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ACTIVITY REPORT 2020

iSea
Environmental Organisation for the
Preservation of the Aquatic Ecosystems

Thessaloniki 2021

This document is in consistence of iSea, Environmental Organisation duties and obligations
under the internal framework of actions of the Organisation

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Revised by all partners of iSea

And signed by the Legal Representative of iSea: Periklis Kleitou

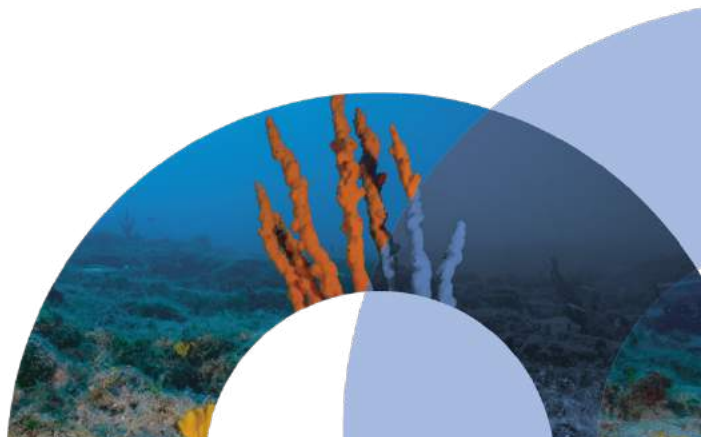
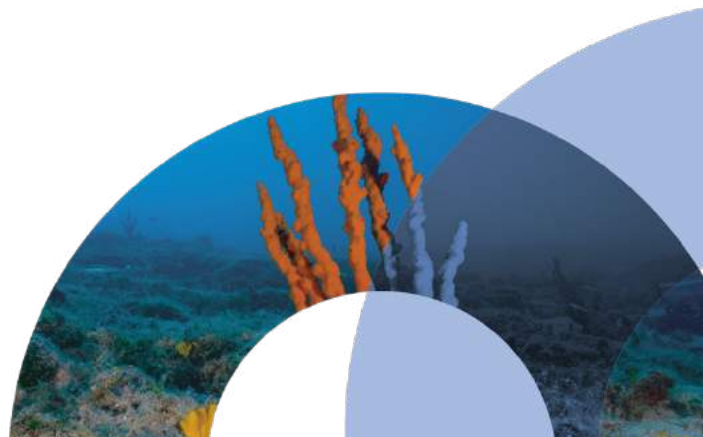
A handwritten signature in blue ink, appearing to be 'Periklis Kleitou', written over a faint dotted line.

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ABOUT

iSea is a Not for Profit Non-Governmental Organisation founded in March 2016, in Greece, with the aim to preserve, protect and restore the precious heritage of the aquatic environment. The organisation consists of a team of young, yet experienced scientists and professionals of various disciplines from marine biologists to specialists in environmental management and educators. The organisation strives to shed light on the foremost issues affecting our oceans and propose alternatives for a sustainable future. Its activities focus on 4 main pillars: fisheries, invasive and alien species, human and aquatic ecosystems and marine litter. The tools utilized by iSea vary from scientific research to citizen science and environmental education and awareness. In the context of all its activities and projects, iSea has developed several collaborations with various entities both on a national and international level.

2020 OVERVIEW

2020 was another important year for iSea. The organisation managed to expand its activities, increase significantly the personnel, improve its facilities and consequently contribute meaningfully in the preservation of the aquatic ecosystems in Greece.

Collaborations

During 2020, iSea maintained all collaborators and focused on strengthening existing collaborations with several partners e.g. University of Patras, MEDASSET HELLAS, the Shark Trust. In addition, new collaborations resulted from successful grant submissions like the RISKMAN project.

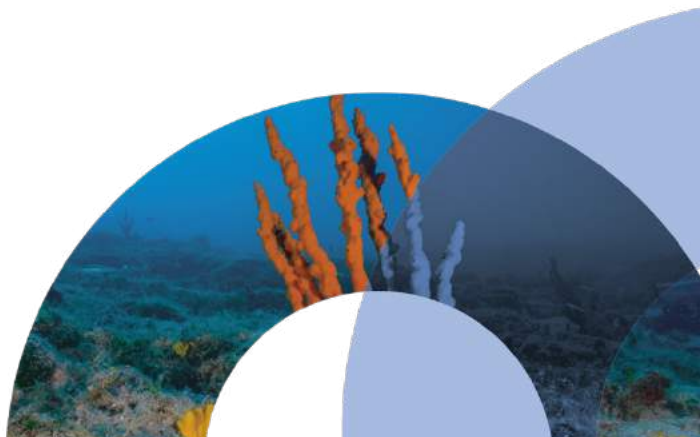
Funders

In 2020, iSea expanded the network of funders which now includes more private Foundations but also national and European projects. This diversification provided stability and liquidity which resulted in the increase of employees and external collaborators of the organisation.

Infrastructures

In 2020, iSea moved onto new and bigger headquarters. The office equipment was renewed improving the working environment for the employees of the organisation, while having the necessary space to keep the public health measures during the COVID – 19 pandemic. The new headquarters covers all the daily needs of the employees in order to perform their daily tasks more efficiently. Additionally, the new headquarters have separate rooms with laboratory equipment and a stereoscope for analyzing samples.

The organisations' infrastructures can now host even more interns who can complete their internship while gaining experience in an appropriate working environment. Finally, the organisation is lined with the General Data Protection Regulation requirements and has a backup server where all the databases and the internal documents are stored.



Additions in the equipment of iSea for 2020

10 new office desks

8 new office chairs

2 new meeting tables

1 Underwater camera SeaLife – DC2000 Pro Flash

1 Stereoscope OPTICA SLX – 3

1 aluminum BRUV skeleton

1 POWERTECH UPS Line Interactive PT-1050

2 new SCUBA diving sets containing scuba tanks, wetsuits, gauges, regulators, buoyancy jackets, gloves and boots

2 new waders

Students-Internships

This year iSea hosted 8 students.

