, this gear needs further tests in Lebanese waters to better assess its viability and sustainability.

Is it a success story?  X Yes ☐ No

Fishermen of Batroun while manufacturing the Spanish traps
Traps are piled up on the fishing vessels before lowering them in the sea.

MAIN KEY FACTORS

Between 2007 and 2010, as part of a project for the socioeconomic development of the fishing community of Batroun implemented by an Italian NGO, fishermen of that community were trained in the manufacturing of fishing traps targeting deep sea shrimps. Tests at sea were carried out by fishermen and researchers providing interesting results in terms of yields obtained.

The so-called Spanish traps are low-cost, easy-to-manufacture fishing gears that can provide an additional income for those fishermen who exploit the upper sector of the continental slope or can represent a valid alternative for those small-scale fishermen who want to explore new fishing grounds.
AFRICA 4 - TUNISIA

FISHERMEN IN AJIM, MINISTRY OF HEALTH, MINISTRY OF COMMERCE

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

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<tr>
<th>Country</th>
<th>Tunisia</th>
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<tbody>
<tr>
<td>Location/Region</td>
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<tr>
<td>Year</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Fishermen in Ajim, Ministry of health, Ministry of Commerce</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Small scale fishermen, Owners of restaurants</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes  □ No</td>
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</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The harbour of Ajim is located on the Island of Djerba off the coast of Tunisia. It is Djerba’s main fishing port and is surrounded by large rock cavities; the sea is rich in fish such as grouper, common sea bream but also octopus and cuttlefish.

Direct sales is the action which consists of selling catch directly from fishermen to consumers (in our case, specific restaurants) at a local level without any intermediary providing a better profitability for the fishermen. However, this action requires a sustained control and monitoring to ensure safety and freshness of the fish.

For the transferability of this activity, it is compulsory to facilitate the creation of local associations of professional groups that can support fishers’ activities, i.e. supplying them with ice or providing storage places.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Main constraints are as follows: i) the requirement of an authorization for selling the fish, ii) the need to establish a policy to define the traceability of the product and iii) the necessity to create a small outlet in front of the port.

As for the future outlook, the Tunisian government is considering the creation of new jobs for artisanal fishermen, the increase of the profitability, the opening of the fisheries sector to the outside world, the promotion of the restoration of Ajim area and the reinforcement of the collaboration between fishermen and restaurants.

Is it a success story? X Yes ☐ No

Fishermen of Ajim while collecting clams on a van.
MAIN KEY FACTORS

The harbour of Ajim is Djerba's main fishing port and is surrounded by large rock cavities; the sea is rich in fish such as grouper, common sea bream but also octopus and cuttlefish. Here, direct sales activities are ongoing consisting in selling catch directly to restaurants without any intermediary providing a better profitability for the fishermen.

Main constraints are as follows:

i) the requirement of an authorization for selling the fish

ii) the need to establish a policy to define the traceability of the product

iii) the necessity to create a small outlet in front of the port.
AFRICA 5 - TUNISIA

Small scale Fishermen, GDA (Grouping for Agricultural Development), Group of local fishermen

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Coast and south of Tunisia</td>
</tr>
<tr>
<td>Year</td>
<td>2014</td>
</tr>
</tbody>
</table>

**Sector/s involved in the Fisheries Multi-Functionality related activities**

- Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)

**Actors involved in the implementation**

- Small scale Fishermen, GDA (Grouping for Agricultural Development), Group of local fishermen

**Direct Beneficiaries**

- Small scale fishermen (especially women who are collecting clams)

**Still running?**

- Yes

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

The activity of cleaning of beaches and sea aims at establishing a convention or an agreement that will gather the GDA* (Grouping for Agricultural Development) and the groups of local fishers in order to find methods and techniques to clean the beach and the sea in a specified area in different periods. Small-scale fishers can supplement their income and – in collaboration with the state – can guarantee the protection of the area and its environment. Fishermen collect litter on daily or weekly basis and deliver it to municipality workers. This activity does not require any special training but it will be necessary to provide fishers with specific materials to ensure their safety.
*GDA: Grouping for Agricultural Development is a non-profit association working under the Tunisian law. This organization include public utility owners and users and is charged by the state to manage certain natural resources

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

Main constraints are as follows: i) the necessity of a specific authorization from the concerned authorities in Tunisia; ii) special material needed for rubbish collection and disposal; iii) the necessity of a convention/agreement between the local fishermen and the municipality of the region.

Outlooks include a supplementary income for the fishermen, the protection of the environment of the area and a better image for the seas and beaches of Tunisia.

Is it a success story?  X Yes □ No
MAIN KEY FACTORS

The activity of cleaning of beaches and sea aims at establishing a convention or an agreement that will gather the GDA (Grouping for Agricultural Development) and the groups of local fishers in order to find methods and techniques to clean the beach and the sea in a specified area in different periods. Small-scale fishers can supplement their income and – in collaboration with the state – can guarantee the protection of the area and its environment.

