

Tackling marine litter in the Mediterranean, from research to action

G7 Workshop on Marine Litter

*"Mainstreaming the work of the Regional
Sea Programmes towards the better
implementation of the G7 Action Plan
and the achievement of the global
commitments on marine litter"*

Legambiente and the *Marine Strategy*

Legambiente is the largest environmental organization in Italy, founded in 1980 for the safeguard of the environment, for the promotion of sustainable.

Goletta Verde is the widest research and awareness campaign regarding sea pollution conducted by an environmental organization. Since 1986, it has been monitoring the quality of Italian seas.

With this activity Legambiente want to contribute to the **Marine Strategy Directive** (2008/56), which requires Member States to monitor the state of seas and take the measures needed to reach or maintain its 'good environmental status' by 2020.





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Actions and policies



" [...] The most significant of these initiatives at the regional level are the following: [...] - the Italian environmental organization legambiente coordinates every spring-summer beach clean ups in the Mediterranean. "

(UNEP, 2015)



Legambiente's campaign Goletta Verde and Clean up the Med in the 1000 Our Ocean actions recorded in 2016 by US State Dep.

We're preparing our participation to the UN Ocean Conference of June 2017 to talk about Mediterranean sea among all the oceans and regional seas.

During the preparatory meeting of February we talked about the importance of the citizen science and the role of NGO in tackling marine litter.



floating macro litter in italian seas

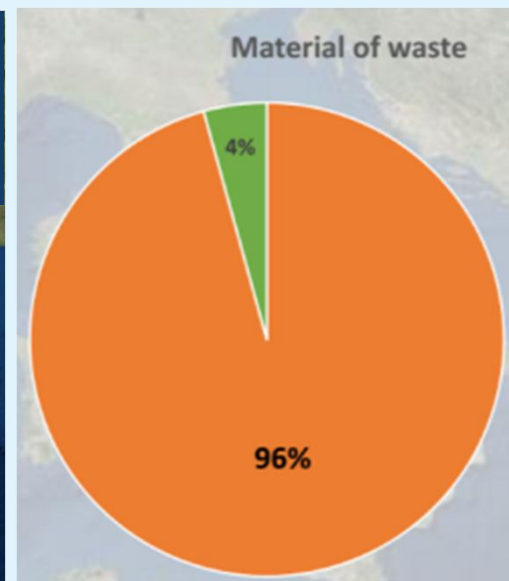
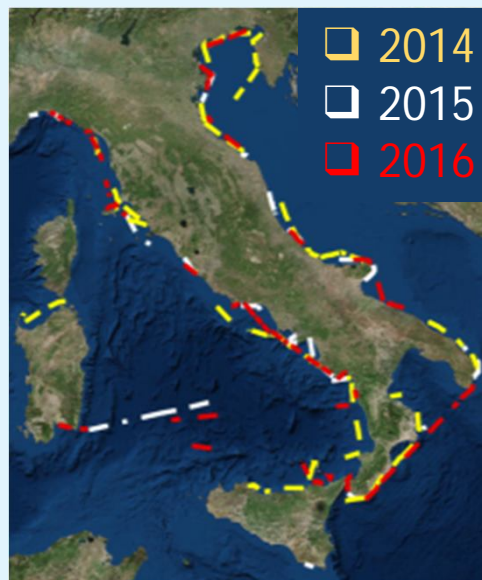
in conjunction with ISPRA NAT-BIO and Accademia del Leviatano ONLUS

In 2016:

The average concentration of wastes in the investigated area is **57,6 items of waste / sq km of the sea**

The **95.7%** of the waste monitored consists of **plastic**.

Most common waste	%
Bags	16,2%
Sheets	9,6%
Net/Lines	3,6%
Polystyrene other	3,1%
Bottles	2,5%
Caps/Lids	2,5%
Tableware	2,2%
Sanitary towels	1,8%
Polystyrene box	1,6%
Other Plastic	49,2%



