



Pick The Alien

iSea

Environmental Organisation for the
preservation of the aquatic ecosystems



Final report
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www.isea.com.gr



Suggested reference

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Alien species in Greece



About 15 invasive alien species of fisheries concern can be found in the Aegean Sea, affecting coastal fisheries, practiced by nets, bottom long-lines and purse-seiners fishing. Several of these species are of high commercial value (e.g., *Siganus spp.*, *Upeneus spp.* etc.), which consist of important fishery resources in Mediterranean areas that are abundant, however the majority of them are of minor

commercial value in Greece. This is happening due to a number of factors, but primarily due to the fact that the Greek consumers and retailers are not familiar with the new species.

The project



[Pick the Alien](#), is one of the main projects of iSea that falls under the scope of Human and Aquatic Ecosystems pillar. Through the project, iSea aimed to promote the responsible consumption of seafood with a special focus on promoting the consumption of edible alien species. The project's actions included raising awareness about the negative effects of the presence of alien species among all the stakeholders involved in the seafood market chain and the promotion of their consumption as a mitigation measure to the increase

and expansion of alien species in Greece. In addition, it included actions that will set the baseline of an alliance between small scale fishers, retailers, chefs/restaurants and consumers locally and nationally that will understand, share and respect the same values and notions of sustainability and marine protection. The main objectives of the project were:

- (i) the replacement of high trophic level species with more responsible seafood products, including edible alien species,
- (ii) the creation of supply chains and pioneer alliance that benefit the local economies and promote the responsible seafood consumption, and

- (iii) the reporting of alien species to our citizen science project and collaboration with the local ambassadors that host the sampling toolkits in order to collect samples from alien species

Collaborators

iSea always aims in building long lasting collaborations with respectable scientists and civil society representatives from all over the world and the Mediterranean Sea. For this specific project, apart from the contribution of Ionian Environment Foundation in the design and implementation of every project's step, iSea collaborated with established scientists in the field of fisheries research and lionfish invasion and local foundations in the different areas of interest. The two main scientific advisors for the construction and deployment of pilot lionfish traps were the Department of Animal Production, Fisheries and Aquaculture of the University of Patras and the University of Plymouth.



The mission of the [University of Plymouth](#) is to advance sustainable use of the marine environment through their systems-thinking approach to research, education and innovation. With one of the largest marine and maritime portfolios of any institution in Europe, the university have a long-held and outstanding international reputation for conducting world-leading, transdisciplinary research. Through this, with partners and collaborators, the university is developing and optimising positive interventions in response to global challenges, while training the scientists and business leaders of the future. The university have joined forces with the Marine Biological Association and Plymouth Marine Laboratory to launch [Marine Research Plymouth](#). Collectively, it hosts the largest number of marine scientists in any UK city and establish Plymouth as an international centre of excellence for marine research.



[The University of Patras](#) is the leading University in the Greek Ionian Sea (city of Patras), hosts 35 Departments with Undergraduate Study Programs, offers 49 Postgraduate Study Programs and is involving, approximately, 1600 faculty members and researchers with an activity of about 23.7 MEuro research funds. The Department of Animal Science, Fisheries & Aquaculture, in particular, has extensive experience in impacts on marine ecosystems triggered by fisheries and anthropogenic activities.



Additionally, to their financial contribution, the Ionian Environment Foundation, the Argolic Environment Foundation, the Blue Marine Foundation and the Cyclades Preservation Fund, also contributed to the coordination of the project in the Ionian, the Argolic, Crete and the Cyclades Islands.



The AEF was established in 2021 to help the communities of the Argolic Gulf become leaders in the transition to sustainability, protecting and regenerating key marine and terrestrial ecosystems and improving the relationship between humans and nature.



**BLUE MARINE
FOUNDATION**

The Blue Marine is a UK based charity dedicated to restoring the ocean to health by tackling overfishing, one of the world's biggest environmental problems. This dynamic charity is working all over the world to protect huge areas of ocean and restore marine biodiversity. In the coming decade Blue Marine aims to see at least 30 per cent of the ocean protected, and the other 70 per cent sustainably managed.



The Cyclades Preservation Fund is a Greek registered nonprofit association set up initially as a UK Charity to support sustainable initiatives and to promote the preservation of the exceptional beauty and natural value of the Cyclades.

Another scientific collaborator on Pick the Alien project on Citizen Science and stakeholder's participation in minimizing the impact of invasive species in the Mediterranean Sea was MER-Marine and Environmental Research Lab.



MER is an established SME composed of highly qualified, motivated, young and experienced scientists that offers specialized research and consulting marine and environmental services.

For the communication campaign and all the materials produced in the context of the project, apart from the internal iSea multimedia designer, an external collaborator was hired.



[Slab](#) is an awarded communication design and printing office, based in Thessaloniki / Greece. It provides design services and solutions, paying attention to detail from the first sketch to the final product. iSea is collaborating with the office in the context of the project.

Main Activities

The project was implemented at a national level this year, with manifold approach and numerous actions. All the actions were framed by a communication campaign and the creation of informative materials. In the Ionian islands informative and gastronomy events were implemented at the islands of Corfu, Paxoi, Zakynthos and Kefalonia and informative seminars also included the islands of Lefkas and Ithaka.

During all the informative events, the participants were informed about the invasive alien species found in each area, their impact, possible measures to mitigate their expansion and abundance, as well as the ecological value of apex predators, the threats they face and examples of responsible seafood consumption. In addition, the participants were informed about the results and the goals of the project, as well as about the alliance the project aims to create among the stakeholders involved in the supply chain of seafood. After the presentation of all the information above, a roundtable among all the participants followed. During the roundtables, active involvement of the participants was noted during discussions on the challenges of promoting the entrance of invasive alien species in the supply chain.

On the other hand, creative ideas on ways to uplift the value of invasive alien species, familiarize the public with such species in order to increase their demand, but also ideas for addressing issues that arise during the efforts of promoting their consumption were thoroughly discussed during the informative events. In addition, apart from the presentation, project materials were distributed among the public according to their profession and needs, i.e. posters with the existing



invasive alien species in each area for the fishers and recipes of invasive alien species for the chefs, for instance.