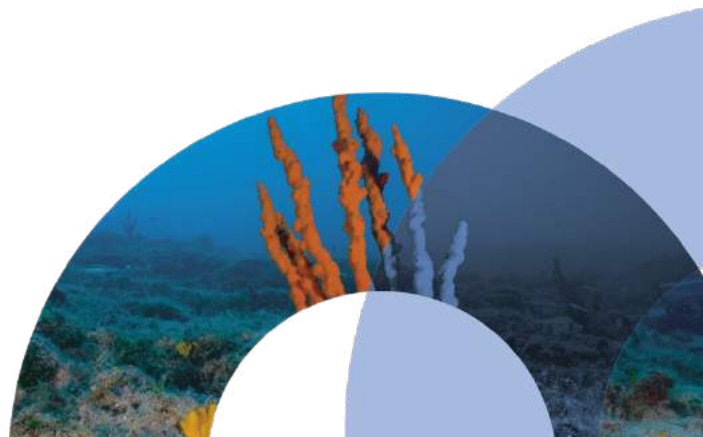
- One from the University of Exeter, that participated in the project ByElasmoCatch in the context of his Erasmus+ Placement/Internship
- Two students from the University of Patras that conducted a six-month internship in the project ByElasmoCatch while they further conduct their BSc Thesis in the context of the project
- One student from the University of Thessaly, that conducted a two-month internship in the project ByElasmoCatch
- Two students from the University of the Aegean that conducted a two-month internship in the project Is it Alien to you? Share it!!!
- One student from the Aristotle's University of Thessaloniki that conducted a two-month internship in the project Is it Alien to you? Share it!!!
- One student from the University of the Aegean, that conducted a two-month internship in the Human and Aquatic Ecosystems activities of iSea

Volunteers

iSea numbers more than 30 trained volunteers who are actively involved in the organisation, constantly represent iSea in different activities throughout Greece and contribute to different projects. More specifically, 25 individuals from different areas of Greece voluntarily participate in different field activities the core teams of volunteers exist in Athens, Thessaloniki, Patra, and Crete. Furthermore, we have 2 volunteers who are involved with graphic design and social media promotion, who have relevant backgrounds and are sensitized about environmental matters.

Among those 25, we have 5 volunteers who participate in data collection and managing and 5 more, based in other areas, who are also involved with data managing and gathering from our citizen science projects namely, "Is it Alien to you?!...Share it!!!" and "Sharks and Rays in Greece and Cyprus".

Most of the volunteers are university students expressing a high interest in environmental issues and the marine environment. Many of them have also basic corresponding knowledge due to their relevant studies and a significant part consists of extensive marine users. In iSea, those individuals are recognised as valuable



members and iSea staff members invest in building their capacities and skills, by involving them in Scientific publications and research.

Social Media

The social media networks of the organisation grew significantly in 2020.

- **Facebook:** from 11,347 followers in 2019 to 15,405 followers in 2020 (35.76% increase) with an average of 152,827.47 reach per month
- **Is it Alien to you? Share it!!! Facebook Group:** from 10,300 members in 2019 to 13,057 in 2020 with an average of approximately 5,000 active members a daily basis
- **Shark and Rays in Greece and Cyprus Facebook Group:** from 2134 members in 2019 to 4,185 in 2020 with an average of 500 active members a daily basis
- **Instagram:** 944 followers in 2019 to 1,680 in 2020 (77.96% increase) with an average of 1615 reach per month
- **Twitter:** from 446 followers in 2019 to 1,007 Followers in 2020 (125.78% increase) with an average of 36,967 impressions per month.
- LinkedIn

Scientific publications and Conferences

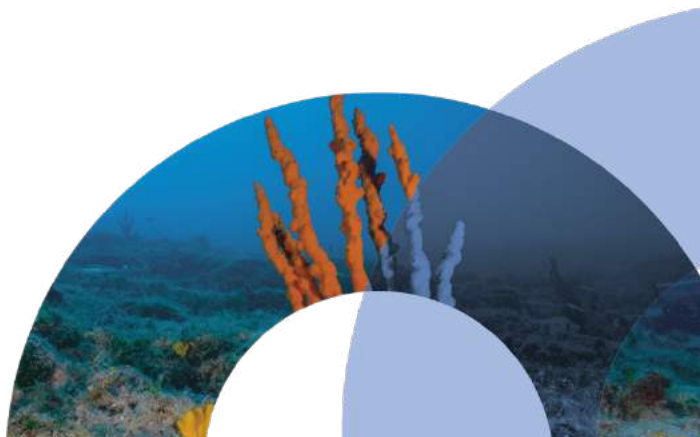
For 2020 iSea produced 15 scientific publications in peer-reviewed journals, participated in 1 book chapter, published 2 Action Plans, participated in 4 conferences presenting 4 oral presentations and was invited in 1 international workshop.

Find the full list of references: <https://isea.com.gr/activities/research/?lang=en>

Beneficiaries

Beneficiaries: Estimated stakeholder groups and individuals actively involved in iSea' s actions and benefited from iSea' s activities

- School students and educators: 2,000
- Tourists and tourism industry: 2,800
- Port and other local authorities: 160
- Recreational and professional fishers, and associations: 140,000
- Divers and diving centers: 5,100
- Restaurant owners and chefs: 1,200
- Scientists and science community: 2,500
- Consumers: 55,000
- Social Media users: 160,000
- Citizen scientists: 14,000



FISHERIES DEPARTMENT

By Elasmocatch



The project By Elasmocatch focuses on studying the elasmobranch fisheries in the North Aegean with a special focus on discarded non-commercial species. The goal of the project is to collect data on the species level, for all elasmobranch species that are captured by different fishing equipment in the North Aegean. On a seasonal basis for all 2020, iSea staff visited on board 6 fishing vessels: 2 purse seines, 2 bottom trawlers and 2 longlining boats for collecting observations, measurements, and samples, using the protocol for monitoring the

bycatch for vulnerable species. Lastly, two meetings with the competent ministry for advocating on the adaptation of the GFCM recommendations in the national laws.

Up to date 38 on board visits were conducted (10 Longline, 14 Bottom trawl and 14 purse seine) and 17 different species were recorded, and more than 23 genetic samples were obtained.

To assess the impact of fisheries in the elasmobranch population of the selected area, Bycatch rate was computed for each species on each gear. To increase the existing knowledge of their spatial distribution also biomass indexes for the species were computed. Finally, to utilise the morphometric measurements that was obtained length-weight relation indexes will be computed for two batoid species (*Raja radula* and *Torpedo marmorata*) that have yet no published data in the Eastern Mediterranean. In Addition, 3 nursery grounds were identified for 3 species (*Scyliorhinus canicula*, *Torpedo marmorata* and *Raja radula*).

All the outcomes of the project will be published in 2 publications in peer-reviewed scientific journals in 2022.

For more information visit: <https://isea.com.gr/by-elasmocatch/?lang=en>

Updating of the Greek National Chondrichthyans Checklist

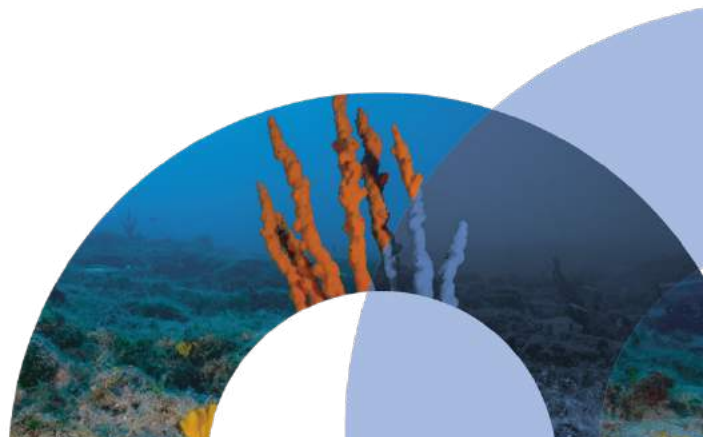


iSea in collaboration with IUCN Shark Specialist Group has undertaken the update of the national checklist of chondrichthyan species of Greece. Chondrichthyans (sharks, batoids, and chimaeras) have been present in the seas of our planet for almost half a billion years, and are comprised of more than 1,250 species. Their importance to marine ecosystems is enormous as most of them are top predators thus maintaining balance within marine food networks. At least 63 species of chondrichthyans are found in Greek

seas; nevertheless, our knowledge about their exact number and distribution is limited.

