

# BL.EU Climate - Climate Innovation in Southern Waters

# GAPS AND SYNERGIES REPORT Deliverable 2

Work Package 2 - Gaps and Synergies identification (surveying)











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# 1. Summary

This document contains gather all information about gaps and synergies reporting. The purpose of this document is to list specific methodologies, data collection and data analysis in order to get more detailed knowledge on the plastic problem in every location. This report is compiling what is already being done in terms of mitigation and known gaps in Croatia, Greece and Portugal. They are presented as three different case studies.

This report consists of fulfillment of Project Output 2 - Gaps and Synergies.

# 2. Introduction

Three case studies represent the BL.EU Climate project, namely in Croatia, Greece and Portugal.

#### Croatia

The report on Gaps and synergies identification for the Croatian case study sites is **based on research done** on environmentally responsible tourist demand and supply.

Terra Hub has been implementing a yearlong support program for influencers and leaders of environmental change on the local area and on the Croatian islands (primarily Zlarin and Cres) through advocacy, campaigns and actions with a goal of reducing plastic waste on the coast and in the Adriatic Sea.

In the first, the quantitative part of the research online surveys and questionnaires were used to gather contextual and localized information that can be combined with some broader sociological concepts. Second part of the research was dealing with qualitative aspects with separate visits to three different locations that are the first changemakers/early movers in terms of abandoning single-use plastic - the island of Zlarin, hotel Adriatic in the city of Rovinj and a zero waste AirBNB/booking rented facility in the city of Zagreb. The idea of this mixed methods research design was to gather broader information on travellers and their habits during the vacation and to see how localities and businesses rationalize and explain their decisions to involve plastic free or zero waste policies in their model.

Additional desk research was conducted prior to the field work and by using secondary sources such as the available data of the Tourist Board and the local and national government as well as internal documentation and assessment/strategy used by the first-generation change-makers.

What the leaders of change on the ground were facing was nominal agreement with change but extremely rigid set of values and practices towards environmental protection as a secondary or tertiary concern following primary concern with economic growth through tourism. Very concrete data on the specifics of tourism demand related to environmental quality of the tourist offer, as well as documenting the paths and the needs of the changemakers in the tourist service industry is the only thing we believe can be detrimental to creating a shift in values and/or priorities.

The data received are to be used for advocacy campaign among the local tourist service providers as well as the tourist board and agencies, local government, media and the general community, providing data, information and recommendations on how to generate change that can increase tourist influx for the local community both in quantity and quality.

In order to trace, document, analyse and propose recommendations for the plastic-free changemakers in Croatia several interviews were conducted as well as extensive desk-research in three locations/initiatives making sure that the initiatives sampled constitute the first generation/wave of change makers in these plastic-free Adriatic initiatives and that they were three structurally different initiatives - one which is a single person, single accommodation initiative (Zero Waste Apartment for rent in Zagreb), one that is a big corporation but unified initiative/tourist service provider and one that is a collaboration of several very small tourist service providers.

#### Greece

The survey was conducted as part of the Climate-KIC funded project entitled "BL.EU – Climate Innovation in Southern European Waters". The survey was based on a common questionnaire designed by all beneficiaries of the BL.EU project, which was targeting tourists that reside in the relevant touristic areas. It was implemented in two stages: the survey ran in the wider Piraeus region between 15-30 September 2019 and in Milos Island during the first half of October 2019. Participation rate was 50%, leading to a sample of 54 respondents. The participation rate is considered low, however, the results depict some significant efforts towards awareness raise.

The analysis of the questionnaire responses highlighted findings that are relevant to the wider range of stakeholders related to marine litter, such as policy makers at national and regional levels, entrepreneurs of the tourist sector, tourists and researchers.

