

iSea

Environmental Organisation for the
preservation of the aquatic ecosystems

Prosfero Interim Report

Attica - Salamina Coastal and Underwater
cleanups

10/2022

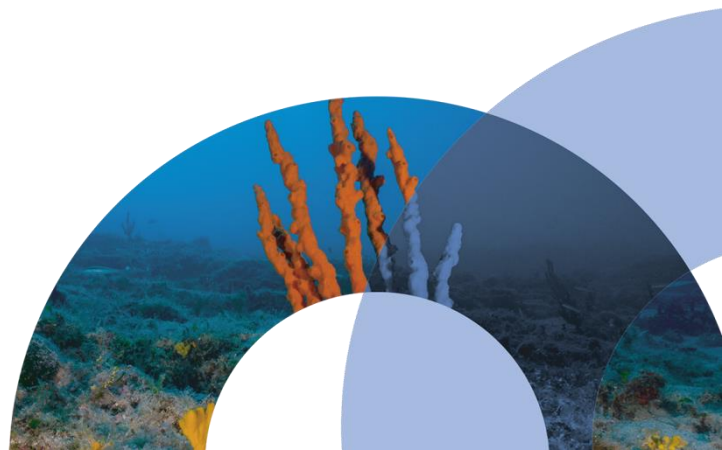
Thessaloniki 2022





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Prosfero campaign

Prosfero campaign is funded by P&G and AB Vasilopoulos and implemented by iSea with the aim to achieve cleaner beaches and coasts. Since 2018, 210 beach and underwater cleanups were conducted throughout Greece in the context of the project and more than 77 tons of litter removed.

The 15th wave of Prosfero campaign was conducted at Attica and Salamina island including a total number of 2 events, 6 beach and 4 underwater cleanup actions. The organisation and coordination of the actions began in August 2022, while they were implemented in October 2022.

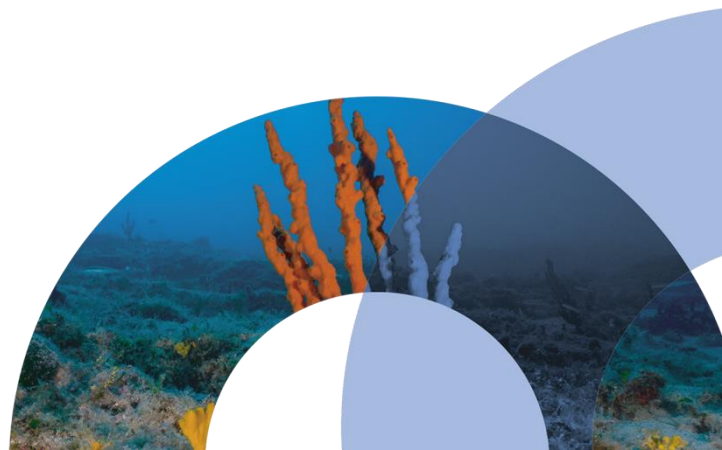
All the actions were coordinated by 4 iSea representatives. The representatives were responsible for the implementation of the informative events, the coordination of the participant volunteers, the introduction of the participants to the issue of marine litter, the presentation of the project and its actions and the data collection during the clean ups.

The present interim report refers to the activities conducted in the context of the 15th wave of Prosfero.

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Environmental Organization for the preservation of Aquatic Ecosystems, iSea





Beach cleanups

During October 2022, 6 beach cleanups (A1-6) took place in the context of the 15th wave of Prosero campaign. In particular, 3 beach cleanups took place in Attica, and 3 on Salamina Island (Table 1).

Beach cleanup details

1th Activity (A1): Kavouri beach, Attica

2th Activity (A2): Batis beach, Attica

3th Activity (A3): Votsalakia beach, Piraeus

4th Activity (A4): Ampelakia beach, Salamina island

5th Activity (A5): Psili Ammos, Salamina island

6th Activity (A6): Aianteion beach, Salamina island

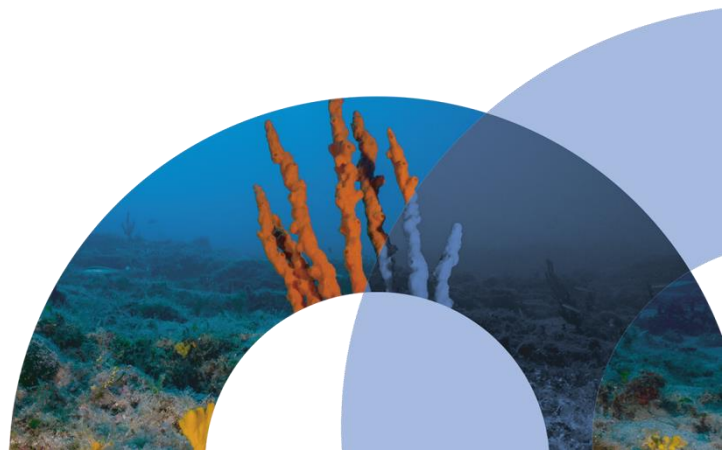


Table 1: Supplementary data of "Prospero 15" beach cleanups conducted during October 2022.