The aim of this project is to prepare an updated national checklist of chondrichthyans that will contain all species currently occurring in the Greek seas.

For this purpose, the following actions will be taken:



- the existing relevant literature will be reviewed,
- two round tables and workshops with Greek chondrichthyan researchers will be conducted,
- an e-book that will contain the new official national checklist and information for each species in Greek and English will be published,
- hardcopy versions of the checklist will be printed and distributed among competent authorities and stakeholders.

For more information visit: <https://isea.com.gr/listchondreng/?lang=en>

Strengthening Angel Shark Conservation in the Southern Aegean Sea

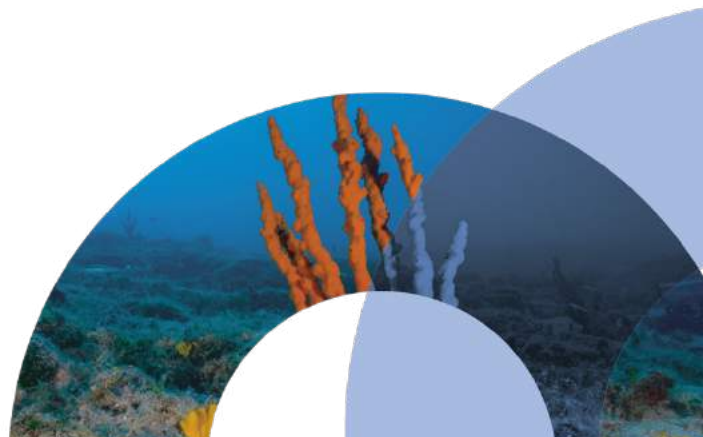


Three angel shark species are present in the Mediterranean, Sawback Angelshark (*Squatina aculeata*), Smoothback Angelshark (*S. oculata*), and Angelshark (*S. squatina*), all classified as Critically Endangered in the International Union for Conservation of Nature Red List of Threatened Species due to past population reductions and several local extinctions. The recent discovery of several records of angel sharks in Cyclades and Dodecanese Islands, indicate that the area is potentially highly important for all three species. The aim of the project is to improve and strengthen the conservation of angel sharks in Greece, and to advance

elasmobranch conservation in the country. Through this project further research will be conducted to support future angel shark conservation actions and policies. The project kicked-off at the beginning of September 2020 and it will end in August 2021. In the frame of this project the following actions are foreseen:

- angel shark sighting data collection was conducted in September-November (inclusive) of 2020 by (a) requesting and acquiring access to data from the [Angel Shark Sightings Map](#), (b) launching a call to action targeted at sea users at iSea's social media to request evidence and photographs of angel sharks from the public, (b) creating and conducting relevant questionnaires to fishers as well as diving centers in the Cyclades and Dodecanese islands (via phone, email, and in person contact), (c) emailing the appropriate authorities to request access to data from the National Fisheries Data Collection Programme (EPSAD/ΕΠΣΑΔ),
- the identification of potential Critical Angel Shark Areas and prioritization of conservation activities at key areas that lack sufficient protection is conducted in November-December (inclusive) 2020 by an external collaborator,
- five capacity building workshops on angel shark identification, good practices, and data collection, targeted towards competent authorities and local stakeholders, will take place in 2021,
- the translation and distribution of angel shark handling guides and identification plates will be conducted in 2021 but initial tasks pertinent to this action took place during September 2020 (i.e. identifying relevant material, contacting owners of said material to acquire authorization to use them),
- two meetings with the competent Ministry and all relevant national authorities for discussing the adoption of the [MedRAP](#) and the [SubRAP 22/23](#) and the transposition of the Recommendation GFCM/42/2018/2 will take place in 2021.

Currently the team of the project is about to publish the layman's report about the distribution of angel sharks in Greece in which priority areas for the species will be also highlighted.



The project is implemented by iSea, with the support of the Shark Trust, in collaboration with the Angel Shark Project, and funded by the Shark Conservation Fund.

For more information visit: <https://bit.ly/2PtjNrZ>

Fishermen, Sea turtles and Sharks: Alliance for Survival II



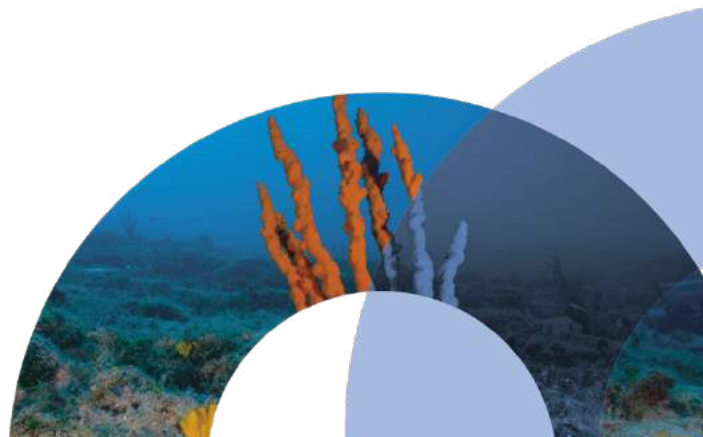
The project “Alliance for Survival II” aims to improve stakeholder’s awareness on the need to protect sea turtles, sharks and batoids. The project actions are based on three main pillars:

- Amplification of the existing knowledge and empowerment of all fisheries stakeholders (Port authorities, auction markets, Fisheries authorities, professional and artisanal fishers etc) regarding the legislation regulating the protection of sea turtles, sharks and rays in Greek waters.
- Capacity building of all fisheries stakeholders (Port authorities, auction markets, Fisheries authorities, professional and artisanal fishers etc.) on identifying vulnerable species (sea turtles, sharks, rays) and safe release and handling techniques when incidentally caught using realistic replicas of the focused taxa. This will be accomplished by implementing workshops in 10 Greek ports: Kalloni (Lesvos), Alexandroupoli, Kavala, Nea Michaniona (Thessaloniki), Alonissos, Piraeus, Kiato, Kyllini, Preveza and Corfu.
- Sensitisation of the wide public with a focus on consumers with respect to unsustainable fishing practices and their negative impact on vulnerable species and guide them on how they can contribute to the imposition of the legal framework.

The project “Alliance for Survival II” is funded under the financial programme of the Green Fund “Natural Environment and Innovative Actions”, Strand “Natural Environment Management Actions”, Measure “Innovative Actions with Citizens”, Budget: 49.670 €. Beneficiary: iSea. Partners: MEDASSET HELLAS, Department of Animal Production, Fisheries and Aquaculture of the University of Patras.