The main findings of the survey are summarized in the following points:

- Most of the participants are aware of the environmental degradation and they can link it to anthropogenic effects.
- Age, education and income levels are factors that affect awareness and perceptions towards environmental protection. Younger people, better educated and with higher income are more eager to identify the impact of environmental degradation in their life and are willing to support more transitions to cleaner environments.
- Some level of environmental awareness exists, however, in some cases this has proven to be superficial since a significant percentage of the participants still does not understand the impact of core environmental problems.
- The above also affects the willingness to pay for the transition into higher quality and more sustainable ecosystems.
- The perceived link between environmental sustainability and socioeconomic aspects is weak, whereas the importance of achieving good environmental status in relevant ecosystems (i.e. marine) is not highly prioritized.
- Significant efforts to increase awareness of the European policies on environmental protection are needed. A clear knowledge gap at the citizen's level was identified during the survey, even for directives that have been already part of the EU dissemination strategies (i.e. single use plastics directive, plastics directive etc.) This gap is more evident among participants of older age; young citizens are more aware and possibly less reluctant to support the implementation of the policies.

## **Portugal**

The work developed in the WP2 allowed to:

- Tourism sector
  - Visit 6 passenger ships
  - Apply questionnaires to Environmental officers or Chief Officers 4 answers obtained
  - Analyze plastic waste compositional data campaign 748 kg (sample)
  - Survey tourists face to face and online approaches 33 answers
- Cargo sector
  - Visit 1 cargo ship
  - Analyze plastic waste compositional data campaign 9 kg (sample)
- Fishing sector
  - Visit 11 fishing ports
  - Apply questionnaires to fishermen 86 answers obtained
  - Analyze plastic waste compositional data campaign 21 kg (sample)

After all data collection, best practices, gaps and barriers were identified for the sectors. At last, conclusions and recommendations were made.

# 3. CROATIA

## 3.1. Surveys and questionnaires

#### **RESEARCH DESIGN:**

**Research Question:** What was the first generation of changemakers in the field of plastic free tourism service able to provide and how does tourist demand react to the increase of environmentally responsible tourism supply on the Croatian Coast

- Topic 1: What are the priorities in choosing a vacation location?
- Topic 2: How much does environmentally responsible offer influence the choice of vacation location for tourists? (What is the perceived cost and acceptable cost of a sustainable choice?)
- Topic 3: Is there a difference in the sociodemographic characteristics of tourists that prioritise environmentally responsible locations?
- Topic 4: What were some of the experiences, challenges and benefits of environmentally responsible tourism supply in Croatia?

# **Quantitative Research**

A convenient sample using online survey was used, with an overall number of 126 participants. Online and offline surveys were conducted during tourist season with the cooperation of the Tourist Board and other stakeholders in the local tourism community.

Three different samples were used:

- Online survey for the general public shared through social media and partner organizations.
- Online survey for the island of Zlarin.
- Online survey for the island of Cres.

The Questionnaire used consisted of four topical segments:

- Socio-demographic variables age, gender, country of origin and the level of education.
- Planning and circumstances considering the vacation financial issues, duration of stay and the arrangements, including the number of people involved.
- Gathering more data on practical ecological issues and the level of information guests have prior to their arrival.
- Dealing with broader attitudes on ecology, using the NEP (New ecological paradigm) scale for testing attitudes of respondents.

#### **Qualitative Research**

Second part of the research was dealing with qualitative aspects – semi-structured interviews with tourists were used with separate visits to three different locations - the island of Zlarin, hotel Adriatic in the city of Rovinj and a zero waste AirBNB/booking rented facility in the city of Zagreb.

The idea of this mixed methods research design was to gather broader information on travellers and their habits during the vacation and, at the same time, see how localities and businesses rationalize and explain their decisions to involve plastic free or zero waste policies in their model.

- Semi-structured interviews with tourists
- case studies: offering environmentally responsible services in the area of tourism with a goal of documenting best practices, experiences, obstacles, and strategies of success.

