

D4.2.2 Pilot Activities implementation

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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.

In D4.2.1, 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 (D4.2.2) the pilot activities implemented by the different partners are described. Each project partner was responsible for the coordination of pilot activities implementation in its own island, following the plan agreed.

The institutional project partners that implemented 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

PILOT ACTIVITIES

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 (marine litter and anthropogenic nutrients). 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 of 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 of 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 material will be given along with carton ashtrays for smokers.

A. 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 applied:

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.



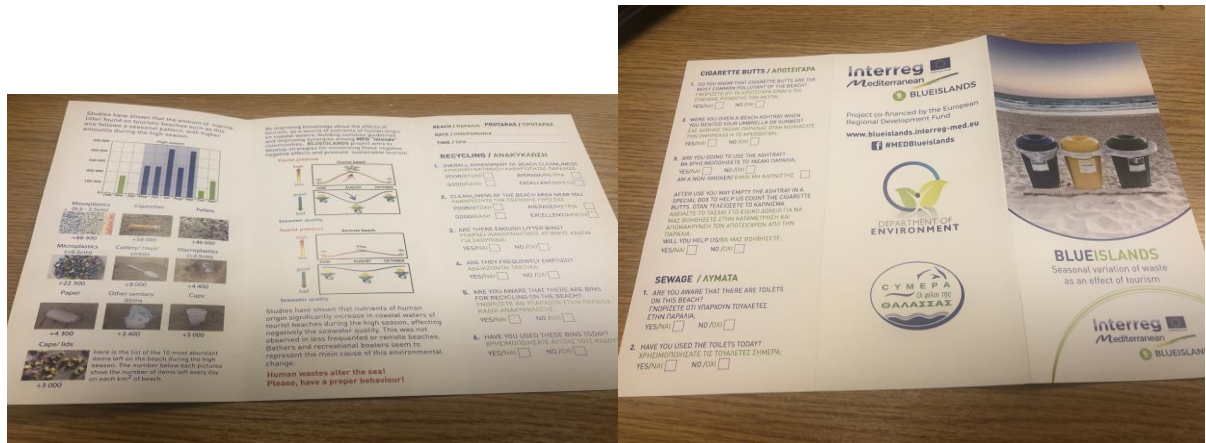
3. Placement of a special bin for collecting cigarette ends.



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 Team was visible on the beach as they had an umbrella, table and chairs. Their location was marked by two feather banners and they wore distinctive polo shirts and cowboy hats with the logos of the campaign.

9. In Protaras the team also visited 15 establishments selected in the Waste Zones 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.

10. A social media campaign accompanied the above actions. The success of the pilot actions also depended on the awareness campaign.

B. Faros, Pervolia (local beach)

Sample Area 2 / Pervolia Community /Faros Bay

Beach Length: 270m Beach Width: 50m

Medium Visitor Volume

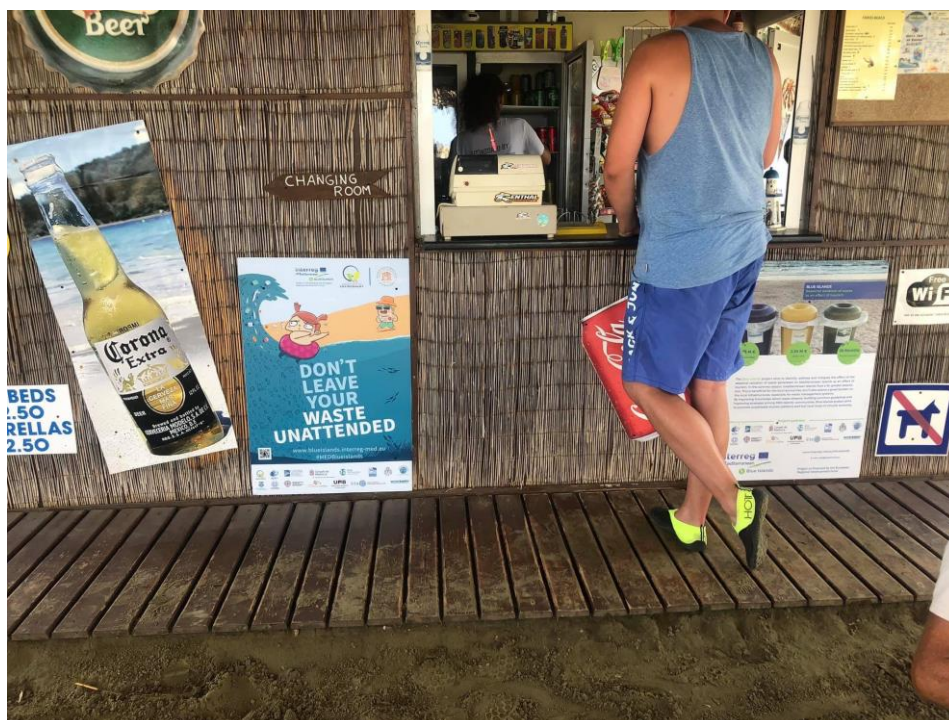


In particular, at Faros Beach the following actions took place:

- 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 was 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).



7) The Teams were visible on the beach as they had an umbrella, table and chairs. Their location was marked by two feather banners and they were wearing 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 Faros beach. The Department of Environment informed Noble Energy Volunteers about the results of the project, gave them informative material and gifts (reusable bags, bamboo cups and straws and bookmarks) to promote the refuse of single-use plastics.