The project is currently ongoing, this year the focus is on producing all the materials that will be used in the workshops and the citizen guide for these vulnerable species and the campaign for raising awareness. Next year the citizen guide will be released and the campaign on Social and Mass media will start, the workshops will follow, starting from March up to June.

For more information visit: <https://isea.com.gr/fishers-sea-turtles-sharks-and-rays-alliance-for-survival-ii/?lang=en>



Sharks and Rays in Greece and Cyprus

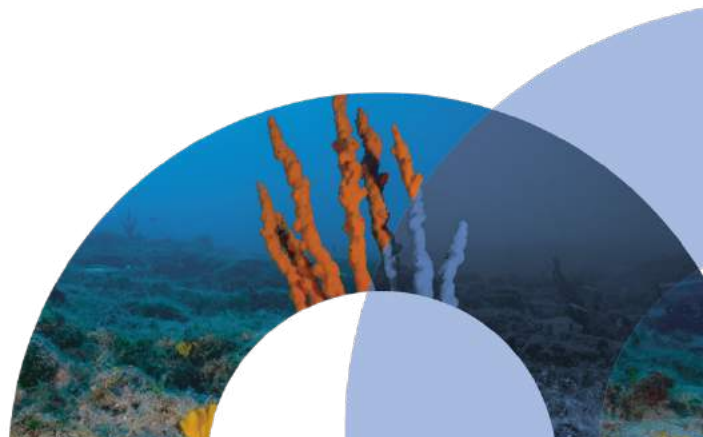


This project aims at gathering additional data on the occurrence of sharks and rays in Greece and Cyprus to improve and strengthen the existing knowledge through citizen science. To achieve this, information material has been published such as the translation of the identification guides for the Mediterranean protected shark species.

The project is a part of a wider initiative [the M.E.C.O. \(Mediterranean Elasmobranchs Citizen Observations\)](#), which is a Mediterranean initiative, which aims to create a network of Mediterranean elasmobranch sightings data, through a collaboration between different teams in various countries, to better understand the occurrence, seasonality and distribution of elasmobranchs in this region.

The records are gathered using a Facebook group in which citizen scientists upload their observations and a team of experts ask them for specific information about the observation and once the identification is verified the record is collected. The project was launched in 2017 and is ongoing with more than 800 individual records and records about 55 species that represent 75% of chondrichthyans extant in the Mediterranean. The group currently has 4K members, and at least 1K active members. From the dataset, 9 scientific publications have been published in peer reviewed journals.

For more information visit: <https://isea.com.gr/activities/programs/fisheries/sharks-and-rays-in-greece-and-cyprus/?lang=en>



CITIZEN SCIENCE DEPARTMENT

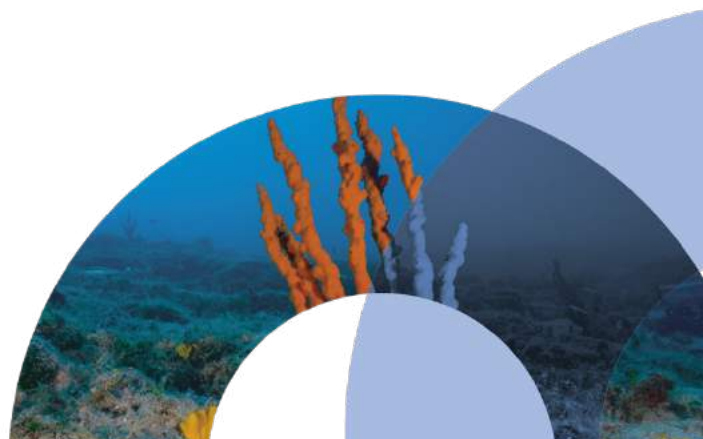
iNaturalist GR



iNaturalist is an online social network for people that are interested in nature and biodiversity. It facilitates the sharing of biodiversity information among users to help each other learn more about nature. Additionally, it is a crowdsourced species identification system and an organism occurrence recording tool. Therefore, it is an extremely important tool for citizen science related to biodiversity. As of October 2020 iSea, in collaboration with Goulandris Natural History Museum (GNHM), is responsible for the implementation of iNaturalist GR. The aim of iNaturalist GR is to promote the use of iNaturalist locally and to facilitate the use of the generated data to benefit the conservation of national/ local biodiversity.

We prepared and submitted our application to declare our organization's interest to join the iNaturalist Global Network and represent Greece during March-June 2020. We also formed a strategic partnership with GNHM which is included in our application as a Partner. This effort will be supported by the Scouts of Greece, who will promote the use of iNaturalist among their members, and the University of Patras that will use iNaturalist GR data for activities relevant to the conservation of marine species in Greece.

The primary actions foreseen for 2021 are the development and management of a localized website, and promotional actions such as educational events and bioblitzes.



ALIEN SPECIES DEPARTMENT

Is it alien to you? Share it!!!



The project aims to monitor the expansion of the already established alien species in Greece and in Cyprus while the extended network of citizen scientists of the project have a crucial role in reporting new alien species that have entered the Mediterranean Sea and the Greek and Cypriot seas. The project is based on citizen scientists reports that are uploaded on the Facebook group of the project "[Is it alien to you? Share it](#)". The group at the moment counts 13.063 members (10.548 on 2019). Together with the Hellenic Network on Aquatic Invasive Species

(ELNAIS) are the main providers of alien species records for Greece in the European Alien Species Information Network ([EASIN](#)), contributing to the implementation of the Marine Strategy Framework Directive (MSFD; EU 2017/848), the Regulation (EU) No 1143/2014 on the prevention and the management of the introduction and spread of invasive alien species.

The fact that the project is now well respected in the Mediterranean is a key reference for all similar efforts in the basin and reflects on its vitality and importance. Thus, scientists of iSea involved in the project are now invited by other scientists around the Mediterranean to contribute with their experience in research efforts.

In numbers:

Project team: 6 members

Identification team: 9 members

Other collaborators: 18 members

Database: 3000 records of alien and rare species

First records of species in the context of the project

2020:

- *Chaetodipterus faber* – Atlantic spadefish (Mediterranean)
- *Pomadasys incisus*– Bastard grunt (Cyprus)

For more information visit: <https://isea.com.gr/activities/programs/alien-species/is-it-alien-to-you-share-it/?lang=en>

Pick The Alien



The project "Pick The Alien" aims to promote the consumption of edible alien species as a mitigation measure to the increase and the expansion of their population in Greece. Additionally, the project aims to raise awareness to all involved stakeholders on the negative effects of the presence of alien species to the local economy, tourism, indigenous species, environment, and human health. 2020 was the second year of the project.

