



Activity Report
2018

iSea,
Environmental Organisation
for the Preservation of the
Aquatic Ecosystems

INTRODUCTION

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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And signed by the Legal Representative of iSea: **Vangelis Paravas**



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, but 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. The organisation 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 nationally and internationally.

2018

2018 was a keystone year for iSea in all levels. The organisation managed to expand its activities, employ personnel for the first time and consequently contribute meaningfully in the preservation of the aquatic ecosystems in Greece, fulfilling its constitutional object. The network of collaborators, volunteers and funders expanded significantly both within Greece and internationally, while the headquarters of the organisation are now fully equipped, providing a safe and pleasant working environment, which ensures high quality results.

Another highlight of the year was the provision of an internship for two undergraduate students from the University of the Aegean, a collaboration that will continue in the future. The social media networks of the organisation grew significantly, primarily Facebook that counts 6573 followers, while the Facebook group of the project "Is it Alien to you? Share it!!!" counts 6110 members.

In numbers

Maximum number of employees reached within the year: 4

Number of members: 13

Number of permanent volunteers: 15

Number of occasional volunteers: 1000

Number of permanent external collaborators: 32

Estimated number of people, stakeholders and other involved persons that have benefited from iSea's activities: 500,000

Number of scientific publications (including conferences communications, reports and book chapters): 29

Number of conferences attendances: 7

Number of funded projects: 4

Number of events: 52

FISHERIES

Fisheries sector is an important professional activity for Greek coastal communities and although its contribution to the national GDP is quite low, it is considered extremely valuable for the cohesion of especially remote, or isolated insular and coastal communities. Despite the limited scientific data, the majority of the Mediterranean fish stocks (including the stocks found in Greek waters) are in poor condition. In order to tackle this problem urgent measures are therefore required to restore stocks to a healthy status. In iSea we recognize the value and importance of the fisheries sector for Greece and our target is to collaborate with scientific institutions and contribute to reinforcing public opinion on the need to take appropriate measures for the conservation and protection of the marine environment and of its elements, including fish, which represents an important resource for the country.. As an organisation we have a special focus on elasmobranchs, an extremely threatened group of marine organisms that possesses a unique position in marine food webs. Due to their pivotal role, elasmobranchs can act as umbrella species for the marine protection. Therefore, the majority of our activities in this pillar focus on advancing elasmobranchs' conservation in Greece.

Highlights

- iSea has been accepted as the 12th member of the European Elasmobranch Association
- The creation of the SEAlly Application for reporting shark sightings
- Establishing our collaboration with HCMR and T.E.I. of Western Greece for consulting iSea on its research about elasmobranchs
- The presentation of our work regarding elasmobranchs in the Morris Kahn Marine Station of the University of Haifa, Israel in the context of an STSM funded by the OceanGov COST Action
- The Update of the Sharks and Rays Identification Guide by the Greek General Directorate for Sustainable Fisheries after the continuous interventions and letters of iSea
- The creation of a new page in the website of the Hellenic Coast Guard dedicated to elasmobranchs following a formal recommendation letter signed by iSea

The most important progress achieved by iSea in several projects carried out throughout 2018 is presented below.

1. Sharks and Rays in Greece and Cyprus



This project is part of a broader initiative, the M.E.C.O. (Mediterranean Elasmobranchs Citizen Observations), which aims to create a network of Mediterranean elasmobranch sightings data, through collaboration among different teams in various countries, in order to better understand the occurrence, seasonality and distribution of elasmobranchs in this region. Currently the project runs in Albania, Cyprus, Greece, France, Libya, Turkey and Spain.

In numbers

Number of Facebook group members: 1245

Number of observations: 334

Number of articles in the Greek press: 31

Number of press releases: 4

Scientific publications (with bold and underlined the members of iSea)

- Bakiu, R., Cakalli, M., **Giovos, I.** (2018). The first record of bigeyed sixgill shark, *Hexanchus nakamurai* Teng, 1962 in Albanian waters. *Journal of the Black Sea/ Mediterranean Environment* 24(1): 74-79.
- Chatzisprou, A., Aroni, M., Lefkadiou, E., Kapiris, K., **Giovos, I.**, Anastasopoulou, A. (2018). Some biological information on a female kitefin shark, *Dalatias licha* (Bonnaterre, 1788) stranded in the Laconikos gulf of Greece (SE Ionian Sea). *Turkish Journal of Fisheries & Aquatic Science* 19(12) (IN PRESS)
- **Giovos, I.**, Chatzisprou, A., **Doumpas N., Stoilas**, V.S., Moutopoulos D.K. (2018). Using unconventional sources of information for identifying critical areas for the endangered guitarfish in Greece. *Journal of the Black Sea/ Mediterranean Environment* 24(1): 38-50.