Fishermen collect litter on daily or weekly basis and deliver it to municipality workers.
AFRICA 6 - TUNISIA

MINISTRY OF TOURISM, MINISTRY OF HEALTH, GENERAL DIRECTION OF FISHING AND AQUACULTURE, FISHING SECTOR IN BIZERTE

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Bizerte</td>
</tr>
<tr>
<td>Year</td>
<td>2014</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Ministry of Tourism, Ministry of Health, General Direction of Fishing and Aquaculture, Fishing sector in Bizerte</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Touristic operators; fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Fishing tourism is a supplementary activity for the artisanal fishing operating in gulf of Bizerte, giving the possibility to the operators to accommodate on board of their boats a number of persons other than the crew. The gulf of Bizerte is a coastal lagoon situated in the north of Tunisia with a 150 Km² area and a maximum depth of 12 m. It is considered as a suitable place for fishing tourism experiences especially for those fishermen who do not really need to buy a special insurance for the tourists. It is an extremely productive ecosystem and it offers to its visitors the opportunity to explore delightful areas and a rich ecosystem. Main goal of this initiative is i) to promote the appreciation and enjoyment of the coastal marine and natural terrestrial environment and the cultural values of a region; ii) to increase the visibility of fishing culture and activities to the public allowing greater appreciation of its value and nutritional aspects; iii) to protect fishing traditions and culture as
fishermen can demonstrate traditional methods and tools; iv) to taste traditional and specific meals of the governorate of Bizerte; v) to provide an immediate and direct supplementary income of fishermen; vi) to reduce fishing effort for a better conservation of fisheries and marine resources.

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

Conflicts between touristic and fishing operators may arise as both these activities may interfere with each other. The limited legislation in Tunisia forbids at present this activity. Infrastructures and services in small boats of the artisanal fishers are not well developed and structural adjustments are needed. Competition for space and gear interactions can deprive other fishermen of the existing resources that can limit their activities. There is a proved lack in business skills: fishers typically have low education and few social contacts with residents of urban cities.

In terms of future outlooks, this activity can i) provide an immediate and direct supplementary income for fishermen; ii) reduce the fishing effort; iii) protect natural environment as fishermen become more aware of bad behaviours at sea; iv) avoid the necessity of using many fishing tools.

Is it a success story?  X Yes  □ No
MAIN KEY FACTORS

Fishing tourism is a supplementary activity for the artisanal fishing operating in gulf of Bizerte, giving the possibility to the operators to accommodate on board of their boats a number of persons other than the crew. Bizerte is an extremely productive ecosystem that offers to visitors the opportunity to explore delightful areas and a rich ecosystem.

Main goal of this initiative is i) to promote the appreciation and enjoyment of the coastal environment and the cultural values of a region; ii) to increase visibility of fishing culture and activities; iii) to protect fishing traditions and culture; iv) to taste traditional and specific meals of the governorate of Bizerte; v) to provide an immediate and direct supplementary income of fishermen; vi) to reduce fishing effort for a better conservation of fisheries and marine resources.
AFRICA 7 - TUNISIA

MINISTRY OF TOURISM, MINISTRY OF HEALTH, GENERAL DIRECTION OF FISHING AND AQUACULTURE, FISHING SECTOR IN BIBANE

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

Country: Tunisia

Location/Region: Lagoon of el Bibane, Medenine

Year: 2014

Sector/s involved in the Fisheries Multi-Functionality related activities: Tourism (fishing-tourism, recreational/educational areas or activities)

Actors involved in the implementation: Ministry of tourism, Ministry of Health, General Direction of Fishing and Aquaculture, fishing sector in Bibane

Direct Beneficiaries: Touristic operators; fishermen

Still running?: Yes

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The el Bibane lagoon, with an area of 230 km² and average depth of 4 m, is connected to the sea by a 400 m-wide channel. The proportion of the inland waters that feed it intermittently is small in relation to its evaporation and exchanges with the sea through the channel that maintains its salinity between 4 and 5%.

Main goal of this initiative is i) to promote the appreciation and enjoyment of the coastal marine and natural terrestrial environment and the cultural values of a region; ii) to increase the visibility of fishing culture and activities to the public allowing greater appreciation of its value and nutritional aspects; iii) to protect fishing traditions and culture as fishermen can demonstrate traditional methods and tools; iv) to taste traditional and specific meals of the governorate of Bizerte; v) to provide an immediate and direct supplementary income of fishermen; vi) to reduce fishing effort for a better conservation of fisheries and marine resources.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Conflicts between tourism operators and fishing operators may arise as both these activities may interfere with each other. The limited legislation in Tunisia forbids at present this activity. Infrastructures and services in small boats of the artisanal fishers are not well developed and structural adjustments are needed. Competition for space and gear interactions can deprive other fishermen of the existing resources that can limit their activities. There is a proved lack in business skills: fishers typically have low education and few social contacts with residents of urban cities.

In terms of future outlooks, this activity can i) provide an immediate and direct supplementary income for fishermen; ii) reduce the fishing effort; iii) protect natural environment as fishermen become more aware of bad behaviours at sea; iv) avoid the necessity of using many fishing tools.

Is it a success story?  X Yes □ No
The El Bibane lagoon.

**MAIN KEY FACTORS**

Fishing tourism is a supplementary activity for the artisanal fishing operating in el Bibane lagoon, with an area of 230 km$^2$ and average depth of 4 m, is connected to the sea by a 400 m-wide channel.