Due to the COVID-19 pandemic the events had to be organized outdoors and for this reason iSea collaborated with the food truck "Food Cartel". Two



rounds of events took place during 2020, the first in Ionian islands and the second in Cyclades islands. The already existing recipe e-book was renewed with recipes of the "Food Cartel" and the restaurant E/G Taksidevontas.

Pick The Alien in the Ionian Sea

The events took place in Lefkas, Kefalonia and Zante, between 7 – 13 of July 2020. In total 10 gastronomy events were conducted, 2 awareness events and 2 round tables. The gastronomy events were attended by more than 2000 people, while more than 1700 attendees tasted edible alien species. During the events, guests were informed about the alien species in general, their characteristics, their impacts, safe handling practices and how they can contribute to the mitigation of the problem by consuming edible alien species. During the round table events that were implemented in Lefkas and Zante island, representatives from the sector of small-scale fisheries and restaurant owners were brought together in order to discuss and to set up a road map to introduce the edible alien species in the menu of the local restaurants and in the local fish market.

Pick The Alien in Cyclades islands:

The events in Cyclades islands were implemented in the islands of Paros, Naxos, Amorgos, and Santorini. The events were aiming to raise the awareness of restaurant owners, chefs and customers. The restaurants acted as local ambassadors of the project by promoting the consumption of edible alien species to their customers.

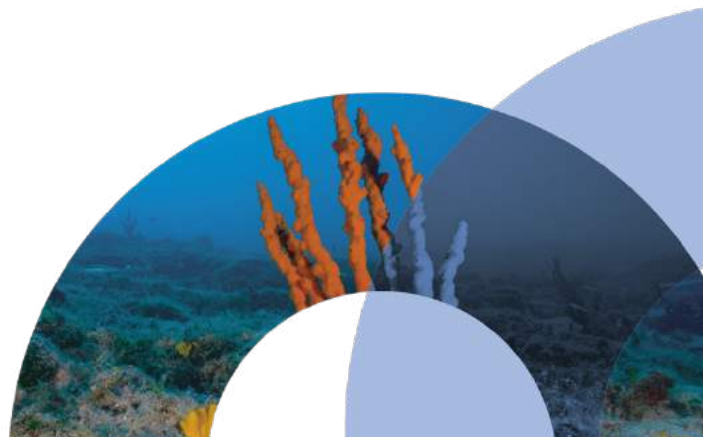
The project team visited 30 selected restaurants in the above-mentioned islands and presented the project. The restaurants served alien species dishes to the customers for free, accompanied with a flyer explaining about the project, the negative effects of alien species and how the consumers can contribute to the protection of the environment. In total more than 1000 consumers were served edible alien species.

Gastronomy events in Athens

In the context of the project, 2 gastronomic events took place in Athens. The first in "E/G Taksidevontas" restaurant and it was attended by journalists, gastronomy journalists, representatives of the Natural Environmental and Climate Change Agency and representatives of environmental organisations. The second event implemented by the Cyclades Preservation Fund in the context of a fund-raising event. Through the project "Pick The Alien", supporters of the foundation served lionfish burgers.

Local ambassadors of the project

- Santorini: Santorini Active Volcanic Environment
- Amorgos: Amorgos Fishing Trips
- Andros: Contact Nikolaos Doumpas (nikolaos.doumpas@isea.com.gr)
- Anafi: Contact Nikolaos Doumpas (nikolaos.doumpas@isea.com.gr)
- Paros: Paros Divers
- Milos: Magdalini Premezzi SeaAwareness
- Naxos: Naxos Island Wildlife Protection
- Folegandros: Contact Nikolaos Doumpas (nikolaos.doumpas@isea.com.gr)
- Kea – Tzia: Kea Divers
- Corfu: [Fishing shop – Psarevo](#)
- Corfu: [Diving Center "Dive Inn Corfu"](#)
- Paxoi: Kouloulou in Gaios square
- Lefkas: [Recreational Fishers' Association Lygias](#)



- Ithaka: Itaka Fisher's Association (nikolaos.doumpas@isea.com.gr)
- Kefalonia: [Fishing Tourism Kefalonia "Michalis"](#)
- Kefalonia: [Fishing shop – Fish and Hunt](#)
- Zante: [Natura Di Zante](#)
- Kythira: [Kythirian Fishers' Association Myrtidiotissa](#)
- Meganisi: Meganisi Fisher's Association (nikolaos.doumpas@isea.com.gr)

Restaurants:

Paros

- Mouragio
- Magaya
- To balkoni tou Aki
- Apoplous
- Thalassamou
- Axinos
- Glafkos
- Ydroussa
- Margarita restaurant

Amorgos

- Youkali
- Mouragio
- Vitsentzos restaurant
- To limani tis kyra Katinas
- Apospero
- Minos restaurant

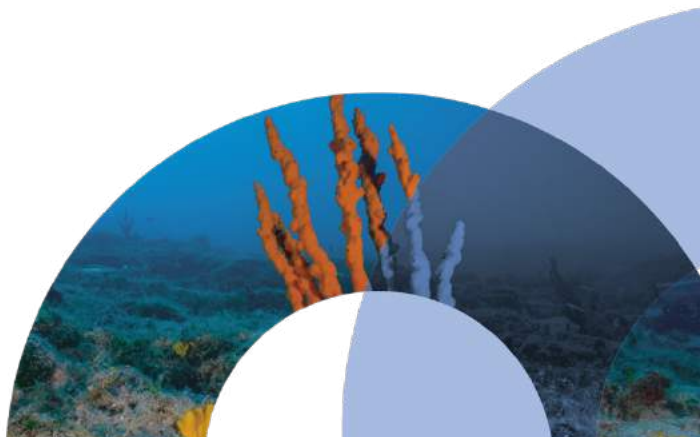
Naxos

- Tortuga
- Blue fin beach bar
- Porta tou Yialou
- Antamoma
- Apostolis

Santorini

- Giorgaros fishing tours
- Selene restaurant
- Ovac
- To psaraki
- Afros beach bar
- Ifestioni
- The cave of Nikolas
- Vineyard

Zante



- Vardiola restaurant

Recipe e-book with edible alien species

The existing e-book was renewed with eight new recipes for the lionfish, the atlantic blue crab and the marbled and dusky spinefoots. Seven of the recipes were produced by the chefs of "Food Cartel" and one was created by the chef Iordanis Iliadis of the restaurant E/G Taksidevontas in Keratsini, Athens.

Press release and articles in the media

During the project, iSea prepared two press releases to distribute it to local and national Media. In total, more than 44 news blogs and sites shared articles about the project from July till October 2020.