# CASE STUDY 1: ZLARIN PLASTIC FREE ISLAND - collaboration of small tourism providers

Zlarin, the island without plastic is the most famous plastic-free initiatives in Croatia, an initiative where all of the tourist service providers in Zlarin that have single-use plastic included in their daily services such as restaurants, grocery stores and fast food places and bars collectively managed to get rid of single-use plastic items in the front-end of the tourism service establishments in couple of months, sign a charter, create a logo and certificate, record a video, produce and use reusable plastic cups for all the events on Zlarin and create and open for use a composter.

#### CASE STUDY 2: ROVINJ ADRIATIC PLASTIC FREE HOTEL — a big tourism provider

Hotel Adriatic Rovinj was the first hotel in Croatia to go single-plastic free, it is a part of a large group of hotels Maistra (<a href="https://www.maistra.com">https://www.maistra.com</a>) that started the initiative in one small hotel due to the inspiration of Zlarin as well as the forthcoming EU regulation in the area of plastic use. The hotel worked closely with all its staff to remove single-use plastic form the front-end (rooms and bar/restaurant) as well as to organize a series of events and discussions on the topic.

## **CASE STUDY 3: ZERO WASTE APPARTEMENT** – a single small provider

The Zero waste private apartment in Zagreb. It's a luxury apartment in the centre of the city that has been completely redone to include energy efficiency, upcycling of furniture and a zero-waste management of tourism.

The obtained data was analysed and based on the survey results several indices were constructed. The main idea was to explain how tourist choices of location are made, how much of an impact did values have on that choice and how much did postmodern values such as environmentalism impact the choice of vacation venue for different socio-demographic groups. This was tested on both current and potential tourist guests in the chosen local communities. The qualitative part of the research project enables us to collect best example stories from service providers that already use environmentalists as a selling point and as a value offered to their guests.

#### **DATA RECEIVED:**

# **Quantitative Research Data**

# The socio-demographic characteristics of the sample:

- Mostly from Croatia, predominant majority of respondents belong to age groups between 20 and 50, with those between 30 and 40 being the largest group.
- Gender balance: 75.9% of the sample is comprised of women who are more prone to cooperate in surveys and are more often involved in planning the trip. Furthermore, women are expressing more concerns about the ecology saying that environmental responsibility is "crucial" when deciding on a destination.
- The more educated population tends to travel, as 83% of the sample has some form of tertiary education and that population is economically better off.

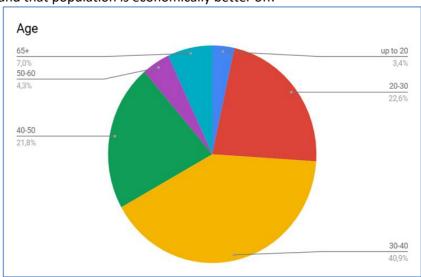


Figure 1: Age.

#### Travel habits, two processes have to be addressed:

- Decision-making: cleanliness is the most important item on their list, as it has a very high level of agreement (4.43), followed by environmental responsibility and a good price while children friendly (2.75) and good nightlife (2.32) are the least important. Two types of tourism come to mind: First is oriented towards family tourism and the other primarily towards the youth.
- Single travelers are rare with only 7%, 78% of all tourists in the sample are coming with another person or a group of up to four other people, meaning that families are the largest audience followed by 25% of couples.

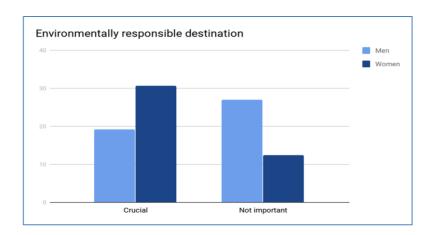


Figure 2: Environmentally responsible destination.

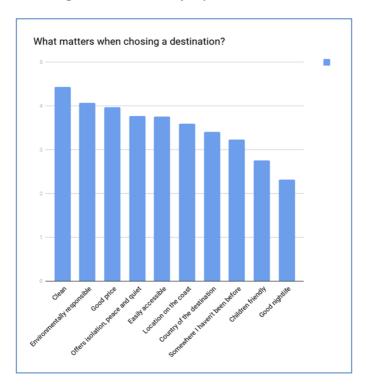


Figure 3: Important aspects when planning a vacation.