During the gastronomy events, the participants were informed about alien species, with emphasis on the species prepared for the occasion. iSea representatives were also asking the participants' opinion and reactions on the tasting value of the recipes and alien species, as feedback for the chance of introducing them in their diet. An impressions book was available during the events where participants could write down their opinion on the initiative and what they have tasted. In addition, material created in the context of the project like more recipes on the species prepared for the occasion was distributed among the attendees.

Additionally, through structured, in person and online interviews with professional and recreational fishers in all areas of interest, the social and economic interactions, ecological impacts, knowledge and perception of fishers for the most common alien species in each area was accessed.

Relevant research has been implemented in Cyprus during 2020 and you can find the publication [here](#).

Finally, a technical report that identifies all the types of key stakeholders in national, regional and local scale and provide insights on how edible invasive species can successfully enter the Greek market is under study.



Picture 1: People trying the taste value of alien species in Paxoi Island.

Implemented actions in the Ionian Islands

The project started implementing actions in the Ionian Islands on February 2022 and commenced on December 2022. Bellow you can see the results of the project regarding the actions along with the results of the communication plan. Additionally, you will find a section about the next steps, conclusions, constrains and the financial report of the project.



26th February & 19th-26th May & 19 December 2022

6 informative events

4 gastronomy events

7 participant chefs

More than 450 people joining



Picture 2: People trying the taste value of alien species in Paxoi Island.

It was the second year that the project visited the Ionian islands. In total 9 events took place in the islands of Corfu, Paxoi, Zakynthos and Kefalonia, one informative and one gastronomy in each island, with the exception of Corfu where an informative seminar was also held in February. The final informative seminar was conducted online on the 19th of December and was mainly focused on the targeted stakeholders of Ithaka and Lefkas islands. The actions are described in more detail below.

Corfu



Two informative events were held at the [Municipal and Regional Theater of Corfu \(DIPETHEK\)](#). The first event was conducted on 26th of February and was mainly addressed to the catering industry of the island, in collaboration with the [Municipality of Central Corfu and Diapontia islands](#) and the [Chef's Club of Corfu](#). In total 10 people attended the event including representatives from the municipality, the catering industry, the president of the street market and local environmental organisations. The second event took place on 20th of May, preceding the gastronomic event, and was mainly addressed to the fishing and catering community. However, despite our constant efforts towards the fishing and catering community no representatives attended the second seminar.



The gastronomic event was conducted in the afternoon on the 20th of May at the [NAOK Azur](#) sailing club. More than 70 people attended the event and tasted the recipes created by 1 local restaurant and 1 hotel, namely [Pomo d' Oro Corfu](#) and [Corfu Palace Hotel](#) respectively. The chefs created 3 different recipes using as

main ingredients lionfish and blue crabs.

Paxoi



Both the informative and gastronomic events were conducted on the 21st of May at cafe "Theofrastos" in Lakka.

In total 15 people attended the informative event including representatives from the fishing and catering community, a local volunteer organisation and interested citizens.



During the gastronomy event, more than 70 people attended and tried the taste value of the invasive blue crabs and lionfish through the recipes created by the chef of the restaurant [La](#)

[Rosa di Paxos](#) and the chefs Adriana Apergi and Spyridoula Petrou.

Zakynthos

The events in Zakynthos took place on the 23rd of May in collaboration with the [Municipality of Zakynthos](#).



The informative event was conducted at the Cultural Center of the Municipality of Zakynthos at Solomos square. In total 14 people attended the event including recreational fisher, representative from the [Management Unit of Zakynthos and Ainos National Parks and Protected Areas of the Ionian islands](#), professors from the [Department of Environment of the Ionian University](#), students of the department and the environmental organization, [ARCHELON](#).



The gastronomic event was held at the same central square, i.e. Solomos square, and more than 130 people attended. They all had the chance to try from the 3 different recipes created from the team of chefs of [Movida restaurant](#) and from the executive chef of the hotel [Atlantica Eleon Grand Resort](#).

Kefalonia



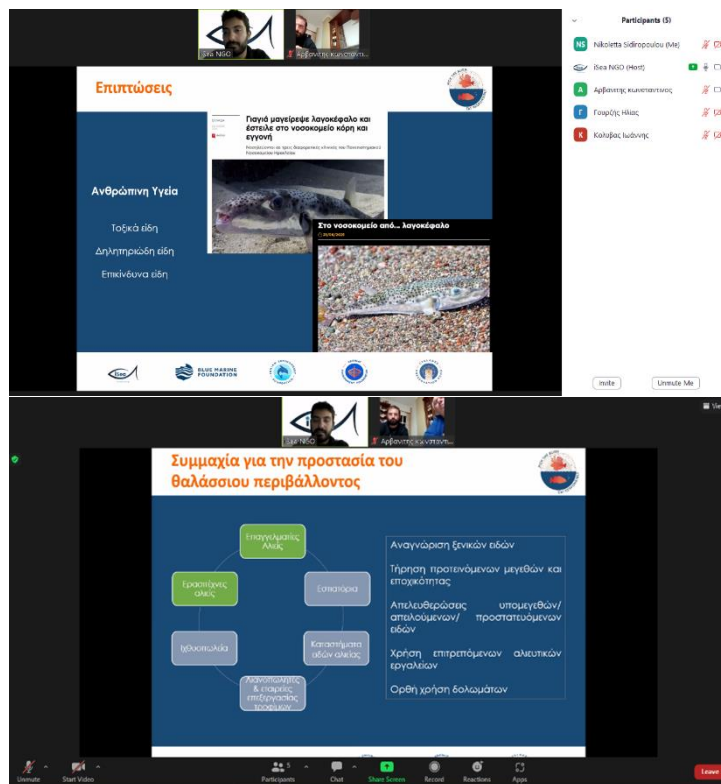
The informative and gastronomic events of the Ionian islands were completed in Argostoli on the 25th of May.