For more information visit: <https://isea.com.gr/pick-the-alien-2/?lang=en>

RiskMan



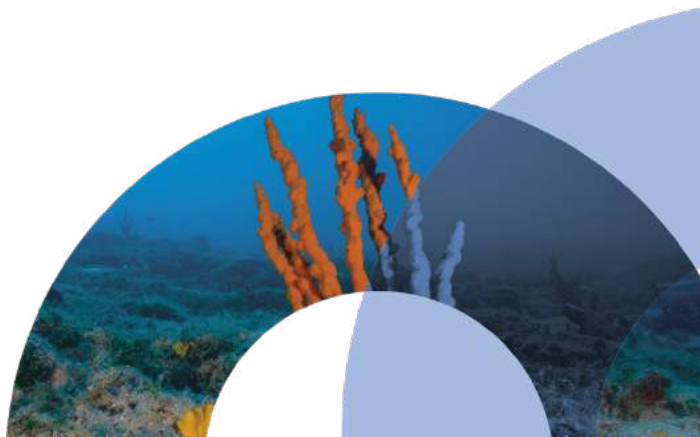
RiskMan is an Erasmus+ project funded by the European Union, and aims to promote the education of stakeholders and high education in the field of risk assessment of non-native (NN) species and to stimulate research and cooperation on the management of NN species in the Western Balkan Region.

At the same time, the project aims to strengthen the cooperation between the consortium partners but also between the stakeholders and higher education institutes.

To achieve this aim, the specific objectives of the project are:

- Update the skills of the higher education system about the management of aquatic NN species in the partner Countries of Western Balkans in line with the international directives given by FAO, IUCN and the strategies of European Policy Cooperation.
- Support the Partner Countries to address the challenges facing their higher education institutions and systems concerning the management of NN species, including risk assessment, stakeholders' participation, planning and governance of aquaculture facilities and industries. Promote communication and awareness of stakeholders (students, workers in aquaculture and tourism sectors, and fishers) about the threat posed by NN species to biodiversity.
- Promote voluntary convergence with EU developments in higher education and fisheries industry and contribute to cooperation among the Consortium Partners on the management of NN species. Develop a risk management model for NN aquatic species for Western Balkans. Produce a policy framework for creating new occupation through the suggestion of the new position "Risk Manager".

iSea is participating in the project along with Mugla Sitki Kocman University, University of Palermo, University of Zagreb, University of Sarajevo, University of Montenegro, University of Bihać, Hydrobiological Institute of Ohrid, Association for ecology EKOMENLOG



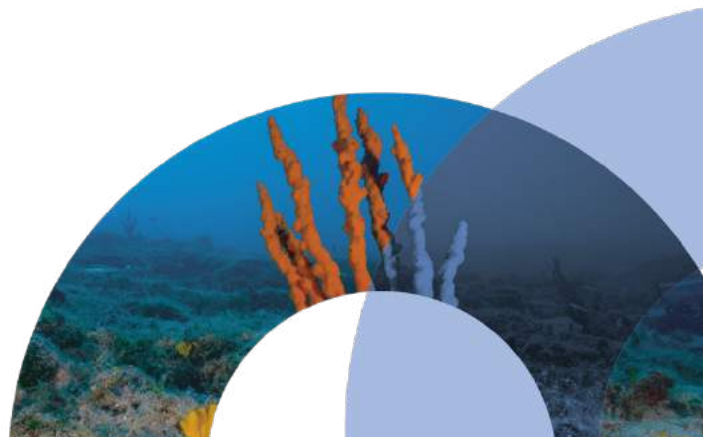
of Ohrid, Albanian Center for Environmental Protection and Sustainable Development, Aquaculture Alb-Adriatico2013 and University College of Business in Tirana. The duration of the project is for two years, 2020 – 2022.

For more information visit: <https://isea.com.gr/riskman/?lang=en>

MarCons STSM, COST action CA 15121

In the context of MARCONS STSM (CA 15121), the action entitled 'Innovative monitoring of non-indigenous macroalgal communities within Maltese waters', pertaining to the WG3- marine conservation and biological invasions was taken place under the supervision of Prof. Alan Deidun, Department of Geosciences, Faculty of Science, University of Malta, and with the collaboration of the European Alien Species Information Network of the European Commission's Joint Research Center.

In this context, an STSM granted to an iSea researcher for visiting Prof. Alan Deidun in the University of Malta to biomonitor the non-indigenous species (NIS) of macroalgal occurrences in the Mediterranean Sea in Maltese waters. The interactions among NIS and native communities, and their conservation status were further examined. A further focus was to contribute to an optimal monitoring strategy targeting non-indigenous macrophyte assemblages in Maltese waters relevant to the Marine Strategy Framework Directive (MSFD; 2008/56/EC) monitoring of Descriptor 2. According to the preliminary results and concerning macrophyte NIS that were recorded, *Acrothamnion preissii*, *Asparagopsis taxiformis*, *Caulerpa cylindracea*, *Caulerpa taxifolia*, *Halophila stipulacea*, *Lophocladia lallemandii* and *Womersleyella setacea* occurred. With regards to the native macroalgal communities, the species which occurred were *Amphiroa rigida*, *Anadyomene stellata*, *Cladophora* sp., *Cladostephus spongiosus*, *Corallina* sp., *Cystoseira* sp., *Dasycladus vermicularis*, *Dictyota dichotoma*, *Dictyopteris polypodioides*, *Halimeda tuna*, *Halopteris filicina*, *Jania rubens*, *Laurencia glandulifera*, *Padina pavonica* and *Penicillus capitatus*. As for the associated other NIS species, *Amathia verticillata*, *Percnon gibbesi* and *Siganus luridus* were found along with other native species such as *Apogon imberbis*, *Arpacia lixula*, *Boops boops*, *Bothus podas*, *Chromis chromis*, *Coris julis*, *Diplodus vulgaris*, *Enchelycore anatina*, *Hermodice carunculata*, *Mugil cephalus*, *Paracentrotus lividus*, *Pseudocaranx dentex*, *Scorpaena* sp., *Serranus scriba*, *Sparisoma cretense*, *Symphodus melanocercus* and *Thalassoma pavo*. The findings of this action will contribute to the existing gaps on NIS impacts on indigenous benthic macrophyte assemblages, structure and habitats.



HUMAN AND AQUATIC ECOSYSTEMS DEPARTMENT

MARINE Education and COmmunication network on the MEDiterranean



MARINE_ECOMED

An Erasmus+ Project to foster education and research through a strategic partnership. The MARINE_ECOMED Project is framed to enhance research and cooperation within the Mediterranean region in the field of sustainable management of marine and coastal areas through the development of innovative communication and education strategies.

The Project enhances the integration of professional experiences and approaches in sustainable management of marine and coastal areas from non-governmental organisations and academic institutions with the goal to improve the quality of research and education in this multidisciplinary subject.

This year the intensive study programme would be held in Thessaloniki, Greece. Meetings among the partners were held in order to organise, enrich and adjust the content of the educational materials. Due to the pandemic the ISP was canceled and rescheduled for academic semesters of next year, since the educational materials are partially based on distance learning, but the international workshops are based and promote the interaction among students, experiential approaches and the collaboration among different disciplines and stakeholders on real case studies. As a result, the ISP could not be transformed in an entirely distance learning study program and was rescheduled for next year.