Activity code	Date	Volunteers	Litter collected (kg)
A1	01-10-2022	25	10
A2	02-10-2022	10	4
A3	03-10-2022	11	7
A4	05-10-2022	120	500
A5	06-10-2022	14	87
A6	07-10-2022	43	250
Total		223	858



Figure 1: Aspects of the beach cleanups conducted in Attica and Salamina island.



Beach litter monitoring results

In the context of the actions and with the aim to survey the abundance of marine litter in each area, beach litter was monitored according to the monitoring framework and list of items of the protocol established in the context of the Marine Strategy Framework Directive.

In total 858 kg of litter were removed from the 6 beaches in Attica and Salamina island. A total number of 1981 litter items were recorded, 81.37 % of which were plastics. In accordance with the global bibliography and data, the most abundant litter type in all the actions conducted was plastic.

In Ampelakia beach (A4), the area with the highest density of marine litter, 534 items of litter were recorded during the survey. More than 500 kg of litter were removed and the area was mainly polluted by bulky items, such as armchairs, vehicle tires, plastic chairs, tables and building materials.

Kavouri beach (A1) follows in terms of marine litter density, where 520 litter items were recorded during the survey. In contrast with the area's abundance of litter, only 10 kg of marine litter were removed, as a result of the quantity of cigarette butts and filters and small plastic pieces which are items of low weight and size posing extra difficulties for their detection and removal from the natural environment.

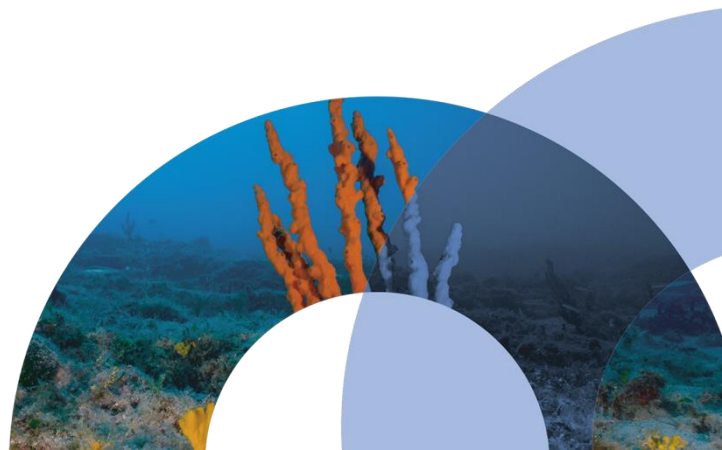
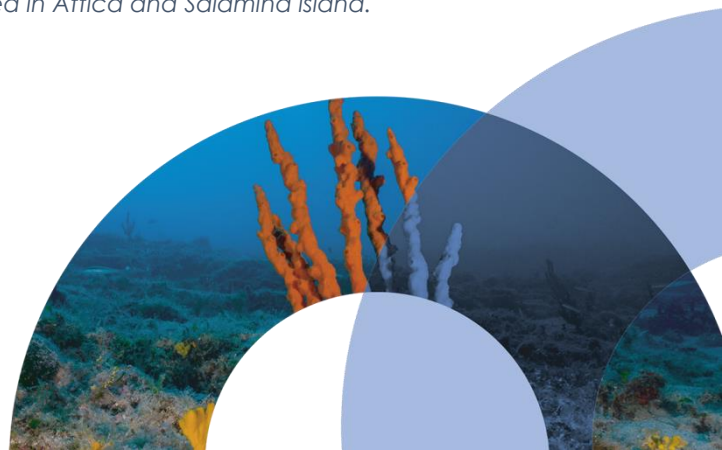