Noble Energy with the cooperation of Cymepa and local authority Pervolia has proceeded with the placing on the beach of new bins, changing rooms, benches and a library as part as their adoption.





A cleaned up day was organised at Faros beach on 15/11/19 by Noble Energy's Energized Volunteers with CYMEPA, Pervolia Community and the Department of the Environment.



9) A social media campaign accompanied all above actions. The success of the pilot actions also depended on the awareness campaign.

PP1 – RHODES MUNICIPALITY, GREECE

PILOT ACTIVITIES

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

The main objective of the pilot activities implemented was 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 of 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 of Rhodes was based on the indicator (stable nitrogen isotope - $\Delta^{15}\text{N}$) of sewage-derived nitrogen in coastal waters.

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

Management methods of Anthropogenic Nutrients

Monitoring of anthropogenic nutrients was carried out by CoNISMa (Consorzio Nazionale Interuniversitario per le Scienze del Mare, Rome, Italy) in 2018. 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), October (putatively at the end of the tourist period) 2018 and August 2019. 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. Results indicate that touristic flows and local activities cause the presence of slight ^{15}N -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 has carried a raising public awareness campaign, including children, youths and tourists which should deal primarily with the problem of anthropogenic nutrients through a mobile education bus. For a 3-week period (26/07/10-16/08/2019) the Municipality of Rhodes carried out a huge "BLUEISLANDS" raising public awareness campaign in the Rhodes Island including voluntary groups, associations, active citizens, members of the educational and school community, Hotels and tourists. The Campaign took place in the City Hall and 3 beaches (Tsampika, Afandou, Faliraki) of the Island through a mobile education Bus. Faliraki area has a potential of touristic beds equal to 20.000, most of them been on the seaside part.



Faliraki Beach

The priority targets for the Municipality of Rhodes was to raise awareness of the marine litter problem, realizing an active reduction in the flow of marine litter and tourist-anthropogenic waste in the sea, coordination of and collaboration between HORECA stakeholders.



Educational visit of a school



Visit of a Hotel



Raising public awareness on tourists



Tackling seasonal variation of waste as an effect of tourism

Marine litter reductions measures

The areas where the pilot activities regarding the marine litter reduction measures took place, were 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 carried out an awareness campaign targeting tourists and 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.



Awareness campaign informing regarding reduction of single-use plastic items

Conclusion

Awareness campaign and the results of Blueislands project, the measures that have been adopted and the necessity for everyone to be part of the solution for a sustainable tourism. Through this awareness campaign more than 2500 locals, children, schools and tourists visited the Education Bus, informed about the Blueislands project, recycled, learned the benefits of recycling and circular economy and informed about the anthropogenic nutrient problem and measures that must be taken. All rewards from the recycled packages were donated to the charitable organization 'The Smile of the Child'.

You can find relevant articles here:

<https://www.rhodes.gr/ekstratia-enimerosis-ke-evesthitopiisis-gia-to-programma-blueislands/>

Also posts on BLUEISLANDS facebook page and other pages

<https://www.facebook.com/MEDBlueislands/posts/2419694748124143>

<https://www.facebook.com/MEDBlueislands/posts/2437222736371344>

<https://www.facebook.com/Mitsisfalirakibeach/posts/1200458576809130>

PP2 – REGION OF CRETE, GREECE

PILOT ACTIVITIES

Design and Manufacture of Bins and Signs

For the design and manufacture of the bins to be placed on the two beaches, special emphasis has been given to the final result being highly compatible with the aesthetics of the beach, the materials being environmentally friendly, the whole construction being user-friendly and encouraging in its use. For this reason, the outer structure surrounding the bins was made of ecological timber, specially processed to withstand the beach weather, the ashtrays were made of clay and at the top of the structure endemic plants resistant to the climatic conditions of both beaches were placed. The only metallic element in the construction was the special bin for discarding cigarette butts at the front of the construction in order to eliminate the possibility of damage it with the cigarette butts.

The clay ashtrays were placed to the left and to the right of the structure so that every visitor entering the beaches could pick up their individual ashtray, use it and return it to the structure ready for the next visitor to use them.

A special sign was also placed at the top of the structure urging bathers to empty their water bottles to the plants.

Inside the construction there are two 120-liter containers each, one for recyclables and one for mixed garbage. The design has been designed to accommodate bins of various sizes, such as 1100 liters.

Signs to be placed on the new bin constructions, as well as on the bins were also designed. Here, also, special attention was paid to the design of the signs so that they could pass a clear message to every Greek or foreigner bather – visitor of the beach.

On August 14, 2019, their construction was completed and their placement at Arina Beach and Rethymnon Beach took place. 5 pairs of bins were delivered and placed on both beaches, as well as, 50 clay ashtrays.

The same day the special stickers were placed on the existing municipal bins, on both beaches.

Information of Bathers at the Two Beaches

From the next day and after, the information of the bathers begun, by specialized staff, urging bathers and beach visitors to avoid contamination and protect the beach using the existing equipment.