Submitted scientific publications (with bold and underlined the members of iSea)

- **Giovos, I., Stoilas, V.S.,** Al Mabruk, S.A.A., **Doumpas, N., Marakis, P., Maximidi, M.,** Moutopoulos, M., **Kleitou, P.,** Tiralongo, F., de Maddalena, A. (2019). Integrating local ecological knowledge, citizen science and long-term historical data for endangered species conservation: New records of Angel Sharks (Chondrichthyes: Squatinidae) in the Mediterranean Sea. *Aquatic Conservation: Marine and Freshwater Ecosystems* (ACCEPTED)
- **Keramidas, I.,** Ugarkovic, P., De Madalenna, A., **Giovos, I.** Rare, or just rarely observed: additional record of a newborn *Lamna nasus* (Bonnaterre, 1788) from Croatia, Adriatic Sea. *Journal of the Black Sea/ Mediterranean Environment* (SUBMITTED)

Conferences (with bold and underlined the members of iSea)

- Barash, A., Salingre, S., Grosmark, Y., Rothman, S., **Stoilas, V.S., Maximidi, M.,** Tuncer, S., Lapinski, M., Nuez, I., Bakiu, R., **Kleitou, P., Giovos, I.** (2018). The MECO project (Mediterranean Elasmobranch Citizen Observations): creating a large-scale database of elasmobranchs observations using social media. 22nd Annual European Elasmobranch Association Meeting, Peniche, Portugal.
- Chatzisprou, A., Anastasopoulou, A. (2018). A Devil not so evil: new data from a female *Mobula mobular* (Bonnaterre, 1788) caught in Greece. 22nd Annual European Elasmobranch Association Meeting, Peniche, Portugal.
- **Keramidas, I.,** Azrieli, B., **Kleitou, P., Maximidi, M., Stoilas, V.S., Giovos, I.** (2018). Guitarfishes in Cyprus: shedding light on the occurrence and the distribution of two endangered species in the Eastern Mediterranean. MARFRESH 2018, First International Marine & Freshwater Sciences Symposium, Antalya, Turkey.

Awareness and information Material

- Identification guide of the Mediterranean Protected Shark Species (translated material produced by Longitude181)
- Poster: Threatened sharks of the Mediterranean

- Poster: Threatened batoids of the Mediterranean
- Conservation Status and Protection Measures for Sharks species in the Greek Seas

New Collaborators

- International/National Bodies, Information Networks, Organisations and Projects
 1. HCMR (Hellenic Center for Marine Research)
 2. Shark References
 3. Toulipa Goulimy Association
 4. SUBMON
 5. Biodiversity.gr
- Diving Centers
 1. Samos Diving Center
 2. Gorgonia Diving Skyros Club
 3. Lepia Diving Center
 4. Kos Divers

2. Monitoring Marketed Elasmobranchs in Thessaloniki



Greece hosts a remarkable biodiversity of elasmobranchs with approximately 70 species confirmed to be present in the Greek waters. Despite this great biodiversity, several shark and ray species are considered threatened due to intensive fishing, as a target or bycatch. Currently, about half of the sharks found and several rays are protected in Greece according to national and international legislation. However, protected species of elasmobranchs are commonly sold in the Greek local markets due to the lack of knowledge and awareness of fishers and the poor law enforcement. These illegal catches are sliced and often intentionally mislabelled and sold as “Galeos” or “Rina/Vatos” (genuinely referring to all large shark and ray species respectively). This emerging issue is of great importance in several European countries as it is compromising shark conservation efforts. At the same time it is also an issue of public safety, since in the flesh of elasmobranchs bioaccumulate harmful toxins and heavy metals that are unsafe for consumption by pregnant or breastfeeding women, children and elder people. The M.M.E.T. project aims at monitoring the landings of sharks and rays in Thessaloniki Metropolitan area for presenting robust results regarding the amount of protected species landings and the mislabelling of shark and ray meat. Thessaloniki is the second biggest metropolitan area in Greece while at the same time hosts the second largest fishing port, with the majority of the fishing fleet in the North Aegean Sea that is considered a hotspot for elasmobranchs.