During the informative event 22 people were informed about alien species and their impacts, including representatives from the [Municipality of Argostoli](#), the Management Unit of Ainos National Park, professors and students from the [Departments of Environment and Food Science and Technology of the Ionian University](#).

The gastronomic event took place at plateia Vallianou in Argostoli where more than 110 people attended. All the attendees had the chance to try the 3 recipes created by

the chef of [Kyani Akti](#) using as basic ingredients the alien species lionfish and blue crabs.

Online Seminar



The final event of the project was the online seminar which was conducted on the 19th of December. It was mainly focused on the professional fishers of Lefkas and Ithaca islands. During the seminar the alien species present in the Ionian Sea, their impact on the marine ecosystem, possible mitigation measures, the role and importance of apex predators and the creation of the alliance were thoroughly discussed.

However, despite our constant efforts both by personal phone calls to fishers' associations and fishers, posts on social media

and a press release, there was very low interest from the targeted stakeholders. One major limiting factor was the advanced age of the fishers in both islands. To overcome the issue, we have suggested to organize the event online in a café where they could all gather or come in contact with their younger relatives to explain and send the link for the seminar but still the interest remained very low.

In total 4 professional fishers participated at the seminar and an active discussion followed the event.

Alliance

To set the context of the Alliance among the stakeholders of the seafood market chain the stakeholder targeted groups were mapped and the criteria for the alliance's members were decided.

The targeted stakeholder groups follow:



- Professional fishers
- Recreational fishers
- Fishmongers
- Fishing tackle stores
- Seafood processing companies
- Restaurants
- Chefs
- Hotels

Since iSea, is not an authority responsible for controlling the punctuality of the alliance members towards the protection of the marine environment, as criteria for entering and remaining a member of the alliance was set the attendance at educational seminars. The seminars will include manifold topics towards the protection of the marine environment starting with the promotion of targeting invasive alien species and the exclusion of targeting apex predators, they will also include: Catch and release practices, fishing gear selection, activities' impact on Marine Protected Areas, anchorage impact on habitats, smallest permitted sizes of fish, responsible seasons for different species consumption, protected species, the legal framework on different relevant issues.

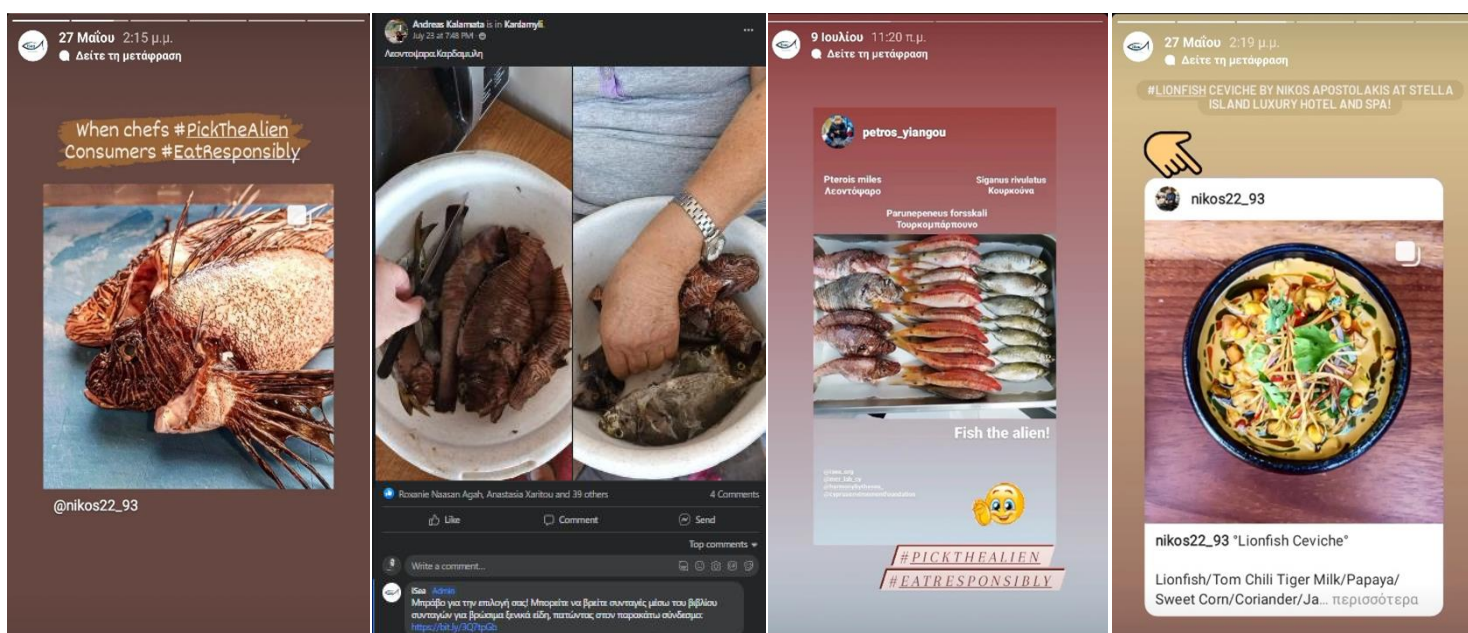
During the actions implemented in the Ionian Islands, all attendees that belong to the targeted stakeholder groups were informed about Pick the Alien Alliance and its goals. In addition, all local people and businesses belonging to the aforementioned groups were mapped in order to get informed and have the chance to join the alliance. On the occasion of the events in the Ionian Islands, iSea met and contacted local representatives, like the ones from the fishing community, enriching its network of collaborators and potential members of the alliance.

The seminars will be conducted through an online MOOC (Massive Open Online Courses) platform. The platform will contain courses that someone will have to follow and successfully pass some "exams" to join the alliance. The attendees that will succeed in the "exams" will get a certificate and will join the interactive map of the project.

Communication

Ionian Environment Foundation was referred in all posts published by iSea in the context of Pick the Alien Project. In addition, it was referred and its logo is included in all the materials created in the context of the project.

