

D4.2.1 Pilot Activities preparation

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INTRODUCTION

The main goal of the WP4 is to develop and implement pilot actions designed to reduce the effects of seasonal variation of waste generated in the islands studied in the project (Cyprus, Malta, Croatia, Sicily, Crete, Rhodes, Mykonos, Mallorca), as well as monitoring and evaluating the results achieved.

Institutional project partners prepared a plan proposal indicating the pilot activities to carry out in each island for each type of waste that needs to be reduced or not increased (marine litter, anthropogenic nutrients in marine coastal waters), on the basis of the results of the "Studying phase" and with the support of the user-friendly tool (D3.7.3 Tool encompassing Action Plans for reducing micro-plastics and marine-litter production in selected beaches taking into consideration tourism seasonality).

In the present deliverable (D4.2.1) the pilot activities prepared by the different partners are described.

The institutional project partners that prepared the pilot activities are:

- LP Department of Environment, Ministry of Agriculture, Rural Development and Environment, Cyprus
- PP2 Rhodes Municipality
- PP3 Crete Region Directorate of Environment and Spatial Planning
- PP4 Mykonos Municipality
- PP5 Primorje and Gorski Kotar County (PGZ)
- PP6 Taormina Etna Consortium
- PP8 Wasteserv Malta Ltd.
- PP13 Council of Mallorca Environment Department



LP - MINISTRY OF AGRICULTURE, RURAL DEVELOPMENT AND ENVIRONMENT, CYPRUS



The main objective of the pilot activities is to propose solutions and measures to reduce (in relation to the results recorded during the study phase of the project, WP3) marine litter and anthropogenic nutrients that enter the environment. The proposed measures are expected to improve environmental conditions. The objective to be achieved during the high tourist season on each island is determined on the basis of the results of the "Study Phase" (WP3) and the follow-up indicators selected from the Annex of the Action Plan (D3.7.3 Tool containing Action Plans to reduce micro-plastics and to produce marine litter on selected beaches, taking into account the seasonality of tourism).

The data base tool stresses the importance of the introduction an integrated and effective waste management plan in line with local regions' characteristics.

It proposes "changing visitors' habits, raising awareness and developing environmental consciousness by providing the appropriate means and infrastructure to promote separate collection, recycling and reuse practices." It further recommends placing recycling bins for at least three waste streams of glass packaging, metal packaging and plastic packaging in the study areas in spots where they are not already present.

It also recommends that ashtrays are placed in public areas such as beaches and outside restaurants, bars, public buildings.

Having all this in mind, DOE has decided to conduct pilot actions on two beaches; Vrysi B (Sunrise), Paralimni (touristic beach) and Faros Beach Pervolia (local beach). Both beaches have been awarded a Blue Flag accreditation.

The pilot actions mainly comprise placing recycling bins for waste streams of glass packaging, metal/ plastic packaging and no recyclables bins in the study areas. At the same time, an integrated campaign will take place to inform the tourists about the Blueislands project and to promote the importance of separate collection and how this could be easily achieved at the beaches. Within the campaign some complementary materials will be given along with carton ashtrays for smokers.



Vrysi B (Sunrise), Paralimni (touristic beach)

Sample Area 1 / Paralimni Municipality / Protaras Bay

Beach Length: 220m Beach Width: 30m

High Visitor Volume





In particular, at Sunrise Beach the following actions will be taken:

- 1. Placement of new clearly marked and well-positioned 3 waste collections points for recycling (PMD and carton/ paper) and non recyclable wastes.
- 2. Replacement of half of the existing non-recyclable bins with PMD ones with clearly marked signs.



- 3. Placement of a special bin for collecting cigarette ends.
- 4. Preparation of specially-made carton beach ashtrays.
- 5. Preparation of Campaign leaflet especially made with data for the specific beach to foster a proper behaviour of tourists (cigarette ends, marine litter, stop single-use plastics, toilets etc).
- 6. Team of 5 surveyors will be active in July and August performing the below tasks:
 - a. Distribution of BlueIslands material (leaflet).
 - b. Distribution of Campaign leaflet especially made with data for each beach to foster a proper behaviour of tourists (cigarette ends, marine litter, stop single-use plastics, toilets etc...).
 - c. Completion of survey on visitors' knowledge and attitudes on recycling, cigarette ends and sewage on the beach with reference to signs and location of toilets etc.
 - d. Distribution of specially-made carton beach ashtrays with encouragement for their use and disposing of butts in the special bins.
 - e. Distribution of campaign small gifts (recyclable bags to avoid use of plastic bags, reusable bamboo straws and cups).
- 7. Awareness and education programs at Municipal / Local Authorities level with the Responsible Coastal Business Network engaging coastal businesses, such as beach bars, restaurants, hotels, kiosks etc, located around beaches in protecting the coastal environment and minimizing their plastic waste, by encouraging them to introduce sustainability practices in their everyday operation.
- 8. The Teams will be visible on the beach as they will have an umbrella, table and chairs. Their location will be marked by two feather banners and they will wear distinctive polo shirts and cowboy hats with the logos of the campaign.
- 9. In Protaras the team will visit 15 establishments selected in the Waste Zone and perform the following tasks:
 - a. Distribution of BlueIslands material (leaflet).
 - b. Distribution of Campaign leaflet especially made with data for Protaras beach.
 - c. Completion of survey on staff knowledge and attitudes on recycling, cigarette ends and sewage, backwash, moppings water etc on the beach.
 - d. Distribution of specially-made carton beach ashtrays.
 - e. Distribution of campaign small gifts (recyclable bags to avoid use of plastic bags, bamboo straws and cups).
 - f. Distribution of bamboo straws and cups to replace plastic ones.
 - g. Encouragement of the establishments to participate.
- 10. A social media campaign will accompany the above actions. The success of the pilot actions also depends on the awareness campaign.



Faros, Pervolia (local beach)

Sample Area 2 / Pervolia Community / Faros Bay

Beach Length: 270m Beach Width: 50m

Medium Visitor Volume





In particular, at Faros Beach the following actions will be taken:

- 1) Placement of clearly marked and well-positioned 4 waste collection points 2 bins for recycling (PMD and carton/paper) and 1 bin for non-recyclables.
- 2) Placement of 2 bins of glass collection in the two beach bars.
- 3) Arrangement with the help of the collective system (Green Dot) of a specific waste collection point for the Community to take all the recyclables collected from the beach on specific day of the week.
- 4) Placement of a special bin on each beach for collecting cigarette ends.
- 5) A teams of 3 surveyors will be active in July and August performing the below tasks:
 - a. Distribution of BlueIslands material (leaflet).