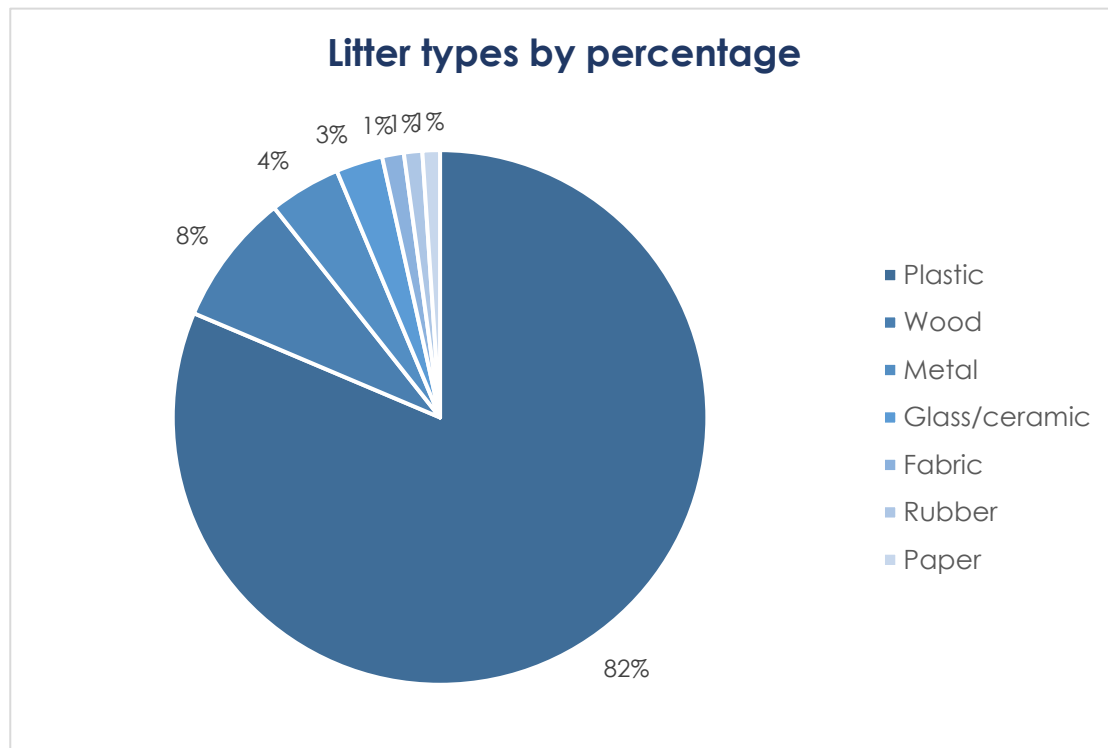


Figure 2: More aspects of the beach cleanups conducted in Attica and Salamina island.



Litter types

The average percentage of plastic found on all beaches is 82%. It should be mentioned that in Votsalakia beach (A3) and Psili Ammos beach (A5), plastic was by far the most abundant litter type, exceeding 95% of the total litter items recorded.



In the case of A3, the high amount of plastic litter items is mainly attributed to the cigarette butts, the cotton buds, the styrofoam pieces and the plastic straws. All the items above, are related to urban and leisure activities (i.e. beach in a densely populated area and park behind the beach). Regarding A5, the high composition of plastic items is attributed to the abundance of plastic bags, food packaging, beverage



related packaging (caps, lids etc.) and cigarette butts. These items are relatively small and since no specific intense activities are conducted in the area their presence may be attributed to activities that take place in densely populated and industrial areas of Athens. In addition, the island obviously suffered the lack of efficient waste management scheme with many illegal waste dumps on its shoreline, contributing to the distribution of such items in many areas and the marine environment. In Bafis beach (A2) the most abundant litter type was plastic (85%) followed by metal items (4.9%), with most of them being plastic bottles, caps, lids and straws and stirrers, possibly due to the increased number of visitors and sea users the area hosts.

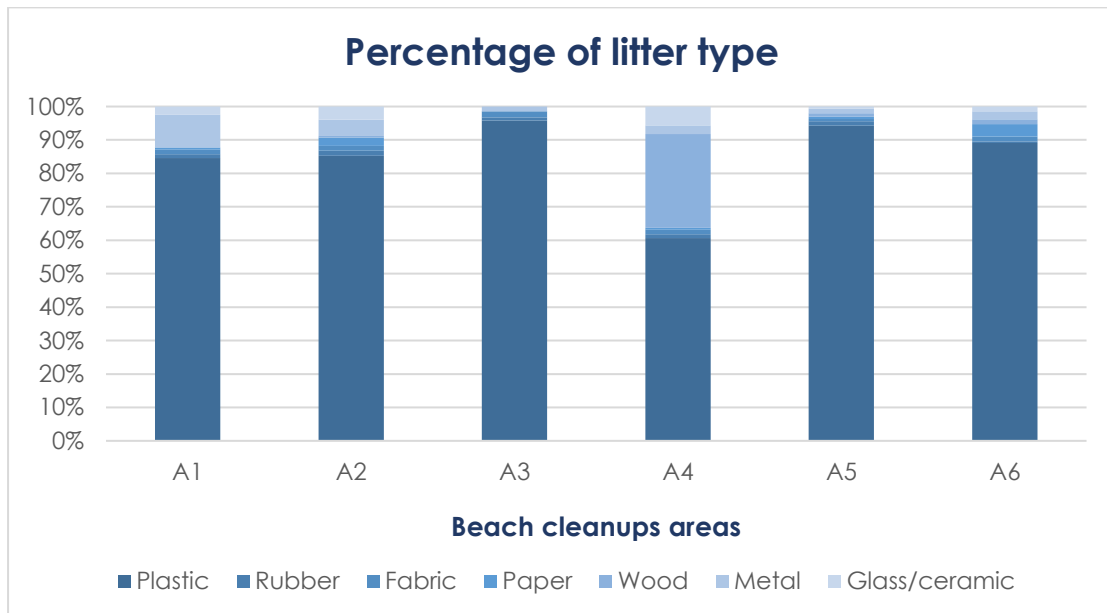
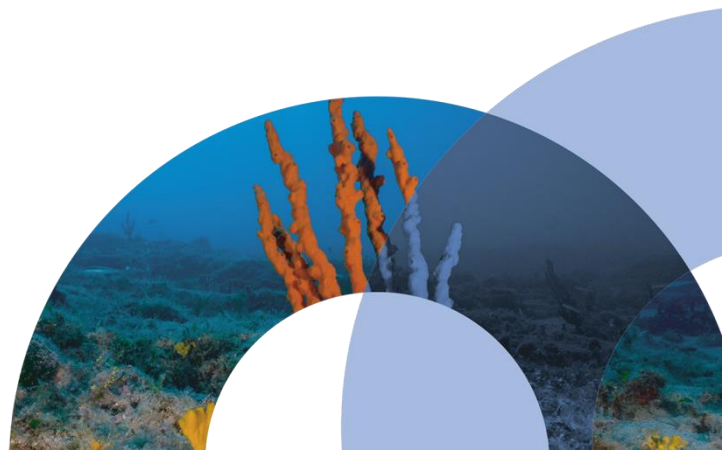


