

### **ACTIVITY REPORT 2022**



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

Written by: Anastasia Charitou, Georgios Rallis, Ioanna Tzioga, Nikolaos Doumpas, Nikoletta

Sidiropoulou, Roxani Naasan Aga Spyridopoulou

Edited By: Anastasia Charitou and Ioannis Giovos

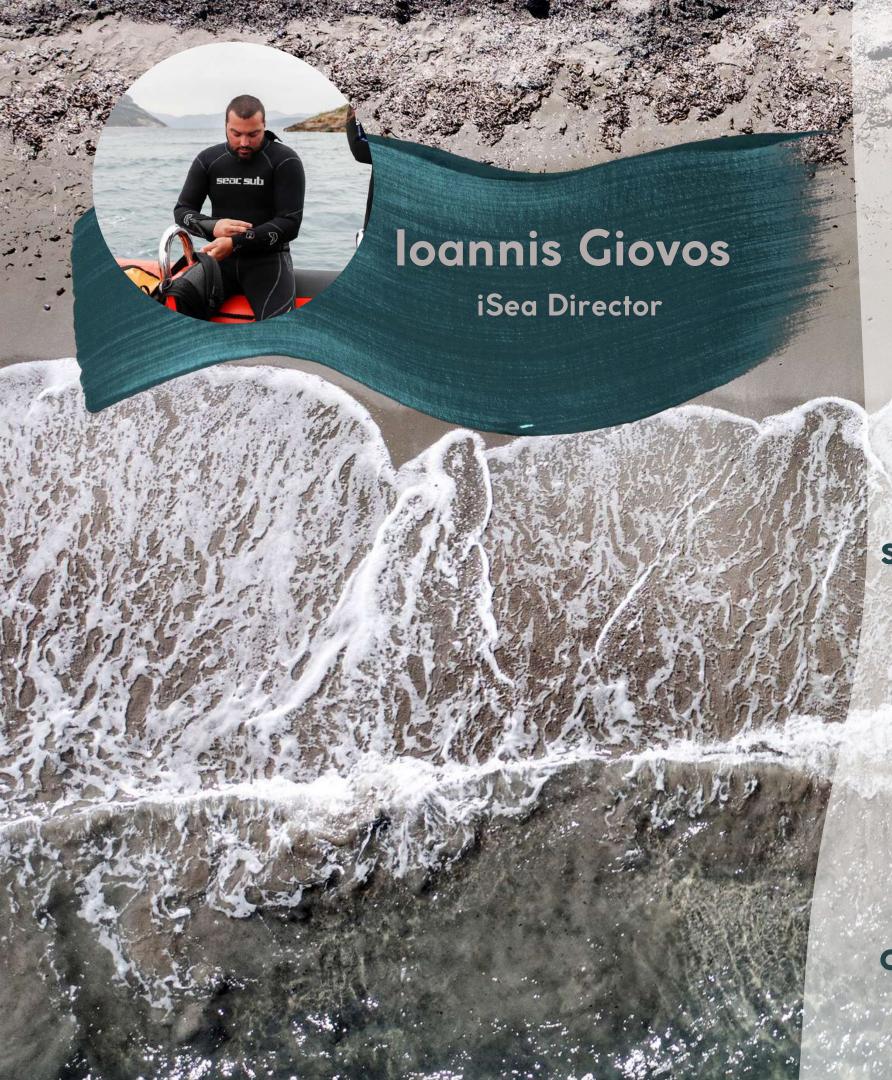
Designed by: Anna Maria Chrysafi and Ioannis Giovos

Pictures: iSea/ Dimitris Tosidis

Revised by all partners of iSea and signed by the Legal Representative of iSea







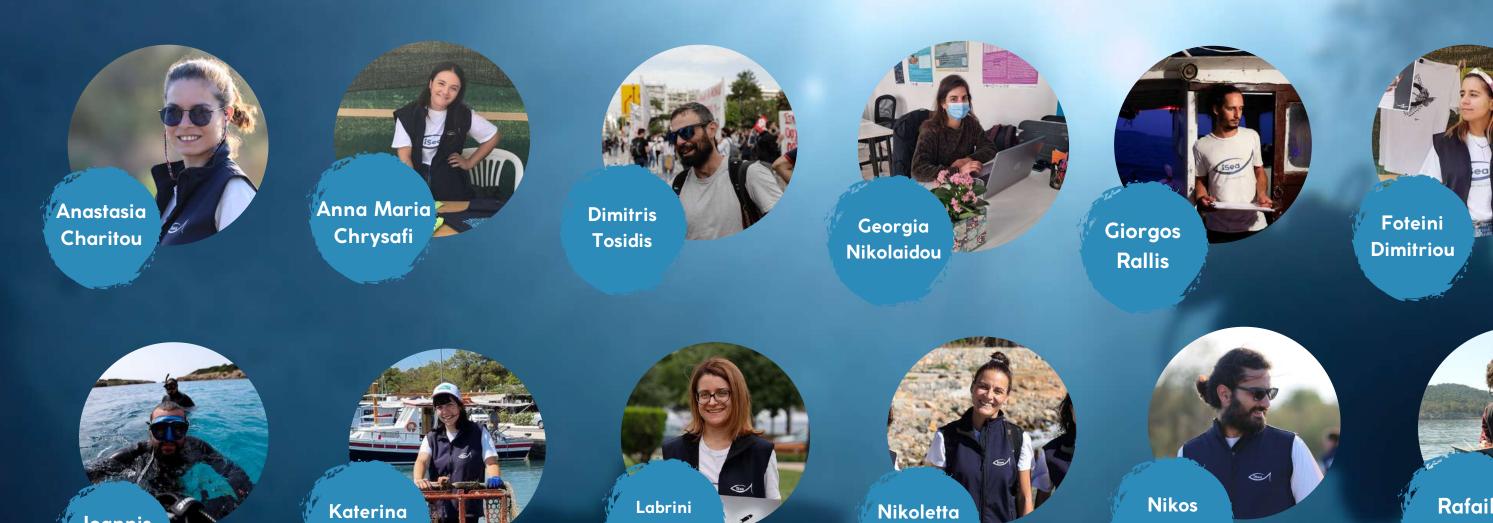
In an era of unprecedented challenges for humanity, where environmental protection is low on the agenda, we continue working closely with the coastal communities and fighting together for the preservation of the unique Mediterranean ecosystems.

In 2022, we overcame difficulties and successfully spent more time in the field, expanded our activities to new areas, spread the message among new communities, and enhanced science-based management in Greece and elsewhere. In such an unstable and challenging year, none of this would have been possible, without our passionate team and without building and strengthening our collaboration with amazing people from all over the globe who are sharing our mission.



# GOALS **Empower local** Protect & preserve communities marine ecosystems Advocate for science Promote based policies Science





Adamopoulou



loanna

Tzioga



**loannis** 

Giovos

Katsaouni



Sidiropoulou



"None of us is as smart as all of us!"

- 1 Angelshark Project: Libya
- 2 Guitarfish Project
- 3 The M.E.C.O. Project
- 4 Is it alien to you? Share it!!!
- 5 iNaturalist Greece
- 6 Reposidonia
- 7 Thermaikos Dolphin Project
- 8 By ElasmoCatch
- 9 Angelshark Project: Greece
- 10 Pick the Alien
- Learn- Participate- Protect the Environment
- 12 #zeroplastic
- 13 Fishing for Litter
- 14 Evaluating Marine Litter in GR
- 15 Prosfero
- 16 My Beach, Our Planet
- 17 Home Sweet Beach, Keep it Clean
- 18 Green Waters
- 19 Typhoon Micro Project
- 20 PanPuffinus
- 21 RiskMan
- 22 Pobleu
- 23 MedBycatch Support
- 24 Fish The Alien- Cyprus