- b. Distribution of Campaign leaflet especially made with data for each beach to foster a proper behaviour of tourists (cigarette ends, marine litter, stop single-use plastics, toilets, etc).
- c. Completion of survey on visitors' knowledge and attitudes on recycling, cigarette ends and sewage on the beach with reference to signs and location of toilets etc.
- d. Distribution of specially-made beach ashtrays with encouragement for their use and disposing of butts in the special bin.
- e. Distribution of campaign small gifts (recyclable bags to avoid use of plastic bags reusable bamboo straws and cups).
- 6) Awareness and education programs at Municipal / Local Authorities level with the Responsible Coastal Business Network engaging coastal businesses, such as beach bars, restaurants, hotels, kiosks etc, located around beaches in protecting the coastal environment and minimizing their plastic waste, by encouraging them to introduce sustainability practices in their everyday operation.
- 7) The Teams will be visible on the beach as they will have an umbrella, table and chairs. Their location will be marked by two feather banners and they will wear distinctive polo shirts and cowboy hats with the logos of the campaign.
- 8) Promote the "Adopt-A-Beach Program" at Pervolia. Noble Energy has adopted the beach.
- 9) A social media campaign will accompany the above actions. The success of the pilot actions also depends on the awareness campaign.



PP1 – RHODES MUNICIPALITY, GREECE



The main objective of the pilot activities is to propose solutions and measures to reduce (in relation to the results recorded during the study phase of the project, WP3) the waste that enters the environment. The proposed measures are expected to improve environmental conditions. The objective to be achieved during the high tourist season on each island is determined on the basis of the results of the "Study Phase" (WP3) and the follow-up indicators selected from the Annex of the Action Plan (D3.7.3 Tool containing Action Plans).

The selection of the litter management measures-action plans for the Municipality pf Rhodes was based on the indicator (Accumulation Index) which represent the accumulation of marine litter of a given item per unit of surface and per unit of time.

The selection of the Anthropogenic Nutrient measures-action plans for the Municipality pf Rhodes was based on the indicator (stable nitrogen isotope - $\Delta 15N$) of sewage-derived nitrogen in coastal waters.

The priority targets for the Municipality of Rhodes will be the raising awareness of the marine litter problem, realizing an active reduction in the flow of marine litter and tourist-anthropogenic wastes in the Sea, coordination of and collaboration between all existing and new HORECA stakeholders.

In view of these priority targets, the action plans that will be implemented in the Municipality of Rhodes contain both management methods of Anthropogenic Nutrient and Marine litter reductions measures. There will also be an emphasis on collaboration, whereby all stakeholders, whether national, or industrial, will be invited to take their own responsibilities.

Management methods of Anthropogenic Nutrients

Rhodes was selected as suitable island to evaluate the effects of tourism, as a source of anthropogenic nutrients, on coastal waters, and to develop strategies for minimizing these negative effects, within the BLUEISLANDS project.

Anthropogenic Nutrients activities were carried out by CoNISMa (Consorzio Nazionale Interuniversitario per le Scienze del Mare, Rome, Italy). The approach used was based on short-term macroalgae deployments and was conducted in three periods: June (putatively before the tourist period), August (during the tourist peak) and October (putatively at the end of the tourist period) 2018. Macroalgae thalli of the species selected, *Cystoseira compressa*, were sampled before the onset of the experiment from the rocky shores of Ladiko, mentioned hereafter as "Collection site", known to host the species throughout all the experimental periods.

The area where the pilot activity will be implemented is the beach of Faliraki which is a very high visited beach (2nd more touristic beach on the Island). Faliraki area has a potential of touristic beds equal to 20.000 most of them been on the seaside part.

Results indicate that touristic flows and local activities cause the presence of slight ¹⁵N-enriched nutrients only in the shallow coastal seawater of the Impact site, while the absence



of tourist infrastructures and leisure activities in Control sites, seems to contribute to the lack of significant isotopic variation of the macroalgae.

For the implementation of these actions, the Municipality of Rhodes will carry a raising public awareness campaign, including children, youths and tourists which should deal primarily with the problem of anthropogenic nutrients.

This action refers to the M211, M212 and M214 scenario described on the D3.7.3 Tool containing Action Plans deliverable of the Blueislands project.

Marine litter reductions measures

The areas where the pilot activities regarding the marine litter reduction measures will take place, are the beaches of Tsambika (Most crowded beach) and Afandou (Local visited beach). On both beaches, research has already been carried out from the project (litter survey and waste characteristics study) in 2017 and 2018. The geographical boundaries of the extent of the beaches for the implementation of the actions coincide with those of the litter survey.

For the implementation of these actions, the Municipality of Rhodes will carry an awareness campaign targeting food establishments regarding reduction of single-use plastic items, such as plastic straws, food containers and drinking cups and also a public awareness on consumer habits – circular economy – etc.

The role of the Municipality is valuable as it can contribute decisively in main ways such as attracting and encouraging voluntary groups, associations, actors, active citizens and members of the educational and school community of the Municipality.

This action refers to the M19 and M18 scenarios described on the D3.7.3 Tool containing Action Plans deliverable of the Blueislands project.

Schedule of activities

Pilot actions will take place on each beach from end June until the end of August.



PP2 – REGION OF CRETE, GREECE



The main objective of the pilot activities is to propose solutions and measures to reduce (in relation to the results recorded during the study phase of the project, WP3) the waste that enters the environment. The proposed measures are expected to improve environmental conditions. The objective to be achieved during the high tourist season on each island is determined on the basis of the results of the "Study Phase" (WP3) and the follow-up indicators selected from the Annex of the Action Plan (D3.7.3 Tool containing Action Plans to reduce micro-plastics and to produce marine litter on selected beaches, taking into account the seasonality of tourism).

The index chosen to represent the cleanliness of the beaches is the litter accumulation index (AI) and indicates the accumulation of marine litter of a given object per unit area and per unit of time. Following the implementation of the pilot actions, the objective to be achieved is an improved (ie lower) A1 with a value equal to or less than moderate (≤3,4) to about 70% of the examined beaches. In short, following the implementation of the pilot actions on two selected beaches where measurements have already been taken by the program, pollution in the natural environment is expected to decrease.