In numbers

Market visits: 20

Number of samples collected: 80

Submitted scientific publications (with bold the members of iSea)

- **Giovos, I.**, Arculeo, M., **Doumpas, N.**, **Katsada, D.**, **Mitsou, E.**, **Aga-Spyridopoulou, R.N.**, **Stoilas, V.O.**, **Paravas, V.**, Tiralongo, F., Tsamadias, I.E., Vecchioni, L., Moutopoulos, D.K. Understanding the elasmobranch market in Greece: a story of illegal fishing, mislabeling and illegal trade. Marine Policy (SUBMITTED)

3. Fishers, Sea turtles and Sharks: Alliance for Survival



The project “Fishers, Sea turtles and Sharks: Alliance for Survival» was funded under the financial program of the Green Fund of the Ministry of Environment and is a partnership between MEDASSET and iSea. iSea is responsible for all actions related to sharks. The aim of the project was to study and mitigate the impacts of bycatch and ghost fishing on the sea turtle and shark populations in Greece, through awareness, capacity building and cooperation with stakeholders in the fisheries sector. The project focused on 5 important ports of Greece (Alexandroupoli, Kavala, Michaniona, Piraeus and Patra), which cover a major part of the country’s fishing activity. Besides, fishing activity in the wider area of these ports coincides with 5 significantly protected areas that are under high pressure and need to be studied and conserved.

In numbers

Numbers of participants in the workshops: 180

Number of interviewed fishers: 90

Number of participating researchers: 10

Conferences (with bold the members of iSea)

- Touloupaki, E., **Doumpas, N.**, Bouziotis, D., **Giovos, I.** (2018). Fishers, Sea turtles and Sharks: Alliance for Survival. 6th Mediterranean Conference on Marine Turtle, Porec, Croatia.
- Touloupaki, E., **Doumpas, N.**, Bouziotis, D., **Giovos, I.** (2018). Fishers, Sea turtles and Sharks: Alliance for Survival. 22nd Annual European Elasmobranch Association Meeting, Peniche, Portugal.
- Touloupaki, E., **Doumpas, N.**, Bouziotis, D., **Giovos, I.** (2018). Fishers, Sea turtles and Sharks: Alliance for Survival. 23rd International Congress on Applied Ichthyology and Aquatic Environment, Volos, Greece.

Reports (with bold the members of iSea)

- Touloupaki, E., **Giovos, I.** (2018). Report on the bycatch of sea turtles and sharks in Greece.

4. STSM OceanGov COST Action



iSea Members visited Israel for 10 days in which they had the chance to meet researchers from Morris Kahn Marine Research Station and participate in the Guitarfish Survey in Maagan Michael and Maayan Tzvi and the Shark Survey in Hadera. In addition, iSea Members visited the IUI-Eilat Interuniversity Institute of Marine Science, guided through the station and learned more about the running projects, dived with researchers of the IUI, participated in the lectures and visited the Underwater Observatory of Eilat. Also part of the STSM focused on filming an interview of the iSea Scientific Coordinator, for the Online Lecture with the Virtual Academy of Sustainability, Bremen for the Course entitled: Ocean Governance for Sustainability – Challenges, Options and the Role of Science discussing about the potential of the dynamic MPAs in the Mediterranean, but also in global scale. The topic of the interview was related to dynamic approaches in conservation and specifically the concept of dynamic MPAs for protecting marine megafauna of the Mediterranean given the geopolitical complexity of the region.

5. MARCONS COST Action WG5



iSea participates in WG5 of the MARCONS Cost Action. Aim of the working group is to analyse how regional agreements can successfully apply international conventions for marine conservation. In addition, it will study the role of the EU as a catalyst and facilitating organisation and in particular the role of EU legislation and policy diffusion into third countries. It will consider the role of conservation as a medium to facilitate other objectives, such as conflict resolution, engaging with the relevant stakeholders and authorities.

Submitted scientific publications (with bold the members of iSea)

- Gonçalves L, Portman ME, Mackelworth P, Augustowski M, **Giovos I.** (2019). Ocean Governance: is marine conservation taken into account. Marine Policy (ACCEPTED)

Reports (with bold the members of iSea)

- Mackelworth, P., Portman, M., Fa, D., Holcer, D., Vega Fernández, T., Augustowski, M., Enemark, J., **Giovos, I.**, Marques, M., Chantal Ribeiro, M., Goldsborough, D., Rossi, V., Rumes, B., Kyriazi, Z. (2018). Review Document of International Instruments for Conservation within the MarCons region. Deliverable 5.1 of the COST Action CA15121 'Advancing marine conservation in the European and contiguous seas (MarCons). Pp. 40.