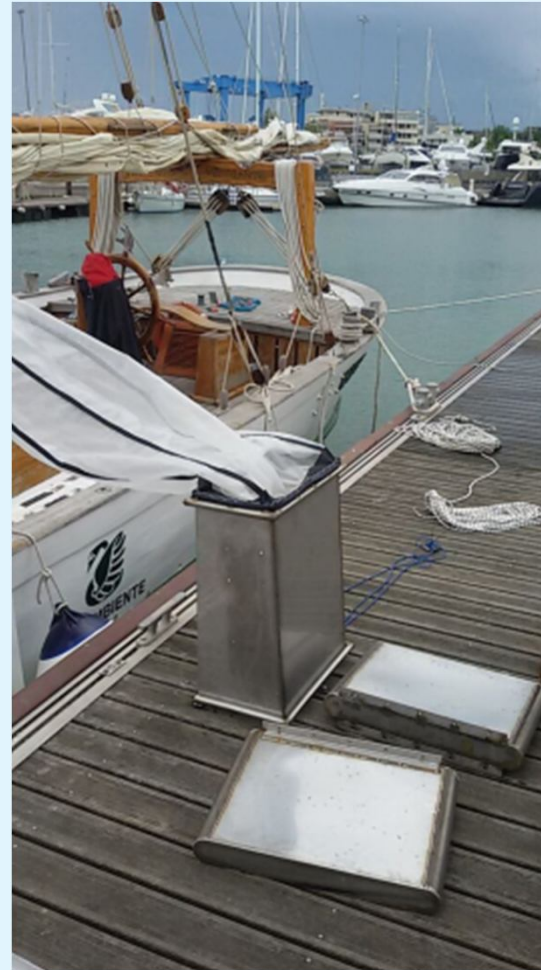
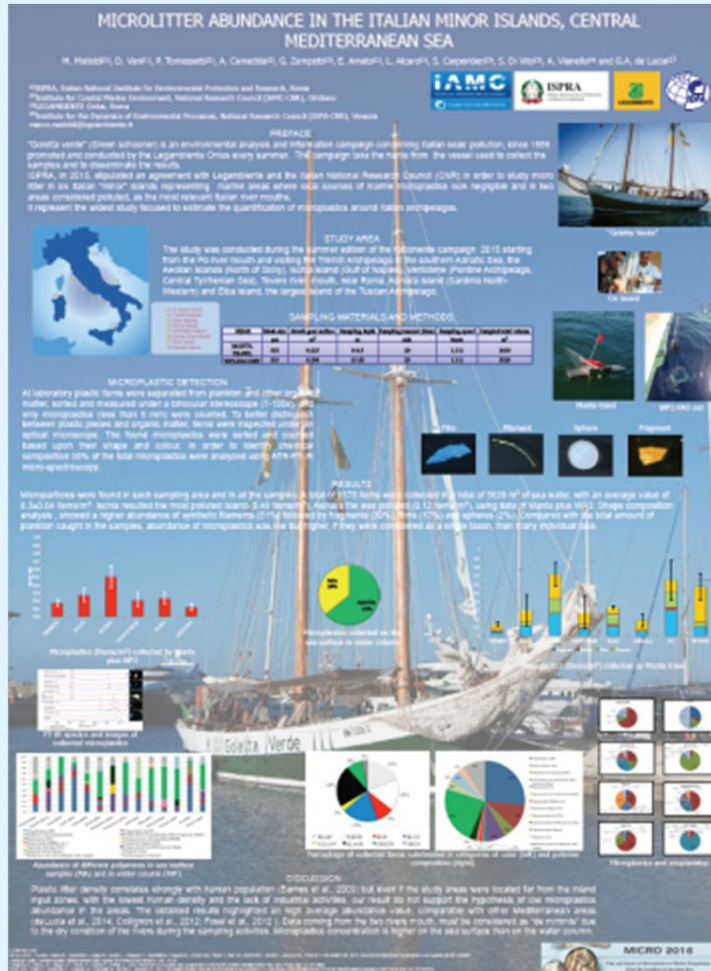
Among the **most common objects** there are single-use plastics, in particular **plastic bags**, and other object that could be linked to **fishing activities** (as net and lines, or polystyrene box for example).



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floating micro litter in italian seas

in conjunction with ISPRA NAT-BIO



Microplastic particles were found in each sampling area and in all the samples.

The more important aspect of this study is that we found high values of plastic litter density even in the areas located far from the inland input zones, with the lowest human density and the lack of industrial activities as islands are.



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floating **micro** litter in italian lakes

in conjunction with ENEA, Ca' Foscari University of Venice and Arpa Umbria



There is a growing awareness that even freshwaters are not immune to this problem, a new and dangerous menace for these fragile semi closed systems, which might be more sensitive to the presence of waste, and in particular to the micro particles, which originate.

Micro plastic particles were found in every single sample, in every lake considered.



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beach litter in italian shores

a success example of citizen science

Only in **2016** edition **47 italian beaches** were monitored. Over 33.000 trash have been recorded, **an average of 714 items of waste per 100 square meters**. The most common material found was **plastic, around 76%**.



*The **monitoring protocol** for beach litter follow the methodology developed by the European Agency for the Environment to support the Marine LitterWatch (MLW) communities.*

The packaging category represents the 56% of urban mismanaged waste buried in the sand, and 75% of this is disposable plastic packaging.