## **Ecological habits and attitudes of tourists:**

- They are generally well informed and have heard about the EU Single-Use Plastics directive and express a strong agreement with pro-ecological items.
- When picking a location, the eco-friendly tourist service will be considered an added value and rarely a factor in decision making. However, it does play a strong role in competing with other service providers in the same destination or in the same price category.
- Ecology being an economic category: 50% of the respondents claim that they would be willing to pay up to 5€ per day to be in an ecologically responsible destination and only 17% are willing to pay more than 10€. Percentage of tourists willing to pay more than 10€ per day and person remains the same (15.3 and 15.9) with accommodation lower than 50€ and in the 50-99€ category and the doubles (30.8 %) with tourists willing to pay more than 100€.

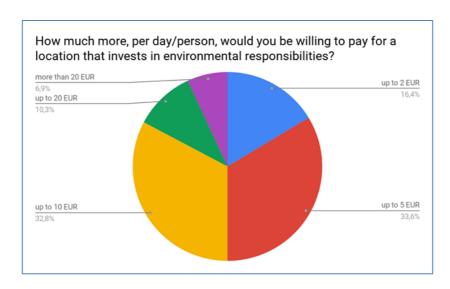


Figure 4: Willing to pay for a location that invests in environmental responsibility.

Which plastic products are tourists using and which of them are they willing to replace: Plastic straws
and shopping bags are the only two items not used by more than half of our respondents. Plastic
bottles, plates, cups and cutlery are seen as the most easily replaceable items.

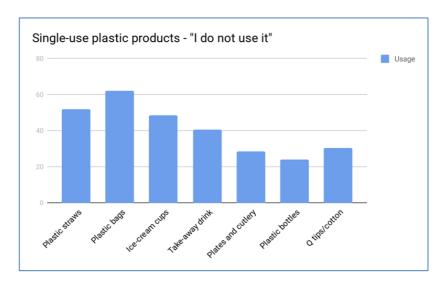


Figure 5: Plastic products.

- A significant fraction of the sample would be willing to pay more to use an environmentally friendly product even if it costs more, ranging from 12% to 35%, depending on the product.

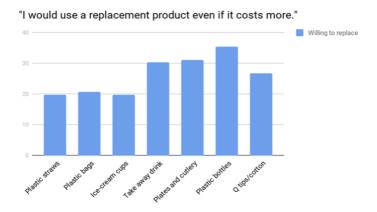


Figure 6: Plastic products.

The issue of the financial cost of replacing single use plastic was raised among the tourist service providers, and although tourists seem to be willing to pay more for plastic-free accommodation, services and products, none of the interviews tourist service provider raised the prices of their services.

The evaluation of the cost was explained with:

- a) The unnecessary things that got rid of covered the cost of the acquisition of new plastic-free products;
- b) It was estimated that the price for that season was marginal and worth the impact it had on the environment as well as promoting plastic-free services.

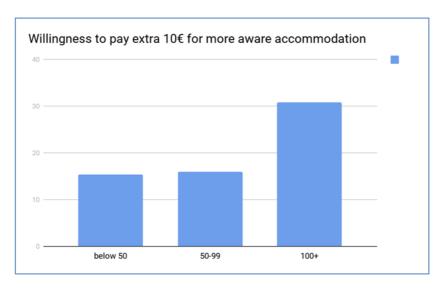


Figure 7: Willing to pay.