1st step: In total 45 posts¹ were published in all the social media of iSea (Facebook, Instagram, Twitter) (Table 1, Table 2, Table 3), 8 Press Releases were sent to local and national news offices, and they were reproduced from news blogs and sites (Table 6), and 8 interviews were given to local radio and television stations. Additionally, many chefs and fishers have tagged iSea as they are preparing dishes or fishing alien species (Picture 3).



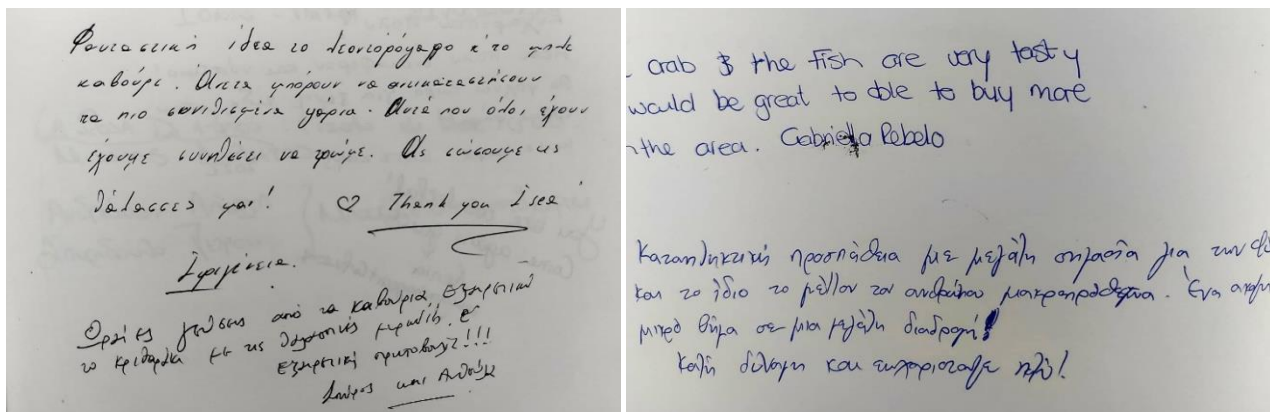
Picture 3: Some of the tags of iSea from chefs and people that fished and/or prepared dishes with alien species.

Also, the recipes eBook will be updated with more than 20 new recipes. Finally, during the gastronomy events, we had also a guestbook where all the attendees could write down their impressions (Picture 4). Some of the quotes they have written are the following:

"Lionfish and blue crab was a fantastic idea. They can easily replace the most common fish we are used to eat. Let's save our seas! Thank you iSea" Ifigeneia, Corfu, Greece

¹ Posts and articles/interviews that refer only to the Ionian Islands or are national are highlighted in bold

"Amazing effort with great significance for nature and our future in the long term. Another small step in a long journey. Good luck and thank you very much"
Unknown, Argostoli, Greece



Picture 4: The attendees of the gastronomy events were writing down their impressions on the project and alien species taste value in a dedicated book.

Post code	Date	Reach
Post 1	05/04/2022	11,769
Post 2	08/04/2022	16,155
Post 3	13/04/2022	6,399
Post 4	15/04/2022	6,957
Post 5	19/04/2022	8,823
Post 6	28/04/2022	2,376
Post 7	05/05/2022	3,067
Post 8	10/05/2022	9,225
Post 9	17/05/2022	5,285
Post 10	20/05/2022	16,471
Post 11	03/06/2022	12,445
Post 12	17/06/2022	3,145
Post 13	20/06/2022	3,206
Post 14	23/06/2022	3,264
Post 15	8/7/2022	39,925
Post 16	18/7/2022	4,275
Post 17	16/9/2022	5,258
Post 18	21/9/2022	2,559
Post 19	17/10/2022	10,363
Post 20	21/10/2022	2,900
Post 21	26/10/2022	4,082
Post 22	02/11/2022	1,599
Post 23	09/11/2022	10,091
Post 24	11/11/2022	5,164
Post 25	16/11/2022	3,216
Post 26	18/11/2022	6,476
Post 27	22/11/2022	9,615
Post 28	01/12/2022	3,840
Post 29	07/12/2022	9,460
Post 30	14/12/2022	2,389
Post 31	21/12/2022	3,255

Table 1: Posts on Facebook

Post code	Date	Reach
Post 1	5/4/2022	498
Post 2	8/4/2022	555
Post 3	13/4/2022	654
Post 4	15/4/2022	630
Post 5	18/4/2022	681
Post 6	28/4/2022	628
Post 7	4/5/2022	571
Post 8	10/5/2022	975
Post 9	17/5/2022	488
Post 10	20/5/2022	486
Post 11	3/6/2022	717
Post 12	17/6/2022	497
Post 13	20/6/2022	616
Post 14	23/6/2022	601
Post 15	8/7/2022	518
Post 16	18/7/2022	229
Post 17	16/9/2022	714
Post 18	21/9/2022	343
Post 19	17/10/2022	531
Post 20	20/10/2022	1103
Post 21	21/10/2022	573
Post 22	27/10/2022	608
Post 23	2/11/2022	444
Post 24	5/11/2022	494
Post 25	9/11/2022	470
Post 26	11/11/2022	441
Post 27	16/11/2022	449
Post 28	18/11/2022	517
Post 29	22/11/2022	497
Post 30	30/11/2022	377
Post 31	07/12/2022	290
Post 32	14/12/2022	281

Table 2: Posts on Instagram

Post code	Date	Impressions
Post 1	5/4/2022	794
Post 2	8/4/2022	784
Post 3	12/4/2022	611