The staff which undertook the information campaigns was bilingual, speaking fluently Greek and English and had been properly trained by the Region of Crete, prior to the launch of the actions. At both Rethymnon Beach and Arina Beach, the staff came in contact with the competent authorities, the local agencies and the local businesses, taking their commitment to actively participate in the beach awareness project and at the waste reduction activities. On August 26 and August 27, two major information campaigns were organized for the bathers of Rethymno and Arina Beach, respectively.

Beach Cleaning Campaigns

On September 19 and September 20, two clean-up campaigns were held on the beaches of Rethymno and Arina (contractor & Region of Crete).

During these two campaigns, an amount of waste was collected from the two beaches and separated according to the specific protocol. The quantitative and qualitative data of the waste collected are presented in the two reports – Litter Surveys. In conclusion, we can say that the amount of waste collected in these two surveys was lower, with a clear decrease compared to the amount of waste collected in the same surveys on the same beaches in September 2017, according to Litter Surveys of 2017 and 2019.



The Wooden Construction with two Bins and the Clay Ashtray



The Wooden Construction with two Bins and the Signs for the Bins



Photos from the Day the Constructions Placed at Rethymno and Arina Beach



Photo of the Existing Bins With the New Signs



Informing The Bathers and Visitors at the Two Beaches



Informing the Bathers and Visitors of the Two Beaches With the Participation of the Region of Crete During the Information Campains 26 & 27 of August 2019



During the Cleaning Actions of the Two Beaches at 19 & 20 of September 2019

PP3 – MUNICIPALITY OF MYKONOS, GREECE

PILOT ACTIVITIES

The Blueislands aims to find the necessary solutions and recommendations to address problems presented by the rapid increase of waste on the islands mainly in summer, where the seasonal tourism generates huge amounts of waste. The challenge is to correlate the tourism with waste volumes and assign qualitative and quantitative characteristics as to efficiently change the current situation.

New tools raised from the project promote a sustainable solution for which the authorities are seeking while dealing with tourism effects in waste volumes. Even though no serious complaints have been made so far, the reduction of the relevant personnel combined with the lack of funds, may increase the problem in the near future.

This problem is even bigger for Mykonos, since more than 1.5 million tourists arrive each year, with an estimation of more of 15.000 tons of waste gathered each year. Mykonos is straggled during the peak season as the population is multiplied by 25 times.

Mykonos was selected as suitable island to evaluate the effects of tourism, as a source of marine litter pollution and to develop strategies for minimizing these negative effects, within the BLUEISLANDS project.

The main objective of the pilot activities which were implemented was 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 Municipality of Mykonos will benefit from:

- a. Assess and quantify local impact and distinguishing factors of the problem.
- b. Share results and local experiences across participants, focusing on practices to deal with the problem.
- c. Develop technical solutions which actually re-address the consequences of seasonal increase of waste generation along with proper technical and scientific monitoring processes in order to document and verify results.
- d. Allow increased waste generation to fuel market forces so that local circular economies emerge because of the availability of raw materials.
- e. Ensure the sustainability of solutions through their actual economic and environmental viability.

In view of the above, the Municipality of Mykonos paid great attention to the organization of an effective campaign from August 2019, targeting tourists and residents, 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 public information campaigns targeted 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. In addition, refill systems and recycling were encouraged. 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.

In particular, in the context of pilot actions, brochures and posters were distributed to public places such as restaurants, cafés, kiosks, pastry shops, grocery stores, beach bars, public services buildings etc. Brochures and posters, as an effective form of advertising and promoting the actions of the “BLUEISLANDS” project, providing important information and raising public awareness on environmental awareness and waste management issues.



Posters and brochures campaign

What is more, as part of the pilot actions, elementary school children received an eco-friendly fabric bag that included a notebook, a pencil, a hat, tissue papers and a brochure with the project logo. At the same time, they were briefed on the objectives and actions of the BLUEISLANDS project and the proposed solutions to the vision of sustainable management and environmental protection. Furthermore, training seminars for the protection of the marine ecosystem, solutions for environmental issues and information on the behavior of marine mammals and fish were held. Subsequently, a theatrical performance on environmental protection followed.

It is worth noting that such events are essential for raising children's awareness and taking action to protect the environment. The action may have been aimed primarily at children, but it was also an opportunity for older people to focus more on environmental issues. 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.



School children campaign

Moreover, cleaning beach actions took place, in order to raise awareness and to share information about the origin of plastic waste, especially single-use plastic. Clean up efforts are an important part of preventing and removing marine litter, for that reason many clean up events took place around the island.

Last but not least, during the awareness campaign paper ashtrays were distributed to tourists, residents and public services, while at the same time large ashtrays were placed outside of the main public offices of the Municipality with the logo of the BLUEISLANDS project.



Paper ashtrays campaign

Awareness campaigns are an effective way of attracting publicity and a powerful "tool" for building interest, through which the Municipality of Mykonos could address the general public. Through this awareness campaign more than 2.000 locals, children, schools and tourists were informed about the Blueislands project and the anthropogenic nutrients and waste problem and measures that must be taken.

You can find relevant articles here:

<https://cyclades24.gr/2020/01/diorganosi-drason-perivallontikis-evesthitopiisis-sti-mykono-sto-plesio-tou-blueislands/>

https://www.mykonosdaily.gr/new/10314_blue-islands-oi-mathites-ths-mykonou-agkaliazoun-to-perivallon

PP5 - PRIMORJE AND GORSKI KOTAR COUNTY, CROATIA

PILOT ACTIVITIES

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”, PP5 Primorje-Gorski Kotar County implemented pilot activities envisaged in D4.2.1 Pilot activities preparation.

