



An awareness raising program on marine litter uniting all marine enthusiasts in Italy – divers, yachtsmen, fishermen, beach goers, students and citizen – in the protection of the Mediterranean sea.

Layman's Report



LIFE GIE/IT/000999

Edited by **Clean Sea Life**


With the contribution of the LIFE financial instrument of the European Community

Acknowledgements

Key to the success of Clean Sea LIFE, recognized as a **flagship project** of the LIFE programme, is the **community** that has grown around the project, and the passion with which it embraced the project's initiatives, in real life as well as on social media. We therefore would like to thank the thousands of professional and recreational fishermen, students and teachers, tour operators, beach-goers, divers and boaters, who have changed their daily habits, thus changing the face of the sea day by day.

We would also like to recognise the **institutions** which supported the project activities and especially the fishing for litter pilot projects in Porto Torres, Manfredonia, Rimini and San Benedetto del Tronto. We are particularly grateful to the men and women of the **Italian Coast Guard**, who assisted our efforts in every way.

The partners of Clean Sea LIFE – the Asinara National Park, Consorzio Nazionale Interuniversitario per le Scienze del Mare (CoNISMa), Fondazione Cetacea Onlus, Legambiente Onlus, MedSharks and Centro Velico Caprera - commit to keep up the fight against marine litter daily.





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Introduction

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An extraordinary awareness campaign that in four years involved 170.000 citizens, removed 112 tons of waste from the Italian coasts and inspired legislations to reduce and prevent marine litter - this is the legacy of Clean Sea Life (LIFE15 GIE/IT/000999), a LIFE project coordinated by the Asinara National Park and co-funded by the European Commission through the LIFE programme. Project partners are CoNISMa, Fondazione Cetacea, Legambiente, MedSharks and Centro Velico Caprera.

Clean Sea LIFE (LIFE15 GIE/IT/000999)

COORDINATING BENEFICIARY

Asinara National Park

ASSOCIATED BENEFICIARIES

CoNISMa - National Inter-University Consortium for Marine Sciences

Fondazione Cetacea Onlus

Legambiente Onlus

MedSharks

Centro Velico Caprera

DURATION

September 30th, 2016 – January 31st, 2021

OVERALL BUDGET

€ 2,060,705

EU CONTRIBUTION

€ 1,233,862

PROJECT AREA

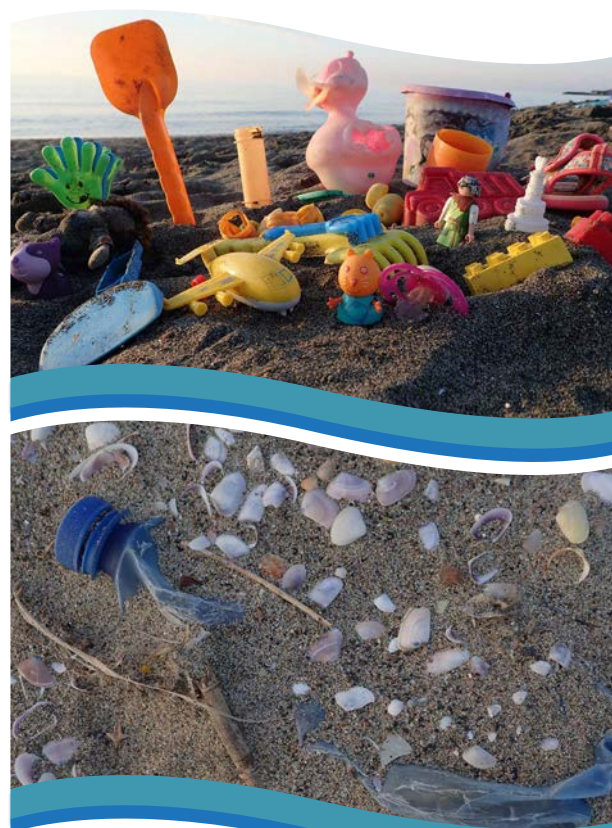
Italia



Analysis

The environmental problem

Even the most remote corner of the Mediterranean Sea is invaded by marine litter - items that are discarded, abandoned or lost at sea. **Litter is a major threat** to marine ecosystems and represents a growing concern for the environment, the economy and health. The Mediterranean Sea, one of the **world's biodiversity hotspots**, has also become one of the areas most affected by marine litter and microplastics, due to the amount of people living on its shores and to currents that trap within the basin any item that ever ends up in the sea.