TOP TEN LIST OF WASTE

Plastic pieces and polystyrene	22,3%
Cotton buds	13,2%
Cigarette butts	7,9%
Top e covers (plastic and metal)	7,8%
Plastic bottles	7,5%
Fishing litter	3,7%
Disposable dish	3,5%
Construction material	2,3%
Glass bottles (and pieces)	1,9%
Bottles for detergents	1,8%



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Monitoring beach litter in mediterranean shores



From Marine Strategy to the citizen science

Plastic bag I'm watching you!!!

This year let us keep under watch the plastic bags, indeed this is the most common item found during the last "Clean up the MED". In Mediterranean Sea an estimated 25 million plastic bags pollute every 1,000 km of coast and this material can trap or suffocate sea turtles, birds and marine mammals. Moreover the economic cost associated to impacts on marine ecosystems could be estimated at least 8 billion dollars per year considering the revenue loss to fisheries and the marine tourism industries, plus the cost of cleaning up beaches. This are the reasons why Legambiente promote the ban on traditional plastic bags, respecting the transition to compostable carrier bags.

6. Guide for identification of litter on the beach		
Litter items (OSPAR Name)		
Plastics • Polystyrene		
4/6-pack yokes		
Bags (e.g. shopping)	1	132
Small plastic bags, e.g. freezer bags		
Plastic bag ends		
Drinks (bottles, containers and drums)		
Cleaner (bottles, containers and drums)		
Food containers incl. fast food containers	6	8
Cosmetics (bottles & containers e.g. sun lotion, shampoo, shower gel, deodorant)		
Engine oil containers and drums < 50 cm		
Engine oil containers and drums > 50 cm		
Jerry cans (square plastic containers with handle)	9	
Injection gun container		
Other bottles, containers and drums		11
Grates		



Print and use the following table during the survey:

Materials / objects	TSG_M L. code	Total number of objects
Plastic		
4/6-pack yokes, six-pack rings	G1	
Shopping Bags incl. pieces	G3	
Small plastic bags, e.g. freezer bags incl. Pieces	G4	
Plastic bags collective role; what remains from rip-off plastic bags	G5	
Drink bottles <= 0.5l	G7	
Drink bottles > 0.5l	G8	
Cleaner bottles & containers	G9	
Food containers incl. fast food containers	G10	
Beach use related cosmetic bottles and containers, eg. Sunblocks	G11	
Other cosmetics bottles & containers	G12	
Other bottles & containers (drums)	G13	
Engine oil bottles & containers <50 cm	G14	

Beach identification form				
<i>please fill out every cell</i>				
Country		Event date		
Region				
City				
Beach name:				
Association/structure (name):				
Responsible (name):				
mail				
Investigation area's coordinates (xx.xxx") - essential				
start		end		
lat	long	lat	long	
Investigation area's effective width (m)		100 m X		
(from shore to dunes/vegetation)				
Sediment typology (pebbles, sandy, rocky, other (mixed)):				
Beach type (Urban, rural, near river mouth):				



Hotel Cretan Malia Park - Malia Pediados - Greece



Škola Obrovac - Obrovac Croatia



Ersoy Primary School Antalya - Turkey



Association les amis de l'environnement Dar Chaabane el Fehery - Tunisie



Association del voluntariat Touiza de la wilaya D'Alger - Algeria

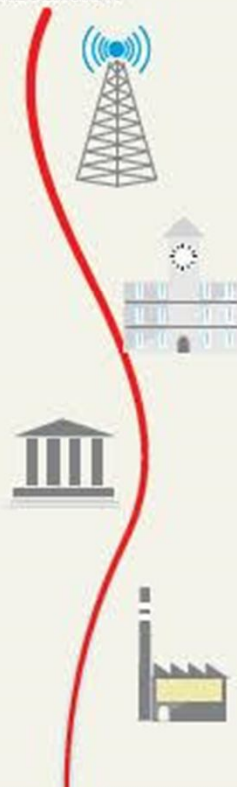


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Common commitments and policies in all Med countries

Preventing is better than cleaning up

PREVENTION



Awareness raising activities among distributors/retailers and consumers can help avoid the generation of marine litter

Research to improve product design and efficiency of processes can prevent waste, and improve recycling and resource efficiency

Research to improve knowledge on sources, pathways and fate to improve existing measures and regulations and enable awareness and attitude change.