The areas (in the Region of Crete) where the pilot activities will take place are the beaches of the city of Rethymnon (100 meters long) and of Arina (Heraklion - Kokkini Hani, 100 meters long). On both beaches, research has already been carried out from the project (litter survey and waste characteristics study) in 2017 and 2018. The geographical boundaries of the extent of the beaches for the implementation of the actions coincide with those of the litter survey.

For the implementation of these actions, the Region will award to a contractor the provision of services.

Obligations of contractor

- (a) The contractor will have to purchase and place on the specific beaches (i) pairs of bins for recyclable and mixed waste at regular intervals covering the specified area (5 pairs of buckets/beach, with a capacity of 120 liters per bin, ie 240 liters per pair). Separation of the use of the bins will be clearly distinguished (2 different colors, information in Greek and English language and international symbols); (ii) cigarette ashtrays to cover the monitoring area per 100 square meters (about 50 ashtrays/beach). Buckets and ashtrays should be of a proper construction so that they are not transported by the air, visible to the visitor on the beach, aesthetically upgraded and practically easily discharged by the cleaner. iii) Marking in Greek and English and appropriate symbols will be placed in the existing bins of the Municipality and recycling company located in the area adjacent to the monitoring beaches. The markings will be placed firmly on or around the façade of the bins to make clear to the user the type of waste collected inside. Labeling can be self-adhesive but durable and durable and permanent.
- (b) The contractor will be responsible (i) to contact the business representatives around the monitoring area, to inform them of the purpose of the pilot activities and blueislands project in general, so that they also inform the visitors. (ii) It also undertakes to contact



- the competent authorities and bodies in the area to obtain the permission to place the equipment and the markings on the existing bins, but also their commitment to the collection of waste and cigarette butts by the new bins and ashtrays to be placed by the contractor on the beach.
- (c) The contractor will undertake at least five times a week (for August and September) on each beach, to oversee the integrity and functionality of the equipment and to encourage passers-by, or habitants to avoid pollution and to protect the beach using existing equipment. The supervising staff is required to speak at least the English language (in addition to Greek). The contractor will be trained by the Region (from the Project Team) for the normal and even implementation of the pilot actions. The contractor will keep a calendar for the presence of staff at each beach and with some key observations he / she may find in relation to the activities. The Region's project team will occasionally oversee the contractor's work.
- (d) The contractor in cooperation with the Region of Crete (project team) will conduct one litter survey for the cleaning of the beaches with the protocol proposed by the project and has already been implemented in the year 2017 by the Region of Crete, for the project. The litter survey will take place on the date set by the Contractor after consulting with the project leader partner before the end of the pilot activities to record the expected improved results. The contractor will deliver a final evaluation report in cooperation with the Region's project team.

Schedule of activities

Pilot actions will take place on each beach from the beginning of August until the end of September. The equipment will remain in the same position after the end of the Contract and will be transferred to the property of the competent authority or body in the area.

The contractor will cooperate with ARCHELON - Association for the Protection of the Sea Turtle, located in the same area of the pilot actions on the beach of Rethymnon.

Each beach will host at least one event for the tourism campaign, in collaboration with the contractor of the communication plan.

The contractor will prominently display the poster with the technical information for the specific beach provided by the coordinator of WP3. Also he will display the poster with the message for clean beaches (mind your waste) from the contractor of the tourism campaign.



PP3 – MUNICIPALITY OF MYKONOS, GREECE



Marine litter is a growing problem for all seas and oceans, and is regarded as a considerable threat to our environment. Marine litter is defined as human-created waste that has deliberately or accidentally been released into the marine environment. Marine litter is essentially waste that comes from activities at sea and on land. Activities at sea that could create marine litter include shipping, fishing and aquaculture. Litter from the land can end up in the marine environment via rivers, sewers, water purification installations or simply be blown in by the wind. An increasing source of beach waste is tourist activity, such as fireworks, festivals, sports competitions, beach bars, etc. and the tourists themselves who leave large quantities of litter on the beach the majority of which is made up of plastic waste.

The negative consequences of marine litter are numerous. Marine fauna may become caught up in the waste and choke or could mistake the waste for food and eat it. Marine fauna may also transfer micro plastics into the human body via the food chain. Marine litter also corresponds to an important economic cost for a range of industries. It can cause damage to port infrastructure, for example, power stations and fishing equipment. Floating plastic also contains a variety of organisms and can introduce invasive species via ocean currents, to areas where they have not previously been found. This upsets existing ecosystems. The subsequent costs for cleaning and decontamination are extremely high. Tourism is also facing up to various negative effects. Marine litter can reduce the appeal of beaches and the sea for leisure, sport and relaxation. Shipping, tourism, fishing, sand extraction, energy production, however, puts huge pressure on the area.

Different activities may encroach on their respective areas and also impact on the marine environment. In order to harmonize all activities effectively, an indicative action Plan will become useful in order to promote effective waste water treatment and management. The quantity of beach waste that is cleaned from beaches in the summer varies widely from municipality to municipality.

The priority targets for this action plan are as follows:

- Raising awareness of the marine litter problem among sea enthusiasts and users
- Realizing an active reduction in the flow of marine litter in the Sea
- Coordination of and collaboration between all existing and new initiatives
- Increasing the number of clean-up activities both on land and at the seaside.

In view of these priority targets, the action plan contains both measures for preventing marine litter at the source as well as measures for cleaning the sea. There will also be an emphasis on collaboration, whereby all stakeholders, whether national, or industrial, will be invited to take their own responsibilities.

Measures and actions will be divided into the following themes:

- Coordination: foundation of a national working group on marine litter
- Tackling the source
- Cleaning
- Communication & raising awareness



- Monitoring: measuring and knowing
- Collaboration

Both local authorities such as the province of Mykonos and the coastal municipalities must take measures to tackle this problem. Both expertise and a suitable policy are currently being developed, from local to international levels. There must be discussions between the various bodies which are currently taking action.