### Where we worked in 2022





### Win #2

Iconic actions for raising awareness about plastic pollution

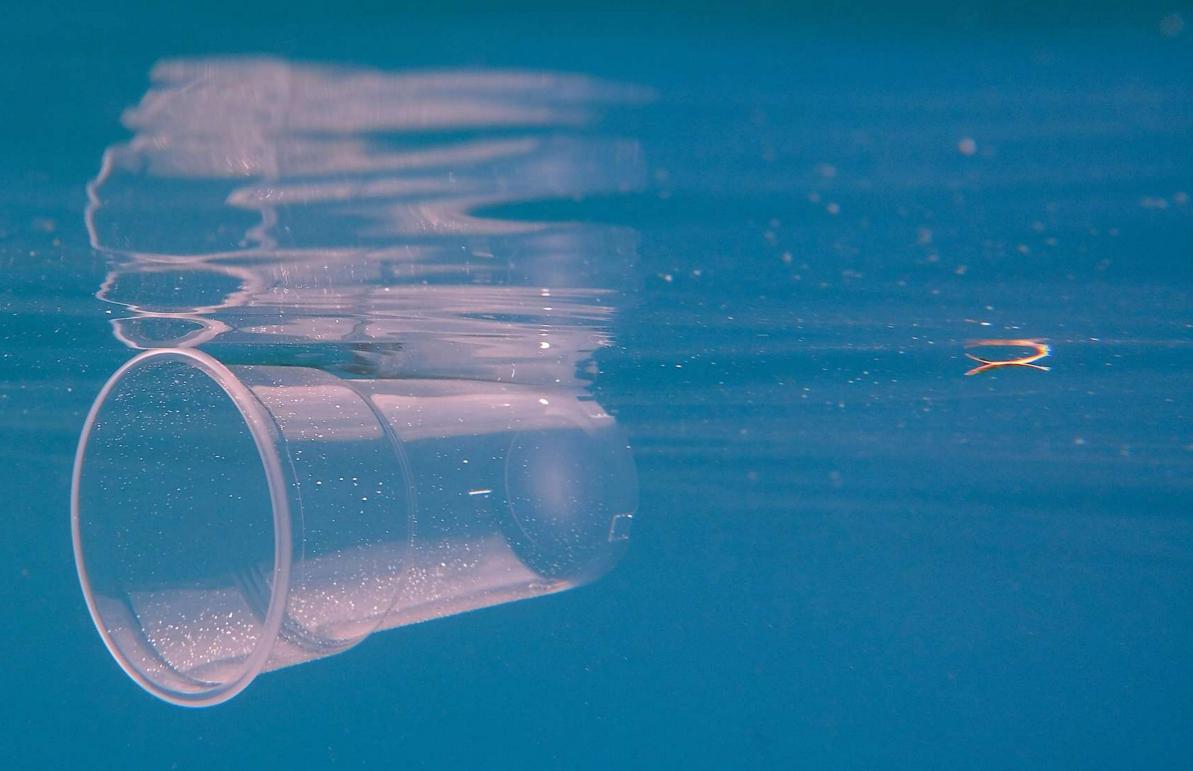




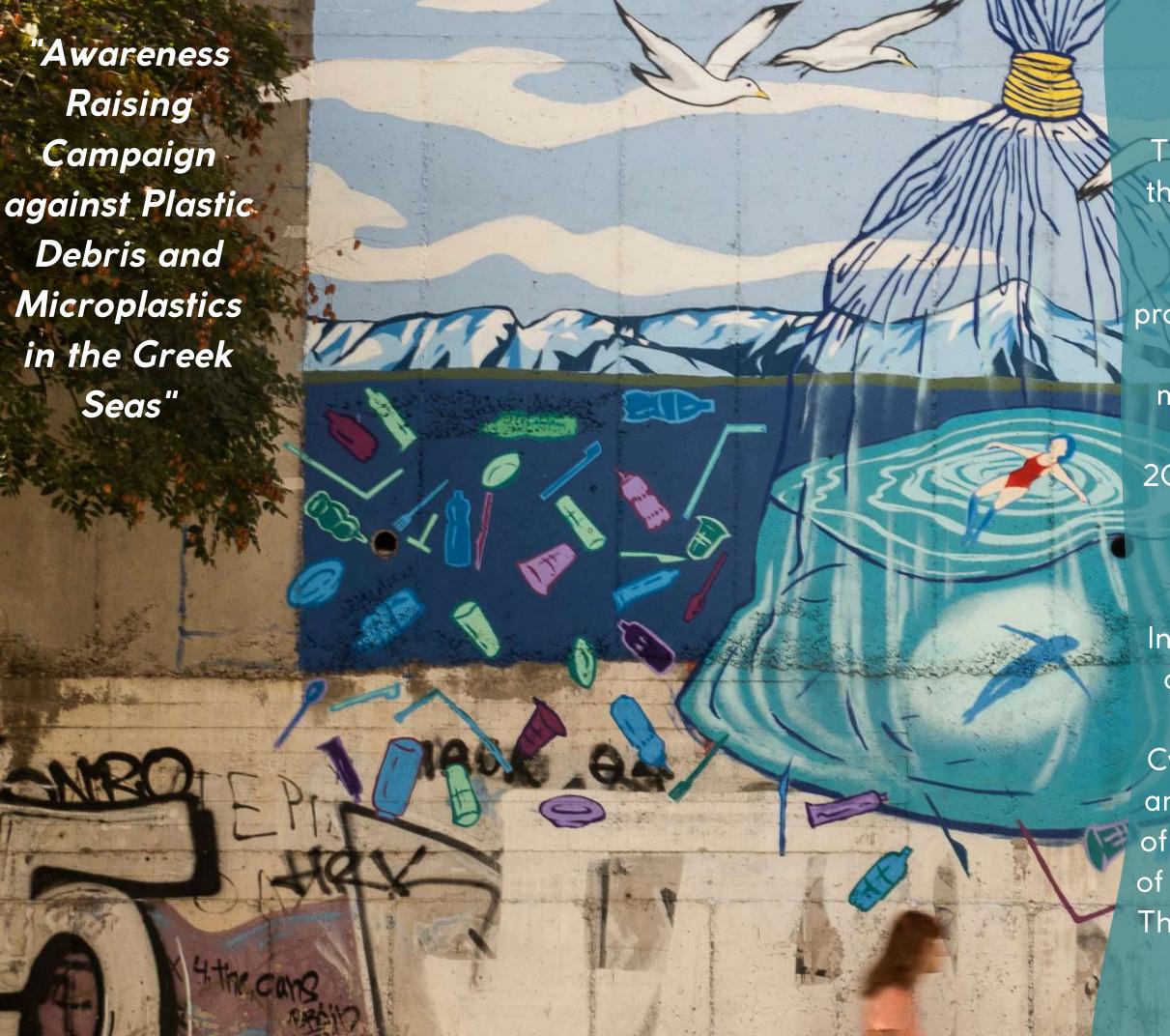
Win #1
New field base in the Ambracian
Gulf

Win #3
iSea team grew

# Aquatic Litter Pillar



"We are working for cleaner seas & coasts"





The #zeroplastic campaign started in 2019 with the aim to inform the public about the impact of plastic waste and microplastics on marine ecosystems and human health. In order to promote a zero-waste lifestyle through the reduce of plastic items and products containing microplastics., an awareness-raising campaign was conducted including multiple actions. In 2020, the campaign focused to raise awareness to the tourism industry through the active involvement of diving centers

In 2022, the project continued aiming in raising awareness to a bigger amount of citizens and business in the tourism sector in Greece and Cyprus. To achieve this, diving centers in Greece and Cyprus were actively involved and a number of iconic actions took place including the lighting of the White Tower in Blue, the graffiti created by Theano Giannezi and the photography campaign created by Foundry Photography Studio.







"Prosfero" campaign continues and during its 5th year of implementation, 37 coastal and underwater clean ups were conducted in areas of high ecological or historical importance all over Greece.

More specifically, cleanups were conducted in marinas, ports and beaches of Sporades island, Thessaloniki, Attica, Salamina, Santorini and Spinaloga.

In total, more than 550 volunteers contributed to the actions and were informed about the impact of marine litter and best practices to achieve a zero-waste lifestyle.





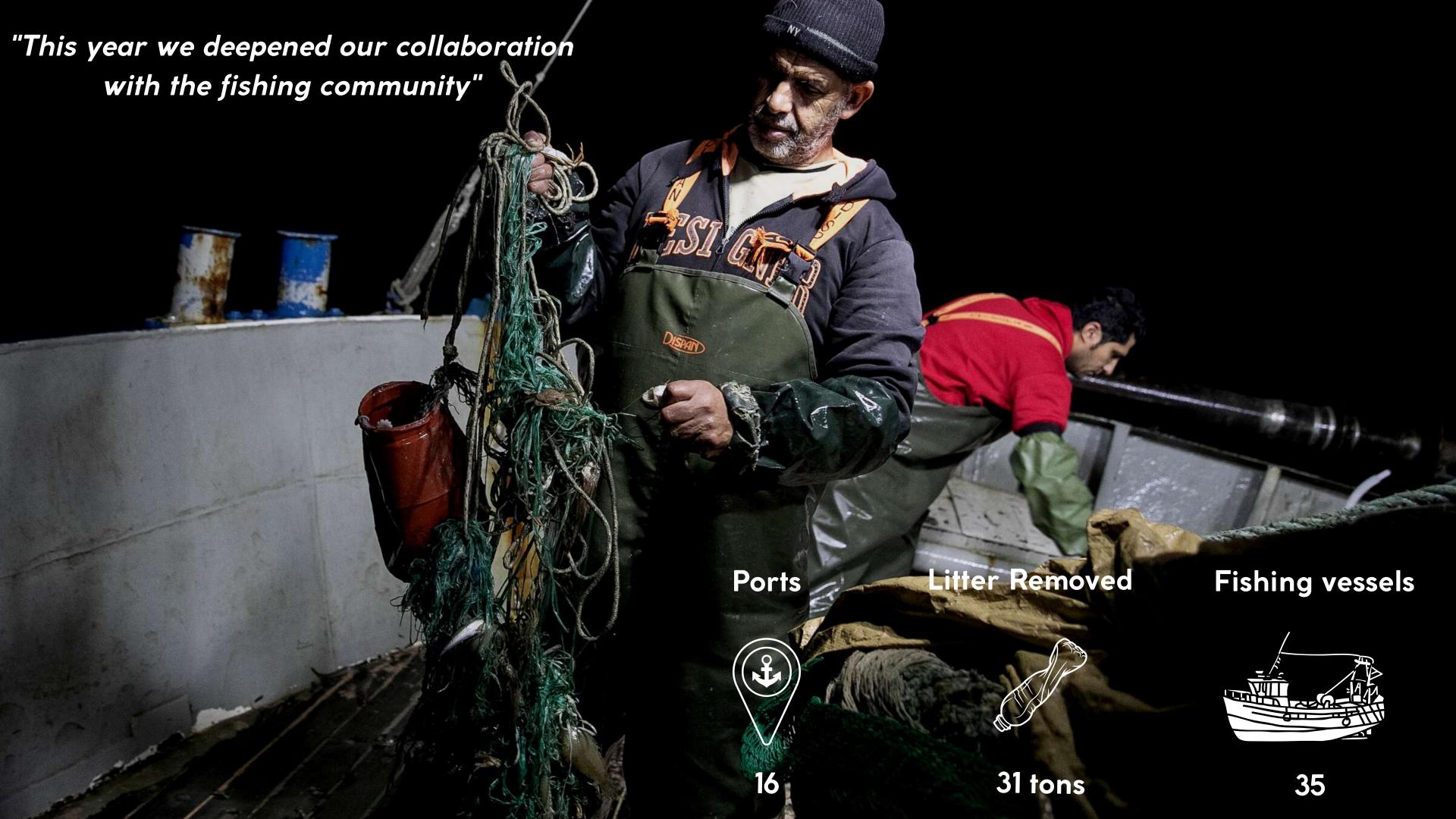


Fishing For Litter project by
A.C.Laskaridis Foundation in
collaboration with iSea aim
at sensitazing and changing
the waste management
practices of the fishing
industry, directly removing
marine litter from the seafloor
and recording them.