Post 4	13/4/2022	418
Post 5	13/4/2022	156
Post 6	14/4/2022	111
Post 7	15/4/2022	225
Post 8	16/4/2022	185
Post 9	16/4/2022	186
Post 10	16/4/2022	160
Post 11	17/4/2022	249
Post 12	17/4/2022	175
Post 13	17/4/2022	204
Post 14	17/4/2022	1.27
Post 15	18/4/2022	184
Post 16	19/4/2022	830
Post 17	19/4/2022	570
Post 18	28/4/2022	257
Post 19	30/4/2022	447
Post 20	4/5/2022	209
Post 21	5/5/2022	129
Post 22	5/5/2022	695
Post 23	9/5/2022	427
Post 24	10/5/2022	163
Post 25	10/5/2022	314
Post 26	13/5/2022	125
Post 27	13/5/2022	130
Post 28	13/5/2022	87
Post 29	15/5/2022	366
Post 30	15/5/2022	402
Post 31	17/5/2022	195
Post 32	17/5/2022	114
Post 33	20/5/2022	229
Post 34	3/6/2022	191
Post 35	20/6/2022	243
Post 36	23/6/2022	536
Post 37	8/7/2022	305
Post 38	18/7/2022	237
Post 39	16/9/2022	227
Post 40	21/9/2022	179
Post 41	20/10/2022	534
Post 42	21/10/2022	1,385

Post 43	27/10/2022	937
Post 44	02/11/2022	162
Post 45	09/11/2022	188
Post 46	11/11/2022	630
Post 47	16/11/2022	262
Post 48	18/11/2022	145
Post 49	22/11/2022	480
Post 50	30/11/2022	271
Post 51	07/12/2022	241
Post 52	14/12/2022	334

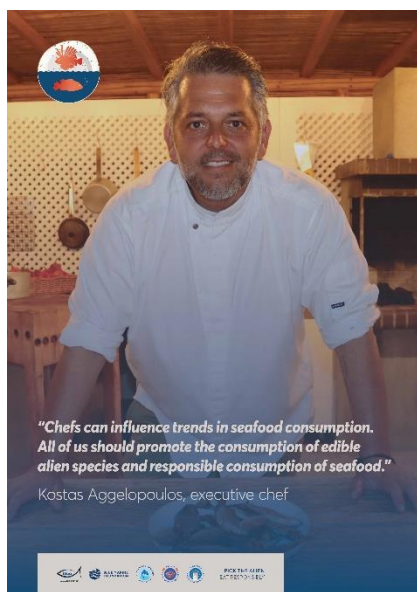
Table 3: Posts on Twitter

News Office	Region	Link	Date
Vories Sporades	Sporades	Link	5/4/2022
Paros News	Cyclades	Link	5/4/2022
Koini Gnomi	Cyclades	Link	6/4/2022
Nea tis Santorinis	Cyclades	Link	11/4/2022
Municipality of Amorgos	Cyclades	Link	13/4/2022
Naxos Press	Cyclades	Link	14/4/2022
Naxos Times	Cyclades	Link	14/4/2022
Cyclades Voice	Cyclades	Link	14/4/2022
Cyclades24News	Cyclades	Link	14/4/2022
Green Agenda	National	Link	18/4/2022
Voria.gr	National	Link	18/4/2022
Kanali 1	Athens	Link	27/4/2022
Proto Thema	Athens	Link	28/4/2022
104FM	Crete	Link	10/5/2022
Municipality of Agios Nikolaos	Crete	Link	10/5/2022
Fonien.gr	Crete	Link	11/5/2022
Anatoli online	Crete	Link	11/5/2022
Lato News	Crete	Link	12/5/2022
Anatoli online	Crete	Link	15/5/2022
Efimerida Anatoli	Crete	Link	15/5/2022
Enimerosi	Ionian Sea	Link	17/5/2022
Corfu Press	Ionian Sea	Link	18/5/2022
CorfuLand	Ionian Sea	Link	18/5/2022
Kefalonia Life	Ionian Sea	Link	18/5/2022
ImeraZante	Ionian Sea	Link	18/5/2022
eKefalonia	Ionian Sea	Link	18/5/2022
KerkyraSimera	Ionian Sea	Link	19/5/2022

ZanteTimes	Ionian Sea	Link	23/5/2022
Department of Food Science and Technology	Ionian Sea	Link	25/5/2022
eKefalonia	Ionian Sea	Link	27/5/2022
Argolikes Eidiseis	Argolic Gulf	Link 1	20/6/2022
H Foni tis Hydras	Argolic Gulf	Link 2	20/6/2022
Hydra Municipality	Argolic Gulf	Link 3	20/6/2022
Arena News	Argolic Gulf	Link 6	20/6/2022
SaronicMagazine	Argolic Gulf	Link 8	20/6/2022
Hydra Island	Argolic Gulf	Link 9	20/6/2022
GRTimes	Argolic Gulf	Link 4	21/6/2022
Taxidromos.gr	Argolic Gulf	Link 5	21/6/2022
NewsBase	Argolic Gulf	Link 7	21/6/2022
Kathimerini	National	Link	12/7/2022
Argolikes Eidiseis	Argolic Gulf	Link	13/9/2022
Anagnostis	Argolic Gulf	Link	13/9/2022
Nafplio24.gr	Argolic Gulf	Link	14/9/2022
Argolidatv.gr	Argolic Gulf	Link	14/9/2022
Argolida Magazine	Argolic Gulf	Link	15/9/2022
Municipal Organization for Culture-Environment-Sports-DOPPAT	Argolic Gulf	Link	15/9/2022
Anagnostis	Argolic Gulf	Link	18/9/2022
Argolikes Eidiseis	Argolic Gulf	Link	21/9/2022
Nafplio24.gr	Argolic Gulf	Link	22/9/2022
Anagnostis	Argolic Gulf	Link	22/9/2022
Dimokratiki	Dodecanese	Link	17/10/2022
To Vima tis Ko	Dodecanese	Link	17/10/2022
Proodos	Dodecanese	Link	17/10/2022
Proti Ekdosi	Dodecanese	Link	17/10/2022
Sky Rodos	Dodecanese	Link	17/10/2022
Real Voice News	Dodecanese	Link	18/10/2022
Kosnews2	Dodecanese	Link	20/10/2022
Kos Tv	Dodecanese	Link	20/10/2022
Ekfrasi97	Dodecanese	Link	21/10/2022
Rhodes	Dodecanese	Link	22/10/2022
Nea Santorinis	Cyclades	Link	15/10/2022
Cyclades Voice	Cyclades	Link	17/10/2022
Atlantea	Cyclades	Link	17/10/2022
Santonews	Cyclades	Link	20/10/2022
Koini Gnomi	Cyclades	Link	21/10/2022
Serifos	Cyclades	Link	21/10/2022