6. Recreational Fisheries through Social Media

Recreational fisheries is an extremely popular activity in the Mediterranean sea, however it is unmonitored at large and the impact of the activity in the marine ecosystems is systematically overlooked. Since information and valid data are very scarce, iSea has commenced a project to utilise unconventional sources of information in order to understand more about this activity and construct the profile of recreational fisheries in the EU-Mediterranean countries. This way we have also aimed to complement other data sets, such as the EU Data Collection Multi-Annual Programme.

Scientific publications for 2018 (with bold the members of iSea)

- **Giovos, I., Keramidis, I.**, Deidun, A., Font, T., Kleitou, P., Lloret, J., Matić-Skoko, S., Said, A., Tiralongo, F., Moutopoulos, D.K. (2018). Identifying Recreational fisheries in the Mediterranean through Social Media. Fisheries Management and Ecology, 25(4): 287-295.

ALIEN SPECIES

Alien Species are considered as a major threat for biodiversity in global scale. During the past 150 years, the distribution of biota has been alarmingly reshaped as a result of intensification of human activities, technical advances and increased global marine trade. Non-Indigenous Species (NIS) are species introduced by humans, regardless of date and origin. Some established NIS may become invasive, with adverse ecological and socioeconomic threats for the recipient areas. As the number of NIS and their impacts are rapidly escalating globally, scientists, conservation managers, policy makers and the public are even more interested in monitoring these species and the promotion of targeted research to support policy for their prevention and mitigation. Greece is one of the most impacted countries, with more than 300 reported marine NIS. Although continuous monitoring is of great importance, such efforts that involve scientists and research vessels are very expensive and insufficient to ensure good spatial coverage, especially in a country like Greece with approximately 17,000 km of coastline (60% of the Mediterranean coastline), and more than 2,000 islands and islets. The work of iSea aims to contribute:

- A) in the early detection, prevention and mitigation of marine alien species in Greece
- B) in the implementation of the Marine Strategy Framework Directive (MSFD; EU 2017/848) and the evaluation of descriptor D2

- C) in raising the awareness of the public about this issue
- D) in sharing knowledge and expertise by promoting collaboration among neighbouring countries
- E) in empowering the next generations of scientists on this topic

Highlights

- The collaboration with ELNAIS of HCMR
- The invitation of IUCN to participate in the Workshop: Marine invasive species management in Mediterranean MPAs
- The collaboration with EASIN of JRC as data partners
- The initiative of iSea to prepare a Mediterranean joined Press Release about Toxic and Poisonous Alien Species

The most important progress achieved by iSea in several projects carried out throughout 2018 is presented below.

1. Is it Alien to you? ... Share it!!!

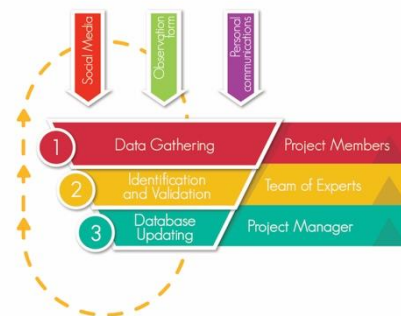


Through this project iSea aims to monitor the expansion and establishment of marine alien species primarily in Greece, but also in neighbouring countries through observations sent by non-experts and identified by a team of taxonomic experts. In addition, the project invests in raising public awareness among all stakeholders.

In 2018, the project of iSea arose as an important complementary tool, which once combined with other efforts, like ELNAIS and EASIN, can help improving our knowledge on the distribution of marine alien species in the region. Such information contributes to the assessment of the Good Environmental Status (GES) of marine waters of EU member states, as required by the Marine Strategy Framework Directive (MSFD; EU 2017/848), since the trends in the number of new alien species in national waters is one of the applied indicators of GES. In fact, to date records of 21 new species in Greek waters are attributed to citizen science (3 of them were collected in the project of iSea), which raises the contribution of citizen science to 9.2% from 6% reported in 2015. In Cyprus the respective contribution of citizen science reaches 7.4% (12 out of 163 species, according to EASIN).