It is based on the participation of the fishing industry in the reduction of marine litter based on the OSPAR protocol Agreement 2017-081.

Participant professional fishers collect, weight and register the litter that accumulates in their nets as part of their routine fishing activity.







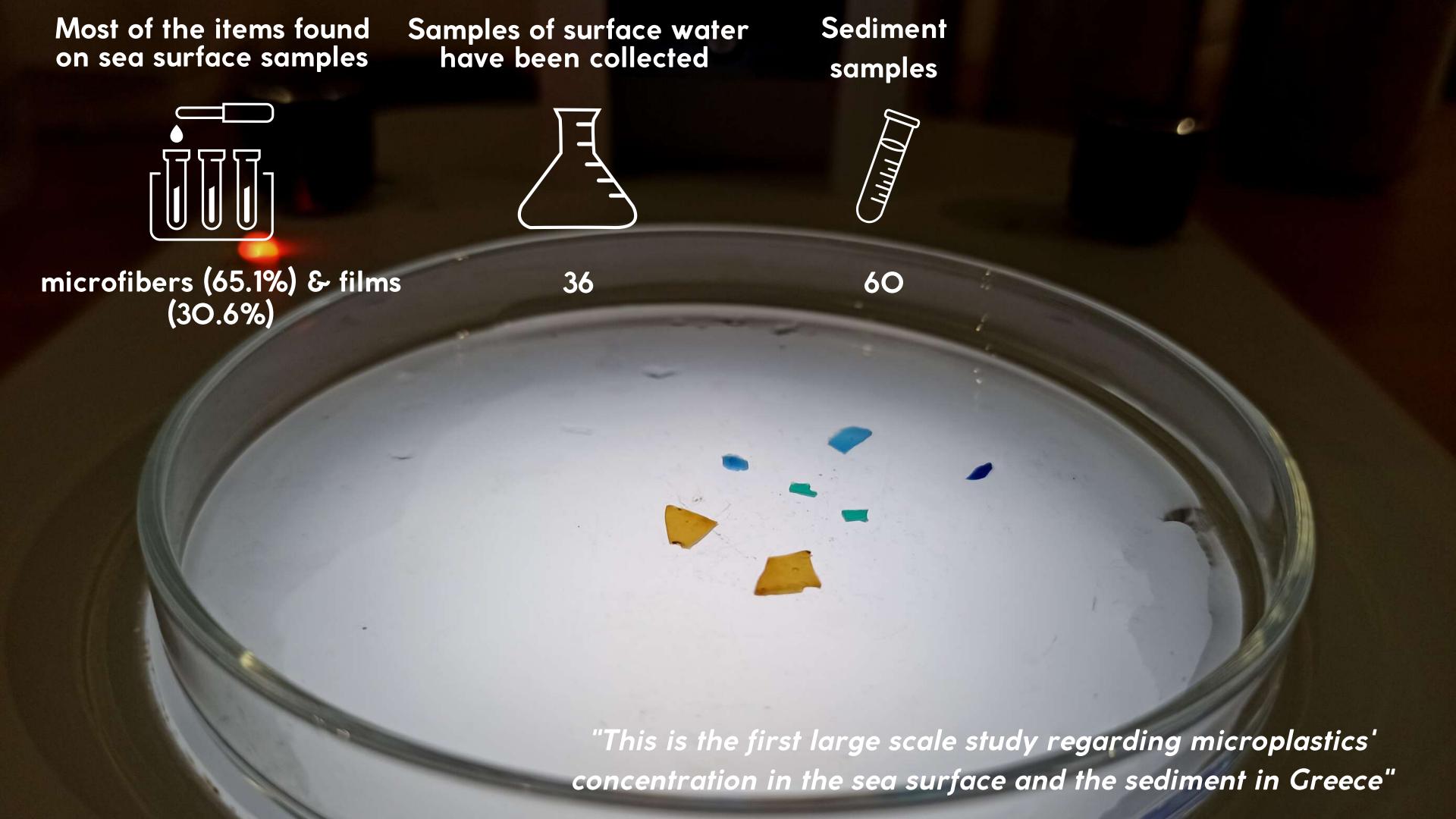




### Typhoon Microplastic Project

«Typhoon Microplastic Project» of A.C. Laskaridis Charitable Foundation is implemented in collaboration with iSea, the Department of Chemistry of the University of Patras and the crew of «Typhoon» vessel in order to study the existence, the abundance and the composition of microplastics in the Greek seas and coasts.

The project aims at ssessing the abundance of microplastics in Greece, analysing the chemical composition of microplastics collected and dentifying possible sources of microplastics in the Greek seas through the collection and analysis of sea surface and sediment samples.





The project "Home sweet... Beach! Keep it clean" includes beach cleanups implemented by iSea in different places of Greece.

In 2022, the actions were implemented in Thessaloniki, Athens and Crete in collaboration with Madoulides School, Primary School of Pefkochori, Primary School of N. Fokea, National Hellenic Student Association, Peiraeus Bank, Eurobank, Kotsovolos and Blueground.

# "Motivated people take action"







### OUR PLANET

iSea and Pernod Ricard Hellas joined their forces in the context of the project "My Beach. Our Planet", with the aim to remove marine litter from beaches in Attica and informing the public about the issue of aquatic litter. In addition, possible ways of tackling the problem and reducing the use of plastic in their everyday life were suggested and a zero-waste lifestyle was promoted to them. The importance of data collection and the results of litter abundance in the Greek seas were also briefly presented.



Litter Removed



Municipalities involved

Beach clean ups in Attica



550 kg



350





8



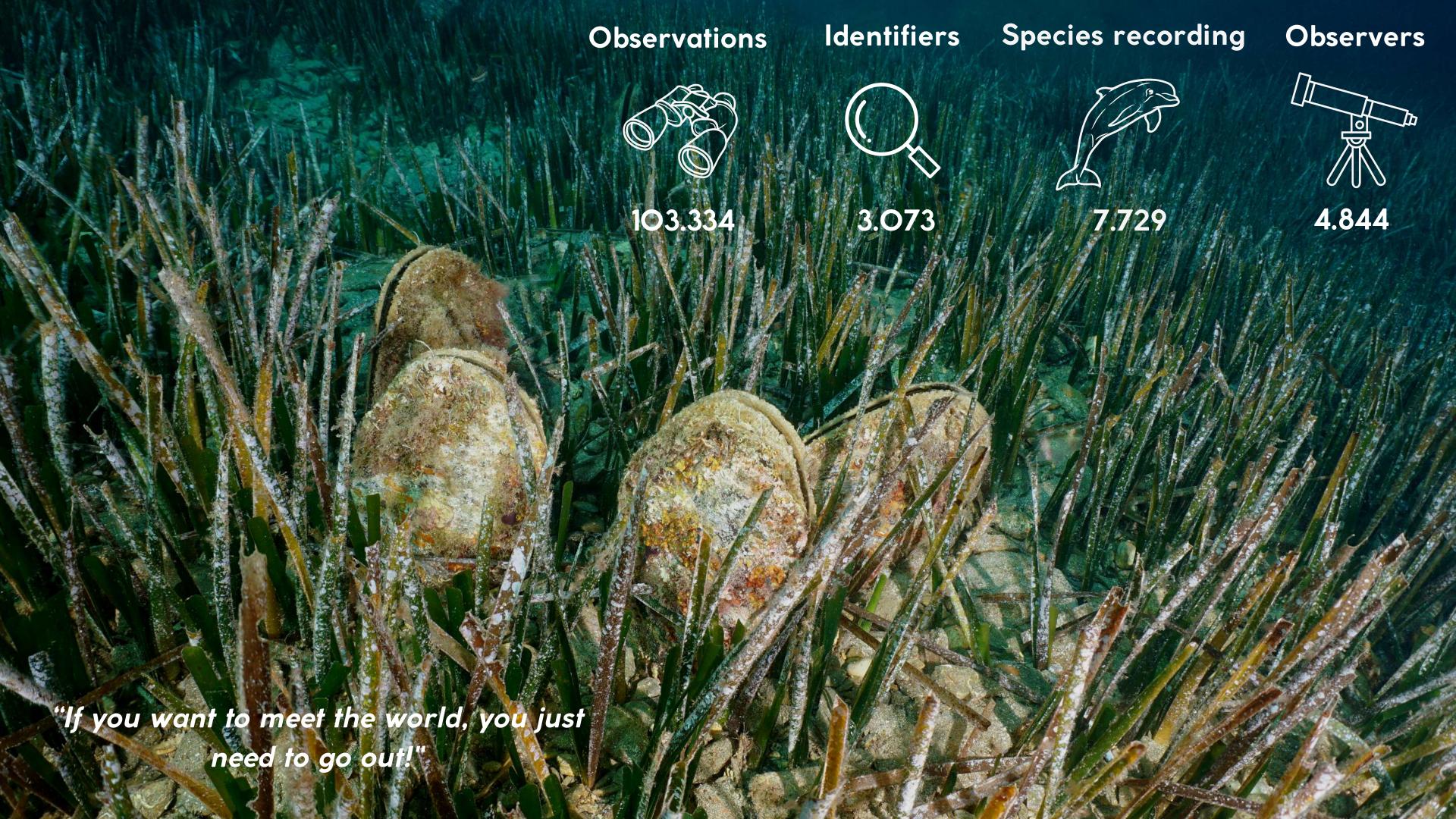




iNaturalistGR is the gate of
Greece to the global iNaturalist
network, is managed by iSea,
with the support of the
Goulandris Natural History
Museum.