For more information visit: <https://isea.com.gr/activities/programs/human-aquatic-ecosystems/marine-education-and-communication-network-on-the-mediterranean/?lang=en>

FishMedic



FishMedic is an upcoming program which aims to investigate the occurrence of medicinal substances in the muscle tissue of commercial fish species, to assess their concentrations and raise awareness and inform the public about the proper management of medicines. The program is implemented by iSea in collaboration with GIVMED and the Biochemistry-Biotechnology Department of the University of Thessaly.

The project includes:

- Sampling in the two largest urban centers in the country (Thermaikos and Argosaronic Gulf).
- Investigation of the existence of 10 pharmaceutical substances in the tissues *Dicentrarchus labrax* and *Solea solea*.
- Risk management assessment through relevant literature.
- Bio-magnification within the food chain analysis.
- Dissemination of results, informing and raising awareness of the problem.
- Conscious consumption of medicines, their proper management and disposal in an environmentally friendly way promotion.
- Capacity building activities focusing on learning, professional support and networking.



For more information visit: <https://isea.com.gr/9686-2/?lang=en>

AQUATIC LITTER DEPARTMENT

BioLearn



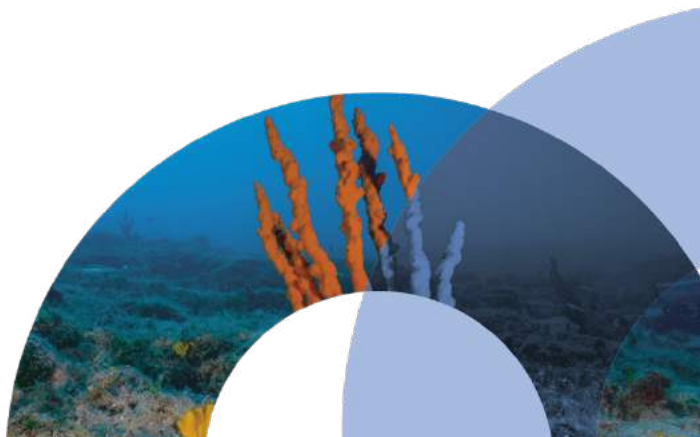
“Eco-Conscious Minds to Stop Pollution in the Valuable Wetlands of Black Sea Basin- Biolearn project” stresses the main pollution problems threatening very important biodiversity sites of the Black Sea Basin, namely its wetlands. The project partnership is established among 6 partners – public institutions, environmental NGOs and national park management bodies from 5 different countries, responsible for the management, promotion and protection of the valuable nature of the Black Sea Basin. Main goal of the project is to combine resources and knowledge for the establishment of common activities in order to increase local awareness

and the reduction of pollution in the important wetlands of Black Sea Basin. The actions of the project include knowledge exchange and capacity building activities between project partners and interested institutions, public awareness raising activities and educational programs for local stakeholders and school students, cleanups in the targeted areas and the establishment of 10 activity centers for the promotion of the issues related to river borne and marine litter in Black Sea Basin.

In the context of the project, supported by the [Management Authority of Evros Delta and Samothraki Protected Areas](#) iSea:

- prepared a report for the current situation of river based and marine litter in Evros Delta wetland after reviewing the existing literature, gathering the relevant data from other projects, implementing in situ observations and samplings and interviewing locals interacting within the wetland.
- organised the project's workshop in Greece, presenting the results of litter pollution in Evros Delta and hosting partners' and other experts' presentation with the aim to incorporate their expertise and organize a manual of training and best practices.
- prepared the manual of educational and training best practices including educational materials for raising awareness against litter pollution in the wetlands and best practices as examples already implemented and serve the needs for the prevention and mitigation of litter pollution in Black Sea Basin areas affected by litter pollution.

For more information visit: <https://isea.com.gr/9686-2/?lang=en>



Fishing For Litter Project



The Fishing For Litter project by [A.C.Laskaridis Foundation](#) includes the participation of the fishing industry in the reduction of marine litter based on the [OSPAR protocol Agreement 2017-081](#). The foundation collaborates with iSea, which has been rendered responsible for the implementation of the project in the north Aegean Sea.

Professional fishers participating in the project are required to collect the litter that accumulates in their nets as part of their routine fishing activity as well as to weigh and register their findings in a recording form that has been created by the project for this purpose. Fished litter is stored onboard in large bags provided by the project so that it can be transported to the shore and be disposed of.

The main objectives of the project are:

- To sensitise and change the waste management practices of the fishing industry
- The direct removal of marine litter from the seafloor
- To record litter that is found by medium-scale fishers as they perform their fishing activities.

In 2019, from October to December, Fishing For Litter project was piloted in the ports of Thessaloniki and Kavala with 8 fishers actively participating. In 2020, the project further expanded to include the ports of Thessaloniki, Kavala, Alexandroupoli, and Volos that account for about 43% of the trawl fleet in Greece. In total, 18 fishing vessels participated, and more than 17 tons of litter were removed and the indexes that describe "good environmental condition" for the seafloor by MSFD were computed for the marine areas that the vessels are fishing. These data will be sent to the Ministry of Environment and Energy to be utilised in the national report of Greece to the European Union. Additionally, the preliminary findings of the first 4 months of 2020 were used in a report addressed to the Ministry of Environment and Energy to advocate for the reduction of SUP fishing gears and the amendment of Directive EE/2019/904 into the Greek law.

For more information visit: <https://isea.com.gr/fishing-for-litter-project/?lang=en>

Piloting marine litter prevention and mitigation action



In the context of the Interreg Med Plastic Busters MPAs project and with the support of MIO-ECSDE, iSea implements the piloting action for the prevention and mitigation of abandoned, lost and discarded derelict fishing gear (ALDFG) coming from mussel farming in the Thermaikos Gulf MPAs. In collaboration with the [Management Body of Thermaikos Gulf Protected Areas](#) and [BlueCycle](#), the project aims to establish a proper collection and management practice of

ALDFG, mainly mussel nets that consist a main environmental source of pollution for Thermaikos Gulf due to their extremely high amount used, discarded because of the weather conditions, their illegal and unregulated management and the high retrieval and management cost. Based on observations and gathered data from coastal cleanups during the previous year more than 70% of litter pollution across Thermaikos Gulf results from fisheries related litter items.

Results:



- 3 beaches near fishing ports of mussel farming, Chalastra, Loudias estuary and Alikes Kitrus were monitored.
- Interviews and personal contacts with mussel farmers and fishers in those areas were conducted with the aim to assess the quantities of fishing gear disposed and their attitude towards the establishment of collecting stations and fishing gear's recycling with a focus on mussel nets.
- Meetings with local associations and authorities were held, in order to map the obstacles for mussel nets proper disposal and recycling.
- 7,5 tons of mussel nets were collected from Chalastra fishing port and recycled from BlueCycle.
- The implemented collection, transportation and management plan is under discussion with other adjacent areas with the aim to adapt it to every area's needs and potential and the goal to improve their facilities and adopt it as a long term management practice.