In numbers

Project Team: 8 members
 Identification team: 16 members
 Other Collaborators: 14 members
 Database: 1251 records of alien and rare species
 Facebook Group Members: 6.108 members
 Active Members in Daily Basis: 4.935 members



First Records of species detected in the context of the project:

- *Abudefduf sexfasciatus* (Mediterranean)
- *Acanthurus sohal* (Mediterranean)
- *Acetabularia caliculus* (Greece)
- *Chrysaora cf. achlyos* (Mediterranean)
- *Lagocephalus guentheri* (Greece)

- *Penaeus aztecus* (Albania)
- *Torquigener flavimaculosus* (Libya)

Scientific publications (with bold the members of iSea)

- Al-Mabruk, S.A.A., **Stoilas, V.O., Kleitou, P., Giovos, I.** (2018). The first record of *Torquigener flavimaculosus* (Tetraodontiformes: Tetraodontidae) from Libya. *International Journal of Fisheries and Aquatic Studies* 6(4): 449-450.
- Çelik, M., Deidun, A., Uyan, U., **Giovos, I.** (2018). Filling the gap: a new record of diamondback puffer (*Lagocephalus guentheri* Miranda Riberio, 1915) from the west-eastern Mediterranean Sea, Turkey. *Journal of the Black Sea/ Mediterranean Environment* 4(2): 180-185.
- **Giovos, I.**, Bernardi G., **Romanidis-Kyriakidis, G., Marmara, D., Kleitou, P.** (2018). First records of the fish *Abudefduf sexfasciatus* and *Acanthurus sohal* in the Mediterranean Sea. *BiolInvasions Records* 7 (2): 205-210.
- **Giovos, I., Kleitou, P., Paravas, P., Marmara, D., Romanidis-Kyriakidis, G.,** Poursanidis, D. (2018). Citizen scientists monitoring the establishment and expansion of *Pterois miles* (Bennett, 1828) in the Aegean Sea, Greece. *Cahiers de Biologie Marine* 59: 359 – 365.
- Kampouris, T.E., Tiralongo, F., Golemaj, A., **Giovos, I., Doumpas, N.,** Batjakas, I. (2018). *Penaeus aztecus* Ives, 1891 (Decapoda, Dendrobranchiata, Penaeidae): On the range expansion in Sicilian waters and on the first record from Albanian coast. *International Journal of Fisheries and Aquatic Studies* 2018; 6(4): 468-471.
- Kampouris, T.E., **Giovos, I., Doumpas, N.,** Stergioti, A., Batjakas, I. (2018). Prawn cocktail in Crete. First record of *Penaeus pulchricaudatus* (Stebbing, 1914) and on the establishment of *P. aztecus*, (Ives, 1891) and *P. hathor* (Burkenroad, 1959) (Decapoda, Dendrobranchiata, Penaeidae) in Cretan waters, south Aegean Sea, Greece. *Journal of the Black Sea/Mediterranean Environment* 24(3): 199-211.
- **Kleitou, P., Giovos, I.,** Tiralongo, F., **Doumpas, N.,** Giacomo, B. (2018). Westernmost record of the diamondback puffer, *Lagocephalus guentheri* (Tetraodontiformes: Tetraodontidae) in the Mediterranean Sea: First record from Greek waters. *Journal of Applied Ichthyology* 00: 1–4.
- **Kleitou, P.,** Kalogirou, S., **Marmara, D., Giovos, I.** (2018). *Coryphaena hippurus*: A potential predator of *Lagocephalus sceleratus* in the Mediterranean Sea. *International Journal of Fisheries and Aquatic Studies*, 6(3): 93-95.
- **Mitsou, E., Maximiadi, M.** (2018) New records of *Lagocephalus sceleratus* (Gmelin, 1789), *Cassiopeia andromeda* (Forsskål, 1775) and *Pterois miles* (Bennett, 1828) in Greek MSFD areas. In: *New Mediterranean biodiversity records*. IN: Yokes et al. *Mediterranean Marine Science, Collective A*, November 2018.
- Tsiamis, K., **Giovos, I.** (2018). First record of the green alga *Acetabularia caliculus* from Greece. IN: Yokes et al. *Mediterranean Marine Science, Collective A*, November 2018.