Raise awareness by conducting public campaign

Promote public information campaigns for citizens, tourists and businesses to reduce waste generation and marine litters to reuse and to facilitate their participation in waste collection systems and to avoid littering

The role of the Municipality is valuable as it can contribute decisively in main ways such as attracting and encouraging **voluntary groups**, associations, actors, active citizens, tourists and members of the educational and school community of the Municipality. Key actions to communicate, organize and interact with the Organizing Team of Volunteers, associations, actors, citizens and the school community must be conducted such us:

- 1) There will be a Statement of participation on the website of the Municipality and the participating institutions in order to attract as many actors as possible for carrying out effectively the implementation of the action plan.
- 2) Definition of a person who will take action on the part of the Municipality to communicate with the organizing team of volunteers.
- 3) Interaction of the Municipality page with our facebook page and other social media.
- 4) Declaration of action points in the Charter of Action
- 5) Last but not least, completing a report form to be sent to everyone after the action

Analytical Steps should be followed- Coordination of the action in simple steps:

- 1. Recording Needs
- 2. Calling the actors at a Meeting
- 3. Creating a Coordination Team
- 4. Preparing an Action
- 5. Communicating & Disseminating Action
- 6. Implementing the Day of Action
- 7. Recognizing Volunteer Participation & Communication effect

1. Record needs

The Municipality and the interested organizations record and map the needs for cleaning, landscaping, aesthetic upgrading and removal of pollution hazards. For registration, it may request the collaboration of voluntary, environmental, cultural, hunting, cycling, naval, social and adornment associations. A source of needs could also be the citizen-sourcing systems that some municipalities probably have.

To this point the above working group focuses on tackling marine litter, which is defined as human-created waste that has deliberately or accidentally been released into the marine environment. This working group will coordinate the efforts and activities regarding marine litter, encouraging to organize clean-up campaigns on the beach

2. Invite stakeholders –actors to a meeting



The Municipality calls all the representatives of local authorities, primary and secondary education community, voluntary groups, environmental organizations, cultural and adornment associations, trade-tourist and professional associations and other organizations active in the region

3. Creation of Action Coordination Group-Sites and Shorelines selected

A Stakeholder Coordination Group is set up by stakeholder representatives. It is proposed to represent the citizens constituting the Coordination Group to be: Municipality - Educational Community - Voluntary Organizations - Associations - Citizens' Groups. It is decided jointly (on a map) what sites will be cleansed / embellished with the presence of the Municipality, and what will be the routes that will follow the volunteers. Also they demonstrate the points that need machinery and technical support from the services of the Municipality.

The sites at this point are already known, due to the previous studying of the type of marine litter that had been implemented.

The sites and additionally the interface between land and sea are an important compartment for monitoring because they are: (i) where marine litter is present in high quantities; (ii) closer to land- based sources and (iii) most accessible. As a result, shorelines and sandy sites typically are the first environmental compartment considered for quantifying marine litter.

The sites where the actions will be conducted are:

- a) Fokos
- b) Merchia
- c) Platys Gialos

4. Preparation period

Through a press release and a call to the citizens through the press office of the Municipality, from the site the social media and the local press the local actors will form a joint plan and set the date for each action that will be decided to carry out.

5. Communication and dissemination of action

Collaboration and activation of all the bodies and organizations of the Municipality registry. It is important to have a personal telephone contact with them. Letter-call of bodies / groups / clubs Letter-call to schools Calling bodies and citizens through a press release Posting the press release on the site of the Municipality Promotion through facebook and even create Announcement in the newsletter of the Municipality Press release for media (newspapers, magazines, radio, television and electronic media).

6. Implementing the Day of Action

The Action Coordination Team arrives in time to prepare for the implementation of the action with the relevant proposed signaling which will have been shared by the Municipality with the group / route / region coordinators. Distribution of material to the relevant groups and volunteers with an overall briefing on the purpose and plan of action

7. Entry Recognition & Outcome Communication

At the end of each action α meeting will be held for the evaluation of the action by the participants and the organizers. It is important to keep all the positive elements and improve the negatives for the next action.



It is also important to upload photos and videos to the website and social media of the Municipality and all participating institutions, to publish a Press Release with thankful messages, pictures of the action and reference to the result. After each action, the Standard Report Form will be completed.

1. Providing information about the impact on marine life from the filters of cigarettes and various wastes. The use of ashtrays along coasts and in public areas.

(M17-Establish ashtrays in public areas such as beaches and outside restaurants, bars, public buildings (inland and along the coasts, ferries).

Despite the fact that cigarette smoking is on a steep decline, cigarette butts remain the top littered item found on beaches around the world. An action plan with the title "Hold on to Your Butt "program has one ambitious goals: to end cigarette litter so we never have to see those butts again. Through volunteer power, the program works to bring awareness to the environmental impact of the cigarette flick.

Cigarette butts can collect and leach toxins, including heavy metals, which can be potentially harmful to children and wildlife. Over time, the cigarette filter, made of thousands of tiny strands of a plastic-like substance called cellulose acetate, breaks up into micro plastics that will never be retrieved.

Our vision is to design innovative solutions to prevent cigarette litter. We aim to reduce cigarette litter raising awareness that cigarette butts are toxic and behave like plastic, and changing smokers' litter-related behavior.

With volunteers and representative of the actors involved in the project we will survey smokers and handing out pocket ashtrays. Smokers are overwhelmingly grateful to receive the pocket ashtray and most have never seen one before.

The results of our survey will inform behavior-changing strategies. Then, we'll take those strategies and put them into action by working with the members of the Blueislands project to develop culturally sensitive messages that we'll spread throughout and encourage behavior change.

At the same time, we are working with the Municipality and the involved parties of the island to provide buttcans: infrastructure critical to abating cigarette litter. We need to establish ash trays and bins with the support of municipality of Mykonos and the stakeholders

Everyone needs trash cans to dispose of their regular trash. Smokers need butt cans to do the same and avoid throwing them on the sand or around the streets. We will install buttcans in cigarette "hotspots" where we observe high concentrations of cigarette butts and monitoring their use through the summer period. We are also conducting cigarette litter audits in coastal areas to establish a baseline for the cigarette litter situation and to quantify the impacts of our efforts. Through infrastructure and behavior change, we aim to keep cigarette butts out of our waterways and safeguard our Marine Protected Areas. Volunteers will install signs at the main entrances of the beaches to foster a proper behavior of tourists as concerning the marine litter cigarette butts awareness to stop use plastics

2. Posters will be installed on kiosks which will indicate the results of the project and a list of proper behavior.

(M212 Raising public awareness, including for children and youths and consumer campaigns, on the occurrence, and prevention of marine litter (e.g. to use ashtrays in public areas inland and along the coast), including micro particles, accompanied by image



campaigns addressing threats/impact to marine life from various harmful litter items, such as cigarette filters.)