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

Materials were distributed throughout the target island of Rab (Croatia) with the assistance of local authorities (city and municipality administration), port authority, local tourist board, local hotels and beach establishments, and most important, with cooperation of tourist apartments owners who rent their properties to domestic and foreign tourists.

The importance of the presence of this material in tourist apartments is deemed very important considering the volume of tourists choosing this type of accommodation regarding the total tourist numbers. Leaflets were also displayed in public areas and on areas adjacent to island beaches as well as hotel and tourist board premises where possible.

The printed materials were produced in Croatian and English languages in total quantity of 4.000, namely:

- 2.000 leaflets in English and
- 2.000 in Croatian language.

It is important to stress that leaflets were printed on ecological recycled paper.

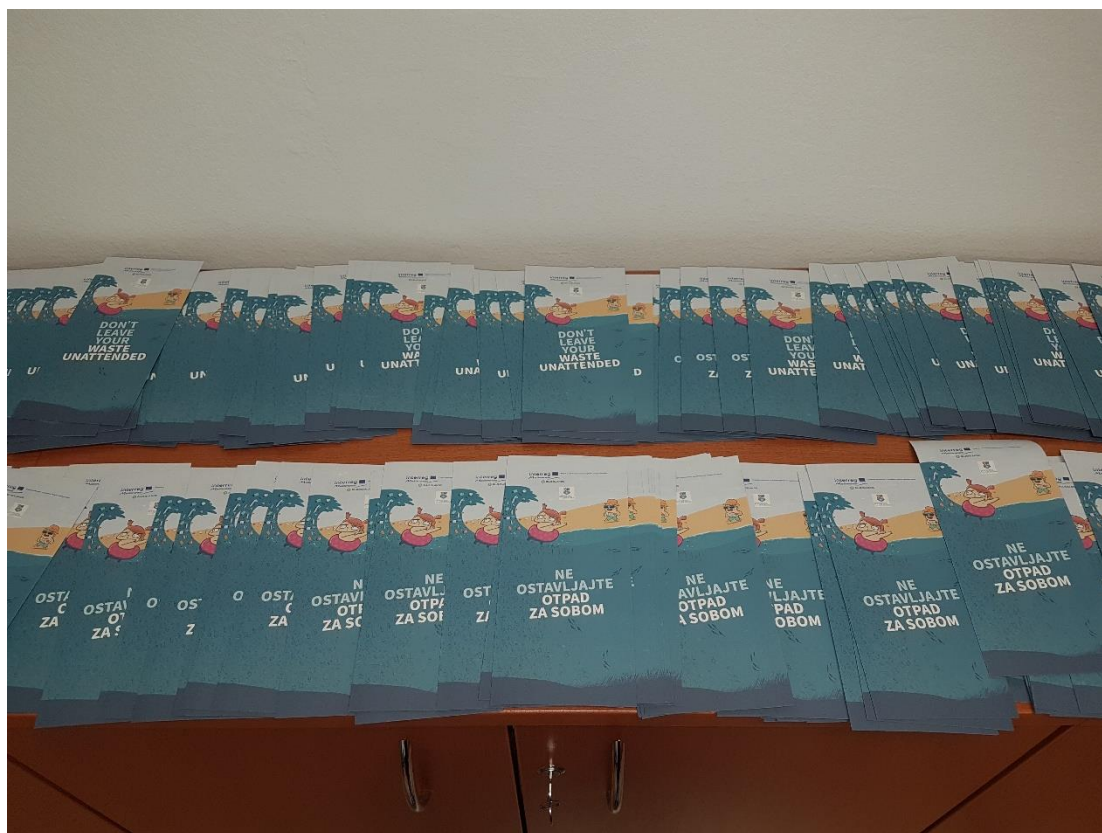
The distribution of materials started in August 2019, considering that this particular month represents the peak of tourist season with highest number of persons residing on the island, but continued also into September 2019.

Leaflets used graphic solutions provided within BLUEISLANDS project and have clear message regarding the wider audience regarding the prevention of inadequate waste production and disposal.

Additionally, leaflets contain the information regarding which are the most abundant items left on beaches emphasizing extracts 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.

By placing this pilot awareness and education activity during high season tourist wave, which puts a strain on islands resources and waste management facilities, Primorje-Gorski Kotar County intended to contribute to reduction of the amount of waste inadequately disposed into the island environment.

Photographs of leaflets (public premises and individual tourist apartments and accommodations)





PP6 – TAORMINA ETNA CONSORTIUM, ITALY

PILOT ACTIVITIES

The deliverable 4.4.2 “Pilot Activities implementation” could be considered a direct consequence of the WP3 surveys and specific results in Sicily. Its aim is to try to reduce or limit marine litter (cigarettes butts above all) and water pollution (presence of anthropogenic nutrients) due to tourism on our two selected beaches: Letojanni beach and Naxos beach.

In particular, we planned to realize an Awareness campaign with different tools such as signs\panels, posters and flyers. In addition, we planned to place on the Letojanni beach some more trash bins for recyclable and mixed waste.

All activities were previously decided and planned in their details in D4.2.1 Preliminary or fine-tuning study for launching pilot activities, with the support of CoNISMa and the UAB.