Figure 4: Collected litter types per beach cleanup, expressed as a percentage (%).



Litter items

Table 2: Ten most abundant beach litter items, expressed as a percentage %.

Top 10 litter items	Percentage %
cigarette butts and filters	21%
plastic pieces 2,5 cm > <50 cm	17%
plastic bags	12%
processed wood	11%
plastic lids from drinks	10%
plastic straws and stirrers	9%
plastic cups and their lids	7%
crisp packets/sweets wrappers	5%
strings and cords (diameter less than 1 cm)	4%
plastic caps/lids and rings from bottles	4%

In the context of the 6 beach cleanups, more than 300 cigarette butts and filters (21%), were recorded, followed by small plastic pieces (17%), plastic bags, their collective rolls and remains of rip-off plastic bags (12%), processed wood (11%) and plastic lids from drinks (10%). Cigarette butts and filters were also among the most common litter items, since they were recorded in all the cleaned beaches. It should be noted that measures are enforced for the reduction of the impacts of the Single Use Plastic items on the environment according to the EU Single Use Plastic



Directive, since February 2021. The directive contains measures on the management of cigarette butts and also particular standards for the design and manufacturing of plastic caps, whereas for the plastic straws, stirrers and plastic cotton bud sticks, their ban entered into force since summer. Nevertheless, items subjected to the Directive are still among the most abundant litter items along the Greek coast proving the long lasting effects of their pollution.

Among all the beaches recorded in Attica and Salamina island, in Aianteion Beach (A6) the highest amount of cigarette butts and filters were recorded, probably attributed to the high number of tourism and foodservice businesses in the area, leading to a high number of visitors.

Underwater cleanups

During October 2022, 4 underwater cleanups (A7-10) took place in the context of the 15th wave of Prosero campaign. In particular, 2 underwater cleanups took place in Attica and 2 on Salamina island (Table 3).

Underwater cleanup details

7th Activity (A7): Amfithea port, Attica

8th Activity (A8): Mikrolimano, Piraeus

9th Activity (A9): Selinia port, Salamina

10th Activity (A10): Salamina port, Salamina

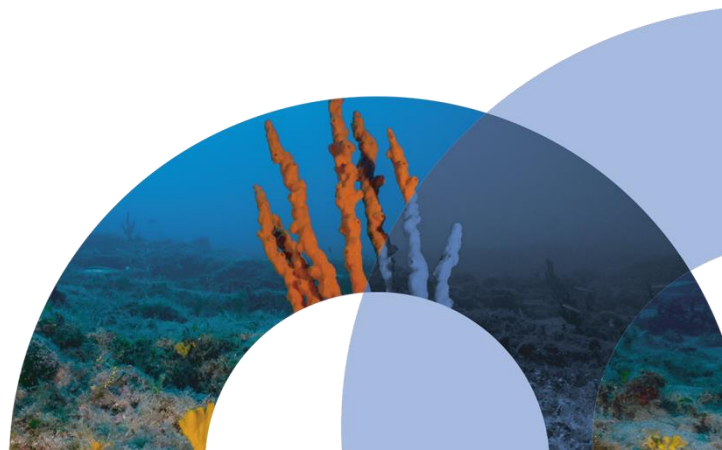


Table 3: Supplementary data of "Prosero 15 " underwater cleanups conducted during October 2022.

Activity code	Date	Volunteers	Divers	Litter collected (kg)
A7	2-10-2022	11	2	150
A14	19-06-2022	9	1	250
A8	3-10-2022	9	1	100
A9	5-10-2022	8	1	220
Total		37	6	720



Figure 5: Some aspects of the underwater cleanups conducted in Attica and Salamina island.



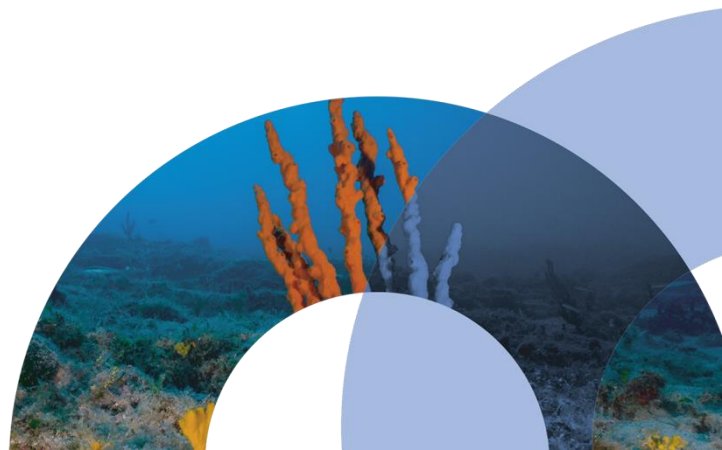
Underwater litter monitoring results

In the context of the actions and with the aim to survey the abundance of marine litter in each area, seafloor litter was monitored according to the monitoring framework and protocol established in the context of the Marine Strategy Framework Directive.