At the central port of the island we will install a kiosk where it will be staffed by volunteers, municipal representatives and environmental educators to inform visitors about programs and actions taken on the prevention of marine litter. They will provide them with a leaflet referring to the program and the actions of the municipality about training seminars and other common events. This kiosk will be dressed with posters and banner which will promote activities related to the management of marine litter in a planned and regular manner.

3. Labels will be put on bins and public toilets. (M214 Clear labeling of the bins)

Public spaces are designed to be frequented and enjoyed by the masses. Without recycling and waste receptacles in place, people are bound to get frustrated with the lack of a location to put their refuse, and automatically public spaces may soon become riddled with litter.

Public recycling and waste containers prevent from happening. Properties such as beaches, parks, streets, bus stops, or any other public space that need a mass waste and recycling collection program.

Having collection containers with distinguished labels on, in the public spaces, cuts down on litter, showing the members of your community a commitment to the environment while keeping the public spaces beautiful.

4. Cleaning beach actions will take place- "Be part of a Cleaning up Event".

(M43 Awareness and education at Municipal / Local Authorities level), (M28 Guidelines on good cleaning practices and collection systems (to prevent litter from land entering the aquatic environment) in beaches, including cleaning beaches actions by local communities, riverbanks, surface sea areas, ports, marinas and inland waterways, in cooperation with relevant stakeholders.)

A dirty environment especially in tourist destinations, not only affects the local people but also overall society as a whole. A dirty environment, definitely affects the country's reputation negatively, hurts country economy and harms fitness and wellness of people in society. The aim of this project is to clean up the most overcrowded beaches in the island. For this reason the initiative is to join forces with different group of people with the motive "as many hands make light work"

The "clean up" action is initiated and organized by the students themselves and supervised by volunteer teachers and local authority with the involvement of the tourists as well. The two main goals is to raise awareness and to share information about the origin of plastic waste, especially single-use plastic. This action also focus on the means to prevent waste from ending up on the Mykonos beaches, where polystyrene often replaces the sand and the floor is littered with wastes brought by the sea.

Many litter projects generate frequency data, typical for clean-up activities where volunteers, citizen scientists, visitor and tourists clean all marine litter from the beach and then categorize the different litter items. Clean-up projects may also generate bulk estimates of litter amounts at a particular site. In these projects, professional scientists typically accompany the volunteer participants to ensure data quality and comparability. Stakeholders and volunteers will first visit the schools in the island. It is proposed to meet the environmental groups of the municipal schools and the environmental education officers



of primary and secondary education.

60 minute training seminars for the protection of the marine ecosystem, solutions for environmental issues and information on the behavior of marine mammals and fish will be held in schools.

Educating people about the problem and encouraging them to join in the effort is the best way to stop more plastics from ending up in our ocean. By addressing the way we contribute to the problem and remembering to reduce, reuse, and recycle, we can all make a difference in reducing the impacts of plastic debris and marine litter.

In addition the working group will give all the necessary information about the participation of students in actions with the help of volunteers and participants of the action plan.

They will encourage children to celebrate by taking the opportunity to join in the fight against marine litter and prevent trash from entering the sea.

Clean up efforts are an important part of preventing and removing marine litter and there are many clean up events happening on and around the island.

Students, teachers, parents and volunteer groups will take part in the clean-up event of the coast where special trainers will be attended, while the bottom cleaning will be done only by self-diving and free-diving instructors.

Coastal and underwater seaborne actions on the beaches of the islands which will be carried out with absolute certainty.

1st Phase

Volunteers and students will first come across with the **tourists** across the selected seaside in order to provide them with the necessary information about the cleaning Up Event. They will inform them about the event by handing them a brochure with the program and the actions that will take place.

This leaflet will have the title: "Do you want to Heal The Bay?" Register Now!! All you need is to show up put your sunscreen and meet us at a beach cleanup experience."

Tourists will have the opportunity to learn about the details of the event via the social media and the site of the actors involved, such as the site of the Municipality, the Environmental Education Office, the Volunteers Group in order to fill in the application form and register to the implementation of the event. The above will raise awareness and encourage tourists to get involved in campaigns having to do with the protection of the environment.

2nd Phase

During the activity, participants, students, parents volunteers tourists and local people will be distributed into groups. The length of clean-up process will be approximately 2 hours and the assigned area will be 2 kilometers long.

A recorded list of the materials will be needed in order the above actions will be carried out such as:

Specifically

- loves and bags (other color for recyclable materials)
- machinery, trucks, refuse trucks, bins
- banners, posters, promotional material
- banner at the meeting point for commemorative photos
- map of the area where the action will take place
- signage signs for each area-route

Provision for the transfer of participants to the action point (eg by public buses, coaches or schools from central points of the Municipality) will be held. Specific meeting points can also



be defined for the transfer of volunteers from one region to another. When promoting the action, it is important to specify the exact point and time of the meeting and to print them on an electronic map along with the coordinates to make it easier for those who use it.

Planning of support from the relevant departments and offices of the Municipality, such as: Cleaning Service for the removal of collected waste, separation of recyclable materials and the use of machinery and trucks for removing traps and bulky items will be held.

Also design by the cleaning service for proper waste management during collection and removal. Attempting to provide two-colour eco-bags to the volunteers, green and black, to separate into recyclable and non-recyclable sources at the time of collection as far as possible will be done.

Posters will be placed in schools, municipal buildings, municipal buses Information banners at central points at the marina and the port.

There will be proposals for recognition of student participation such as prize draw - gifts that can be offered by the commercial community. Volunteers and actors respond particularly when there is personal communication, motivation and motivation (after the action, guided tour of an archaeological site, participation certificate etc.).

The initiative of this action is to join more people of all ages in such crucial actions for the community, to give back to society and bring about awareness on clean environment. Eventually our aim is to reinforce the voice of children to reach everybody local and visitors. After participants finish cleaning, they will meet up at the meeting point, to distribute wet wipes and drinks, and talk about the result and effect of the activity.