We first informed local authorities (Municipalities of Giardini Naxos and Letojanni and the ATOME4, the local public waste management service) and some stakeholders (tourist offices and info-points, diving centers, restaurants and bars close to the beaches, seaside resorts) explaining our program and asking to support our activities.

In the meanwhile, we projected, designed and printed panels (2 different templates, one for each beach, with some project results and the slogan “Stop Indifference. Save the Beach: Sort your Waste” and the Blueislands info and logos), posters and flyers for our campaign with the Blueislands project info and logos. Here following the templates:

STOP INDIFFERENCE. SAVE THE BEACH: SORT YOUR WASTE!
BASTA INDIFFERENZA. SALVA LA SPIAGGIA: DIFFERENZIA!

Blueislands Seasonal variation of waste as an effect of tourism

The **BLUEISLANDS** project aims to identify, address and mitigate the effect of the seasonal variation of waste generated on Mediterranean islands as an effect of tourism.

Il progetto **BLUEISLANDS** mira ad individuare, affrontare e ridurre gli effetti della variazione stagionale dei rifiuti prodotti nelle isole del Mediterraneo come conseguenza del turismo.

For this specific beach, more than 54.8% of the items collected are made of plastic:

Per quanto riguarda questa specifica spiaggia, oltre il 54,8% dei rifiuti raccolti sono di plastica:

Here is the list of the 10 most abundant items left on the beach during the high season. The number up each pictures show the number of items left every day on each km2 of beach.

A seguire l'elenco dei 10 rifiuti più presenti sulla spiaggia durante l'alta stagione. Il numero sopra ciascuna foto indica la quantità giornaliera di "rifiuti" per km2 di spiaggia.

Industrial scrap + 1700	Cigarettes + 1800	Microplastics + 300
Drink bottles + 300	Microplastics + 2700	Caps/lids + 300
Microplastics + 200	Misc + 200	Plastic pieces + 200
Other metal pieces + 100	Bottles + 100	

PLACE ALL RUBBISH IN BINS PROVIDED

Project partners

Interreg Mediterranean BLUEISLANDS

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Project co-financed by the European Regional Development Fund
 Progetto cofinanziato dal Fondo europeo di sviluppo regionale

Letojanni Beach A3 forex Panel (2 copies)

**STOP INDIFFERENCE.
SAVE THE BEACH: SORT YOUR WASTE!**

**BASTA INDIFFERENZA.
SALVA LA SPIAGGIA: DIFFERENZIA!**

Blueislands Seasonal variation of waste as an effect of tourism

The **BLUEISLANDS** project aims to identify, address and mitigate the effect of the seasonal variation of waste generated on Mediterranean islands as an effect of tourism.

Il progetto **BLUEISLANDS** mira ad individuare, affrontare e ridurre gli effetti della variazione stagionale dei rifiuti prodotti nelle isole del Mediterraneo come conseguenza del turismo.

For this specific beach, more than 86.8% of the items collected are made of plastic:

Per quanto riguarda questa specifica spiaggia, oltre l'86,8% dei rifiuti raccolti sono di plastica:

PLACE ALL RUBBISH IN BINS PROVIDED

Project partners

interreg Mediterranean E-mail: info@blueislands.eu <https://blueislands.interreg-med.eu>

Project co-financed by the European Regional Development Fund
Progetto cofinanziato dal Fondo europeo di sviluppo regionale

Here is the list of the 10 most abundant items left on the beach during the high season. The number up each pictures show the number of items left every day on each km2 of beach.

A seguire l'elenco dei 10 rifiuti più presenti sulla spiaggia durante l'alta stagione. Il numero sopra ciascuna foto indica la quantità giornaliera di "rifiuti" per km2 di spiaggia.

Cigarettes + 400	Macroplastic + 1300	Microplastic + 1100
Paper + 500	Balloons, ribbons + 500	String + 400
Other plastic + 400	Other sanitary + 200	Crisp/sweet packets + 200
		Food containers + 200

Plastic
Rubber
Glass/bottle
Paper/cardboard
Plastic/foam
Metal
Glass/Ceramics
Unidentified and/or chemical

Naxos Beach A3 forex Panel (2 copies)

A5 Flyer (500 copies)

PLACE ALL RUBBISH IN BINS PROVIDED

interreg Mediterranean **BLUEISLANDS**

Project co-financed by the European Regional Development Fund

**STOP INDIFFERENCE.
SAVE THE BEACH:
SORT YOUR WASTE!**

**BASTA INDIFFERENZA.
SALVA LA SPIAGGIA:
DIFFERENZIA!**

Project partners

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Project co-financed by the European Regional Development Fund
Progetto cofinanziato dal Fondo europeo di sviluppo regionale



A3 Poster (32 copies)

The Municipality of Letojanni and the ATOME4 placed new trash bins for recyclable and mixed waste with different colors but with no information\symbols in Italian and English. So, we decided to improve their job adding on the equipment some stickers with bilingual indications and the logos of Blueislands project. Here following the 3 sticker templates (12 copies):



On the 24th of June we started with the activities: the 4 panels\signs were located at the entrance of the beach of Letojanni (2 signs), at the entrance of the Naxos Beach (in the Lido di Naxos resort) and at the entrance of the touristy port of Naxos; posters were attached at the Tourist offices and info-points of Giardini Naxos and Letojanni, in 4 restaurants and bars nearby the beaches, in the seaside resorts of Naxos Beach, etc.; flyers were distributed in the Tourist offices and info-points of Giardini Naxos and Letojanni, in diving centers, local associations and on the beaches. The stickers were applied to the new bins located on the Letojanni Beach.