From anchovies to whales, from turtles to birds, hundreds of Mediterranean marine species are affected by this kind of pollution, sometimes with **fatal** results. Microplastics are of particular concern as they absorb and concentrate dissolved pollutants and, due to their small size, are easily ingested by minute organisms, with consequences that are still unclear.

Professional fishing and shipping are both significant sources of marine litter. However marine litter **mostly originates from land**: from illegal landfills or badly managed municipal waste, it is often carried downstream by rivers or inefficient sewage treatment plants. Another major source of litter in the Mediterranean Sea are recreational and tourist activities: Clean Sea LIFE therefore focused its awareness-raising activities on the 'users of the sea'.

Objectives

The aim of the Clean Sea LIFE project is to reverse the accumulation of marine litter along Italian coasts by **raising awareness** of the issue, **inspiring changes** in attitude in citizens, encouraging **co-responsibility** and disseminating **good management practices** among tourism operators and authorities.

The project - co-financed by the European Commission's LIFE programme and coordinated by the Asinara National Park with partners CoNISMa, Fondazione Cetacea, Legambiente, MedSharks and Centro Velico Caprera – took off in October 2016 and ended in January 2021.

Target groups

The project engaged key groups with an interest in the marine world - divers, boaters, recreational and professional fishermen, beach operators - as well as students, teachers and the general public. Clean Sea LIFE also reached out to local, regional, national and international authorities to promote policies to reduce marine litter.





Activities

Actions

In four years Clean Sea LIFE developed a **community** of operators, clubs and citizens **committed to take co-responsibility** in the fight against marine litter. The main players were nautical, diving and recreational fishing clubs, associations, marinas, tourist and beach operators who modified their operating practices, promoted regular clean-up activities and raised the awareness of their members, students and visitors. Olympic athletes and leading public figures became project ambassadors, promoting more environmentally friendly behaviour among citizens.

3



In addition to the many activities carried out with **students**, both in the classroom and at the beach, Clean Sea LIFE provided **specific training for teachers** and informal educators, such as environmental guides and instructors of nautical and underwater activities, so as to ensure that awareness on marine litter will continue well after the end of the project.

A multitude of **beach and seafloor clean-ups** organised by project partners, which involved thousands of people, included **scientific monitoring** and specific **citizen science** activities to identify waste and its origin.

Better management practices, to reduce waste production and encouraging the public to actively participate in the fight against marine litter, were drafted with the operators that joined the Clean Sea LIFE project. These **good practices**, coupled with the expertise developed during the project, formed the core of the project's Guidelines, which were disseminated to operators, authorities and the general public. The map of the areas of marine litter build-up along the Italian coastline, drawn up with the results of all project activities and targeted questionnaires, was an **evidence-based** resource that Clean Sea LIFE provided the authorities to fight marine litter more effectively.

Communication

An intense **communication effort** was sustained through the four years of the Clean Sea LIFE project: over 1,000 public meetings and lectures were held in museums, at clubs and associations, in classrooms, at the beach and even on military vessels.

In the last nine months of the project, the **Covid-19 pandemic** hampered some of the in-person activities, but this did not prevent the project from reaching its objectives, which were well on track: in



2020 the communication effort moved to the Internet, with over 20 webinars designed to cement knowledge and disseminate project results among the public and stakeholders.

To promote a sense of **personal responsibility**, awareness-raising activities consistently reduced the abstract problem of marine litter - often associated only with the so-called 'plastic islands' in the Pacific Ocean - to a Mediterranean and local level, highlighting the direct link between some of the most frequent marine litter items and people's careless habits.

Specific communication **campaigns** were launched to prevent littering, particularly of cigarette butts, balloons and recreational fishing lines. Others encouraged coastal clean-ups and the replacement of disposable products with durable ones, such as flasks instead of plastic bottles.

Interviews and videos relayed the messages of the **project's ambassadors**, as well as examples of virtuous and easily replicable practices adopted by **'local heroes'** on social media.

Specific **evidence-based reports** of emerging issues were produced, increasing the visibility of both the marine litter issue and the project itself, while a suite of **practical tips** were proposed to encourage the general public to change its habits.

The focus on **visual messages**, with hundreds of original photos and videos produced, made the most of the power of social media: posts were often re-launched thousands of times, with three reaching around **500,000 people** each.