In total 720 kg of litter were removed from the seafloor of the 4 ports in Attica and Salamina island and a total number of 750 litter items were recorded, more than 74% of which were made of plastic, in accordance with the global bibliography and data, followed by metal (13%).

Litter types

The average percentage of plastic found in the seafloor of Attica and Salamina island exceeded 74% of the total litter recorded, followed by metal (13%). On the other hand, wood and paper are not abundant benthic litter types mainly due to the durability of these materials.



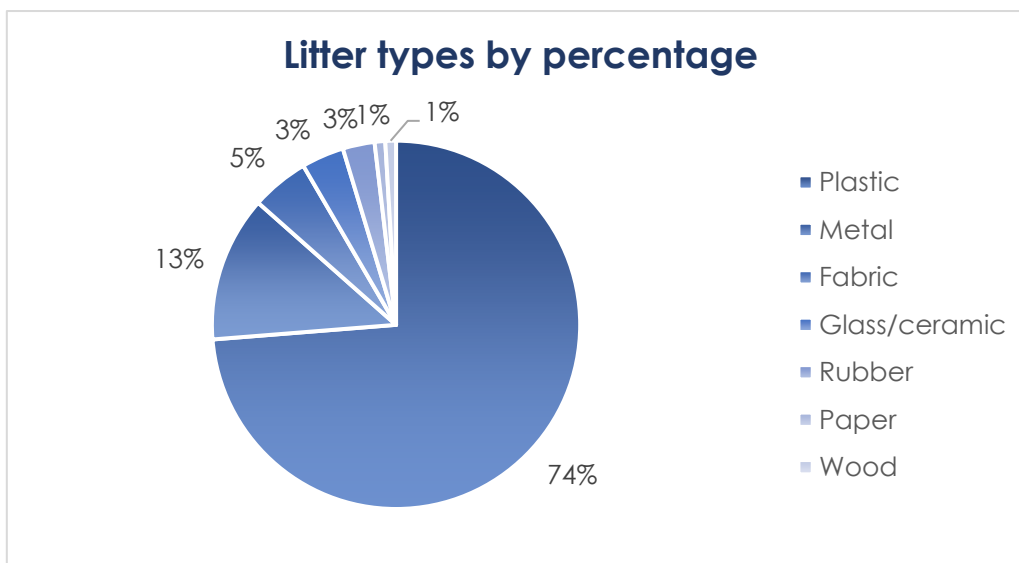
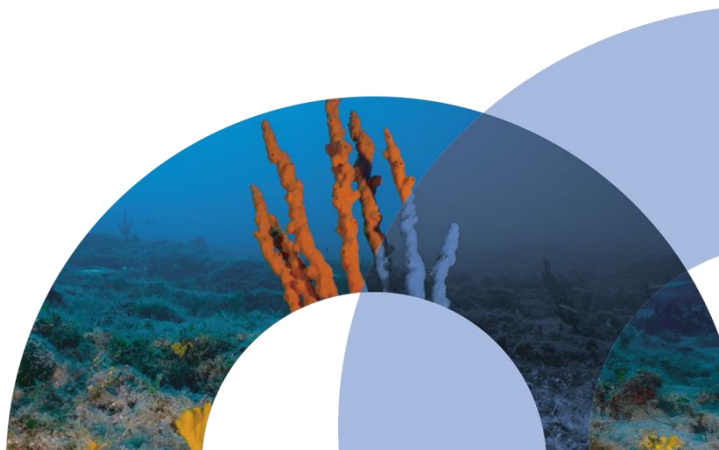


Figure 6: Litter type according to the data collected from 4 underwater cleanups expressed by percentage. (%)

Particularly, in Amfithea port (A7) 76% of the litter recorded were plastic while in Selinia port (A9), 78% were plastic, making these two ports exceeding the average percentage of plastic. Selinia (A9) is a recreational port with many small vessels. According to the Nautical Association maintaining the port facilities the main driver of pollution is the floating litter coming from Attica region that after a while sink in the bottom. Similarly, the Nautical association in Marina Amfithea (A7) attributed the amount of litter items on transferred materials from Kifissos river.



