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## MARLESS (MARine Litter cross-border awareNESS and innovation actions)

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### 4.2.5 – Report on measures to be taken by the touristic sector for the conservation of the marine environment

#### WP 4

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## PROJECT MARLESS

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## 1. Introduction

Deliverable 4.2.5 is part of work package 4 (WP4), which specific objective was to involve local communities, local and regional authorities, decision makers, educational and scientific institutions, tourism sector, fisheries and maricultural sector, port authorities and environmental NGOs to prevent, compensate and even improve the state of environment. Actions to tackle the problem of litter in our sea and coast included educational programs and promotion of the more active involvement through clean-up activities. Through awareness campaigns on marine litter management and environmental education activities addressed to students, operators in agriculture, fishing, and touristic sectors as well as to all the citizens and public decision makers.

The achieved outputs of the WP4 are:

- Increase of pro-environmental behaviours and responsibility toward marine litter management among the entire population, with specific focus on target groups directly addressed in WP activities thanks to social events such as thematic hackathon events, itinerant exhibitions, contests etc.
- Enhancement of youth engagement in Marine Litter phenomenon thanks to the creation of a 2-step education methodology that will be applied within schools located in the project

intervention area through the realization of clean-up activities where Italian and Croatian students and their families will be involved

- Improvement of local governance processes related to marine litter management through the realization of “coastal agreements” signed by public and private coastal actors for the implementation of shared policies on marine litter management based on shared knowledge, expertise, and best practices.

This specific deliverable is strictly linked with the others activity 4.2- “Sensitising the touristic sector” that focus on activity that aims to sensitise the touristic sector by actively involving concessionaires of beaches (e.g. hotel companies) in the marine litter assessment and by applying preservation measures proposed according to data analysis results deriving from WP3 Monitoring activities. Beaches under concession are cleaned daily which is allowing a considerable amount of data concerning quantity and composition of marine litter to be collected.

During the project implementation, PPs trained hotel company employees in collection of ML according to a simplified methodology.

The assessment on the quantity and composition of marine litter have been done and this report will represent some of the results achieved.



## 2. Background

Tourism and the environment are intrinsically linked. Most tourists decide to travel to a particular destination because of sand, sun and sea or a foreign culture. The natural and cultural environment is part of the tourism product. Coastal areas in particular are especially attractive to tourism as they provide the ideal environment in which many tourists want to spend their holidays.

Tourism can enhance cultural and historical traditions which contribute to conservation and sustainable management of natural resources. However, despite its development potential, tourism rarely lives up to its sustainability expectations. Adverse impacts include excessive and inequitable resource use, habitat destruction and fragmentation and littering.



Considering this conditions, they risk finding an ocean coloured not by vibrant species of fish and coral, but by chocolate wrappers, single-use bottles and plastic straws it's high. The sand too, is buried under layers of cigarette butts, discarded flipflops and ice cream tubs. In fact, during peak tourist season, marine litter in the Mediterranean region has been found to increase by up to 40 per cent (source UNEP). With great irony, tourism, which often depends upon the Earth's natural beauty, is making enormous contributions to its decay in a very visible way

Alongside the 8 million tonnes of plastic that enter the ocean every year, 300 million tonnes of new plastic is created annually, utilizing non-renewable resources such as oil, gas and coal, and contributing to climate change. If growth in plastic production and incineration continue, cumulative emissions by 2050 will make up between 10 and 13 per cent of the total remaining global carbon budget. As a result, the implications of plastic overconsumption extend even further than the litter that is visible in the ocean.

Many stakeholders in the tourism industry have been acting against plastic pollution—moving away from single-use plastics, reducing consumption of unnecessary plastics, and moving towards

circularity through better recycling and reusing schemes. However, in order to tackle the enormity of the plastic problem, equally enormous action is needed, across the entire tourism value chain.

### 3. RESULTS OF MARLESS PROJECT MONITORING ACTION

In order to have a clear overview of the marine litter issue in the Adriatic Region the following result, represent what have been collected during the touristic season in the MARLESS project study area (Veneto Region, Friuli Venezia Region, Emilia-Romagna Region, Puglia Region and Istria Region).

It is well known that beaches under concession are cleaned daily which is allowing a considerable amount of data concerning quantity and composition of marine litter to be collected. MARLESS project foresees the collection of beached Marine Litter in each project region on at least 2 beaches, randomly once a week per 1 year. To assure the comparison of this supplemental monitoring activity with the project campaigns the concessionaires of beaches have been trained by Project partners in collecting the beached material according the prescribed methodology.