Finally, to reinforce the bond with the project and the **sense of community**, Clean Sea LIFE constantly maintained a **conversation with the public** through the project's social media, answering questions and requests for support, and sharing photos and activities of the volunteers.



Materials

The project printed a limited number of leaflets, designed specific posters for each target group (divers, boaters, fishermen, students), created training materials for instructors and an exhibition, which was displayed in various settings. Guidelines for carrying out clean-ups and monitoring activities, presentations and videos were created according to the needs expressed by the public and made available through the project website.

To avoid littering from cigarette butts, thousands of portable ashtrays were distributed, of various shapes according to the target group, and special plexiglass containers were delivered to beach operators, to raise the awareness of the public on cigarettes littering the beach. Special containers for discarded fishing lines were placed in various harbours and marinas, to be used by recreational fishermen. To build community spirit, T-shirts and water bottles were distributed to those who distinguished themselves in clean-up activities.



The Pledge to the Sea

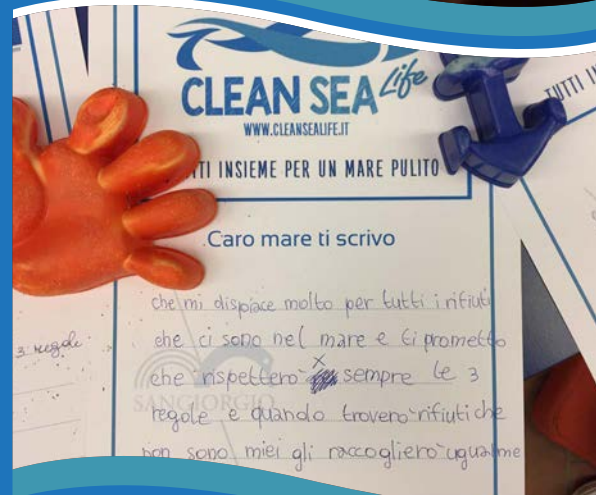
Over 40,000 people actively participated in project activities, often engaging in coastal clean-ups for the first time; 20,000 people made a formal commitment by signing Clean Sea LIFE's 'Pledge to the Sea', a promise to change one's habits and adopt virtuous behaviour to reduce marine litter.

The key principles of the pledge are:

1 | DO NOT LITTER - including cigarette butts and balloons launch: these are careless behaviours that are often not recognised by citizens as polluting

2 | PICK UP litter from the sea and coasts - promoting individual activities and stimulating clubs and associations, organisations and communities to carry out regular beach or underwater clean-up events

3 | REDUCE waste production - focusing on reuse, recycling and the need to minimise the use of disposable, single-use objects made from any material.





Results

4

The impact of the Clean Sea LIFE project

Given the complexity of the issue and the limited knowledge on the presence and consequences of marine litter, the impact of the Clean Sea LIFE project is measured by increased awareness, litter clean-up, prevention efforts and the number of citizen and operators adopting better management practices.

112 tons of litter removed from the Italian coastline

Clean-up activities removed 112 tons of waste from the Italian coastline. Besides recovering significant amounts of litter, thereby eliminating a possible cause of harm to marine animals and a source of microplastics in the sea, these events led local and national authorities to **field test management solutions for marine litter**, which has yet to be regulated by a National law. In San Benedetto del Tronto, with the full support of both fishermen and local authorities, **fishing for litter** activities of the project were extended to the whole fleet and have become **daily practice**. Several fishermen continue to bring the waste ashore in the other ports where Clean Sea LIFE pilot projects were carried out.

The situation around the Italian coast

No action against marine litter is possible without a thorough understanding of the situation. This is why Clean Sea LIFE carried out around 200 monitoring activities on beaches and seabeds, following the MSFD protocol. The survey of 106 beaches, several carried out as citizen-science activities, consistently records values well above the limit set by the European Commission for marine litter on the coast, with cases up to 500 times higher. The results were then supplemented with analyses of the waste collected on the seabed, questionnaires submitted to various stakeholders, including the local Coast Guard, and reports of the beaching of carrier disks.

The result is a map of areas of waste build-up along the Italian coastline which, together with the analysis of their nature and possible origin, will provide useful indications to address targeted mitigation activities.