Table 4: Articles in press

2nd step: Regarding the second step of the communication plan and the representatives of different key stakeholders to act as ambassadors of the project, the people selected follow: Kostas Aggelopoulos and Alexandros Untila were the representatives from the side of the chefs community, Dr. Stelios Katsanevakis from the side of the scientific community, Georgios Tyrikos Ergas from the side of the recreational fishers community, Apostolos Elissaios from the side of small-scale fishers community, Apostolis Chartabilas from the side of the fishmongers community, Nikolaos Mittas (president of New Consumers Institute of Greece) from the side of the consumers community and Anthi Arvaniti from the side of the fishing tourism sector. The campaign launched on November, however, there has been increased interest from old and new partners in becoming ambassadors of the project, as they are interested in further supporting its cause, so there may be more to come and represent different sectors or ways of tackling the issue of alien species.



3rd step: In this step of the campaign, we aimed to familiarize the public with the “view” of the alien species in three different environments, the sea, the market, and the restaurant. For this purpose, the campaign matched edible alien species with some very well-known native species which consumption is not considered as responsible for different reasons and promoted their replacement with invasive alien species. You can find the matches of the species in the following table (Table 5). Additionally, a responsible seafood consumption guide in both Greek

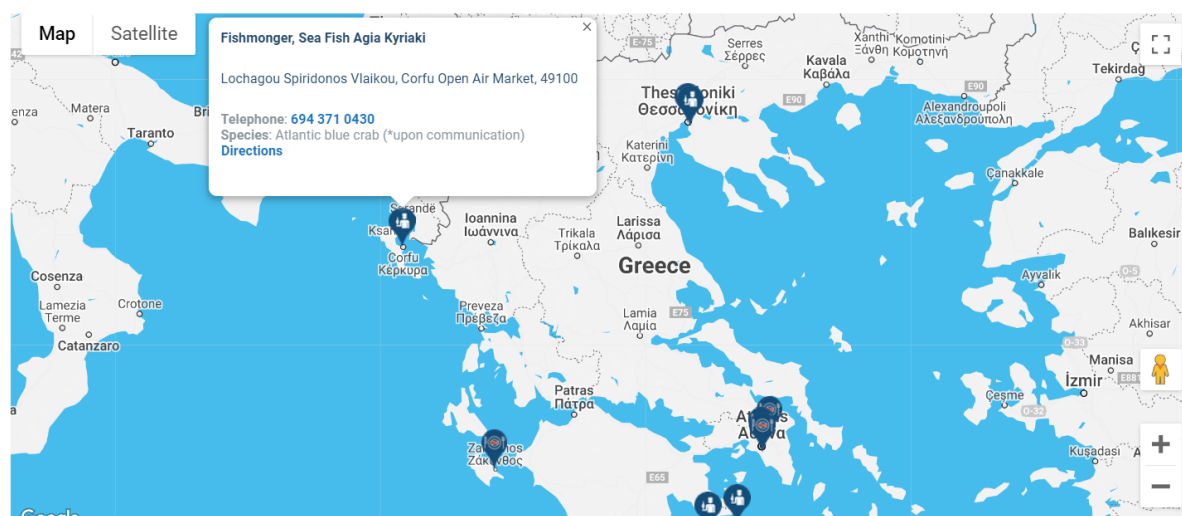


Picture 5: The responsible seafood consumption guide

Alien Species	Marine Environment	Fish Market Environment	Restaurant environment
Lionfish (<i>Pterois miles</i>)	Groupers (<i>Epinephelus</i> sp)	Scorpionfish (<i>Scorpaena</i> sp)	Groupers (<i>Epinephelus</i> sp)
Blue crab (<i>Callinectes sapidus</i> & <i>Portunus segnis</i>)	Native crabs	Octopus (<i>Octopus vulgaris</i>)	Lobster (<i>Palinurus elephas</i>)
Red sea goatfish (<i>Parupeneus forsskali</i>)	Surmullet (<i>Mullus surmuletus</i>)	Red mullet (<i>Mullus barbatus</i>)	Surmullet (<i>Mullus surmuletus</i>)
Trumpetfish (<i>Fistularia commersonii</i>)	Seabass (<i>Dicentrarchus labrax</i>)	Needlefish (<i>Belone</i> sp.)	European eel (<i>Anguilla anguilla</i>)
Spinefoots (<i>Siganus</i> sp.)	Salema porgy (<i>Sarpa salpa</i>)	Annular seabream (<i>Diplodus annularis</i>)	White seabream (<i>Diplodus sargus</i>)

Table 5: Alien species matches with native species for the 3rd step of the campaign

Discover restaurants, fishmongers and fishers where you can find edible alien species!



Picture 6: Interactive map with restaurants, fishers, fishmongers throughout Greece for edible alien species

Another major step for the communication campaign was the creation of an interactive map, where the consumers can discover restaurants, fishers and fishmongers throughout Greece that sell edible alien species according of course with their availability. All stakeholders that have been included in the map have been contacted personally in order to disclose their personal data (i.e., phone number).

Next steps

The interactive map will continue to get updated regularly with new restaurants, fishers and fishmongers who promote and sell edible alien species.

The 3rd step of the communications campaign, i.e., the familiarization of the consumers with edible alien species through the different steps of the supply chain, will launch later in the season in order to coincide with major celebration/festivals (e.g. Christian season of fasting) and to be more close in the summer period that seafood consumption is higher.

Additionally, the communication, discussions and seminars required for the establishment of the alliance will continue.