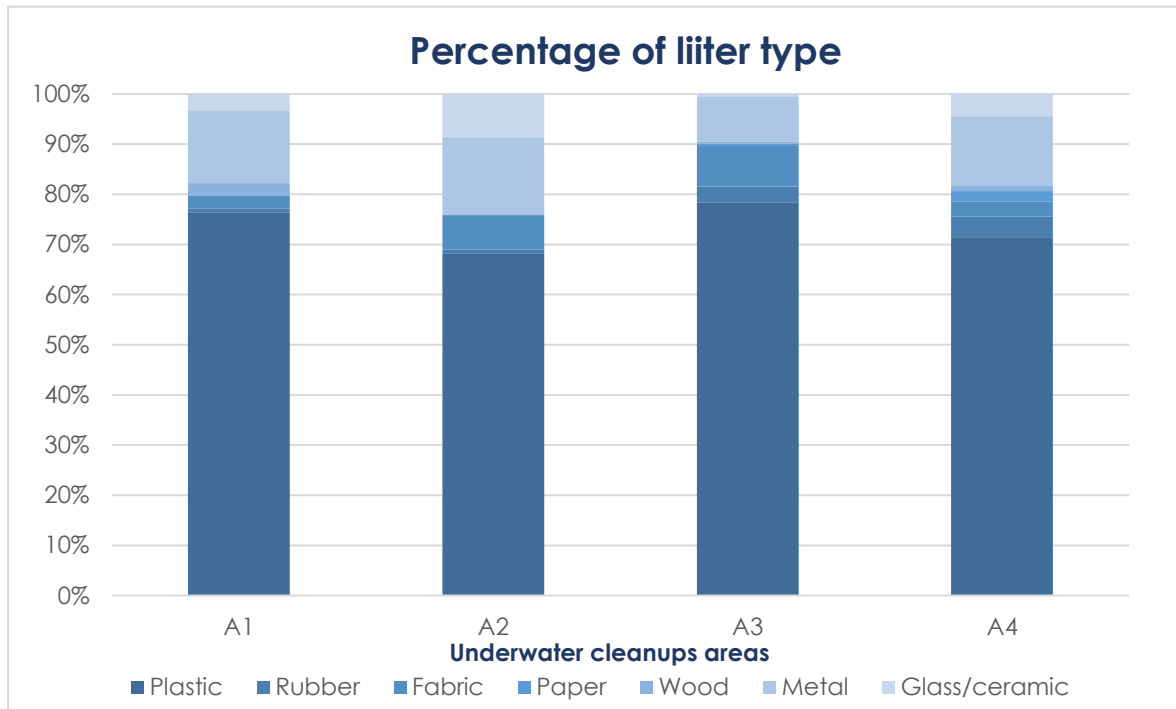


Figure 7: Litter type according to the data collected from 4 underwater cleanups expressed by percentage.

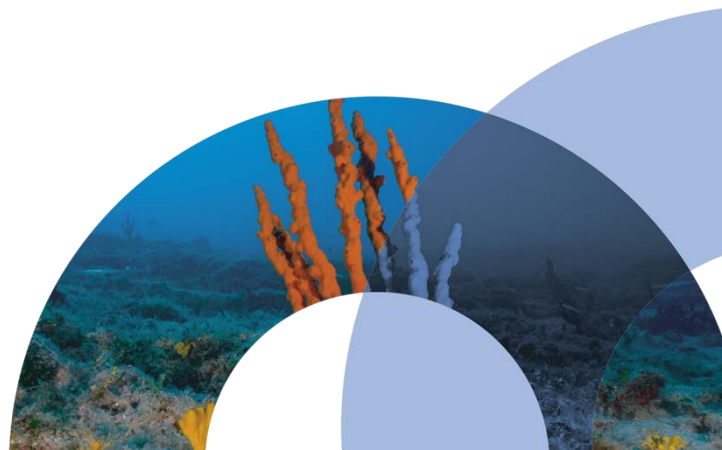
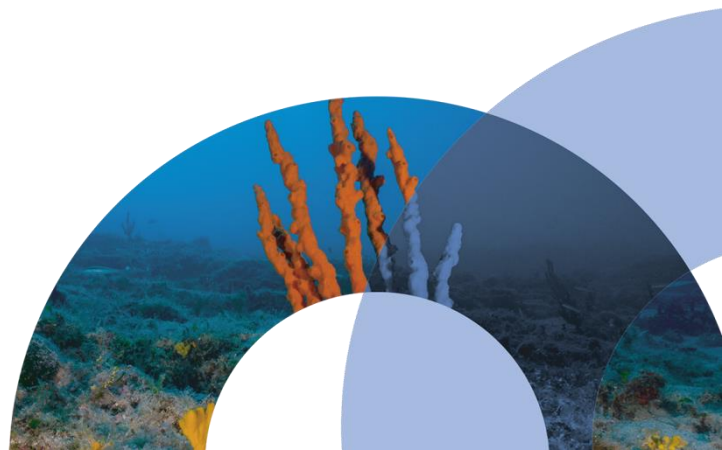




Figure 8: More aspects of the underwater cleanups conducted in Attica and Salamina island.