The network allows people to record their observations and helps them identify the organisms around them. This way they learn more information about biodiversity, keep their own record of observations and share their observations with other nature lovers! Every observation published is validated by the iNaturalist user community, creating valuable open data for the study of biodiversity.



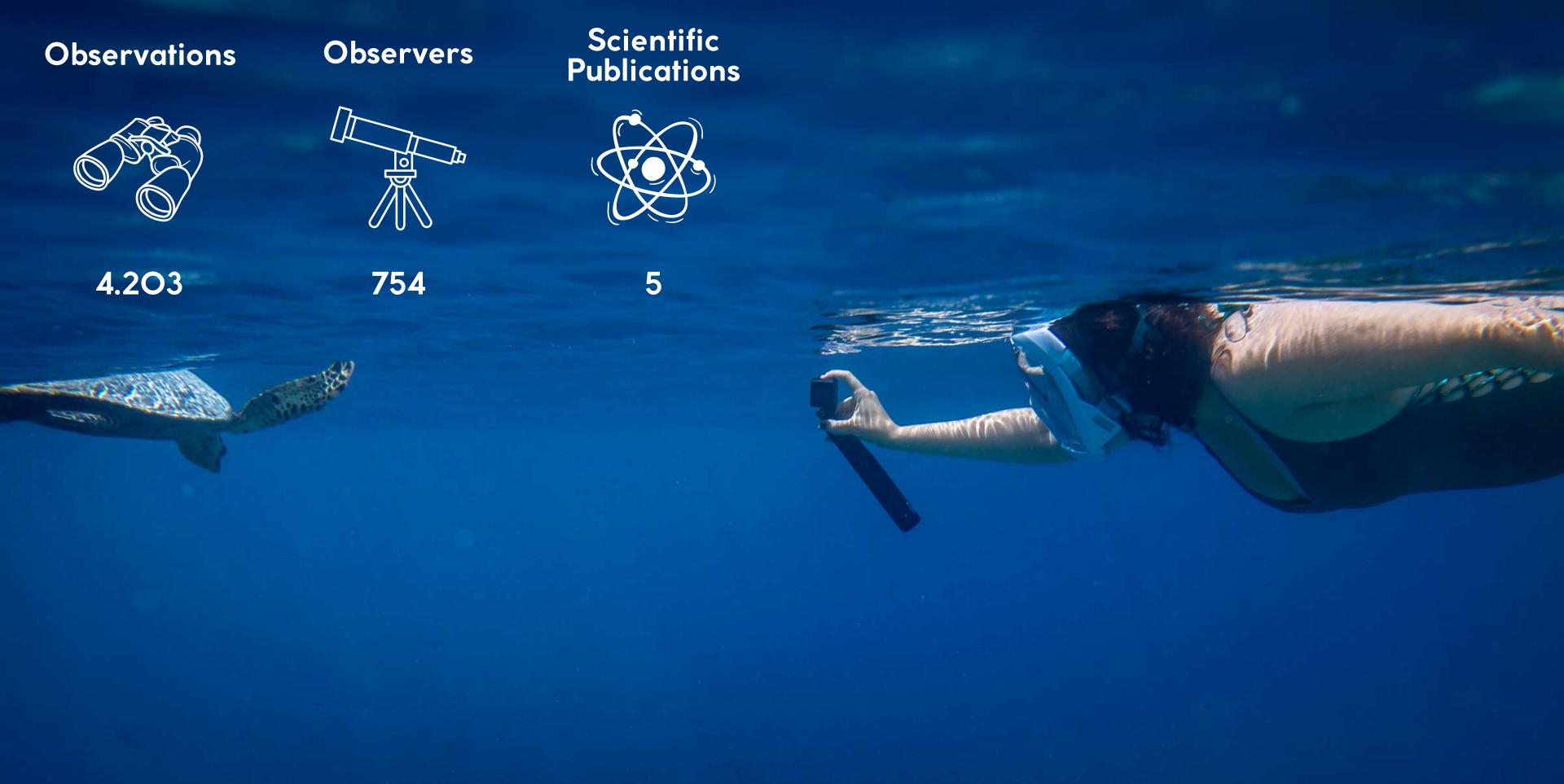






The project "Is it Alien to you? Share it!!!" is the most successful citizen science project of Greece in regards to the marine environment engaging thousands of people and collecting vast amount of information. Until 2020, the project aimed to monitor the expansion of the already established alien species in Greece and in Cyprus utilizing an extended network of citizen scientists.

In 2022, the project expanded at collecting data on protected, axploited, rare and indicator species.



"Citizens and scientists contributing side by side in marine science"



The project launched in 2017 aims to create a network of Mediterranean elasmobranch sighting citizen science initiatives in 10 countries, to better understand the occurrence, seasonality and distribution of elasmobranchs in the region. iSea is responsible for collecting citizen observations of sharks and rays in Greece and Cyprus through the corresponding Facebook group. The project is implemented in Albania, Austria, Cyprus, Greece, France, Israel,

Italy, Libya, Spain and

Turkey.





# Human & Aquatic Ecosystems Pillar







The project Pick the Alien launched in 2019 aiming to promote the consumption of edible marine alien species and the reduction of their populations. The vision in 2022 expanded and aimed at promoting the responsible consumption of eafood through the consumption of edible alien species. Informative and gastronomic events were implemented in Athens, hessaloniki, Amorgos, Santorini, Paros, Crete, Kos, Rhodes, Corfu, Paxi, Zante, Kefalonia, Spetses, Hydra and Nafplio, strengthening existing collaborations and creating many new ones. An interactive map with restaurants, fishers and fishmongers where alien species are vailable for the consumers was created. Through the development of specially designed lionfish traps, novel fishing practices are being tested for the first time in the Mediterranean seas in collaboration with professional fishers.

New recipes with Chefs that cooked Tasted edible Pilot traps for Informative and edible alien species and prepared alien species gastronomy events lionfish were created edible alien species 7 7 7 >2000 people "Consumers have the power to protect the marine environment through their choices"





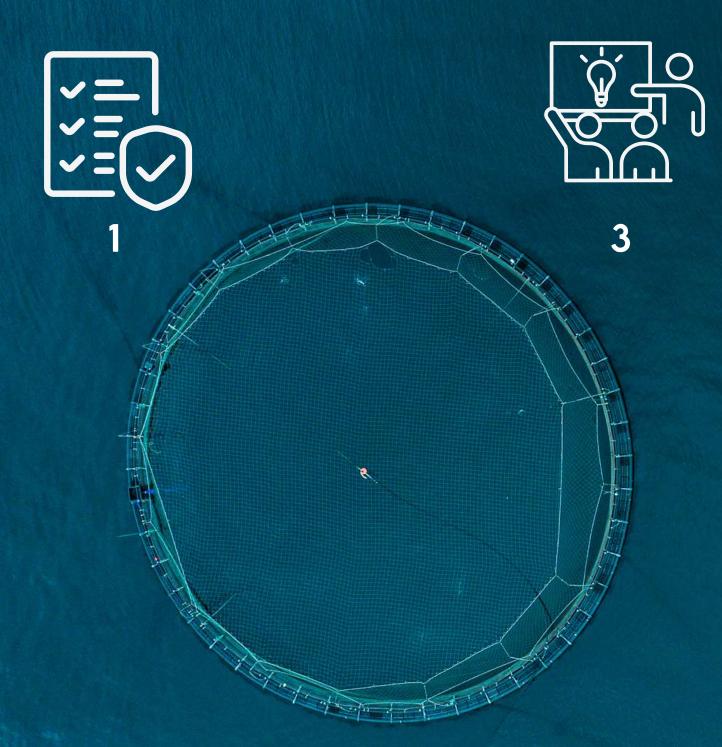
RiskMan Project aimed to strengthen the Educational Capacity for Risk Management of NN Aquatic Species in Albania, Bosnia and Herzegovina, Montenegro by promoting the education of stakeholders and higher education students and stimulating cooperation among the Partner countries.

To achieve this, a thorough set of measures based on new educational paths to increase the ability of local target groups mitigate and proactively prevent the potential negative impact on socio-ecological systems was proposed.