In terms of future outlooks, this activity can i) provide an immediate and direct supplementary income for fishermen; ii) reduce the fishing effort; iii) protect natural environment as fishermen become more aware of bad behaviours at sea; iv) avoid the necessity of using many fishing tools.
AFRICA 8 - TUNISIA

GENERAL DIRECTION OF FISHING AND AQUACULTURE,
FISHERMEN IN AJIM

Fish farming (capture of wild juveniles/adults for farming purposes)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Ajim, isle of Djerba, Medenine</td>
</tr>
<tr>
<td>Year</td>
<td>2011-2014</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Fish farming (capture of wild juveniles/adults for farming purposes)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>General direction of Fishing and Aquaculture, fishermen in Ajim</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The installation of artificial reefs is considered by the Tunisian government as a beneficial activity for the fishermen and for the marine resources. A preliminary experience in Gabès has been successfully carried out. This action was planned and developed in four steps, namely construction, storage, transport and immersion of the artificial reefs.

From previous experiences, Tunisian government can envisage many advantages especially for aquatic resources such as protecting, restoring and regenerating aquatic habitats. Fishermen can increase the quantity of fish collected consequently increasing their additional income. New species of fish are expected to spill over from the reef. The artificial reef can be also an attractive place to visit for professional divers or for those tourists who want to explore the different species of fish.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Main constraints are as follows: i) Manufacturing and, transport and immersion of the reefs are arduous and costly activities; ii) it is difficult to locate suitable areas exactly defined for the deployment of the reef.

As future outlooks, we defined i) the possibility to increase the biodiversity in the areas surrounding the reef, ii) the development of marine research in different topics related to the marine sciences and iii) the regeneration of marine habitats.

Is it a success story?  X Yes  □ No
Construction of the artificial reefs in the area of Ghannouch (2011). Links of videos in youtube (Japanese experience with the coordination of the JICA in 2007):
https://www.youtube.com/watch?v=vo1Fm2WQb5Y&feature=youtu.be
https://www.youtube.com/watch?v=Lk-2Mtk2JQU&feature=youtu.be
https://www.youtube.com/watch?v=OrNtZ44SYmQ&feature=youtu.be

**MAIN KEY FACTORS**

The installation of artificial reefs is considered by the Tunisian government as a beneficial activity for the fishermen and for the marine resources. A preliminary experience in Gabès has been successfully carried out. This action was planned and developed in four steps, namely construction, storage, transport and immersion of the artificial reefs.

As future outlooks, we defined i) the possibility to increase the biodiversity in the areas surrounding the reef, ii) the development of marine research in different topics related to the marine sciences and iii) the regeneration of marine habitats.
EUROPE 30 - GREECE

GREEK PROFESSIONAL FISHERMEN AND GIORGOS LOURDIS

Tourism (fishing-tourism, recreational/educational areas or activities)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>All Greece</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>General direction of Fishing and Aquaculture, fishermen in Ajim</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The website [http://fishingtrips.gr/](http://fishingtrips.gr/) aggregates information on services made available in Greece to sea enthusiasts and assists tourists in booking fishing trips over several touristic destinations. “Fishingtrips.gr” offers a database of professional fishing vessels that are ready to welcome people on board in order to let them experience coastal attractions, knowledge and tastes of different coastal regions. The interactive map contributes to easily obtain the locations in which similar services are available and to directly get in contact with people running the activities on the ground.

The website, which, at present, provides only basic information, is integrated by news, pictures, weather forecast and recipes.

MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES
The aim of the site developers is to contribute to develop Greek tourism while increasing the incomes of other professionals (e.g. fishers) that become partners of this endeavour. On a broader extent, their goal is to create a portal equipped with functions that allow website visitors to fully plan their holidays on-line (i.e. hotels, restaurants, shopping, daily program including fishing activities, etc.) in their chosen place of interest so long as it is within the portal’s service locations.

The portal is currently not fully functional but – if well developed – can stimulate the fishing-tourism sector in Greece that is now facing new opportunities. In fact, after years of legal and political wrangling, legislation has been passed setting the terms and conditions for a comprehensive development of fishing tourism. Thanks to the new regulations, professional fishers can apply for a license that will allow them to take passengers on either pleasure trips or fishing excursions.

Is it a success story?  X Yes □ No
MAIN KEY FACTORS

The website [http://fishingtrips.gr/](http://fishingtrips.gr/) aggregates information on services made available in Greece to sea enthusiasts and assists tourists in booking fishing trips over several touristic destinations. “Fishingtrips.gr” offers a database of professional fishing vessels that are ready to welcome people on board in order to let them experience coastal attractions, knowledge and tastes of different coastal regions. The website, which, at present, provides only basic information, is integrated by news, pictures, weather forecast and recipes.

The aim of the site developers is to contribute to develop Greek tourism while increasing the incomes of other professionals (e.g. fishers) that become partners of this endeavour.
EUROPE 31 - GREECE

ARISTOTELIAN UNIVERSITY OF THESSALONIKI, TECHNOLOGICAL EDUCATIONAL INSTITUTION OF KAVALA, FISHERY COOPERATIVE OF THE KAVALA LAGOONS

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kavala</td>
</tr>
<tr>
<td>Year</td>
<td>1997-1999</td>
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</table>