Pomo d'Oro 3€ per person

Homemade sour dough bread

Sea 22€

Ravioli stuffed with monkfish, mussels and their jus

Sunday 20€

Ravioli stuffed with lamb ragu, bechamel crème, lamb jus, gruyere chips

Kobitsi 18€

Fusili, eggplant cream, mushrooms, masticha, pine oil, toasted pine nuts

Gerekos island 22€

Spaghetti chitarra, blue crab, zucchini, baked tomato jus, saffron

Picture 7: Blue crab in the menu of Pomo d' Oro restaurant in Corfu

Constraints

The main constraints faced during the project were the following

- The organization of the gastronomy events was more challenging than expected taking into account that May is already in the pick of the tourism season in the Ionian Islands, which is a recurring issue from previous years. The availability of chefs and restaurants but also the reduced personnel in general (a problem that the tourism industry is currently facing in Greece) for the conduction of gastronomy events was very low, due to unexpected increased touristic activity. To face the issue, the project team communicated with all the collaborating restaurants/chefs from previous years, but also the majority of restaurants, taverns, catering businesses and hotels of the areas of interest.
- The difficulty in providing edible alien species to the chefs especially early in the season (i.e. May). Finding the species locally was very hard, due to the bad weather conditions and the low water temperatures of this year and thus, the targeted alien species, such as spinefoots, lionfish and blue crabs were not found in shallow and/or coastal waters. However, with constant communication with local fishers, their associations and representative form the fishmonger community, we managed to overcome this issue.
- In some areas, despite the systematic efforts and the personal contacts to attract them, very few or no representatives from the fishing or the catering community attended the seminar. To cope with this issue, the project team contacted and informed the relevant associations and their representatives. As a result, many of them manage to attend the gastronomy events which are more attractive, tasted the recipes and got informed about the project and the issue of invasive alien species. In all such cases, visits in the ports, the fish markets, the restaurants and other places where targeted stakeholders usually gather followed to ensure that all stakeholders were informed about the project and its actions.

Conclusions

During the events and our discussions with the attendees, many common misconceptions among the professionals were revealed. For example, the strong belief that the toxic *Lagocephalus spp* can be consumed as fugu dish is still promoted among different professional, but also the Mass Media and the Press.

On the other hand, the local community showed a great interest on alien species, looking for possible opportunities to find them in their local markets. In addition, in some cases the local community was aware about the existence of invasive alien species, but only positive to taste them after being informed about the species.

In addition, in some cases, there are restaurants looking for edible alien species, but due to the lack of communication between the different sectors, they are not aware that local fishers catch them. As a result, local fishers, avoid, discard or self-consume them.

Furthermore, it was not before the events when different professionals were informed and realized that some species that they target or serve, such as groupers and snappers, are threatened, but of high ecological value and should be protected.

Most of the professionals were skeptical towards spinefoots, which they avoid due to the time-consuming procedure to either remove them from their nets or cook them. In some cases, fishers have even increased the nets "eyes" in order to avoid catching them. An interesting idea that came up during the discussions of the informative events was to connect the fishers with a profitable market opportunity for exporting them. However, in areas where the export of spinefoots overseas (i.e. Cyprus) was already tested did not thrive as it was not economically viable and advantageous for the local fishers. Therefore, our main focus shifted more towards the development of a domestic market, from areas with high alien species population density towards major consumer centers.

Additionally, some species have already entered the market (like blue crabs in Corfu and Zakynthos restaurants or the fish market in Corfu), although the regional production can support even higher demands by the catering industry.

On the other hand, stakeholders from the catering community were skeptical about adding edible invasive species to their menu, as consumers are not familiar with them resulting in low consumption and the fact that some of the alien species such as spinefoots and blue crab require increased working hours for the preparation of the dishes. Thus, suggestions aiming to familiarize the consumers with the edible invasive species and other responsible seafood choices and ways to overcome the extended labor were thoroughly discussed among the participants.



Picture 8: Fillets of spinefoots

Since the beginning of the project we were contacted, either directly or via social platforms, from people such as consumers, chefs and restaurant owners that have exhibited a great interest for the implementation of relevant actions in their regions in order to get informed about invasive alien species and responsible consumption of seafood but also try the taste value of the invaders.



Picture 9: People gathered to taste edible alien species in Athens gastronomy event

Financial report

Regarding the expenses of the project, the following table shows the costs incurred in the implementation of the actions. Budgetary expenses included the informative and gastronomic events, sustenance expenses, communication campaign, graphics design and project management. For all expenses, as described in the table below, all relevant receipts and invoices are available on request.

Type of Cost	Date	Expenses	Type in Budget
Graphic (Prints)	24/02/2022	24.49	Production of informative material
Sustenance (Ferry)	25/02/2022	31.90	Travel expenses
Sustenance (Ferry)	25/02/2022	7.90	Travel expenses
Sustenance (Ferry)	25/02/2022	7.90	Travel expenses
Sustenance (Ferry)	25/02/2022	7.90	Travel expenses
Sustenance (Fuel)	25/02/2022	52.03	Travel expenses
Sustenance (Tolls)	25/02/2022	2.10	Travel expenses
Sustenance (Tolls)	25/02/2022	1.20	Travel expenses
Sustenance (Tolls)	25/02/2022	1.40	Travel expenses
Sustenance (Tolls)	25/02/2022	1.50	Travel expenses
Sustenance (Tolls)	25/02/2022	1.40	Travel expenses
Sustenance (Tolls)	25/02/2022	2.20	Travel expenses