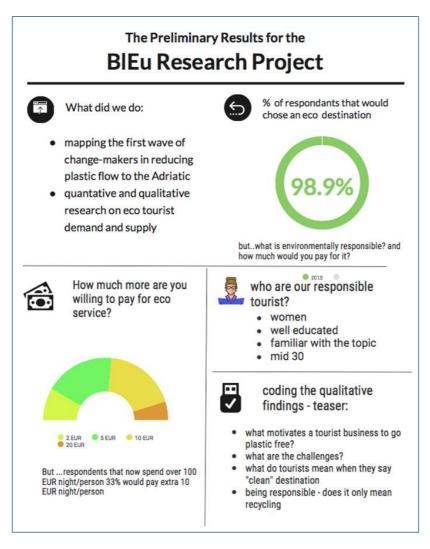


Figure 8: Summary infographic with the research results

# **Qualitative Research Data**

To get additional insight into choices and behaviours of the tourist, a series of semi-structured interviews were conducted with tourists in Rovinj and Zlarin during August of 2019. What follows are the selected relevant findings for the qualitative dimension of BIEU research of tourist/guest attitudes, values, habits and behaviours.

- The first part: how the tourists found themselves to be in the given location and how they make choices about locations they visit.
  - three categories: "relatives/ties to a location", "something different/something new" and "clean/beautiful". It was found that in the traveling decision-making the first two are usually opposing and the third one seems to be an individually differently perceived common denominator. "Clean" is crucial for tourists and it seems to be connected to serenity, greenery, natural biodiversity and a place for relaxation with cleanness of the sea, history, heritage, waste management and urban planning, a place that is taken care of. Further exploring the meaning and expectations projected into the "clean" imaginary is one of the possible routes to be further clarified by additional research.

- The second part: decision about the accommodation (if not staying with family). None of the interviewees mentioned environmentalism as the reason for picking accommodation or the fact that the accommodation itself has made any efforts in being green/plastic free. The reasons for picking accommodation are a combination of location and price with a strong input from online tools for grading and reviews (such as TripAdvisor).
- The third part: tourists were asked if knew they were on a first plastic-free island/hotel and how they felt about it. All interviewees considered it a great thing and are happy to support/promote/recommend it perceiving it as a great added value to the original location/price value. Zlarin has had significant support and assistance (Terra Hub organizations Challenge, the media picking up the story, being showcased at the GA Un by the President of Croatia herself), as well as working on the visibility and brand (big poster at the doc, the design of the Zlarin without plastic signs for all tourist service providers and reusable cups now used on the island for all events). Because of that all but one of the interviews have either heard of Zlarin being the first island without plastic in Croatia before coming to the island (with some even coming because of that) or they have learned about it upon arrival. They even discussed what could be done better, what disappointed them or compared it to where they are from. In Rovinj the tourists were unaware of Hotel Adriatic being the first plastic-free hotel in Croatia and even suggested disseminating that information upon arrival. Tourist focus on what's most obvious to them, they are much more likely to perceive waste on the beach and the island and compare it to the promise of the plastic free island than the lack of plastic straws.
- The fourth part: tourists were asked about their impression of Croatia and branding as a clean blue and green paradise in comparison with their own countries. Tourists were asked to compare standards in their own countries and here as well as their own habits at home (and how they can practice them here) and most think it isn't a leading country in environment preservation. The identified major problem is that when asked about how they contribute to the environment/planet the absolute go to answer is recycling. Usually that is the beginning and the need of what people from various countries, age, gender, nationality and status believe is the most important and often the only thing they can do. Knowing that recycling is the last resort in environmental preservation, as well as the national and local governments are catching up with the data and knowledge in the field and are only now (in Croatia) providing infrastructure for recycling as well as that recycling is the main environmental habit taught in schools as the solution it all provides for a very worrying message to all citizens, including tourists. However, some tourists do have the right idea and are declining plastic whenever they can, are a responsible shopper by buying in Packaging-Free Supermarkets or Zero Waste Stores, are picking up trash, saving resources, using reusable items, are composting and shopping at a farmers' market, are vegan and so on.