By collecting data, we help identify the sources of pollution and work towards developing permanent solutions. The information volunteers and citizen scientists collect on the data is being used to revise national maritime disposal policies and is used to advance environmental legislation.

At the end of the action of cleaning up the seaside from marine litter the working group will Coordinate and provide support to litter assessments assisting with data compilation into a new database, seeking feedback, and creating a baseline report.

5. Refill systems and recycling will be encouraged. (M24 Improve Litter collection systems)

Everyone should understand the importance of recycling. Everyone should carefully sort paper, plastics, and aluminum. Whenever possible, you reuse plastic bags and repurpose old items around the home so they serve a new function. Additionally buy products made from recycled materials. Though you try hard to recycle on your own, many in your community don't seem to care about protecting the environment. And many more don't even bother to throw their trash in the dumpster, let alone take their recyclable items to the nearest center. So what can you do to encourage your community to take action?

a) Add Recycling Bins to Public Areas

Many people prefer to choose the path of least resistance. If something seems inconvenient, they may feel they don't have the time or energy to follow through. To make recycling an easy option, the stakeholders should purchase a few recycling bins and place them strategically next to trash cans in parks, parking lots. When people throw away their trash, they only need a few seconds to decide whether they should recycle.

b) Write a Column in Your Local Newspaper or Newsletter



Submit an article to the local newspaper and the site of the Municipality and describe the benefits of recycling. If you have a particular knack for writing, you can start your own daily, weekly, or monthly column that gives readers tips and tricks for recycling their waste properly. Share your website through social media to get the word out.

Action plan	Sites	Actors	Timing	Comments
The use of ashtrays along coasts and in public areas/survey (M17-Establish ashtrays in public areas such as beaches and outside restaurants, bars, public buildings (inland and along the coasts, ferries).	Merchia, Fokos , Pl. Gialos	Representatives of Municipality or the Marine environment Training staff, Citizen scientists, volunteers, tourists	During the mid of October	Costs involved such as the purchase of ashtrays
Posters will be installed on kiosks (M212Raising public awareness, including for children and youths and consumer campaigns, on the occurrence, and prevention of marine litter (e.g. to use ashtrays in public areas inland and along the coast), including micro particles, accompanied by image campaigns addressing threats/impact to marine life from various harmful litter items, such as cigarette filters.)	Port Marina Yachts	Representatives of Municipality or the Marine environment Training staff, Citizen scientists, volunteers, tourists	During the mid of October and all year long	Costs involved such as the installation of the kiosks and the printing brochures
Be part of a Cleaning up Event" (M43 Awareness and education at Municipal/Local Authorities level), (M28 Guidelines on good cleaning practices and collection systems (to prevent litter from land entering the aquatic environment) in beaches, including cleaning beaches actions by local communities, riverbanks, surface sea areas, ports, marinas and inland waterways, in cooperation with relevant stakeholders.)	Platys Gialos	Representatives of Municipality or the Marine environment Training staff, Citizen scientists, volunteers, students, educators, tourists	During the mid of October	
To put labels on the bins and public toilets (M214 Clear labeling of the bins)	Fokos, Platys Gialos	Representatives of Municipality or the Marine environment volunteers, tourists	During the mid of October and all year long	Costs involved refer to the printing of labels
Encourage refill systems and recycling (M24 Improve Litter collection systems)	Merchia, Fokos , Pl. Gialos	Representatives of Municipality or the Marine environment Citizen scientists, citizens	During the mid of October and all year long	



PP5 - PRIMORJE AND GORSKI KOTAR COUNTY, CROATIA



According to BLUEISLANDS Action Plans for Marine Litter as well as BLUEISLANDS Action Plans for Municipal Waste, namely measure "M310 Awareness and education programs at Municipal / Local Authorities level", the Primorje-Gorski Kotar will adapt and prepare the awareness and education materials in order to raise awareness and educate the local population, tourists and visitor on target island of Rab (Croatia) regarding the mitigation and prevention of plastic and other litter disposal on beaches and thus in waterways.

The materials produced in previously implemented BLUEISLANDS work packages activities, namely WP2 Communication and WP3 Waste Characteristics Study will be used as inspiration for preparation of awareness and education materials which will be consisted of printed leaflets.

Materials will be distributed thought the target islands with the assistance of local authorities (city and municipality administration), port authority, local tourist board, local beaches, local hotels and establishments as well as tourist apartments owners who rent their properties. The presence of this materials in tourist apartments is deemed very important considering the volume of tourists choosing this type of accommodation regarding the total tourist numbers.

The printed material will be produced in Croatian and English languages in following quantities: 2.000 leaflets in English, 2.000 in Croatian, (4.000 total) on ecological recycled paper.

Leaflet will use graphic solutions provided within BLUEISLANDS project as well as have clear message regarding the wide audience regarding the prevention of inadequate waste production and disposal.

Leaflets will be displayed in public areas and on areas adjacent to island beaches as well as hotel and tourist board premises where possible.

Additionally, leaflets will contain the information regarding which are the most abundant items left on beaches emphasizing extracted from BLUEISLANDS project studies (i.e. WP3 Waste Characteristics Study) in order to emphasize the necessity to raise the awareness of all beach visitors that everyday items as wells plastic objects and other disposable objects do not benefit the environment protection as well as human wellbeing.

The distribution of materials will be conducted in August considering that this particular month represents the peak of tourist season with highest number of persons residing on the island.

The leaflets will be personally distributed on beaches and it will be made available hotel receptions and tourist board office as well in private accommodation apartments which are rented to tourists. In this way the message from distributed materials will reach the general public and stakeholders, local population as well as individual tourists.



By choosing the method of personally distributing the materials we hope with implementing this small scale actions to contribute to more effective waste management on a tourist island as well as the protection of island resources, completely in line with the BLUE ISLANDS project, while raising the awareness of stakeholder and individuals living on and /or visiting the island.

By this pilot awareness and education activity during high season tourist wave which puts a strain on islands resources and waste management facilities, we hope to contribute to reduction of the amount of waste inadequately disposed into the island environment.



PP6 – TAORMINA ETNA CONSORTIUM, ITALY



The aim of the deliverable "4.2.1 Preliminary or fine-tuning study for launching pilot activities" is to plan and organize pilot actions, such as solutions to reduce the impact of tourism on the target beaches (following the results recorded during the WP3, the study phase of the project). These actions will be implemented during the next phase, deliverable 4.4.2 "Pilot Activities implementation".