Risk Manager suggested policy framework

New courses related to Non Native Species

Aquatic alien species database in Western Balkan Countries

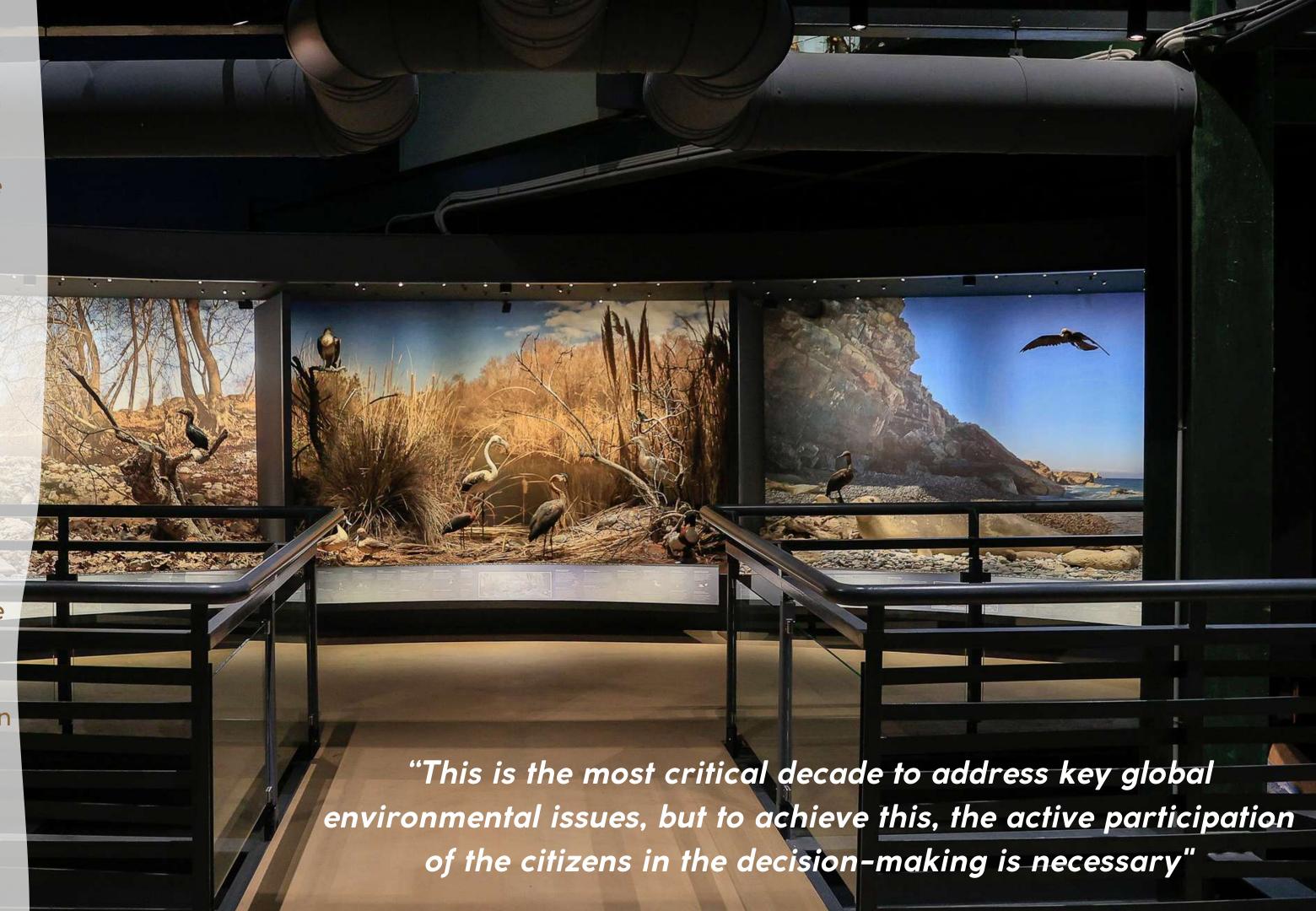




"The "Risk Manager" occupation created in the context of the project is very promising for Western Balkans"

Iceland Liechtenstein Active
Norwaygrants citizens fund

The project is implemented within the Active citizens fund program, by iSea and The Green Tank. It aims to promote, strengthen and shield the participation of students from universities with an environmental background and volunteer groups in processes related to the creation and implementation of environmental policies in Greece, with emphasis on climate crisis, biodiversity loss and plastic pollution.

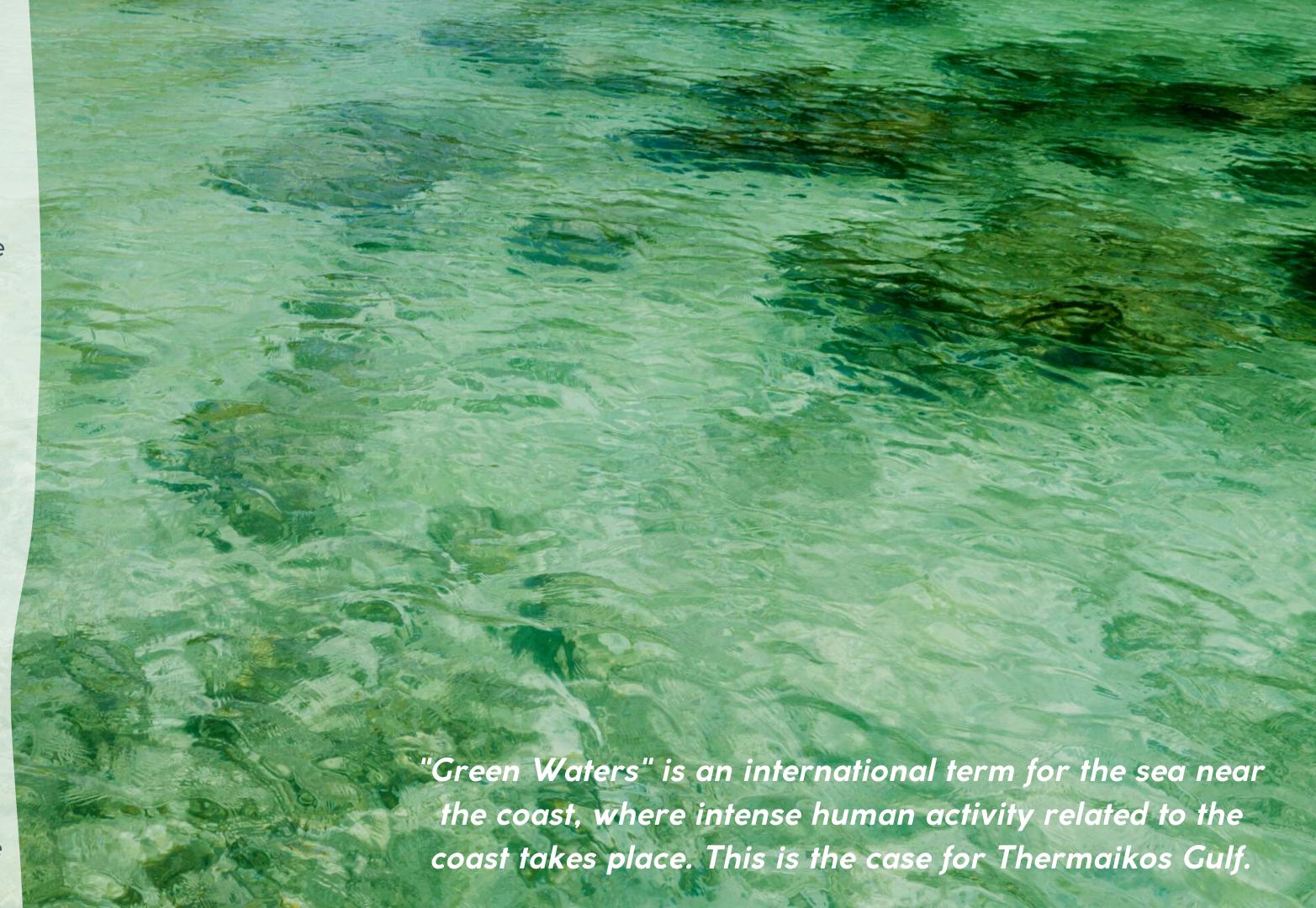






The project is implemented within the framework of the Active citizens fund program by the American Farm School of Thessaloniki and iSea.

Green Waters aims to the creation of a local network for the sustainable development in Thermaikos Gulf, Thessaloniki, through the awareness, involvement and collaboration of volunteers and entities dealing with the marine environment.





Active citizens fund











"In the context of 'Green Waters Network', 12 entities join forces for the protection of Thermaikos Gulf, the promotion of culture and safety at sea"

### NETWORK FOR LIFE AT SEA

Entities that participated in the network



Meetings among the network members



# Vulnerable Species Pillar

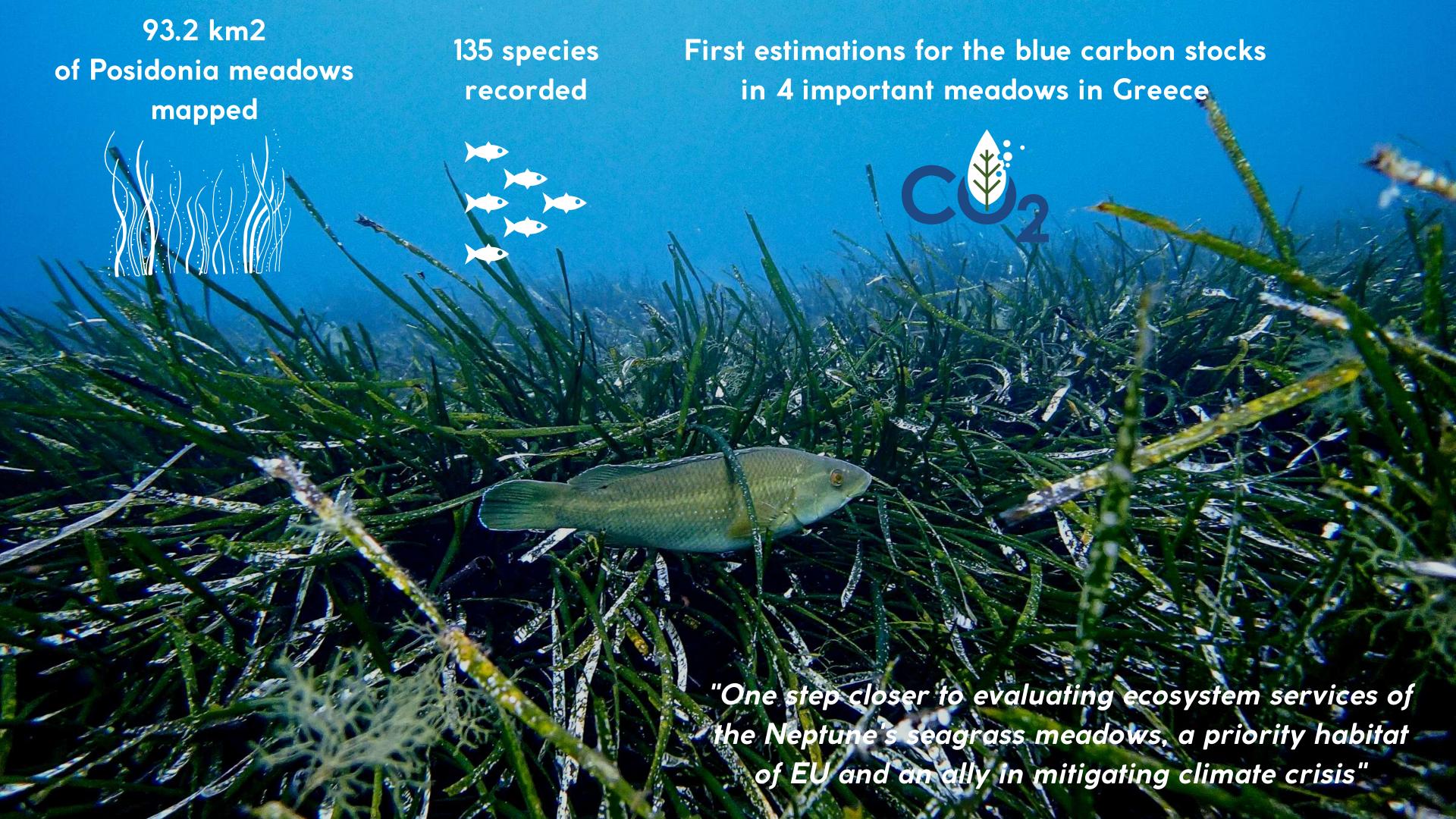
"We are working on preserving the most vulnerable marine species in the Mediterranean"