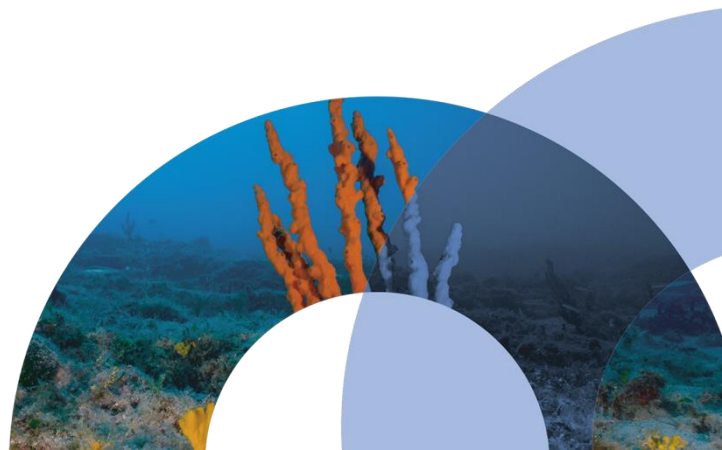
Litter items

Table 4: Ten most abundant benthic litter items, expressed as a percentage %.

Items	Percentage%
Plastic bottles (water, beverages)	28%
Beverage and beer cans	19%
Single Used Plastic cups and lids	8%
Expanded Polystyrene pieces 2,5 cm > <50 cm	8%
Plastic Bags and pieces	7%
Polystyrene ropes	7%
Glass bottles and pieces	7%
Clothes and pieces	6%
Plastic food packaging	6%
Vehicle tires	5%

In the context of 4 underwater cleanups, the total number of more than 100 plastic bottles (28%) was recorded, followed in number by 73 beverage and beer cans, Single Use Plastic (SUP) cups and lids accounted for 8%, while Expanded Polystyrene pieces 2.5 cm > <50 cm and plastic bags and their pieces accounted for 8% and 7%, accordingly. The highest number of plastic bottles and cans were recorded in Salamina port (A10), 50 plastic bottles and 37 cans in particular, due to the angle of the port trapping this type of litter.

Furthermore, beverages and beer cans collectively represented 14%, and were more abundant in Amfithea and Salamina ports. In Salamina, 37



beverages and beer cans were collected.

Many items dating back to previous decades were also removed from the marine environment. In particular, a beverage can with an expiration date of 1994 was among the litter items removed from Selinia Port (A9) and two beverages can with an expiration date of 2008 collected from Salamina Port (A10).

It must be also highlighted the fact that a supermarket trolley, a metallic table, the fishing traps and fishing equipment were removed from Amphithea and Salamina ports.

Informative Events

For the first time, in the context of “Prosfero” project two informative events took place in Athens and Salamina island, attended by more than 250 people. The iSea representatives informed all the attendees about the aim and the actions of Prosfero and distributed informative material on marine pollution and measures for its prevention and mitigation. Adults and children who attended these events had the opportunity to learn about the 10 most common beach litter and to see items removed from the seabed during underwater cleanups as well. Also, in Salamina island a film aiming to raise public awareness on marine protection and biodiversity was screened. These two events were implemented with the collaboration of the Municipality of Palaio Faleiro and Salamina island and the participation of our volunteers.



Participation details

A total number of more than 261 people participated in “Prosero campaign 15”. In particular, 223 volunteers contributed to the activities and the removal of litter from beaches and 37 volunteers contributed to the activities and the removal of marine litter from the ports. Volunteers included iSea members, as well as representatives of associations and entities actively working in each area. The entities were; Ecological Collective of Palaio Faliro, Nautical Club of Amphihea, Fishers’ association “Agios Nektarios”, Highschool of Ampelakia, Middle school of Aianteion, Nautical-athletic club of Selinia, Nautical club of Yourkariou of Salamina and the Association of Parents and Friends of People with Disabilities of Salamina. Individual volunteers also joined the cleanups.

As far as it concerns the diver volunteers a diver of iSea coordinated and conducted all the underwater cleanups, while 1 more diver voluntarily participated in Amphihea port.

Apart from the volunteers, representatives from the local authorities took part in the actions (i.e. municipal authorities, port police) mainly as ambassadors of their affiliated entities. In particular, representatives from the local Municipalities (4), the Coast Guard (1) and the Port Authorities (3) contributed to the implementation of the cleanups. Namely, representatives of the Municipalities of Palaio Faliro, Varis – Voulas - Vouliagmenis, Piraeus, Salamina, Selinion, Aiantiou, and the Coast Guard of Salamina participated in the actions, along with the Port Authorities of Piraeus and Salamina.



Communication plan

iSea based on the findings of Prosero Campaign shared all the results via its social media and website aiming not only to distribute the significant impact of the actions, but also to raise awareness about the issue of marine litter and its impact on marine ecosystems and marine biodiversity. To achieve this goal, a total number of 6 post were published in Facebook, Instagram and Twitter presenting the results of the actions in each area and reaching up to 8,081 people.

Table 5: Facebook posts presenting the results of the actions.