Sustenance (Tolls)	25/02/2022	2.20	Travel expenses
Sustenance (Tolls)	25/02/2022	1.20	Travel expenses
Sustenance	25/02/2022	15.00	Subsistence
Sustenance	25/02/2022	141.01	Accommodation
Sustenance	26/02/2022	3.60	Subsistence
Sustenance	26/02/2022	9.90	Subsistence
Sustenance	26/02/2022	13.00	Subsistence
Sustenance	27/02/2022	5.80	Subsistence
Sustenance	27/02/2022	59.20	Subsistence
Sustenance	27/02/2022	3.50	Subsistence
Sustenance	27/02/2022	7.10	Subsistence
Sustenance	27/02/2022	3.80	Subsistence
Sustenance	28/02/2022	5.40	Subsistence
Sustenance	28/02/2022	18.80	Subsistence
Sustenance	28/02/2022	6.00	Subsistence
Sustenance (Ferry)	01/03/2022	30.00	Travel expenses
Sustenance (Ferry)	01/03/2022	7.50	Travel expenses
Sustenance (Ferry)	01/03/2022	7.50	Travel expenses
Sustenance (Ferry)	01/03/2022	7.50	Travel expenses
Sustenance (Fuel)	01/03/2022	50.00	Travel expenses
Sustenance (Tolls)	01/03/2022	1.20	Travel expenses
Sustenance (Tolls)	01/03/2022	1.40	Travel expenses
Sustenance (Tolls)	01/03/2022	1.50	Travel expenses
Sustenance (Tolls)	01/03/2022	1.40	Travel expenses
Sustenance (Tolls)	01/03/2022	1.20	Travel expenses
Sustenance (Tolls)	01/03/2022	2.10	Travel expenses
Graphic (Prints)	13/04/2022	185.07	Production of informative material
Graphic (Prints)	13/04/2022	33.98	Production of informative material
Sustenance	18/05/2022	35.00	Travel expenses
Sustenance (Ferry)	18/05/2022	33.70	Travel expenses
Equipment	18/05/2022	75.78	Promotional events
Graphic (Prints)	18/05/2022	148.74	Production of informative material
Sustenance	19/05/2022	70.00	Accommodation
Sustenance (Gas)	19/05/2022	69.01	Travel Expenses
Consumables	19/05/2022	6.00	Promotional Events
Sustenance	19/05/2022	4.50	Subsistence
Sustenance (Tolls)	19/05/2022	1.40	Travel expenses
Sustenance (Tolls)	19/05/2022	1.20	Travel expenses
Sustenance (Tolls)	19/05/2022	1.50	Travel expenses
Sustenance (Tolls)	19/05/2022	1.20	Travel expenses
Sustenance (Tolls)	19/05/2022	1.40	Travel expenses

Sustenance (Tolls)	19/05/2022	2.10	Travel expenses
Sustenance (Tolls)	19/05/2022	2.20	Travel expenses
Sustenance (Tolls)	19/05/2022	2.20	Travel expenses
Sustenance (Gas)	19/05/2022	65.01	Travel expenses
Sustenance	20/05/2022	2.70	Subsistence
Consumables	20/05/2022	15.78	Promotional Events
Consumables (lionfish)	20/05/2022	118.65	Promotional Events
Sustenance	21/05/2022	40.00	Travel expenses
Sustenance	21/05/2022	28.00	Travel expenses
Sustenance	21/05/2022	40.50	Sustenance
Sustenance (Ferry)	22/05/2022	31.00	Travel expenses
Sustenance (Ferry)	22/05/2022	28.00	Travel expenses
Sustenance	22/05/2022	14.00	Sustenance
Sustenance	22/05/2022	1.00	Sustenance
Sustenance	22/05/2022	11.29	Travel expenses
Sustenance (Tolls)	22/05/2022	13.70	Travel expenses
Sustenance (Tolls)	22/05/2022	3.15	Travel expenses
Sustenance (Tolls)	22/05/2022	2.10	Travel expenses
Sustenance (Gas)	22/05/2022	10.00	Travel expenses
Sustenance (Gas)	22/05/2022	74.01	Travel expenses
Sustenance (Ferry)	22/05/2022	11.30	Travel expenses
Sustenance (Ferry)	22/05/2022	11.30	Travel expenses
Sustenance (Ferry)	22/05/2022	38.40	Travel expenses
Sustenance (Tolls)	22/05/2022	9.60	Travel expenses
Sustenance	23/05/2022	113.00	Accommodation
Sustenance (Ferry)	23/05/2022	11.30	Travel expenses
Sustenance (Ferry)	23/05/2022	11.30	Travel expenses
Sustenance (Ferry)	23/05/2022	38.40	Travel expenses
Consumables	23/05/2022	30.47	Promotional Events
Consumables	23/05/2022	12.00	Promotional Events
Sustenance	23/05/2022	13.70	Subsistence
Sustenance	23/05/2022	6.00	Subsistence
Sustenance	23/05/2022	88.94	Accommodation
Sustenance	23/05/2022	1.00	Accommodation
Sustenance	24/05/2022	27.74	Travel expenses
Sustenance (Ferry)	24/05/2022	12.40	Travel expenses
Sustenance (Ferry)	24/05/2022	12.40	Travel expenses
Sustenance (Ferry)	24/05/2022	45.00	Travel expenses
Sustenance	24/05/2022	6.00	Subsistence
Sustenance	24/05/2022	5.20	Subsistence
Sustenance	25/05/2022	1.20	Subsistence
Sustenance	25/05/2022	2.10	Subsistence
Sustenance (Ferry)	25/05/2022	13.80	Travel expenses
Sustenance (Ferry)	25/05/2022	13.80	Travel expenses

Sustenance (Ferry)	25/05/2022	49.80	Travel expenses
Sustenance	25/05/2022	13.30	Subsistence
Sustenance (Gas)	26/05/2022	60.03	Travel expenses
Sustenance (Tolls)	26/05/2022	13.70	Travel expenses
Sustenance (Tolls)	26/05/2022	3.00	Travel expenses
Sustenance (Tolls)	26/05/2022	3.55	Travel expenses
Sustenance (Tolls)	26/05/2022	3.05	Travel expenses
Sustenance (Tolls)	26/05/2022	1.20	Travel expenses
Sustenance (Tolls)	26/05/2022	1.40	Travel expenses
Sustenance (Tolls)	26/05/2022	1.50	Travel expenses
Sustenance (Tolls)	26/05/2022	1.40	Travel expenses
Sustenance (Tolls)	26/05/2022	1.20	Travel expenses
Sustenance (Tolls)	26/05/2022	3.15	Travel expenses
Sustenance	26/05/2022	9.20	Subsistence
Sustenance	26/05/2022	1.92	Subsistence
Consumables (crabs)	30/05/2022	81.36	Promotional events
Sustenance	30/05/2022	55.00	Accommodation
Sustenance	30/05/2022	0.50	Accommodation
Multimedia designer (50%)	05/09/2022	249.99	Communication
Project Management	½ February, May, November	4,583.00	Human resources
Overhead		600.00	
TOTAL		7,971.71	