In July we monitored the state-of-play of the activities: if signs\posters\stickers were still visible or they were damaged by the sun or other elements. The campaign was also promoted through our social medias and with the support of the two involved municipalities and the other private stakeholders and service providers with clear messages on the importance to reduce marine litter and discourage water pollution by having appropriate behaviors.

On the 27th August the campaign officially ended (even panels, poster etc. remained there trying to take advantage of their presence as long as possible).

PP8 – WASTESERV, MALTA

PILOT ACTIVITIES

Wasteserv conducted its pilot project between September and October 2019. Activities related to this pilot project were carried out on two prominent beaches in Malta: Ġnejna Bay and Golden Bay. Golden Bay is very popular with tourists due to its accessibility, amenities and Blue Flag status. On the other hand, Ġnejna Bay is usually less crowded and more popular with locals.

The pilot project was mainly focused on an awareness campaign. In order to reach both locals and tourists, the campaign was presented via various media. Additionally, Wasteserv representatives were on the beaches to directly engage with beach visitors and give out free promotional material.

DESCRIPTION OF SITES CHOSEN FOR THE IMPLEMENTATION OF THE PILOT PROJECT



Aerial map of the Maltese Islands

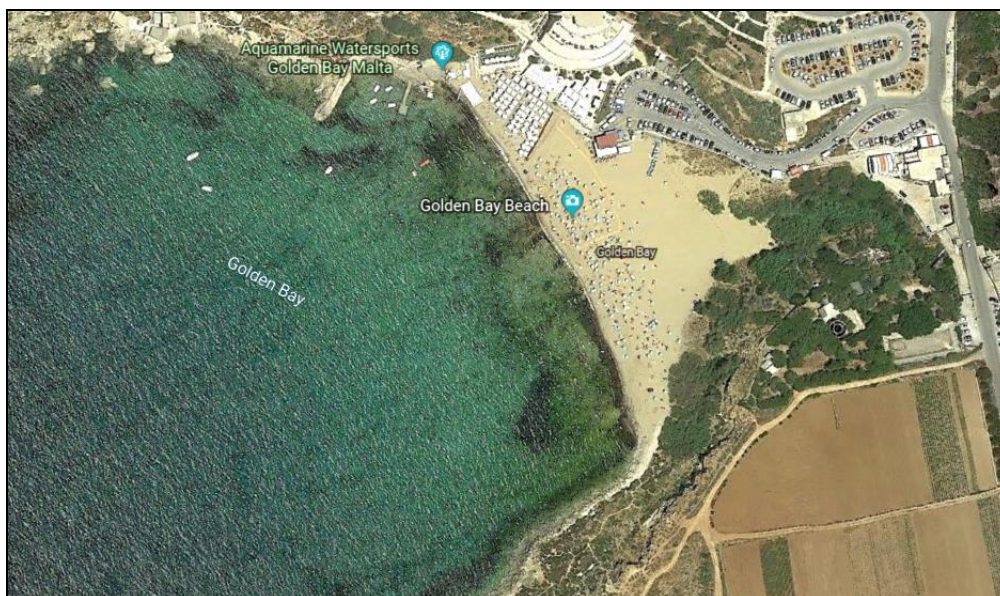
Golden Bay is the second largest sandy beach in Malta [1] and is set within a cliff face in the North West of the island. On one side there is a 5 star hotel, the Radisson Blu Resort & Spa, whilst on the other, there is a watch tower dating back to the Knights of St John. It is one of the most popular 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

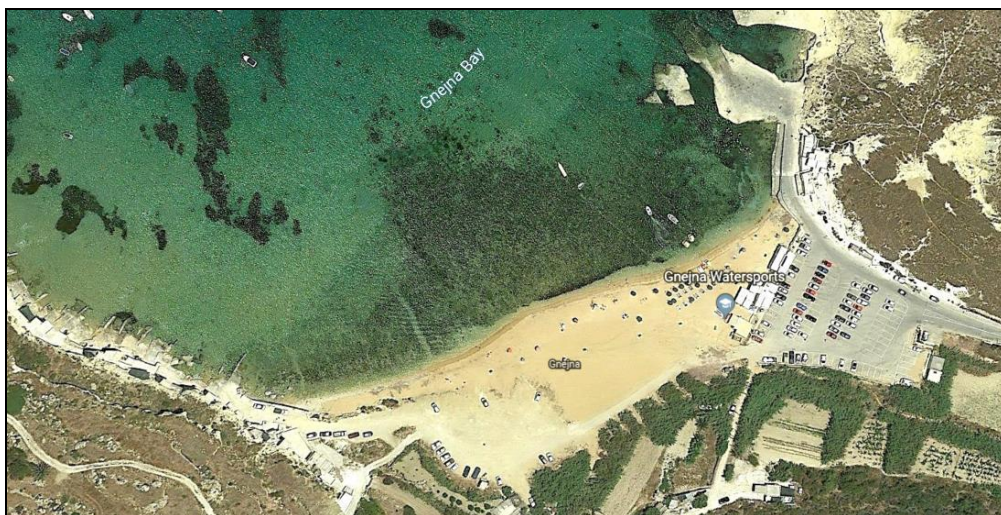


On-Site Photo of Golden Bay

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 Ġhajn 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 Gnejna Bay