REPOSIDONIA is an umbrella project that aims at the protection and the preservation of the priority habitat *P. oceanica*, to the point it fulfils its ecological role in a healthy marine ecosystem through various ecosystem functions and services.

To achieve this, the project aims to increase the scientific knowledge about the distribution and area coverage of P. oceanica meadows in the Greek Seas, conduct biodiversity and biomass surveys and health assessments for the meadows, estimate the mapped meadows' Blue Carbon potential to propose science-based management measures, and finally, educate and sensitise key stakeholders to propose target management actions for these habitats, highlight the important ecosystem services offered by the meadows.

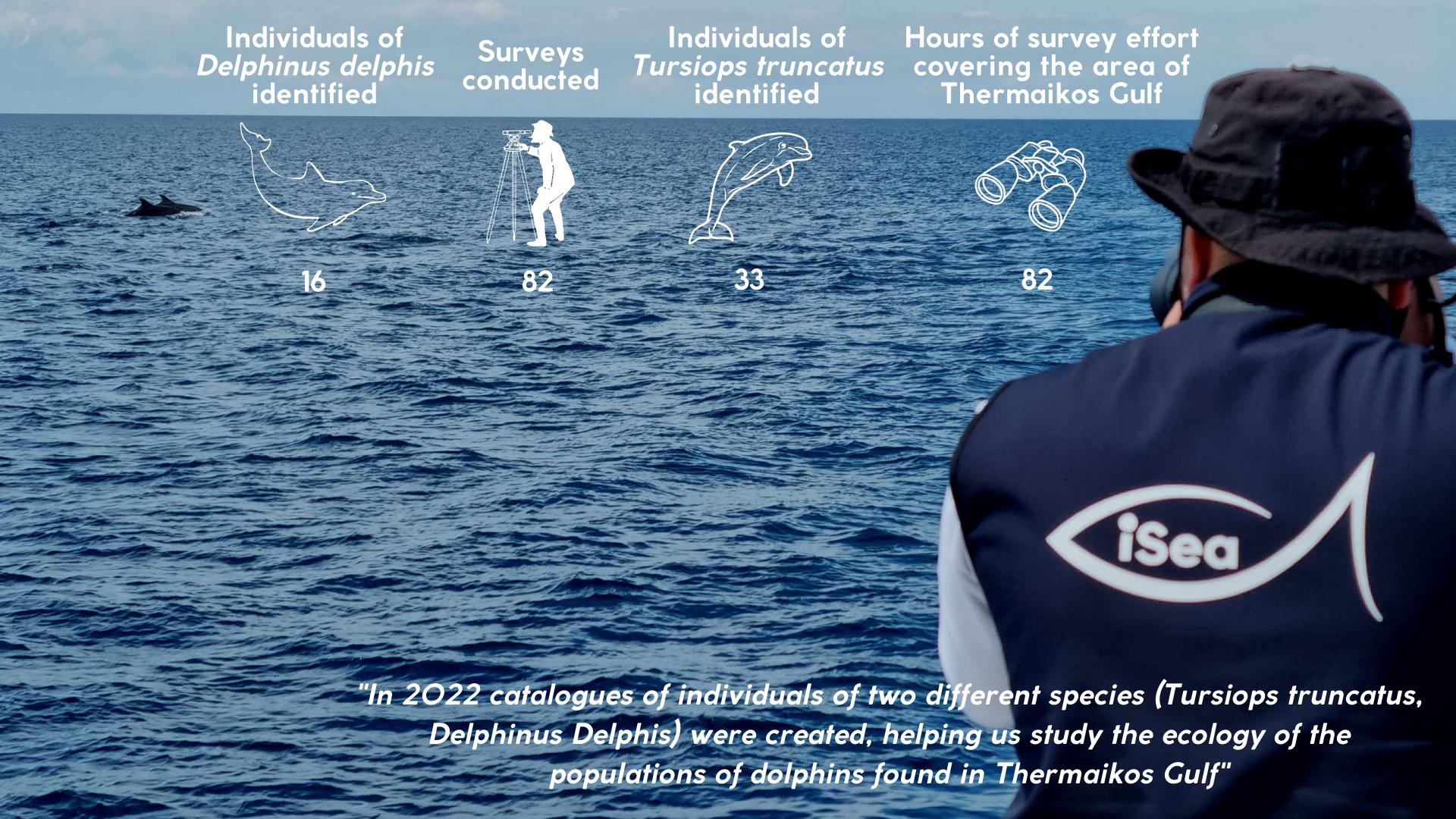






Thermaikos Dolphin Project is the first systematic effort to monitor the populations of cetaceans in the area of Thermaikos Gulf, which is heavily understudied in terms of cetaceans, and it is likely to be a key region for them.

Through Thermaikos Dolphin Project, the area's dolphin populations' abundance and distribution are studied, for species that regularly or occasionally occur in the gulf with the use of Photoidentification. The research effort to better understand the local populations of these animals is complemented with educational activities aimed to inspire the next generation and provide valuable knowledge on the importance of preserving the aquatic ecosystems and the biodiversity they host.