500 operators have joined the project, adopting better practices

Clean Sea LIFE identified **best management practices** together with tourism and beach operators, and dozens of schools, banks, industries, clubs and associations. These good practices include for instance replacing plastic bottles with returnable glass bottles, fitting potable filters for drinking water, replacing plastic straws with reusable ones, taking measures to contain and limit the dispersion of balloons on the beach, efforts to prevent littering from smoking, facilities to collect waste from recreational fishermen in harbours and marinas. These procedures were disseminated nationwide and have **inspired other operators** who, while not formally joining the project, have nonetheless adopted better practices, ensuring less litter entering the sea in the future. More than 500 clean-up activities were carried out by these operators themselves.

40.000 people actively engaged to protect the sea and oceans

Over **40,000 people**, including **5,000 students**, took part in project activities. More than **20,000 people** signed the project's Pledge to the Sea, thereby committing to being more careful with waste production and sharing this new attitude with family and friends. Hundreds of images sent to us via social media testify to this **increased awareness in society**.



100.000

people have visited the exhibition

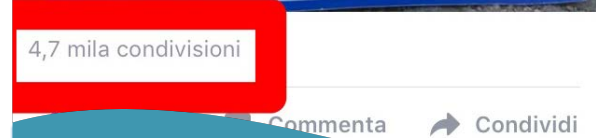
100,000 people visited the Clean Sea LIFE travelling exhibition on marine litter, which was put on display in museums, aquariums and even on military vessels; two copies are on permanent display in Rimini and on the island of Asinara, and two were donated to museums and fairs, to continue raising public awareness once the project ended. We estimate that the Clean Sea LIFE message **reached 300,000 people** during the 23 fairs where it was present.

500.000

people were reached via social media

Clean Sea LIFE built up a wide **social media community**. The main communication channel for the Italian public was the project's Facebook page, which was followed by 13,000 people and featured 1,700 posts, 1,500 photos and 200 videos. The videos totaled over 2,000 hours of viewing time, and three particular posts reached between 400,000 and 500,000 people.

The project Instagram profile was followed by around 2,500 people. Twitter was used to engage the international community and was followed by 1,280 people. The project's YouTube channel features 150 videos.



The impact on the media

A sustained effort to engage the media produced a **remarkable coverage of the project**. The media strategy focused on the production of studies, in-depth analyses, press releases and images both on project initiatives, such as fishing for litter or local events, and on emerging and current issues.

Some examples are the study on products containing microplastics, disseminated during the campaign to ban them from cosmetics (2017); the in-depth study on littering produced by seaside tourism (2018); the study on mussel farming nets presented at the opening of the Salone Internazionale del Gusto (2018); and interviews with sailors at the Barcolana, the world's most attended regatta (2018). The timely investigation into the massive stranding of biofilm carriers spilled from a sewage treatment plant in 2018 (see box) was **the highlight of this strategy**, as it provided journalists with information and context on the ongoing accident, firmly establishing **Clean Sea LIFE** as an **authoritative source** on the topic of marine litter.

The impact of this strategy was very significant. The press have consistently followed the project, with **330 features** in regional, national and international press, radio and television. Even **CBS**, **France 24** and **AFP** featured our fishing for litter project. Considering National TV coverage alone, where all the major national broadcasters and news programs reported on Clean Sea LIFE, a total of **48 TV reports** aired for over 100 minutes, of which **40 in prime time**.

It is estimated that the project reached an audience of **34 million viewers**, **59%** of the Italian people.