AWARENESS CAMPAIGN

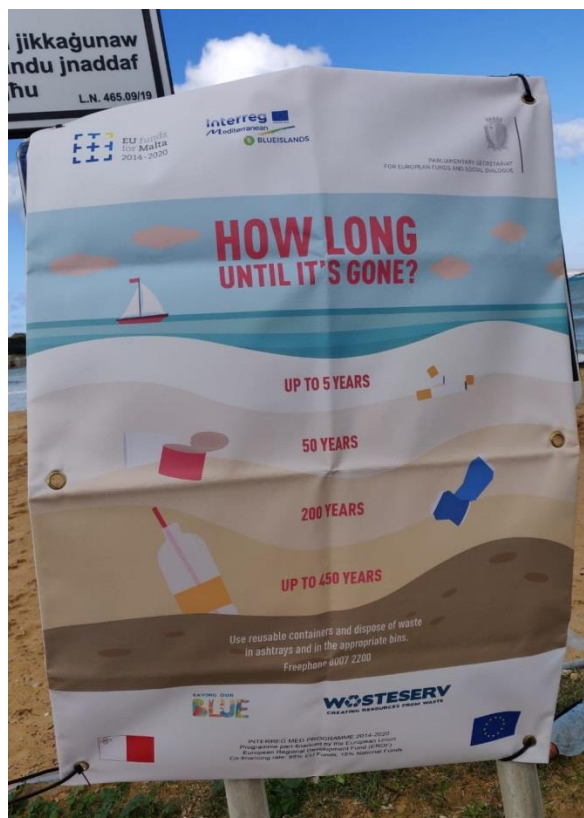
The awareness campaign targeted the importance of proper waste management on beaches and the effects of marine litter. Wasteserv's campaign started in September 2019, during which, Wasteserv advertised its campaign and messages through various media, in order to reach as many people as possible, both locals and tourists.

Posters

A1 sized posters were affixed at the entrance of both beaches throughout the campaign. The posters were used for educational purposes so that beach visitors are aware of how their habitual ways of disposing of waste could sometimes be harmful, especially on marine life (when on beaches). Another purpose for these posters was to promote proper waste disposal. Also, the posters include simple waste management tips for beach users. The idea behind these posters was to have an instant impact on beach visitors so that they are instantly aware of the importance that one manages their waste responsibly.



Artwork of affixed posters at entrances to the beaches



Poster at Gnejna Bay



Poster at Golden Bay

Online Portals

Online portals were 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}
- www.timesofmalta.com {the official website of a daily newspaper in Malta}



Wasteserv's web banner on online portals

Web banners were uploaded as advertisement on the aforementioned websites with 20% occupancy on the homepage. Furthermore, Wasteserv made use of 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

Both locals and tourists (through car rentals) make extensive use of their personal cars to commute in the Maltese Islands. More time in the car means more time listening to the radio. Therefore, Wasteserv used this medium to reach people commuting to various destinations, beach, work, home, etc. The circa 25 second radio adverts were aired on two popular radio stations: *Bay Radio* and *Vibe FM*.

Magazine

In order to directly reach incoming tourists, Wasteserv also chose to advertise on the magazine '*il-Bizzilla*' which is Air Malta's in-flight monthly magazine. An informative advert appeared on a full page in September 2019.



The '*il-Bizzilla*' Magazine September 2019 cover



Full-page advert in the 'Il- Bizzilla' magazine

On-site promotion

Wasteserv representatives were despatched on site to directly reach beach visitors. They communicated directly with beach visitors and shared with them relevant information on the BlueIslands project. The promoter's job was to 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 were distributed while Wasteserv representatives were on the beaches promoting the awareness campaign. The aim of the provision of such merchandise was to encourage beach visitors to properly dispose of their waste and reduce the volume of waste generated. Some of the most persistent waste streams on Maltese beaches, namely cigarette butts and plastic bottles, were targeted.

Beach Ash-trays

Beach users and visitors, mainly smokers, were handed plastic (beach) ash-trays in order to tackle the problem of cigarettes butts in the sand and eventually in the sea. This has proven

to be one of the most frequent waste streams present on beaches in the Mediterranean. A total of 2000 were purchased by Wasteserv and 1900 were distributed to beach visitors. The rest were kept for BluesIslands related events such as the next Steering Committee to be held in the coming months.



Beach ash-tray in Ġnejna Bay

Reusable Bottles

Along with the beach ash-trays, promoters also provided beach users with reusable aluminium water bottles. These were provided in order to tackle the issue of single-use plastics. One thousand (1000) bottles were purchased and distributed. A limited number of bottles were kept by Wasteserv to be distributed in Blue Island related events.



A sample of the reusable bottles distributed on beaches

COLLABORATION WITH LOCAL AUTHORITIES AND NGOS

Wasteserv also collaborated with various stakeholders in order to increase the effectiveness of the pilot project. These mainly included:

- The Ministry for the Environment, Sustainable Development and Climate Change (MESDC) through their campaign: Saving Our Blue. This campaign, similarly to the Blue Islands campaign, focuses on reducing single-use plastics and eliminating marine litter.
- 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 conducted between September and October 2019 should satisfy scenarios M18 and M212 of the tool of *D3.7.3: Tool encompassing Action 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. Meanwhile, scenario M212 is focused 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.