According to the results of the WP3 surveys and the samplings, the main issues on our beaches are marine litter (cigarettes butts above all) and to a lessere extent the increase in anthropogenic nutrients due to the seasonality of tourism. So, the goal of our pilot activities will focus on the reduction of these elements on two selected beaches: Letojanni beach and Naxos Beach, where we already accomplished the surveys (marine litter survey, water surface sampling, waste characteristics study and anthropogenic nutrient detection) in 2017 and 2018.

Description

Knowing our territorial context and based on the results of the analyses and surveys, the Distretto decided to implement 2 main actions. In particular, it was decided to:

A. Place on the Letojanni beach some more trash bins for recyclable and mixed waste, with different colors and different information\symbols in Italian and English.

This action will involve the Municipality of Letojanni and the ATOME4, the local public waste management service, in order to obtain the permission to place the equipment.

According to the deliverable 3.7 Building scenarios Action A is related to the following references:

M214 - Clear labelling on the bins

M215 - Introduce more glass waste bins

M216 - Introduce big bins for the tourists to deposit re-usable / recyclable items that they no longer need (plastic inflatable beach mattresses, flip-flops, shoes, beach toys, etc.)

- B. Project and realize an Awareness campaign, with different tools
- I. Signs (dimensions and layout to be decided) with the Blueislands project info and logo, inviting visitors, with a friendly language, to respect nature, sea and beaches, having an appropriate behavior (don't leave cigarette butts, stop single-use plastics, use the bins, discourage water pollution etc.);

These signs will be placed in Naxos Beach (Lido di Naxos), at the entrance of the tourist port of Naxos and in Letojanni beach.

II. Posters and\or flyers (to be designed and printed) with the project results and some slogans against waste pollution of the beaches and marine litter, the use of single-use plastic etc.

The poster should be displayed in the tourist offices of Letojanni and Giardini Naxos, in some restaurants and or bars close to the beach, in the seaside resorts, diving centers, etc.)

The Flyers will be distributed in the tourist offices of Letojanni and Giardini Naxos (together with the other materials, as the maps, already distributed there).



The campaign will be promoted also on different websites and social medias of the Distretto and of the two involved municipalities.

According to the deliverable 3.7 Building scenarios Action B is related to the following references:

M212 - Raising public awareness, including for children and youths and consumer campaigns, on the occurrence, and prevention of marine litter (e.g. to use ashtrays in public areas inland and along the coast), including micro particles, accompanied by image campaigns addressing threats/impact to marine life from various harmful litter items, such as cigarette filters.

M213 - Promote the "Adopt-A-Beach Program

The actors involved in the pilot actions will be public and private:

- Municipality of Giardini Naxos
- Municipality of Letojanni
- Tourist offices and info-points
- Diving centres
- Restaurants and bars close to the beaches
- Seaside resorts on the selected beaches
- Other stakeholder or service providers (local associations, boat rentals, etc.)

Schedule of activities

Pilot actions will take place on each beach since the half of June until the end of August. In the meanwhile, in August, new samples will be accomplished in order to measure the impact of the pilot actions on the behaviour of locals and tourists, comparing the data with the information related to the previous years.



PP8 - WASTESERV, MALTA



Wasteserv will be conducting its pilot project on two beaches: Gnejna Bay and Golden Bay. Golden Bay is very popular with tourists due to its accessibility, amenities and Blue Flag status, whilst Gnejna Bay is usually less crowded and much more popular with locals.

The pilot project mainly comprises of an awareness campaign. In order to reach both the locals and tourists, the campaign will be presented via various media. Additionally, Wasteserv will have its representatives on site to directly communicate with beach visitors. The campaign is expected to initiate in August 2019.



DESCRIPTION OF SITES CHOSEN FOR THE IMPLEMENTATION OF THE PILOT PROJECT

Aerial map of the Maltese Islands

Golden Bay is the second largest sandy beach in Malta [1] and is set within a cliff face in the North West of the island. On one side there is a 5 star hotel, the Radisson Blu Resort & Spa, whilst on the other, there is a watch tower dating back to the Knights of St John. It is one of the most popular beaches on the Maltese Islands and has been designated as a Beach of Quality according to international Blue Flag criteria. The bay can be easily accessed, hence making it suitable for the less mobile. Furthermore, beach management is operated by the Malta Tourism Authority between the 15th of June and 15th of September.

Golden Bay is a Natura 2000 site and is part of 'Il-Majjistral' Nature History Park which was declared a national park by the Government of Malta by Legal Notice 251 of 2007 in September 2007.





Regional Map of Golden Bay

[1] Malta Tourism Authority, "GOLDEN BAY," 2019. [Online]. Available: https://www.visitmalta.com/en/info/goldenbay. [Accessed 20 May 2019]



Beach Map of Golden Bay





On-Site Photo of Golden Bay

Ġnejna Bay is located in the North West of Malta, within the limits of the rural village of Mġarr. Ġnejna beach is the smaller and less crowded beach from the neighbouring beaches, Golden Bay and Għajn Tuffieħa. Mostly noticeable for its clay slopes and limestone cliffs, the area is one of Malta's few remaining perennial freshwater springs that run through Wied il-Ġnejna. Adjacent to the main sandy beach, there is also a stretch of flat rock.

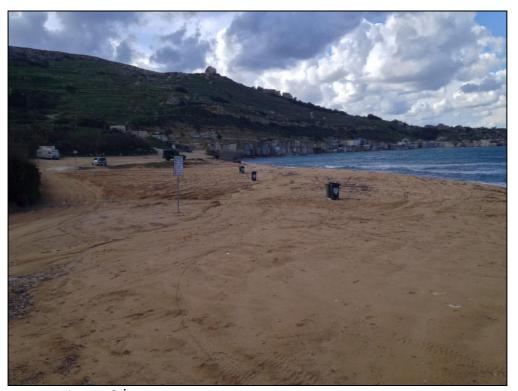


Regional Map of Ġnejna Bay





Beach Map of Gnejna Bay



On-Site photo of Ġnejna Bay



AWARENESS CAMPAIGN

The awareness campaign will focus on the importance of proper waste management on beaches and the effects of marine litter. Wasteserv will be starting the campaign in August 2019. During this awareness campaign, Wasteserv will be sending out information and messages through various media, in order to reach as many people as possible, both locals and tourists.