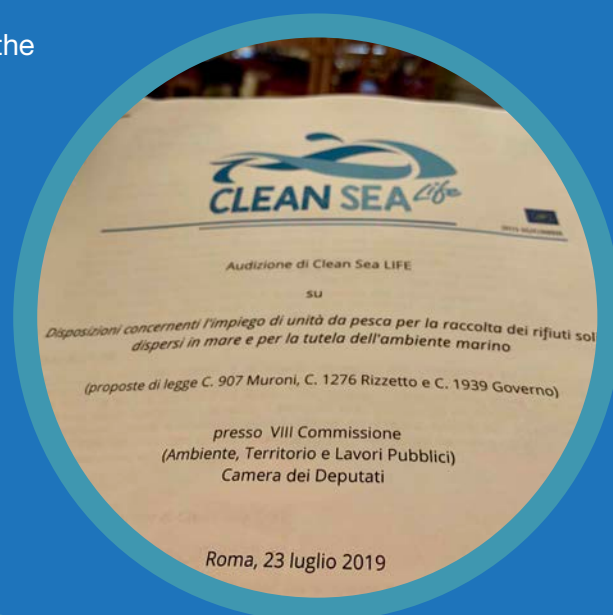


Fishing for litter - testing a draft bill in real time

Fishing for litter was one of Clean Sea LIFE's **most successful initiatives**. Pilot projects were carried out in four Italian regions, in Porto Torres (Sardinia), Manfredonia (Puglia), Rimini (Emilia-Romagna) and San Benedetto del Tronto (Marche). The project involved a total of 118 vessels, **the largest fleet ever engaged** in this activity in Italy. The fishermen brought ashore **80 tons** of marine litter caught up in nets. The aim of the pilot project was not only to remove a considerable amount of waste from the environment, but also to identify with fishermen and local authorities a **feasible management process for marine litter**.

Clean Sea LIFE was invited to illustrate best practices that have emerged from such a large-scale experience to both branches of the **Italian Parliament**, as they were fine tuning the 'Salva Mare' legislation.

This activity deeply touched **Pope Francis** who invited the fishermen to a private audience, where he praised their efforts: *"This project is an example of how civil society can and must contribute to tackling global issues, stimulating the responsibility of institutions"*. Clean Sea LIFE presented the Holy Father a flag of the LIFE programme, as a testament to the **efforts of all Italian and European LIFE projects** to protect biodiversity.





Operazione Spazzamare

Operation Spazzamare, organised by Clean Sea LIFE and the Italian Coast Guard on 8 June 2020, World Oceans Day, was the **largest underwater clean-up event** ever carried out in Italy. The activity involved 40 dive centres and the Coast Guard's five Underwater Units. Hundreds of divers were deployed in 12 Regions and 37 sites such as harbours, marinas and areas of natural and archaeological significance. They removed **12 tons** of waste, which was then disposed of by local authorities testing locally adapted managing measures for marine litter.





Networking, policy and governance

5

An intense networking effort led Clean Sea LIFE to engage with institutions, European projects, research institutes, environmental associations and trade unions to understand the problem and disseminate possible practical solutions to reduce the pressures of marine litter, and achieve the Good Environmental Status required by the EU Marine Strategy Framework Directive.

Some of these include sharing data and strategy with the UN Global Partnership on Marine Litter or sharing monitoring data with the **European Environment Agency** for its Marine Litter Watch. Clean Sea LIFE was presented as a best practice at the 2017 **G7 workshop** “Tackling marine litter in the Mediterranean Sea” by the Italian Ministry of the Environment. Synergies were also developed with the Clean Up the Med campaign, which involves thousands of volunteers in 21 Mediterranean countries.

Clean Sea LIFE actively collaborated with institutions such as the Ministry for the Environment, the Italian and European Parliaments, municipalities and regions. The project provided them with data and studies on specific topics, helping to develop measures to reduce marine litter or, as in the case of the Lazio Region, to create awareness-raising material. In total, partners participated in **150 meetings**.

The experience gained through fishing for litter activities was a valuable test case for both local authorities and National legislators, who were able to fine-tune the 'Salva Mare' bill in real time, based on the results of the pilot projects.

A major achievement, which will reduce marine littering in the long-term, are the **national law and local regulations inspired by Clean Sea LIFE**, such as the law banning cosmetics with microplastics and local resolutions prohibiting the massive release of balloons.

The relationship with the **Marine Protected Areas** of Porto Cesareo, Ustica and Egadi was particularly meaningful: they organised clean-up events with stakeholders and formalised a commitment to carry out such activities annually in the future. Collaboration was also established with Federparchi - Europarc Italia, the Italian federation of protected areas, which signed a commitment to continue disseminating the project objectives within its network.

Joint awareness-raising activities were carried out with the **Italian Coast Guard** and the **Carabinieri Forestry Corps** who were provided, at their request, with awareness materials and a specific training programme on the topic of marine litter.

Research findings conducted during the project were presented at several national and international conferences, including the 6th International Marine Debris Conference in San Diego, USA (2018).

The **European Commission** frequently invited Clean Sea LIFE to present its activities at international public events such as EU Green Week (2019), Ecomondo (2019) and the Salone del Gusto in Turin (2018), the conference of World Aquariums Against Marine Litter (2020).