Submitted scientific publications (with bold the members of iSea)

- **Doumpas, N.,** Tiralongo, F. A new occurrence of *Sillago suezensis* (Forsskål, 1775) From the Aegean Sea, Turkey. *Mediterranean Marine Science, Collective A* (SUBMITTED)
- Langeneck, J., Crocetta, F., **Doumpas, N., Giovos, I.,** Piraino, S., Boero, F. First record of the non-native jellyfish *Chrysaora cf. achlyos* (Cnidaria: Pelagiidae) in the Mediterranean Sea. *BiolInvasion Records* (SUBMITTED)
- Kampouris, T., **Doumpas, N., Giovos, I.,** Tiralongo, F., Batjakas, I. First record of the Lessepsian *Nemipterus randalli* Russell, 1986 (Perciformes, Nemipteridae) in Greece. *Journal of Applied Ichthyology* (SUBMITTED)
- **Giovos, I., Kleitou, P.,** Poursanidis, D., Batjakas, I., Bernardi, G., Crocetta, F., **Doumpas, N.,** Kalogirou, S., Kampouris, T., **Keramidas, I.,** Langeneck, J., **Maximiadi, M., Mitsou, E., Stoilas,**

V.O., Tiralongo, F., **Romanidis-Kyriakidis, G.**, Xentidis, N.J., Zenetos, A., Katsanevakis, S. Citizen-science for monitoring marine invasions and stimulating public engagement – a case project from the eastern Mediterranean. Conservation Biology (SUBMITTED)

Book Chapters (with bold the members of iSea)

● **Giovos, I.**, Batjakas, I., **Doumpas, N.**, Kampouris, T.E., Poursanidis, D., **Paravas, V.** (2018). The current status of lionfish invasion in Greece and future steps towards control and mitigation. In: Hüseyinoğlu, M.F., Öztürk, B. (Eds.) 2018. Lionfish Invasion and Its Management in the Mediterranean Sea. Turkish Marine Research Foundation (TUDAV) Publication number: 49, Istanbul, Turkey, 121 pages.

Conferences (with bold the members of iSea)

● **Doumpas, N.**, **Giovos, I.**, Kalogirou, S. (2018). The misconception of pufferfish consumption in Greece through social media sentiment analysis. ESENIAS & DIAS Conference 2018, 8th ESENIAS Workshop, Bucharest, 2018.

● **Keramidas, I.**, **Doumpas, N.**, **Kleitou, P.**, Tiralongo, F., Bernardi G., **Romanidis-Kyriakidis, G.**, **Marmara, D.**, **Giovos, I.** (2018). Is it Alien to you?? Share it!!: Citizen scientists monitoring Non-Indigenous species in Greece. 12th Panhellenic Symposium of Oceanography & Fisheries Ionian University, Corfu, 30 May – 3 June 2018

Press Releases

● [Joint Press Release about the Toxic and Poisonous Alien Species occurring in the Mediterranean Sea](#)

New Collaborators

● International/National Bodies, Information Networks, Organisations and Projects

1. HCMR (Hellenic Center for Marine Research)
2. ELNAIS (Ellenic Network on Aquatic Invasive Species)
3. EASIN (European Alien Species Information Network)
4. IUCN Med, MedMIS Project
5. Aliens in the sea
6. Biodiversity.gr
7. Toulipa Goulimy Association
8. RELIONMED

● Diving Centers

1. Chalki Dive Center
2. Paros Diving Center
3. Samos Diving Center
4. Kalymnos Diving

● Facebook Groups and Pages affiliated to our Facebook group

1. Alien species in Greece & Cyprus
2. Coypu in Greece
3. HELLENIC MALACOLOGY

2. MARCONS COST Action WG3



MARCONS

iSea participates in two WGs, with WG3 focusing on offering methodological approaches and tools for designing networks of MPAs that are more resilient to biological invasions, and to propose management actions to mitigate the impacts of invasive species on biodiversity and ecosystem services. In this context, members of iSea participate in the meetings of MARCONS, as well as in the production of scientific publications and other relevant documents.

Scientific publications (with bold the members of iSea)

- Mačić, V., Albano, P. G., Alpanidou, V., Claudet, J., Corrales, X., Essl, F., ... Katsanevakis, S. (2018). Biological Invasions in Conservation Planning: A Global Systematic Review. *Frontiers in Marine Science*, 5. doi:10.3389/fmars.2018.00178

3. Citizen Science Summer School 2018

At 2018 iSea co-organized with Biodiversity.gr a citizen science summer school in mount Pelion, Greece. 12 university students of various disciplines related to environmental sciences attended the summer school and were trained on how to collect and report data for monitoring biodiversity, how to utilise a variety of platforms including the Invasive Alien Species Europe and the MyNatura of the European Commission. In addition, students learned about the advantages and disadvantages of citizen science and the value of this approach for advancing the understanding of the marine biodiversity.