<table>
<thead>
<tr>
<th>Sector/s involved in the Fisheries Multi-Functionality related activities</th>
<th>Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actors involved in the implementation</td>
<td>Aristotelian University of Thessaloniki, Technological Educational Institution of Kavala, Fishery cooperative of the Kavala lagoons</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Consumers of bottarga</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The compositional changes that occur to the grey mullet (*Mugil cephalus*) ovaries during the drying process have been studied in the framework of the project “DIMITRA ‘95: Study of the processing methods and the composition of the traditionally produced fish roe from *M. cephalus* gonads in the lagoons of Kavala province”. Gonad tissue samples, representing four different stages of the production process, were obtained with the support of the fishermen operating in the lagoons of Kavala’s regions during the production periods of August - September. The analyses included the quantitative determination of chemical and microbiological parameters. In addition, in the final product the concentration of six heavy metals (Cu, Ni, Cr, Cd, Pb and Hg) was also measured. The most significant
changes in the basic chemical parameters occurred during the first four days of the drying process. No considerable variations were observed in the composition and concentration of the five principally occurring polyunsaturated fatty acids. Mercury was not detected. As far as the other heavy metals analysed is concerned, the total viable count was as well above to the critical values (log cfu/g = 6), and no microbiological contamination was detected. (Source Fisheries Research Institute, [http://www.inale.gr/](http://www.inale.gr/))

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

This study showed that fish roe “avgotaraho” (bottarga) of Kavala is rich in polyunsaturated fatty acids and high valued proteins. In addition to its high nutritional value, the results show that the concentration of chemical and microbial quality indicators in the final product are below the tolerance limits set by E.U. for fishery products. Many of the results of this project have been published in national and international scientific journals and congresses.

(Source Fisheries Research Institute, [http://www.inale.gr/](http://www.inale.gr/))

Is it a success story?  X Yes  □ No
Extraction of ovaries of *Mugil cephalus*.

The Greek “avgotaraho” (bottarga) obtained by salting and drying the ovaries of the grey mullet.
MAIN KEY FACTORS

The compositional changes that occur to the grey mullet (*Mugil cephalus*) ovaries during the drying process have been studied in the framework of the project “DIMITRA ’95.

This study showed that fish roe “avgotaraho” (bottarga) of Kavala is rich in polyunsaturated fatty acids and high valued proteins. In addition to its high nutritional value, the results show that the concentration of chemical and microbial quality indicators in the final product are below the tolerance limits set by E.U. for fishery products.
EUROPE 32 - GREECE

FISHERIES RESEARCH INSTITUTE AND FISHERMEN OF KALYMNOS

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Greece</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Kalymnos, South Aegean</td>
</tr>
<tr>
<td>Year</td>
<td>2000-2001</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries</td>
<td>Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>South Aegean fishermen</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The project TRAPS “Fishery with traps in deep waters for crawfish, shrimp, lobster, fishes” aimed to study the dynamic behaviour, output and selectivity of traps, for the improvement of their output and selectivity, in order to ensure the maintenance of marine biological resources and also the long-term income of fishermen of region Kalymnos. The investigation of the output of traps was carried out with specific research in the main fishing fields of the region of Dodecanese and more generally of South Aegean. In these regions, different types of traps were tried depending on the target species.

During 2001, 80% of the project was carried out. The fisheries research team of F.R.I., in collaboration with the Association of Coastal Fishery of Kalymnos “IPAPANTI”, conducted the experimental fishery with traps of different type, in the
marine region of southern Kalymnos up to the region of Karpathos. (Source Fisheries Research Institute, [http://www.inale.gr/](http://www.inale.gr/))

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

Based on the study and analysis of collected data, the most efficient and simultaneously functional traps were identified, as those targeting the crawfish, *Nephrops norvegicus*. The mesh size (5mm or 22mm) of the trap, as well as the time of fishery (less or more than 18 hours) did not appear to influence the efficiency of traps. On the contrary, as expected, the depth zones where the traps fished had repercussions in their qualitative and quantitative output. From the results of this experimental fishery, used traps were considered suitable for the fishery of crawfish and of other commercial species (fishes, shrimps). The relatively small abundance of individuals that was found could be attributed to the fact that the fishery regions are located in the limits of the geographic extension for certain species (i.e. crawfish). Another reason could be that the high number of sea dogs that we fished obstructed the entrance of other species and made the traps useless. From the above-mentioned results, it is obvious that the traps can constitute a new type of selective fishery in the Greek seas. However, in order to achieve this, further research in all fishing periods with the attendance of professional fishermen is essential.

(Source Fisheries Research Institute, [http://www.inale.gr/](http://www.inale.gr/))

Is it a success story? X Yes ☐ No
MAIN KEY FACTORS

The project TRAPS “Fishery with traps in deep waters for crawfish, shrimp, lobster, fishes” aimed to study the dynamic behaviour, output and selectivity of traps, for the improvement of their output and selectivity, in order to ensure the maintenance of marine biological resources and also the long-term income of fishermen of region Kalymnos.

Based on the study and analysis of collected data, the most efficient and simultaneously functional traps were identified, as those targeting the crawfish, *Nephrops norvegicus*. 
AFRICA 9 - ALGERIA

INSTITUT NATIONAL SUPERIEUR DE LA PECHE ET DE L'AQUACULTURE

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
### SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Algeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Alger</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
</tbody>
</table>

#### Sector/s involved in the Fisheries Multi-Functionality related activities

- Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)

#### Actors involved in the implementation

- Institut national supérieur de la pêche et de l'aquaculture

#### Direct Beneficiaries

- Divers

#### Still running?

- Yes

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**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

In the framework of the initiative «Blue ports and barrages: together for productive and durable fisheries and aquaculture» organised by the Ministry of Fisheries and Halieutic Resources with the objective of joining different stakeholders for the valorisation of sectorial infrastructures; several initiatives were organized aiming at increasing the awareness of coastal communities. The students of the Higher Institute for Fisheries and Aquaculture (INSPA) under the supervision of the Captain Renane manufactured bags from fishing nets. These bags are meant for divers to collect waste of different nature from the sea.