For more information visit: <https://isea.com.gr/piloting-marine-litter-prevention-and-mitigation-action/?lang=en>

#zeroplastic diving centers



#zeroplastic awareness raising campaign against plastic litter and microplastics in Greek Seas started in 2019 and consisted of several actions, communication campaign, the production of educational materials, Science Café Webinars, awareness raising events, a scientific research and beach clean ups. During 2020 the project focused on the tourism industry through the engagement of 12 diving centers across Greece which conducted several actions in order to raise awareness among their visitors, to remove marine litter

from their areas, reduce the single use plastics and products containing microplastics they use and collect data about seafloor litter in their areas.

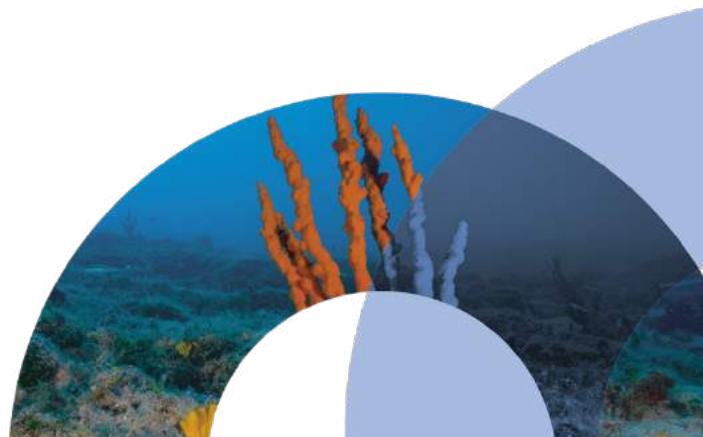
Participants:

- [Amorgos Diving](#)
- [Blue diving center](#)
- [Ocean Diving Center](#)
- [IKION Diving Alonissos](#)
- [Eco Diving Center](#)
- [Gorgonia Diving](#)
- [Paros Divers](#)
- [Paros Diving](#)
- [Athos Scuba](#)
- [Skopelos Dive Center](#)
- [School of Diving](#)
- [NIMA](#)

Find their location [here](#).

Actions:

- Informative material was provided to the diving centers presenting the issue of marine plastic pollution. As a result, more than 2500 people were informed.
- Every participant diving center reported its consumption of single use plastic materials and



products containing microplastics on a monthly basis, in order to minimise the amounts used in the context of their activities.

- A total number of 11 areas were surveyed and cleaned by the participant diving centers. All data were collected based on the [Dive Against Debris](#) guidelines provided to the participants and reporter to iSea. They were also submitted to the global citizen science platform, [Project Aware](#). More information on the locations of the clean ups can be found [here](#) and their results [here](#).
- An open public awareness raising event took place in collaboration with the [Europe Direct Central Macedonia](#) and [Ocean Diving](#) center in Lagomandra beach. The event included an underwater clean up conducted by Ocean Diving, Europe direct provided information about the projects on European issues implemented in Central Macedonia for the environment and iSea presented the impact of marine plastic pollution and promoted a zero-waste lifestyle among the public.

For more information visit: <https://isea.com.gr/activities/programs/aquatic-litter/zeroplastic/?lang=en>

Prosfero



In the context of the "Prosfero" campaign, 50 underwater cleanups were conducted from May to September 2020 all over Greece. More specifically, in marinas and beaches of Athens, Thessaloniki, Volos, Kavala, Thrace, Patra and West Greece coastline. In total, about 70 volunteers contributed to the removal of marine litter from the seafloor and 50 divers, iSea's diving team members and representatives of local diving associations and centers. A total number 8 diving centers and 20 local associations participated in underwater clean ups taking place in their community. In addition, 24 different Municipalities and 15 Port

Authorities of these areas supported and participated in actions implemented in their areas. The participants were also informed about the impact of marine litter and a zero waste lifestyle was promoted among them.

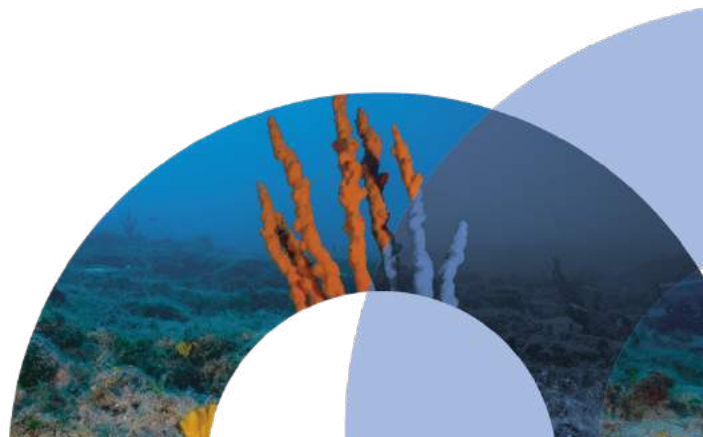
A total amount of more than 22 tons of marine litter was collected during the implementation of the campaign. The types of litter removed differed depending on the area and the most common human activities in each region. Plastic was the most abundant litter type with a rate exceeding 60%. SUP cups and lids, beverages and beer cans, plastic bags, plastic bottles, plastic pieces >2.5 cm, plastic food packaging, glass bottles, vehicle tires, clothes and textiles, and ceramic pieces, fishing lines, fishing gear, ropes and twines, vehicle tires, plastic bags and piece and fishing nets were among the most abundant items removed from the seafloor. Extraordinary items were also removed, like a supermarket cart, barbecue equipment, binoculars, alarm clocks, cell

For more information visit: <https://isea.com.gr/activities/programs/aquatic-litter/prosfero/?lang=en>



LEGAL DEPARTMENT

In 2020 the Organisation filed twelve (12) complaints before the locally competent Port Authorities, the Hellenic Food Authority (EFET) and the Inspection Office of the Department of Fishing Inspection of the General Directorate of the Ministry of Rural Development and Food, for violations concerning protected species of elasmobranchs or the legislation regarding recreational fishing. The violations were located in various areas of the country (Chios, Athens, Piraeus, Thessaloniki, Fournoi, Crete, Corfu). From the twelve violations, five (5) were about displaying of protected species for sale, two (2) were about fishing and retaining on board of protected species, two (2) were about fishing beyond the limits for a recreational fishers, one (1) was about the usage of nets by a recreational fisherman and one (1) for usage of a speargun by an amateur fisher in a restricted area (Thermaikos Bay) after the sunset. The species that were located by iSea were: *Glaucostegus cemiculus*, *Squatina aculeata*, *Hexanchus griseus*, *Alopias supeciliosus*, *Isurus oxyrinchus*. Eleven (11) violations were tracked on social media, where the offenders posted photos in which protected species were being retained on board or being displayed for sale, while one (1) violation was tracked in a post of an informative website. In the eleven (11) out of twelve violations, the competent authorities were mobilised and an investigation was conducted. In three (3) cases, the offender was found, was called to give an apology and an administrative fine was imposed on him, while in two (2) cases there is an ongoing investigation.





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