In analysing each piece of material found during the monitoring campaigns, the operators have classified the collected object according to a classes that are those reported in the following table

- 163 - M001 - CLOTH/TEXTILES
- 164 - M002 - FOOD WASTE
- 165 - M003 - GLASS BOTTLES
- 166 - M004 - metal drink cans
- 167 - M005 - plastic drink bottles >0.5l
- 168 - M006 - plastic drink bottles <=0.5l
- 169 - M007 - plastic cigarette lighters
- 170 - M008 - beach related items
- 171 - M009 - tobacco products with filters (cigarette butts with filters)
- 172 - M010 - plastic crisps packets/sweets wrappers
- 173 - M011 - plastic caps
- 174 - M012 - plastic straws
- 175 - M013 - plastic beach use related body care and cosmetic bottles and containers
- 176 - M014 - plastic plates and trays
- 177 - M015 - plastic mussels/oyster mesh bag
- 178 - M016 - RUBBER
- 179 - M017 - paper cigarette packets
- 180 - M018 - DPI face mask, gloves
- 181 - M019 - other items

The most frequent type of waste is filtered tobacco products (171-M009) followed by the category of other waste (181-M019). Only in third place we find plastic food packaging followed by objects related to recreational activities on the beach. The amount of tobacco products with filter is equal to the sum of all other waste

For a deeper look at the results, in the frame of the MARLESS project, the volume of data collected and the detail of the information harvested cannot be fully explored according to a

static approach, that is with a report, even if in digital format. So, an interactive tool has been developed and let available to the whole community by way of a World Wide Web service.

To access the service, follow this link

<https://public.tableau.com/app/profile/interregithr.arpafvg/viz/InterregIT-HRMARLESS-Balneari/MARLESS>

The data are accessible according five main access points that aim to ease the exploration of the whole dataset. Entering each of those points, menus are available to select data collected in each location, according to campaign dates and type of marine Litter.

## 4. COLLECTION OF BEST PRACTICES FOR THE CONSERVATION OF MARINE ENVIRONMENT

### 4.1. SMOKE-FREE BEACH



Looking at the results of the project, cigarette butt are the most common items found on a beach. In some locations, investigated by the MARLESS project, the beach concessionaries adopted a “simple as effective” solution: SMOKE FREE BRACH.

Comparing the results of the number of cigarette butt between two similar area it’s clear that this solution it’s really effective reducing the number of items found in the sand up to the 80%.

Moreover, this initiative has been well accepted by most of the tourist of the area.



## 4.2. “LID ON THE BINS”

As simple as effective: Put a lid over the bins to avoid dispersion of waste.

This “uncontrolled dispersion” can be caused both by atmospheric conditions and by animals, mainly birds (Seagulls). As for the lid, having an heavier bin can avoid that during windy day or storm the trash will fall down reaching the sea and the beach.



### **4.3. DRINK BOTTLES**

Networks of water fountains in cities, tourist areas and at beaches (or any other high footfall area) can be installed, along with running of information campaigns, in order to avoid the need for bottles at all. Drinking fountains are available in most cities, but at a density where consumers can quickly find them.

To enable and encourage consumers to use refillable bottles, mobile applications can be developed to indicate to consumers where the nearest available refill points are, to ensure they are used.

Retailers could install carbonating machines for use with refillable bottles, rather than selling SUP bottles. Consumers would then bring refillable bottles to the outlet and purchase the volume of drink they require for their bottle

### **4.4. STRAWS AND STIRRER**

For many drinks, straws and stirrers are not needed at all, and could simply be eliminated. Straws and stirrers are also available made out of glass or metal. Another option could be to innovate packaging design to build-in 'straws' to the pack itself, rather than have a separate disposable straw that could be littered – such as 'Straw Pak'.<sup>80</sup> Paper or bamboo alternatives are also very common and highly available.<sup>81</sup>

For stirrers, if consumers found Single Use options necessary, wooden stirrers are commercially available.

### **4.5. CLEAN UP ACTIONS**

Clean up-actions can have a double positive effect of beached waste.

The first on, and more evident, it's of course to collect the waste along the beach, keeping it clean and avoiding a direct impact on the ecosystem.

The second, and less directly evident effect, can be the awareness and knowledge increase in the people that are performing the action or even just looking at it, on the beach or on the social media. Be conscious of the problem could be the first step for an effective solution.



#### **4.6. “SPREAD THE WORD”**

Stay informed on issues related to plastic pollution and help make others aware of the problem. Tell your friends and family about how they can be part of the solution, or host a viewing party for one of the many plastic pollution focused documentaries, like A Plastic Ocean, Garbage Island: An Ocean Full of Plastic, Bag It, Addicted to Plastic, Plasticized, or Garbage Island

#### 4.7. “MAKE IT FUN”

Many actions can be performed in many different ways, and most of the time if there is a prize behind it more people will like to do it. The beer challenge has been shared between many beach bars in Italy and Spain. The action was as simple as effective and the people took up the challenge. One beer for one cup full of cigarette butts.

Of course this is not a final solutions and it’s always better to prevent instead of acting after it, but the results was quite good, maybe not too much from the environmental point of view, but for sure as an awareness and educational campaign.



#### 4.8. TAKE CARE OF WASTE MANAGEMENT AT HOME

The 80% of the Marine Litter comes from Land sources activities. Nowadays this sentence has been shared a lot and for some regions can be quite true. For sure the northern Adriatic Sea, especially on the Italian side, it’s quite affected by the rivers as source of waste flowing up to the sea. This means that the “ocean-care” should start within the cities, with a correct waste management that

can boost the recycling rate and avoid dumping in the environment. Many communication activities have started in many cities all around the world reaching a wide target of populations.



#### **4.9. OTHER BEST PRACTICES**

Many other “best practice” can be found at the link report below from the CAPonLITTER project that aims at improving policies and practices that can help in preventing marine litter that results from coastal tourism and recreational activities.

<https://projects2014-2020.interregeurope.eu/caponlitter/good-practices/>