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**
This action shows the different possible adaptability of the knowledge and experiences coming from fishermen. Even if the impact of this specific action can appear limited, in our opinion similar initiatives represent a good approach to uphold the link between fishermen and territories, promoting environmental awareness in both fishing communities and youth.

Is it a success story?  X Yes □ No

Banner of the initiative «Blue ports and barrages: together for productive and durable fisheries and aquaculture».

Manufacturing bags from fishing nets.
**MAIN KEY FACTORS**

In the framework of the initiative «Blue ports and barrages: together for productive and durable fisheries and aquaculture» aiming at joining different stakeholders for the valorisation of sectorial infrastructures; the students of the Higher Institute for Fisheries and Aquaculture (INSPA) under the supervision of the Captain Renane manufactured bags from fishing nets. These bags are meant for divers to collect waste of different nature from the sea.

This action shows the different possible adaptability of the knowledge and experiences coming from fishermen upholding the link between fishermen and territories, promoting environmental awareness in both fishing communities and youth.
AFRICA 10 - ALGERIA

SARL ORCA MARINA

Fish farming (capture of wild juveniles/adults for farming purposes)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Algeria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Surcouf Ain Taya, Alger</td>
</tr>
<tr>
<td>Year</td>
<td>2015</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Fish farming (capture of wild juveniles/adults for farming purposes)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Sarl Orca Marina</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Seafood consumers in Alger</td>
</tr>
<tr>
<td>Still running?</td>
<td>Yes ☑ No □</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

The Ministry of Fisheries and Helieutic Resources is drafting a new program for implementing the aquaculture sector for the period 2014-2020, within the framework of the Plan Aquapecche 2020. Public Institutions are supporting the mussel farming (for instance through the Centre de Conchylicole de Bou Ismail). In the area of Alger (Surgouf Ain Taya), the private enterprises Sarl Orca Marina is rearing both mussels (*Mitylus galloprovincialis*) and oyster (*Crassostrea gigas*), fixed onto off shore stakes.

The enterprise is run at family level. The family has been historically performing fishing activities, having a deep knowledge of marine environment and weather conditions in the area. Farming area is rich of plankton organisms that are the feed for the reared bivalves. Six stakes - for a total length of 1.200 m - produce 10 tons annually. The rearing cycles foresees several stages, from the seeds to the market sizes. The rearing cycle is of 7/8 months for mussels and about 18 months for oyster.
The environmental conditions of the area (plankton density, currents, temperature, salinity and other chemical parameters) are favourable for a rapid growth of the bivalves with high rate of natural reproduction. The market is still not developed in the Country but the demand is growing in particular in the area of Alger (mainly thanks to restaurants and hotels) and the price is profitable (mussels are sold at 1/1.5 Euro per kilo).

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

Marine aquaculture technologies can increase the socio-economic level of coastal communities, having a significant impact on the living standards of target groups. Food production sectors are strategic and crucial for Algerian Policy. Public Institutions intend to play the role of strategic guidance for private enterprises; taking into account both economic and ecological needs (sustainable and responsible approach).

The Algerian Public Institution is working on informing and assisting on new opportunities offered by the aquaculture sector. Molluscs rearing can offer an opportunity to the coastal marine stakeholders considering the support of the public sector (Plan Aquapeche 2020; financial subsidies, etc). Mollusc rearing can constitute a profitable activity, as it does not require high variable cost in terms of labour, management and equipment.

Is it a success story?  X Yes  □ No
Submerged stake with mussels.

Direction de la Pêche et des Ressources Halieutiques

Stake collected on board of a support vessel.

Direction de la Pêche et des Ressources Halieutiques
MAIN KEY FACTORS

In the area of Alger (Surcouf Ain Taya), the private enterprises Sarl Orca Marina is rearing both mussels (*Mitylus galloprovincialis*) and oyster (*Crassostrea gigas*), fixed onto off shore stakes. The enterprise is run at family level. The family has been historically performing fishing activities, having a deep knowledge of marine environment and weather conditions in the area. Farming area is rich of plankton organisms that are the feed for the reared bivalves.

Market is still not developed in the Country but the demand is growing in particular in the area of Alger (mainly thanks to restaurants and hotels) and the price is profitable (mussels are sold at 1/1.5 Euro per kilo).

This action shows the different possible adaptability of the knowledge and experiences coming from fishermen upholding the link between fishermen and territories, promoting environmental awareness in both fishing communities and youth.
EUROPE 33 - CYPRUS

FISHERMEN IN ZYGI

Tourism (fishing-tourism, recreational/educational areas or activities)
The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Cyprus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Zygi/Larnaka District</td>
</tr>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries</td>
<td>Tourism (fishing-tourism, recreational/educational areas or activities)</td>
</tr>
<tr>
<td>Multi-Functionality related activities</td>
<td></td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Fishermen in Zygi</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Tourists</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

**BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY**

The Larnaka district fishing village of Zygi boasts beautiful coastal scenery and a newly completed Fishing Reserve that is the perfect place for an idyllic stroll to see the local fishers at work.