Better implementation of existing legislation on the release of litter, on land and at sea, helps to reduce marine litter at source

Behavioural and system changes leading towards more sustainable production and consumption patterns

The application of extended producer responsibility (EPR) can help to avoid certain types of marine litter



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Common commitments and policies in all Med countries



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Stop plastic bags in the Mediterranean Area

A BAN ON PLASTIC CARRIER BAGS IN MEDITERRANEAN AREA

CONSIDERING,

Unep states that "marine litter in the Mediterranean is a confirmed critical issue. The problem is exacerbated by the basin's limited exchanges with other oceans, its densely populated coasts, highly developed tourism, 30% of the world's maritime traffic passing through and various additional inputs of litter from rivers and very urbanized areas."

Plastic bags emergency. In the European Union, around 100 billion plastic bags are put on the market each year (equivalent to 190 million tons of oil consumption). Many end up in the seas or on the coast. In Mediterranean Sea an estimated 25 million plastic bags pollute every 1,000 kilometres of coast, more than 1,1 trillion for 46000 kilometres of the Mediterranean Sea per year. Total consumption of PE (HD and LD, high and low density) estimate more than 25 millions of tons in EMEA countries and low price of NAFTA pushed production and consumption in the last six months.

Plastic bags in Mediterranean coast and sea. In 2015, from April to May, was conducted a BEACH LITTER survey within "Clean-up the Med 2015", with the contribute of many associations: 54 Mediterranean beaches (Algeria, Croatia, Greece, Italy, Portugal, Spain, Turkey,

ASK TO IMPLEMENT ASAP

- Coordinate a ban on plastic carrier bags below 100 microns except bags for primary transport (i.e. fisheries) and biodegradable and compostable certified EN 13432 or ISO 14855
- A ban on microbeads used in cosmetics and cleaning products
- A ban on cotton buds non biodegradable and compostable certified EN 13432 or ISO 14855
- Define a plan for reduction and recycling of plastic in all sector, from primary sector to retail with mandatory goals
- An international campaign to improve separate collection of urban waste with a specific focus on domestic and commercial food waste
- Funding for biodigesters and composting plant as a infrastructure for climate adaption

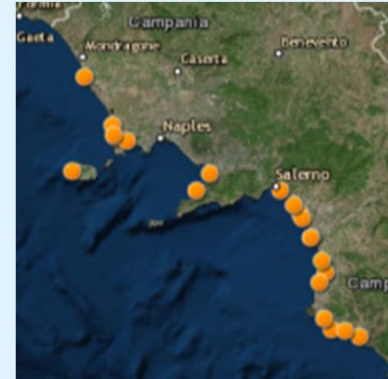


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Best practices and lesson learnt

the strength of taking care

During 2016 monitoring activities our group of Bagheria (Sicily) found a massive presence of waste and the bay was also surrounded by unstable cement artifacts. The area was immediately **reported to the authority** and closed.



In 2016 Legambiente Campania **join forces** and carried out monitoring on 16 beaches. This effort permit to read better data and relate them to the regional policies.

involving students in monitoring activities



MED-SEALITTER

Developing Mediterranean-specific protocols to protect biodiversity from litter impact at basin and local MPAs scales

THE PROJECT

The project aims at accomplishing and validating, within the Mediterranean basin, systematic protocols for monitoring marine litter and its potential effect on key biodiversity species. This will allow to strengthening effective management within MPAs and by coordinating conservation measures across MPAs.

PARTNERS

- Cinque Terre National Park and Marine Protected area, ITALY
- Legambiente Onlus, ITALY
- Italian National Institute for Environmental Protection and Research (ISPRA), ITALY
- University of Barcelona, SPAIN
- MEDASSET - Mediterranean Association to Save the Sea Turtles – GREECE
- University of Valencia, SPAIN
- Municipality of Villasimius - Capo Carbonara Marine Protected Area, ITALY
- Ecole Pratique des Hautes Etudes, FRANCE
- Hellenic Centre for Marine Research, GREECE
- EcoOcean Institute, FRANCE
- Municipality of Favignana – Managing Body of Egadi Islands Marine Protected Area, ITALY



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CLEAN SEA LIFE - LIFE15 GIE/IT/000999

www.cleansealife.it

THE PROJECT

The overall aim of the Clean Sea LIFE project, **financed under the LIFE Programme**, is to support the application of the Marine Strategy Framework Directive (MSFD) and EU biodiversity policy relating to marine litter.



The specific objectives are:

- To **increase awareness** of marine litter, empowering citizens to become part of the solution;
- To **remove existing litter**, including lost fishing gear, and prevent further littering;
- To **promote "fishing for litter"** initiatives and to train fishing industry professionals in responsible practices
- To provide **guidelines for the management** of marine litter, increase exchange of knowledge and the uptake of best practices and assist authorities in achieving a Good Environmental Status of the sea, as required under the Marine Strategy Framework Directive.



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