PP13 – COUNCIL OF MALLORCA, SPAIN

PILOT ACTIVITIES

The pilot actions consisted in the installation of ashtrays made with recycled materials in tourist and remote beaches together with the implementation of an awareness campaign.

According to the results on the marine litter surveys which showed that the main problem in the tourist beach was the littering of cigarette butts, the Environment Department contacted the Municipality and they were very engaged to implement this action. In May 2019, the installation of ashtrays on the beaches was published on the news.

Calvià colocará latas en las playas para recoger las colillas

El uno de mayo, los arenales del municipio ya tendrán todos los servicios en marcha, según el Consistorio

Moure | Calvià | 10.04.2019 | 19:10

Tres de las principales **playas** del municipio de **Calvià** estrenarán este verano un **sistema para evitar que las colillas acaben en la arena**. Para ello, se instalará un **atril con latas de bebida** para que las puedan usar los bañistas durante su estancia en el arenal para **depositar este resto del cigarrillo**.

Estas latas se colocarán en los arenales de **Santa Ponça**, es Carregador (**Palmanova**) y Torà (**Peguera**).

Los recipientes que se pondrán a disposición de los usuarios llevarán incorporada una **etiqueta** con las **instrucciones** del proyecto, que recibe el nombre de **'Programa colillas'**. Un plan en que el Consistorio quiere involucrar también a los **colegios del municipio**.



Una mujer participa en una recogida de colillas en el litoral. g. bosch

- El 'plogging' llega a Mallorca: Correr y recoger basura
- La concesionaria de las playas paga 10.000 ceniceros para los bañistas



Consell de Mallorca planned to launch an awareness campaign together with the installation of the ashtrays and to produce certain complementary material like stickers for the cans, leaflets and others.





The problem was that since local elections were celebrated in May, the Municipality under new political decision makers, resolved to postpone the “Cigarette butts program” campaign until next summer.

This is the reason why the Environment Department of Consell de Mallorca had to adapt the pilot action to this unexpected situation and only execute the awareness campaign and offered all materials produced to the Municipality to be used next year together with the installation of the ashtrays.

PILOT ACTIVITY MATERIALS

- Consell de Mallorca printed 200 posters designed specifically for this beach by UAB which showed the results of the marine litter surveys in which it is appreciated that the item which is in the first position of the list is the cigarette butt.
- 15.000 leaflets were produced including the image of the project and an awareness message to be distributed among HORECA sector, tourist offices, hotels and tourists



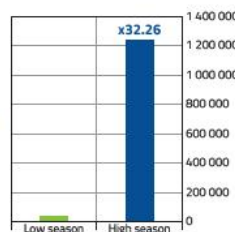
The **BLUEISLANDS** project aims to identify, address and mitigate the effect of the seasonal variation of waste generated on Mediterranean islands as an effect of tourism. In the summer season, mediterranean islands host a far greater population. This is beneficial for the local economies, but it also places a great burden on the local infrastructures, especially for waste management systems. By improving knowledge about waste streams, building common guidelines and improving synergies among MED islands' communities, **BLUEISLANDS** project aims to promote sustainable tourism patterns and fuel local loops of circular economy.

Studies have shown that the amount of marine litter found on touristic beaches such as this one follows a seasonal pattern, with higher amounts during the high season:

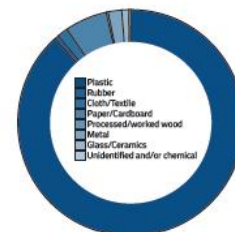


Number of items/day/km²

For this specific beach this represents an increase of x32.26 times compared to the low season:



For this specific beach, more than 88% of the items collected are made of plastic:



Here is the list of the 10 most abundant items left on the beach during the high season. The number below each pictures show the number of items left every day on each km² of beach.



Please help us to keep our beaches clean!
Thank you!

Project partners

Interreg Mediterranean

BLUEISLANDS

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IMPLEMENTATION

The awareness campaign took place in Tora beach which is located in Calvià Municipality. This beach is mostly frequented by tourist and it was included in the marine litter surveys study. During the second half of September, leaflets were delivered to bathers and tourists walking in the surroundings. A roll-up of the project was displayed in the promenade where many tourists stopped to see what it was about.

The bathers were told about the aim of BLUEISLANDS project and the problem of butts littering in the beach. Different reactions were identified but most of them positive.

Some of the tourists are used to brought their own ashtrays to the beach and others demanded for more campaigns since they complained about the quantity of butts that are found in the beach every day and harder measures have to be applied. Cleaning the beach daily is not enough to deal with the problem due to the high affluence of tourists.

Posters and leaflets were delivered to HORECA establishments in the area. Some of them were happy with the measure and displayed the poster in their premises. They seem very committed but emphasized that is very difficult to raise awareness on tourists as during holidays they feel more relaxed regarding these issues. They were willing to contribute delivering some leaflets.

In conclusion, the pilot action as an awareness campaign has been successfully implemented. Tourist show empathy concerning climate issues and preservation of the environment and they were willing to collaborate.