Thanks to a recent initiative co-financed by the European Fisheries Fund and the Larnaka District Development Agency – entitled ‘Zygi Boat Adventures’ - visitors can experience the traditional fishing methods first-hand. The fishing trips take place in a traditional fishing boat with the local fisherman casting their nets for the morning catch. As tourists explore caves and coves, a professional tour guide entertain them with stories of the sea and the history of fishing on the island. The package of services provided includes also diving and snorkelling trips in the area of Zygi.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The success of this activity is related to presence of tourists in the area. It is therefore fully active in a limited period of the year and can suffer from reductions of presence of tourists in the area. Furthermore, the use of social media and website is advised to try to intercept potential customers that intend to spend their vacation in the region.

Is it a success story?  X Yes  ☒ No

Fishing boat ready to accommodate tourists on board. The board on the dock advertise the activities made available for the tourists.
MAIN KEY FACTORS

The Larnaka district fishing village of Zygi boasts beautiful coastal scenery and a newly completed Fishing Reserve. Thanks to a recent initiative co-financed by the European Fisheries Fund and the Larnaka District Development, visitors can experience the traditional fishing methods first-hand. The fishing trips take place in a traditional fishing boat with the local fisherman casting their nets for the morning catch. As tourists explore caves and coves, a professional tour guide entertain them with stories of the sea and the history of fishing on the island.

This action shows the different possible adaptability of the knowledge and experiences coming from fishermen upholding the link between fishermen and territories, promoting environmental awareness in both fishing communities and youth.
AFRICA 11 - MOROCCO

FISHERS IN BADÈS, AL HOCEIMA NATIONAL PARK

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
## SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

*The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.*

<table>
<thead>
<tr>
<th>Country</th>
<th>Morocco</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Al Hoceima</td>
</tr>
<tr>
<td>Year</td>
<td>2014</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Fishers in Badès, Al Hoceima National Park</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fishers in Al Hoceima National Park</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

### BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Al Hoceima National Park is the only Park located on the Mediterranean coast of Morocco. All fleets operating in the MPA use the same resources and fishing areas leading to conflicts among fishing sectors. According to artisanal fishers, the MPA did not effectively address the management of the resources, the mitigation of conflicts and the valorisation of small-scale activity.

Aiming to promote the effective participation of fishers on the implementation of a monitoring system of small-scale fisheries and other events (IUU, pollution and sighting of emblematic species), to support sustainable management of fisheries resources in Al Hoceima; the artisanal fishing community actively participated to the project SuiviCOM- Al Hoceima carried out by the National Institute of Fisheries Research (Morocco) and FAO in collaboration with the National Park of Al Hoceima.
and under the scope of MedPartnership. Community-based monitoring of the fisheries activity was used as tool to promote effective participation and legitimate co-management in the future.

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

A pilot study was carried out in Badès where fishers daily monitored fisheries activity and other events at the fishing site: daily monitoring: - Fishing effort during day and night; - Main gears used; - Other economic activities conducted by fishers (e.g. tourism, transportation...); - IUU such as trawling under 3 nm, the use of copper sulphate and recreational fishing (spear gun and angling); - Sighting of flagship species (eg. Pilot whales) and interactions with fishing gear; - Pollution; - Other information as meteorological conditions, moon period and social events influencing the activity at the fishing site.

Although some snags in the implementation of field activities, stakeholders are envisaging a new phase of the project with broader goals.

(source: Omar Kada, Mohamed Najih, Yassine Zahri, Abdelhakim Mesfioui, Laura Leite and Pedro Barros - Community-based monitoring of artisanal fishery activity in Al Hoceima National Park (Morocco))

Is it a success story? X Yes ☐ No
MAIN KEY FACTORS

Aiming to promote the effective participation of fishers on the implementation of a monitoring system of small-scale fisheries and other events (IUU, pollution and sighting of emblematic species), to support sustainable management of fisheries resources in Al Hoceima; the artisanal fishing community actively participated to the project SuiviCOM- Al Hoceima carried out by the National Institute of Fisheries Research (Morocco) and FAO in collaboration with the National Park of Al Hoceima and under the scope of MedPartnership. Community-based monitoring of the fisheries activity was used as tool to promote effective participation and legitimate co-management in the future.
EUROPE 34 - FRANCE

LAGOON FISHERS IN THE NARBONNAISE REGIONAL NATURE PARK

Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>France</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Narbonne</td>
</tr>
<tr>
<td>Year</td>
<td>2013</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sector/s involved in the Fisheries Multi-Functionality related activities</th>
<th>Environmental services (Design/management of Marine Protected Areas, samples/data collection, scientific research, guardians of the sea, oil spills recovery, waste management/removal, purification plants – bivalves for pollution reduction)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Actors involved in the implementation</th>
<th>Lagoon fishers in the Narbonnaise Regional Nature Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Beneficiaries</td>
<td>Lagoon fishers and consumers</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes □ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

Since time immemorial, the coastal lagoons have been exploited for fishing. Their shallow waters and the proximity of the shores, make them accessible with basic means. The richness in nutrients, high temperatures in spring, support a high organic production, abundant food source for several fish species (eels, sea bass, sea bream, sole, mullet), crustaceans and shellfish able to grow despite strong variations in salinity, temperature and available oxygen. The mobile species, such as fish, shrimp, and crabs move in and out of the ponds according to the seasons. These periodic migrations across canals (called graus in Languedoc) well known by the fishers, allow abundant catch obtained with weirs appropriately placed. This métier is collectively executed and highly regulated by the local Union of Fishermen (called Prud'homies).
The artisanal fishery in the pond has been using a considerable variety of gears of all types, suitable for different species and areas, frequently differing from village to village. However, since the widespread use of synthetic fibres and the motorization of fishing boats, practices and materials were simplified. What we see on all ponds are usually stationary triple traps, locally known as "trabacs".

**MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES**

Lagoon fisheries are traditional activities strongly rooted in the territory. Currently, artisanal fishing activities in the lagoon of Bages-Sigean, Gruissan, Ayrolle, Campignol and La Palme sustain sixty family businesses, focused mainly on the exploitation of eel. A viable economic activity can be maintained only if lagoon’s ecological conditions and fishers’ abilities give an added value to the production. This process is supported by the Narbonnaise Regional Nature Park, established to preserve and enhance the exceptional heritage of Narbonne in the Mediterranean in a harmonious living environment for residents and visitors.

*Is it a success story? X Yes □ No*
Fishermen in the pond of Campignol.

Eels: main target species in the ponds.
MAIN KEY FACTORS

Lagoon fisheries are traditional activities strongly rooted in the territory. Currently, artisanal fishing activities in the lagoon of Bages-Sigean, Gruissan, Ayrolle, Campignol and La Palme sustain sixty family businesses, focused mainly on the exploitation of eel. A viable economic activity can be maintained only if lagoon’s ecological conditions and fishers’ abilities give an added value to the production. This process is supported by the Narbonnaise Regional Nature Park, established to preserve and enhance the exceptional heritage of Narbonne in the Mediterranean in a harmonious living environment for residents and visitors.

Periodic migrations of viable species across canals (called graus in Languedoc) are well known by the fishers and allow abundant catch obtained with weirs appropriately placed. This métier is collectively executed and highly regulated by the local Union of Fishermen (called Prud'homies).
ASIA (EUROPE) 28 - TURKEY

FISHERMEN IN SEFERIHISAR

Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)
The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Seferihisar</td>
</tr>
<tr>
<td>Year</td>
<td>2011</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Adding value to fishery products (direct sales and/or short circuits, new products, processing, new marketing strategies, support to businesses)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Fishermen in Seferihisar</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Community of Seferihisar</td>
</tr>
<tr>
<td>Still running?</td>
<td>X Yes ☐ No</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

With the overall objective of adopting EU fishery standards in Turkey, the project “Fisheries: implementing sustainable networks between Turkey and Italy” funded by the EU technically supported local fishers to establish, manage and market their own brand for the region. Over 50 fishers were trained on practical and technical issues on production standards (fishing techniques, net sizes and types) and marketing standards (hygiene, presentation, labelling). The final and more concrete result was the opening of a fish market point directly managed by the fishermen of Seferihisar with the long-term perspective of preserving the quality of local fish from the net to the dishes, improving product quality standards and strengthening environmental-friendly fishing techniques. The project lasted one year but the market established is still functioning.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

The aforementioned project – implemented by the Italian NGO Ricerca e Cooperazione with the active supports of the local fishing community and the academia - initiated an experience that is still actively proceeding, demonstrating the durability of the action. In this phase, the constraints are related to the ordinary market competition.

Is it a success story?  X Yes ☐ No
MAIN KEY FACTORS

With the overall objective of adopting EU fishery standards in Turkey, the project “Fisheries: implementing sustainable networks between Turkey and Italy” funded by the EU technically supported fishers from the area of Seferihisar in the establishment management and marketing of their own brand. Over 50 fishers were trained on practical and technical issues on production and marketing standards.

Final and more concrete result was the opening of a fish market point directly managed by the fishermen of Seferihisar dedicated to preservation of the quality of local fish from the net to the dishes, improving product quality standards and strengthening environmental-friendly fishing techniques.
ASIA (EUROPE) 29 - TURKEY

MEDITERRANEAN CONSERVATION SOCIETY, SGP (THE SMALL GRANTS PROGRAMME) COMDEKS, NATIONAL SYSTEM OF MARINE PROTECTED AREAS VEHBI KOÇ FOUNDATION

Awareness programs of the fishery-based culture (schools, support to consumers, festivals)
SMALL FISHERIES - MULTI-FUNCTIONALITY SURVEY

The purpose of this survey is to collect international experiences which have been undertaken with the aim to introduce the concept of Multi-Functionality in small scale fisheries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Turkey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location/Region</td>
<td>Bozburun, district of Muğla</td>
</tr>
<tr>
<td>Year</td>
<td>2012</td>
</tr>
<tr>
<td>Sector/s involved in the Fisheries Multi-Functionality related activities</td>
<td>Awareness programs of the fishery-based culture (schools, support to consumers, festivals)</td>
</tr>
<tr>
<td>Actors involved in the implementation</td>
<td>Mediterranean Conservation Society, • SGP (The Small Grants Programme)COMDEKS, • National System of Marine Protected Areas • Vehbi Koç Foundation</td>
</tr>
<tr>
<td>Direct Beneficiaries</td>
<td>Fisherwomen of Datça-Bozburun Peninsula</td>
</tr>
<tr>
<td>Still running?</td>
<td>Yes ☑ No ✗</td>
</tr>
</tbody>
</table>

BRIEF DESCRIPTION OF THE ACTIVITIES RELATED TO FISHERIES MULTI-FUNCTIONALITY

There are no official records on the active involvement of women in Turkish fisheries nor do governmental institutions acknowledge their participation. The project “Fisherwomen of Aegean: Datça-Bozburun Peninsula”, carried out in 2013-14, provided training and materials to 70 fisherwomen in the area of Datça-Bozburun. The project aimed to inform them of best practices for sustainable fisheries, on the valorisation of fisherwomen’s role in the culture of the artisanal fisheries in DatçaBozburun, and on the basic issues connected to the implementation of fishing activities in Marine Protected Areas.