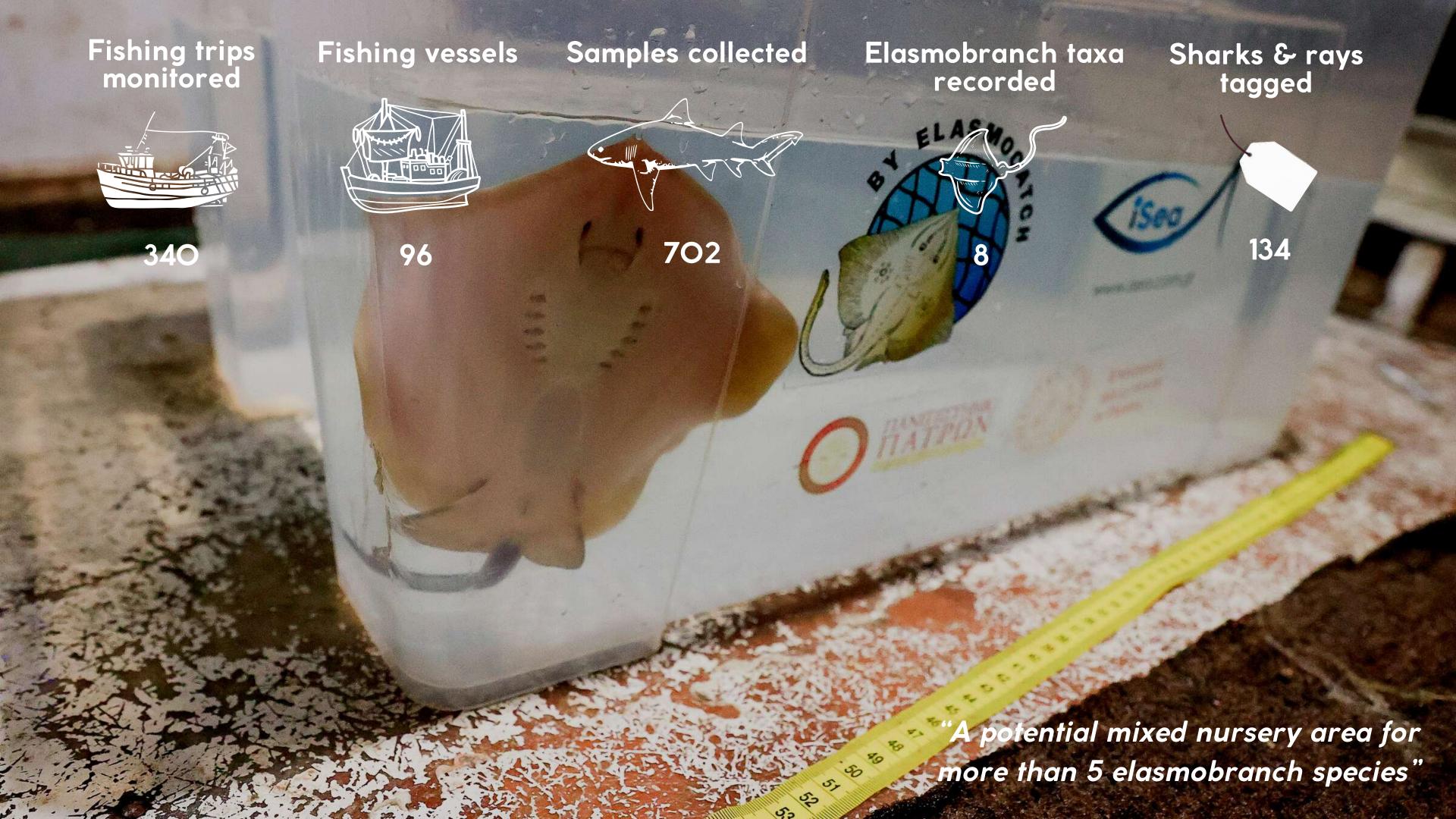


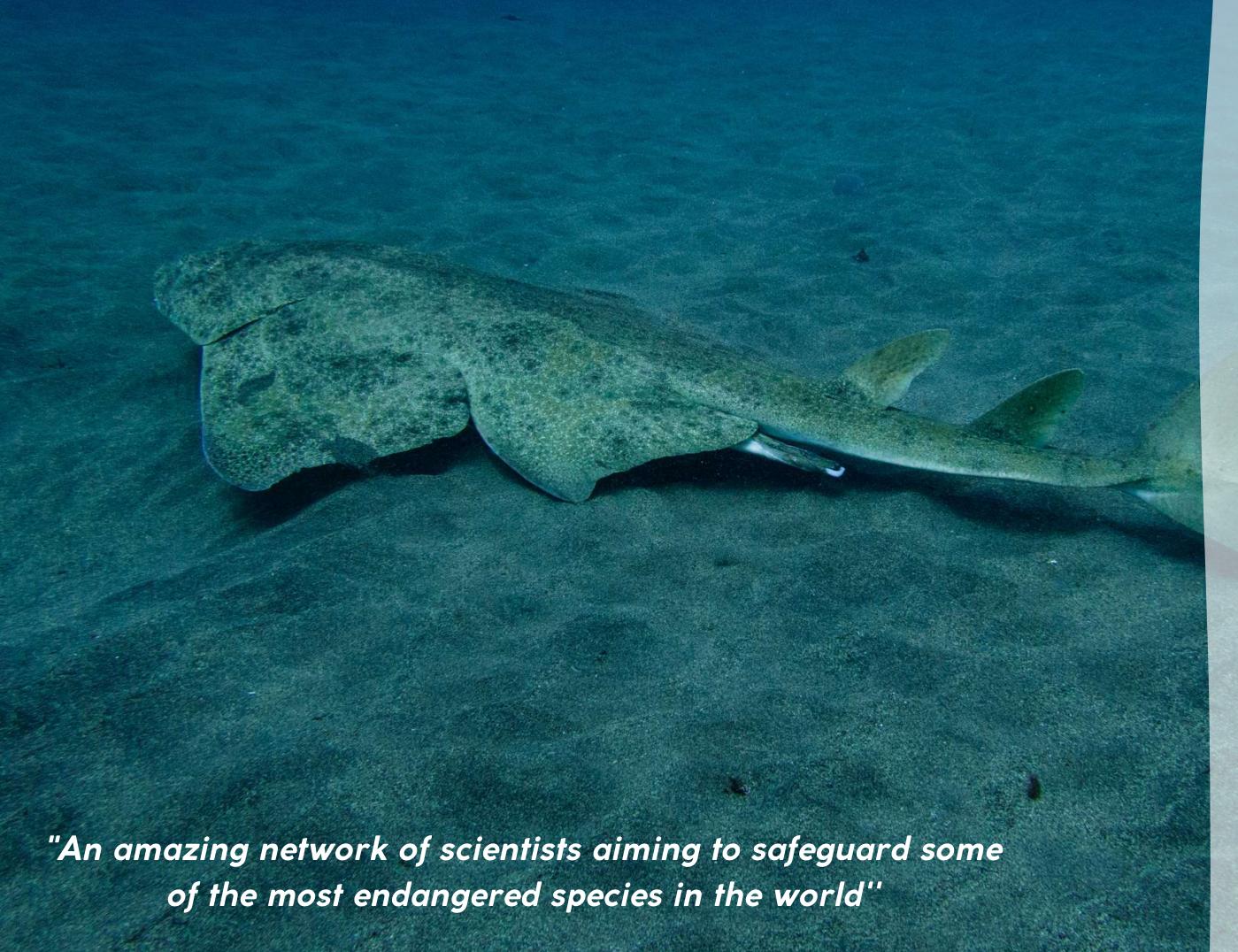


The project By ElasmoCatch focuses on the study of the biodiversity of elasmobranchs in Greece and its interactions with fisheries, as well as the study of their biology and ecology.

In 2022 the project focused on the area of the Ambracian Gulf, in northwestern Greece. Bycatch data and general questionnaires were gathered from more than 90 small-scale fishing vessels and the preliminary results of this long-term study revealed the presence of 2 species of sharks and 8 species of rays. Interesting results of the project also point out a possible mixed nursery for at least 5 elasmobranch species in the Gulf, highlighting the importance for further studies in the area and the need to propose conservation measures to protect their populations.



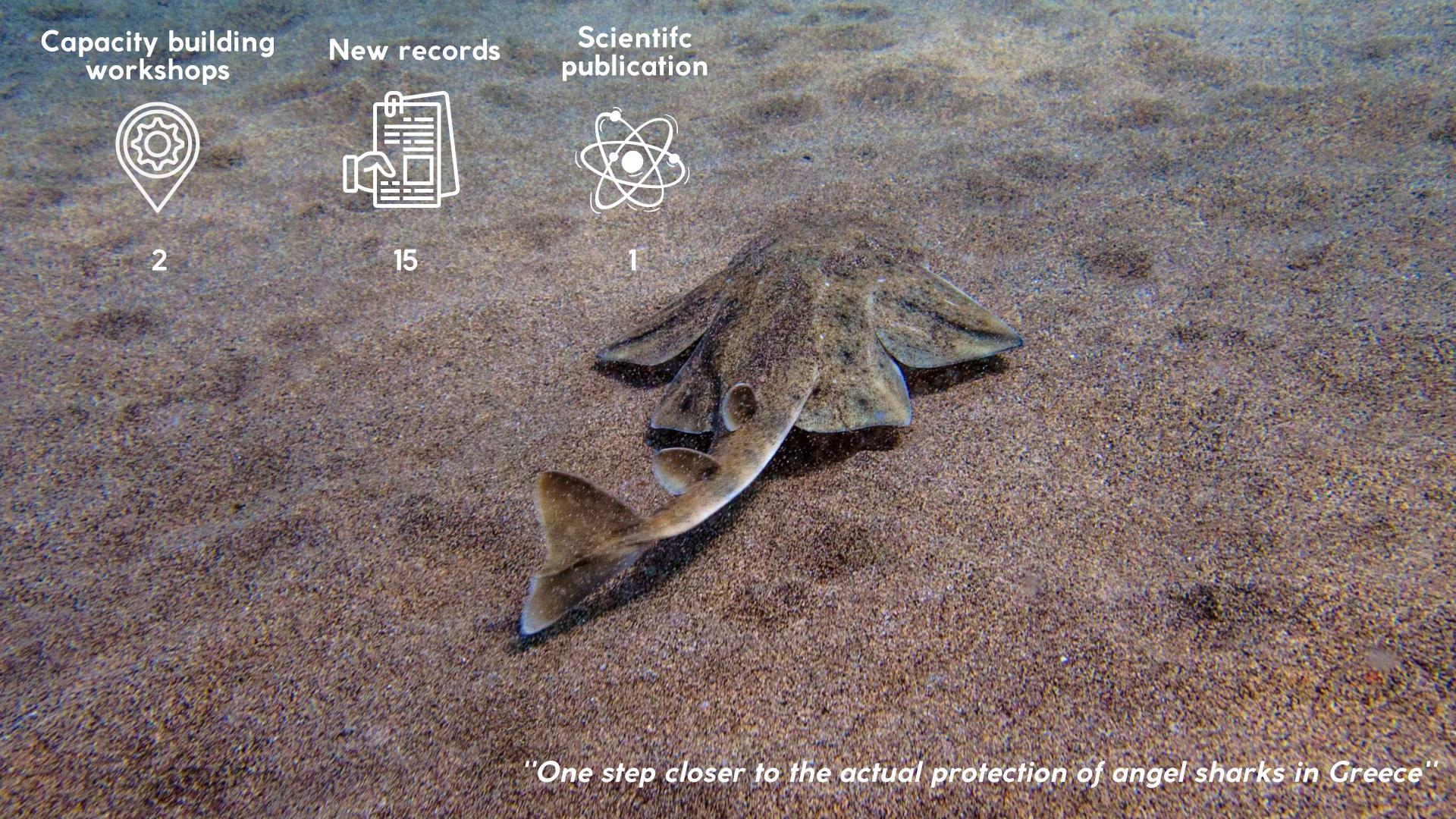






Angel Shark Project: Greece is a collaborative project led by iSea and supported by ULPGC, ZFMK, ZSL, and Shark Trust with an overall aim to investigate the importance of the Greek side of the Aegean Sea for all three angel shark species present in the Mediterranean (Squatina aculeata, Squatina oculata, Squatina squatina).