The European Commission's LIFE programme has described Clean Sea LIFE as one of its **flagship projects** and illustrated its work in several publications.



Microplastics-free cosmetics without microplastics: a law

A Clean Sea LIFE survey of hundreds of cosmetics, presented to the Italian Senate, provided **evidence to support a law** banning the sale of products containing microplastics in Italy. The study revealed the presence of significant amounts of tiny plastic flakes in more than one hundred products, mostly exfoliating cosmetics, even in products that claimed to be natural and environmentally friendly. Laboratory analysis estimated that in a 250 ml bottle of a specific product there were more than 27 grams of plastic, amounting to about **1,600,000 microbeads**.

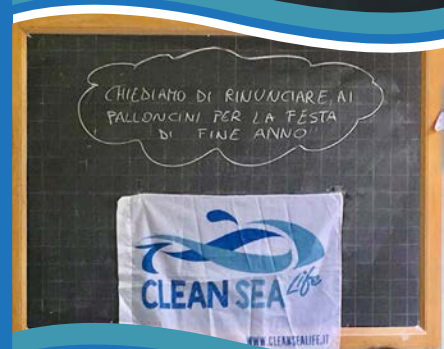
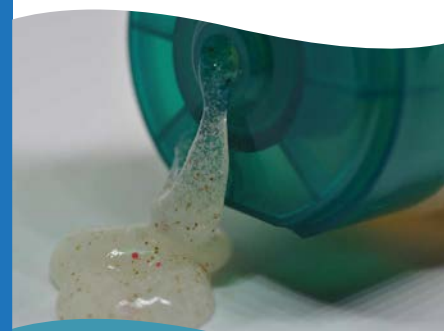
The Italian regulation, which preceded the European ban, was approved by the Italian Parliament on December 30th 2017; as of January 1, 2020, the presence of microplastics in cosmetics is **prohibited** in Italy.

For this initiative, which was widely reported in the media, the Ministry of Environment presented Clean Sea LIFE as an example of Best Practice at the 'G7 Plastics Workshop in the context of 2030 Agenda implementation and towards G7 collaborative activities', because it "enhances and promotes a preventive approach to microplastics management".

Six resolutions against balloon releases

Clean Sea LIFE monitoring activities have shown that balloons are a common debris along Italian coasts. Although apparently harmless, balloons - both plastic and latex, the so-called biodegradable ones - are one of the identified causes of **mortality of endangered** species such as marine turtles and birds. These species can mistake balloons for food or get caught in the ribbons tied to them.

To address this little-known form of pollution, Clean Sea LIFE urged schools, citizens and authorities to stop the massive release of balloons in private, civic and religious celebrations. In response to the project's call, dozens of schools, four Italian municipalities (Maruggio, Giovinazzo, Bitonto and Castelsardo), Parco Regionale delle Dolomiti Friulane and Asinara National Park **banned** the **massive release of balloons** in their areas.



Clean Sea LIFE and the first trial in Italy on marine litter

The polluter pays principle: the disaster at a water treatment plant in southern Italy - which in February 2018 caused the spilling **of millions of plastic disks at sea** - went to court early 2021. Pushed by the currents, the disks gradually washed up all around the central-western Mediterranean Sea. Clean Sea LIFE followed the event since its very beginning, sparking the media's attention and assisting investigators to identify the source and extent of the accident. As part of a **citizen science** activity, the #diskhunt brought hundreds of volunteers to the beach: they collected over 260,000 disks, which were then classified and geo-referenced. More than 600 photo/video reports have shown that over the last three years the light plastic carriers, carried by currents, have reached **France, Spain, Tunisia** and **Malta**, stranding also in various protected areas. Carriers can still be found on beaches all along the Tyrrhenian and Ionian coasts. At least **three sea turtles** have ingested the carrier discs, and two of them died.

These reports have also enabled the scientific community to **track the fate of plastics** dumped in the Mediterranean and provided, in the words of the investigators, crucial support in **identifying the perpetrators of an environmental crime**, and in setting up the first marine littering trial ever held in Italy.





LIFE GIE/IT/000999

COORDINATING BENEFICIARY



PARCO NAZIONALE DELL'ASINARA
AREA MARINA PROTETTA "ISOLA DELL'ASINARA"

ASSOCIATED BENEFICIARIES



LEGAMBIENTE



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