Posters

A1 sized posters will be affixed at the entrance of both beaches throughout August and September 2019. The posters will directly target beach visitors to raise awareness on how their actions can have an impact on marine life and to promote proper waste disposal. Also, the posters may include simple waste management tips for beach users. The idea of these posters is to have an instant impact on beach visitors for them to be aware of the importance that one manages their waste responsibly.

Online Portals

Online portals will be used to reach online users, especially youths and news followers. Wasteserv put adverts on two main online portals:

- www.tvm.com.mt {the official website for the public broadcaster of Malta}
- <u>www.timesofmalta.com</u> {the official website of a daily newspaper in Malta}

Web banners will be uploaded as advertisement on the aforementioned websites with 20% occupancy on the homepage for one week in August and September 2019. Furthermore, Wasteserv will be utilizing its official Facebook page (www.facebook.com/wasteserv/) to share information and raise awareness with its followers and the social media community.



Wasteserv's Facebook Page

Radio Adverts

During the summer, people tend to go out more and listen to the radio while commuting. Therefore, Wasteserv will be utilizing this medium to reach people commuting to various destinations; beach, work, home, etc. 25 second radio adverts will be aired on two popular radio stations, Bay Radio and Vibe FM, for one week in August and September 2019 with 6 spots daily (3 in the morning and 3 drive time).

Magazine



In order to directly reach incoming tourists, Wasteserv will also opt for an advertisement on the magazine Il-Bizzilla which is Air Malta's in-flight monthly magazine. An informative advert will be printed on a full page in September 2019.



The 'il-Bizzilla' Magazine

On-site promotion

Wasteserv representatives will be on site to directly reach beach visitors. They will be providing information on the Bluelslands project, raise awareness with regards to proper waste management, share simple tips on how to manage your waste (especially on beaches) and to distribute merchandise material.

MERCHANDISE

Two merchandise items will be distributed while Wasteserv representative are on-site promoting the awareness campaign. The aim of the provision of such merchandise is to encourage beach visitors to properly dispose of their waste and reduce the volume of waste generated.

Beach Ash-trays



The provision of a number of plastic ashtrays in order to tackle the problem of cigarettes butts which is one of the most frequent waste streams present on beaches in the Mediterranean.





Example of beach ashtray together with the artwork that will be printed on the lid.

Water Bottles

The provision of a number of reusable aluminium water bottles in order to tackle the issue of single-use plastics.





Example of aluminium bottle together with the artwork that will be printed on the bottles.

COLLABORATION WITH LOCAL AUTHORITIES AND NGOS

Wasteserv is seeking collaboration with various stakeholders in order to increase the effectiveness of the pilot project. These mainly include:

- The Ministry for the Environment, Sustainable Development and Climate Change (MESDC)
- Nature Trust Malta (an environmental NGO in Malta dealing with natural environment of the Maltese Islands)
- Malta Tourism Authority (MTA)

CONCLUSION

The pilot activities which Wasteserv Malta will be conducting between August and September 2019, will satisfy scenarios M18 and M212 of the tool of D3.7.3: Tool encompassing Ac-



tion Plans for reducing micro-plastics and marine-litter production in selected beaches taking into consideration tourism seasonality. Scenario M18 focuses on public awareness and education (increase of budget for marine litter education) on consumer habits, circular economy and related topics while scenario M212 focuses on raising public awareness, including children and youths and consumer campaigns, on the occurrence and prevention of marine litter and also addressing the threats and impacts to marine life.

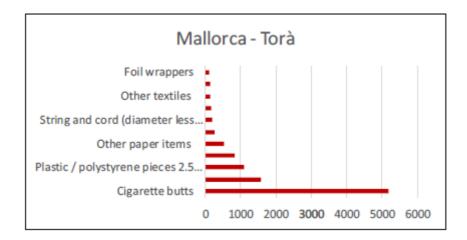
Wasteserv will continuously work to involve more parties in the pilot activities to increase the effectiveness of the activities, promote the Bluelslands Project and promote sustainable waste management.



PP13 – COUNCIL OF MALLORCA, SPAIN



The results of the preliminary samples collected in the three selected beaches within WP3 Study phase, revealed that the main marine litter found are cigarette butts (see the graph below).



The pilot action to be implement by Consell de Mallorca will be focused in that type of waste.

According to the deliverable 3.7 *Building scenarios* this action is included in the following references:

M212 Raising public awareness, including for children and youths and consumer campaigns, on the occurrence, and prevention of marine litter (e.g. to use ashtrays in public areas inland and along the coast), including micro particles, accompanied by image campaigns addressing threats/impact to marine life from various harmful litter items, such as cigarette filters

- signs at the main entrances of the beaches to foster a proper behaviour of tourists (cigarette butts, marine litter, stop single-use plastics, ...) with the Blueislands project info;
- posters with results of the project and list of proper behaviours;

M17 Ash trays and bins establishment with the support of local Municipality and stakeholders

Description

Wooden ashtray lecterns (see picture below) will be installed along the following selected beaches:

- Tourist beach: Es Torà (Palmanova)
- Beach frequently used by locals: Sa Canova (Artà)

The lecterns include 27 reusable cans to be used as ashtrays on the beach. The users will take a can at their arriving and will empty the can when leaving for the next use. The materials used in building these lecterns are 100% recycled and made by an NGO which works with disabled people and at risk of social exclusion.

This action will serve to monitor the impact on the behaviour of locals and tourists related to cigarettes butts waste in beaches. The impact will be measured by the collection of new samples after the implementation of the action which will be subsequent analysed by



partner UAB supported by a report drafted by Consell de Mallorca.

The actors involved in the pilot action will be the municipalities where beaches are located:

- Municipality of Calvià
- Municipality of Artà

They will support the action by buying the lecterns and installing them in the beaches. Consell de Mallorca will collaborate with the local Authorities by designing and printing several materials to promote the use of the ashtrays and raising awareness, as well as disseminate the project. These supports will include:

- cans will be customized with stickers promoting the project and a message to raise awareness on marine litter;
- posters to promote the action;
- flyers to be distributed among beach users;
- wooden outdoor sign in the beach.

The lecterns will remain installed in the beaches all summer.

The action will be implement during June 2019. Afterwards, new samples will be collected in order to measure the impact.