- Participants: 12 persons
- Days: 5

HUMAN AND AQUATIC ECOSYSTEMS

Water is the source of life on Earth. Aquatic ecosystems are an integral part of human history for survival and evolution. The connection among humans and the marine ecosystem is one that is evolving abreast and changing through time. The investigation of all these connections through time is a new scientific sector, which contributes effectively to the detection of solutions for today. This pillar of iSea works horizontally with the other pillars, focusing on educational and awareness raising events and on the research about the historical and the current perception of humans towards aquatic life and the aquatic environments.

Highlights

1. Our Erasmus+ proposal MARINE ECOMED is accepted and will be funded between 2019-2021. The topic of the project is Ocean Literacy

Below are presented the progress of the pillar and the most significant projects for 2018.

In numbers

Educational events: 4 high schools, 4 primary schools and 3 schools of special education,

Number of participants in Educational Events: More than 700 students and 30 teachers

Awareness events: 3 public events on marine litter and 4 workshops about alien species and the Gulf of Thermaikos.

Number of participants in Awareness events: More than 200 people

Scientific publications (with bold the members of iSea)

- **Giovos, I.**, Moutopoulos, D.K., **Charitou, A.**, Gonzalvo, J. (2018). Primary school student's awareness about cetaceans in Greece. *Applied Environmental Education & Communication*.

1. Sani Eco Days

During the summer of 2018 iSea participated in the events of Sani Eco Days, which are organized by Sani resort in Khalkidhiki. In this context, iSea presented to the participants the impact of marine litter and the presence of marine alien species on Greek aquatic ecosystems. In addition, children participated in activities relevant to material reuse and waste reduction. The participants were mainly tourists from many different countries worldwide. The vast majority of them involved families with school and preschool age children. The total number of the participants informed by iSea and the children participated in the relevant activities exceeds the number of 1000 people.

MARINE LITTER

Aquatic litter are emerging as an unprecedented threat for the aquatic ecosystems. Uncontrolled consumption, disposal and accumulation of garbage cause problems to the organisms and subsequently to the undisturbed function of ecosystems. For many years, humans considered the oceans as the ideal place to throw trash and wastes. The delay in development of policies and measures for their treatment led to the exacerbation of the problem resulting in a significant volume of waste being added to the oceans. The mentality shift, which in combination with effective measures will lead to the improvement of the state of aquatic ecosystems, is now urgent. iSea through its projects focuses on the establishment of research projects on aquatic litter. Its aims are to provide answers to qualitative composition and distribution of aquatic litter in Greek waters and coasts in order to develop appropriate policies at both public and private level. An additional aim constitutes the public awareness focusing on the student community for preparing the next generation of responsible consumers and citizens.

Highlights

- The participation of iSea in the Greek Cooperation Network for the Marine Environment
- The project Home sweet... beach, keep it clean!!! Funded by Laskaridis Foundation
- The removal of 3 tonnes of marine litter in one year

Below is presented the progress of the most significant projects for 2018.

1. Home sweet... beach, keep it clean!!!

Home sweet... beach, keep it clean!!! started on March 2016, for conducting beach clean-up actions with the participation of volunteers. The project invests on a two-fold approach aiming to involve participants in data collection empowering the assessment of Descriptor 10 of the MSFD and at the same time to sensitize them on the issue of aquatic litter and plastic pollution. In addition, the project is the first zero waste beach clean up campaign in Greece, since all materials are reusable including the plant sacks for promoting the zero- waste lifestyle. iSea now plans to distribute 200 zero waste clean-up tool kits across Greece, empowering local communities to take care of their beaches, their homes. The kits have all the necessary equipment and instructions for the implementation of beach clean- ups together with a data collection form for data recording.

In numbers

Number of clean ups: 21

Number of litters removed: 3 tonnes

Number of volunteers: >800

Number of local organisations participating: 15

Conferences (with bold the members of iSea)

- **Marmara, D., Charitou, A., Doumpas, N., Naasan Aga, R.** (2018). Home Sweet Beach...Keep it Clean: Summary results of 2016- 2018. 9th Congress Hellenic Ecological Society, Heraklion, 4-7 October 2018.