Date	Impressions	Reactions	Shares	Link
25-08-2022	2,715	85	7	Link 1
06-09-2022	8,081	283	22	Link2
13-09-2022	2,531	78	7	Link3
22-09-2022	3,284	67	4	Link4
28-09-2022	6,520	123	17	Link5
18-10-2022	8,013	272	15	Link6

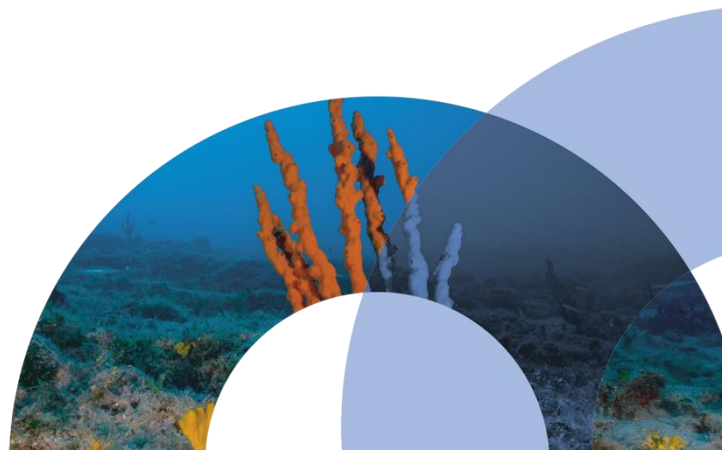
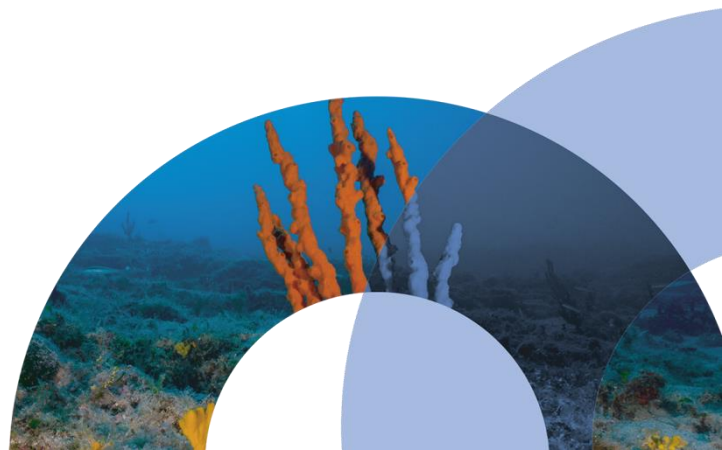


Table 6: Instagram posts presenting the results of the actions.

Date	Reach	Reactions	Link
25-08-2022	1,243	48	Link1
06-09-2022	1,059	55	Link2
13-09-2022	515	32	Link3
22-09-2022	985	37	Link4
28-09-2022	948	54	Link5
18-10-2022	490	45	Link6

Table 7: Twitter posts presenting the results of the actions.

Date	Impressions	Reactions	Retweet	Link
25-08-2022	752	21	15	Link1
06-09-2022	475	14	10	Link2
13-09-2022	338	20	11	Link3
22-09-2022	400	9	5	Link4
28-09-2022	394	9	5	Link5
18-10-2022	452	17	4	Link6



In addition, a total number of 17 “stories” were published via Social Media during the actions, to inform the public about the progress of each action and keep their interest in the project alive.

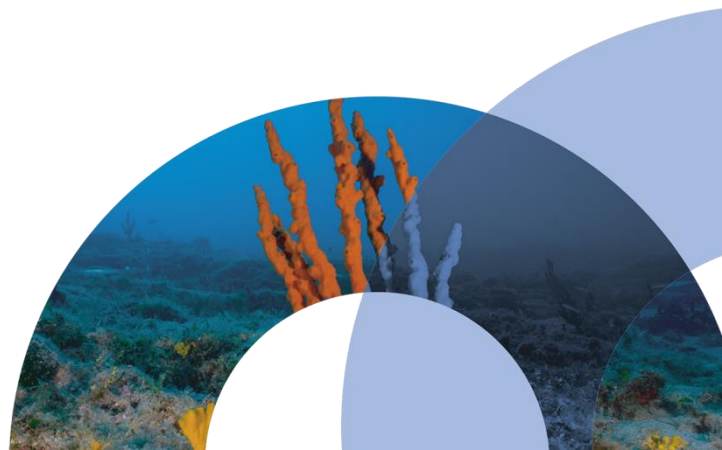


Figure 9: “Stories” of the beach and underwater cleanups conducted in Attica and Salamina.

A press release was created and shared with the local press inviting the local community to participate in the campaign.

Table 9: Press release inviting the local community to the actions.

Media	Link
e-peiraias.gr	Link 1
Salamina-press	Link 2
Csrnews	Link 3
Επιχειρώ	Link 4
Η φωνή της Σαλαμίνας	Link 5
Salamina-press	Link 6
Facebook post	Link 7



Furthermore, the following articles were published in the local press and post on social media with the aim at informing the community about the actions and achieve high participation.

Table 10: Articles in press about Prosero Campaign in Attica and on Salamina island.

Media	Link
Γενικό Λύκειο Αμπελακίων Σαλαμίνας	Link 1
Ναυτικός όμιλος Βουρκαρίου Σαλαμίνας	Link2
Facebook post	Link3
Facebook post	Link4
Facebook post	Link5
Facebook post	Link6
Facebook post	Link7
Facebook post	Link8
Facebook post	Link9
Facebook post	Link10