These species were once
widespread throughout the
Eastern Atlantic and
Mediterranean Sea, but now
their Mediterranean populations
are listed as Critically
Endangered in the IUCN Red List
of Threatened Species, a fact
that means they are all facing an
extremely high risk of extinction.



#### 2022 Scientific Papers

- Bargnesi, F., Moro, S., Leone, A., ..., Ferretti, F. (2022). **New technologies can support data collection on endangered shark species in the Mediterranean Sea**. Marine Ecology Progress Series.
- Giovos, I., Aga-Spyridopoulou, R.N., Serena, F., Soldo, A., ..., Moutopoulos, D.K. (2022). **An Updated Greek National Checklist of Chondrichthyans. Fishes, 7**(4), 199.
- Giovos, I., Brundo, M. V., Doumpas, ..., Copat, C. (2022). Trace elements in edible tissues of elasmobranchs from the North Aegean Sea (Eastern Mediterranean) and potential risks from consumption. Marine Pollution Bulletin, 184, 114129. Giovos, I., Brundo, M. V., Doumpas, N., Kazlari, Z., Loukovitis, D., Moutopoulos, D. K., ... & Copat, C. (2022). Trace elements in edible tissues of elasmobranchs from the North Aegean Sea (Eastern Mediterranean) and potential risks from consumption. Marine Pollution Bulletin, 184, 114129.
- Giovos, I., Katsada, D., Spyridopoulou, R.N.A., ..., Hood, A.R. (2022). Strengthening Angel Shark Conservation in the Northeastern Mediterranean Sea. Journal of Marine Science and Engineering, 10, 269.
- Fabbri, F., Maggioni, T., Charitou, A., ...., Musco, F., (2022). Integrated Ocean Management in the Mediterranean Overview and good practices to foster the ecosystem approach. Zenodo.
- Hsun Hsu, H., Yacoubi, L., Lin, Y-L, ..., Rabaoui, L. (2022). Elasmobranchs of the western Arabian Gulf: Diversity, status, and implications for conservation, Regional Studies in Marine Science, 102637
- Kleitou, P., Moutopoulos, D.K., Giovos, I., ..., Rees, S. (2022). Conflicting interests
  and growing importance of non-indigenous species in commercial and
  recreational fisheries of the Mediterranean Sea. Fisheries Management and
  Ecology.
- Koehler, L., Giovos, I., Lowther, J. (2022). The application of precaution in elasmobranch conservation and management in the Mediterranean Sea. Marine Policy, 135, 104830
- Kosmopoulou, A., Xirotagarou, P., Alexiadou, I., ..., Vourdouba, D. (2022) The pollution footprint of the pandemic in Greek seas and coasts: A first assessment. Kouvara, K. & Papatheodorou, G. (Eds). Pandemic, Sea and Human in Greece: Athanasios K. Laskaridis Foundation. Athens, 2022.

- Kouvara, K., Papatheodorou G., Kosmopoulou, A., ..., Geraga, M. (2022).
   COVID-19-related litter pollution on Greek beaches and nearshore shallow water environments. Marine Pollution Bulletin 185, 114250.
- Langeneck, J., Minasidis, V., Doumpas, N., ..., Crocetta, F. (2022). Citizen
   Science Helps in Tracking the Range Expansions of Non-Indigenous
   and Neo-Native Species in Greece and Cyprus (Eastern Mediterranean
   Sea). Journal of Marine Science and Engineering, 10, 256.
- Moutopoulos, D.K., Lazari, E., Katselis, G., Giovos, I. (2022). From
   Extermination to Conservation: Historical Records of Shark Presence during the Early and Development Phase of the Greek Fishery. Animals, 12(24), 3575.
- Minasidis, V., Doumpas, N., Giovos, I. et al. (2022). Assessing Consumer
   Attitude Towards Marine Non-Indigenous Fish Species: A Case Study
   From Greece (Eastern Mediterranean Sea). Thalassas.
- Minasidis, V. & Kaminas, A. (2022). On the presence of Lophotus lacepede Giorna, 1809 in the Greek waters (eastern Mediterranean Sea). Journal of the Black Sea/Mediterranean Environment, 27(3), 379–384.
- Nuez Rodriguez, I., Giovos, I., Tiralongo, F., ..., Gazo, M. (2023). Assessing the current status of Hexanchus griseus in the Mediterranean Sea using local ecological knowledge. Marine Policy, 147: 105378
- Poursanidis, D., Kougioumoutzis, K., Minasidis, V., ..., Kalogirou, S. (2022). Uncertainty in Marine Species Distribution Modelling: Trying to Locate Invasion Hotspots for Pterois miles in the Eastern Mediterranean Sea. Journal of Marine Science and Engineering, 10(6), 729
- Sokou, V., Gonzalvo, J., Giovos, I., ..., Moutopoulos, D.K. (2022). **Tracing dolphin-fishery interaction in early Greek fisheries**. ANNALES · Ser. hist. nat., 32, 443–450.
- Tiralongo F., Hall-Spencer J.M., Giovos I. and Kleitou P. (2022) Editorial:
   Biological invasions in the Mediterranean Sea. Frontiers in Marine
   Science 9: 1016168.



# Research Output

#### Conference Communication 2022

- Adamopoulou, L., Giovos, I., Minasidis, V., ...,
   Papastamatiou, Y. (2022). Kos Island

   (Dodecanese, Greece) as a potential hotspot for
   highly threatened demersal elasmobranchs in
   the Mediterranean Sea. 15th ICZEGAR, Mytilini,
   12-15 October 2022
- Ciprian, M., Minasidis, V., Rallis, G., ...,
   Moutopoulos, D. K. (2022) Take me home: first
   insights on elasmobranchs release as a possible
   management strategy in the Ambracian Gulf,
   Greece. Sharks International 2022, Valencia,
   20–22 October 2022
- Kerametsidis, G., Glarou, M., Tiralongo, F., ...,
  Gonzalvo, J. (2022). Assessing human-wildlife
  interactions in the Anthropocene: a social
  media-based study on the Mediterranean monk
  seal, a flagship species for marine conservation.
  ECS Conference 2022 Ashdod, Israel, 5-7 April
  2022.
- Komnenou, A., Drougas, A., Kofidou, ..., Giovos, I.
   (2022). A Stranding of a Harbour Porpoise Calf (Phocoena phocoena relicta) in the North Aegean Sea. ECS Conference 2022 – Ashdod, Israel, 5–7 April 2022
- Martin, A., Naasan Aga-Spryridopoulou, R., Giovos, I. (2022) Monitoring elasmobranch bycatch in the small-scale fisheries of the North Aegean, Greece. Sharks International 2022, Valencia, 20-22 October 2022

- Minasidis, V., Douligeri, A. S., Kaminas, A., ...,
   Moutopoulos, D. K. (2022). Assess the status of
   four non-indigenous species in Greece and
   Cyprus: Preliminary results. 18th lchtyologists'
   conference, Mesologgi, 3-6 November 2022
- Naasan Aga Spyridopoulou, R., Giovos, I., Moutopoulos, K. D. (2022) Five years of monitoring elasmobranch fisheries and trade in Greece; Lessons learned and future steps. Sharks International 2022, Valencia, 20–22 October 2022
- Rallis, G., Minasidis, V., Ciprian, M., ...,
   Moutopoulos, D. K. (2022). Insights on
   elasmobranch biodiversity of the Ambracian
   Gulf through bycatch data of small-scale
   fisheries. 15th ICZEGAR, Mytilini, 12- 15
   October
- Rallis, G., Ciprian, M., Papale, A., ...,
   Moutopoulos, D. K. (2022) Discovering the
   feeding habits of rays in the Ambracian Gulf.
   Sharks International 2022, Valencia, 20–22
   October 2022
- Rallis, G., Giovos, I., Naasan Aga –
   Spyridopoulou, R., Gonzalvo, J.(2022).
   Monitoring dolphin populations in Thermaikos gulf through photo-identification. 18th lchtyologists' conference, Mesologgi, 3-6
   November 2022



## Special Thanks to our funders

Blue Marine Foundation

A. C. Laskaridis Charitable Foundation

Bodossaki Foundation

Solidarity Now

Erasmus+ Programme

Green Fund

Shark Conservation Fund

Ocean Care

**Shark Foundation** 

Beyond Plastic Med

Ionian Environment Foundation

**Argolic Environment Foundation** 

Natural Environment and Climatre

Agency (NECCA)

KYMA sea conservation & research

Save our Seas

NHSA

Procter & Gamble

AB Vassilopoulos

Thenamaris (Ship Management)

Pernord Ricard

SANI Resort

**British Council** 

Eurobank

Peiraeus Bank

Blueground

Foodrinco

Kotsovolos

Trata

for supporting our efforts in 2022

# Special Thanks to our collaborators

University of Patras University of Padova Marine and Environmental Research Lab Ltd. **Angel Shark Project** Tethys Research Institute **IUCN Shark Specialist Group** American Farm School *i*Naturalist University of Plymouth University of Catania ENTE Fauna Mediterranea Stazione Zoologica Anton Dohrn

TUDAV Florida International University Ionian University WWF Mediterranean Marine Initiative Terra Solutions European Elasmobranch Association ARION KYMA sea conservation & research Hellenic Ornithological Society Shark Trust Nerd Fishing Tyrikos Foundry Photography Studio

for enriching our efforts in 2022

# Special Thanks to our interns



Aristide Papale

BSc Student
University of Catania



Sofia Litsiou

MSc Student

Aristotle University of

Thessaloniki



MSc Student
University of Padova



Eddy Simon

BSc Student
University of Toulouse



Guilia Filz

BSc Student
University of Bologna

for joining our efforts in 2022