Fisherwomen were also introduced to the role of fishing cooperatives and their importance and had the chance to share experiences and habits with the Italian Fisherwomen’s Cooperative, Bio & Mare - La Pesca Rosa.
MAIN CONSTRAINTS AND OUTLOOKS FOR THE IMPLEMENTATION OF THE FISHERIES MULTI-FUNCTIONALITY EXPERIENCES

Although fisherwomen truly fulfil all functions that the profession requires (both pre- and post-harvest phases), results of the study demonstrate that they are ignored in pertinent policies. The study suggests that gender-oriented data should also be collected; the contribution of fisherwomen to the fisheries sector should be considered and included in related policies. NGOs should continue to support and conduct projects in order to improve and empower fisherwomen and artisanal fisheries.

(Source: Huriye Göncüoğlu, Vahdet Ünal, Zafer Kızılkaya - Supporting Fisherwomen in Small-Scale Fisheries in Turkey. Presented at the GFCM-First Regional Symposium on sustainable small-scale fisheries, 2013)

Is it a success story?  X Yes  □ No
Turkish fisherwomen mending nets.

Banner of the project “Fisherwomen of Aegean: Datça-Bozburun Peninsula”.
MAIN KEY FACTORS

The project “Fisherwomen of Aegean: Datça-Bozburun Peninsula”, carried out in 2013-14, provided training and materials to 70 fisherwomen in the area of Datça-Bozburun. The project aimed to inform them of best practices for sustainable fisheries, on the valorisation of fisherwomen’s role in the culture of the artisanal fisheries in Datça-Bozburun, and on the basic issues connected to the implementation of fishing activities in Marine Protected Areas.

Fisherwomen were also introduced to the role of fishing cooperatives. Outcomes of this project suggest the need of gender-oriented data collection to better assess and manage fisherwomen’s contribution in the Turkish fisheries sector.
DISCUSSIONS AND CONCLUSIONS

As a result of the experiences shown in the present document, we believe that small scale fishers cannot be considered as mere collectors of proteins meant for the consumption of human beings. They were given the responsibility to preserve and continue an ancient profession that supported coastal communities for centuries while preserving the balance of marine ecosystems. Fishers have been struggling with hard conditions and danger, fatigue and poor incomes. Today, the whole sector is in danger.

Multi-functionality in SSF sector can respond to the declining profitability and falling employment in the whole fishery sector. In the EU only, in the period 2002/2003 fishery sector employed approximately 421,000 persons. Since then, the number of fishermen has decreased by 4-5% per year, resulting in more than 200,000 fishermen being left in Europe⁴. Whereas unemployment is rising across the Mediterranean and youth unemployment is dramatically increasing in some countries, replacement for retiring artisanal fishing crews is an issue especially on the northern shores. For some youngsters, SSF along with related activities of diversification and reconversion may become a way out of the severe social and economic crises hitting harshly most countries across the basin. Due to their familiarity with new technologies and – generally speaking – to their higher educational level than older age groups, young generations can play a leading role in this process. Studies reveal that fishing-tourism employees need education on foreign languages, marketing and informatics, while “itti-tourism”⁵ employees require education on fish biology and traditional culture and cooking⁶.

Options of diversification are relevant in different sectors, offering fishers, their families and other members of fishing communities the possibility to create additional sources of employment and income while providing valuable services for

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⁵ Form of tourism related to lodging in fishers’ home and the provision of food services based on typical seafood products.
⁶ Enhancing small-scale fisheries value chains in the Mediterranean and Black Sea. Thematic session IV – part 2 prepared by Giulio Malorgio, Luca Mulazzani and CIHEAM Bari. First Regional Symposium on Sustainable Small-Scale Fisheries in the Mediterranean and Black Sea. 27–30 November 2013
coastal communities. Furthermore, the diversification of professional activities allows fishers to better resist to variations affecting marine ecosystem and its resources, better balance supply and demand by offering different products or services.
ACKNOWLEDGMENTS

Many persons from different Countries and professional backgrounds have supported the conception of the report and the work of data collection. I wish to thank for their valuable support: all the fishers interviewed for their patience and kindness, Dahej Mokdad, Samir Majdalani, Imad Lahoud, Samer Jawhar, Charbel Nammour, Massimo Zuccaro, Enrico Azzone, Daniele Galli, Roberto Ugolini, George Tserpes, Giuseppe Maffei, Houssam Hamza, Laura Cicinelli, Vahdet Ünal, Fondazione Angelo Vassallo Sindaco Pescatore, Civil Campaign to Protect the Dalieh of Raouche.