#### **TOURIST SERVICE PROVIDERS AS CHANGE-MAKERS**

In discussing how and why the initiative was started, all of the changemakers perceive environmentalism and plastics in particular as one of the most important issues of today and often refer to future generations, responsibilities to the communities and are motivated by the EU Directive businesswise. In Rovinj it was obvious there was an understanding of the responsibility that the hotel has for the impact on plastic waste volume in the community. Motivation such as smart business decisions, promotion, education of guests as well as wider social impact were detected among the first generation of change-makers.

In a strictly business and procedural way, switching to plastic free didn't seem to be that demanding, time-wise or financially although time consumed was more often quoted as an issue than financial losses. People who do not have the experience of going plastic-free perceive it as much more complicated and expensive than it is in implementation. However, staff from the plastic-free hotel and the cafes say that they have not only started to replace plastic at home, but have also talked about their family and friends into it. It seems that living without plastic for 8 or more hours during work is enough to change behaviour at home.

Discussing how the community reacted and how the guests reacted and what were the methods of communicating change to plastic-free, the existing consensus was faced again on plastic-free or environmentalism being a positive change throughout communities/societies. The perception of the guest by the tourist service provider in the context of providing environmentally responsible service varied from having a wish to impact and even change the behaviour and the attitudes of the guest through providing a service that is luxurious/comfortable/holistic/healthy to simply integrating what is good for the environment without considering the impact on the guest at all. At this time, it is not possible to be 100% zero waste or plastic-free so there were certain compromises to be made, depending on the motivation or perceived importance of goals. In Hotel Adriatic the content is presented without plastic, also they are refusing to sell plastic products to guests in order to make sure the guests see as little plastic as possible. The tourists are all surprised and when told the reason, have a good reaction. In zero waste apartment the dishwashing sponge is left for the guests (in addition to the bamboo brush for dishwashing) because it was the estimate of the owner that it would be too big of a push for guests to learn to wash the dishes without the sponge even though it leaves microplastics in the waste waters. On top of compromises it is clear that the tourist service providers are determined to go above and beyond the call of duty for their customers, with zero waste apartment separating waste and recycling after guests if they do not do it themselves, the same service is provided in the Adriatic hotel where also cardboard straws are replaced if they get soggy because of staying in the drink for too long etc.

#### HOW CHANGEMAKERS IMPACT EACH OTHER AND WHY SYNERGY IS IMPORTANT

Terra Hub is the only organization in Croatia that has been doing the job of degenerating and supporting ideas in the area of reducing plastic, tracking them, researching, enabling, and mentoring. During the BL.EU project a lot of information about this first generation of changemakers has been documented.

An article about Zlarin was the main inspirations for the hotel Adriatic to the plastic-free project. The work done by the Adriatic hotel will be an inspiration, lesson and motivation for many more to come. Thus, continuing work on supporting and documenting community leaders in the area of reducing plastic and waste is crucial. It would be well advised to set up social impact measurement tools and protocols in order to document and measure further how a small island initiative can inspire a small hotel which can then in return inspire the whole hotel group and have a sizable impact on the community, not just at large but specific niches such as supplier of alternative to plastic, staff working in tourism, and tourists/guests themselves.

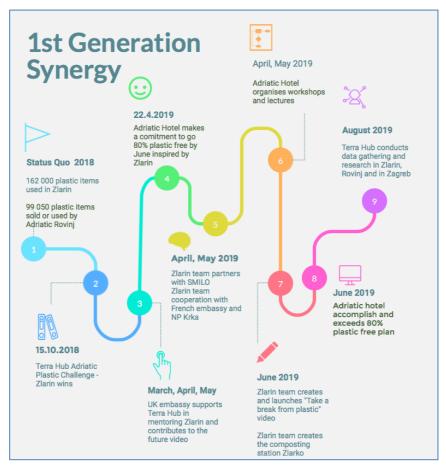


Figure 9: First-generation strategy.

#### 3.2. Other data collection

Additional desk research was conducted prior to the field work and by using secondary sources such as the available data of the Tourist Board and the local and national government as well as internal documentation and assessment/strategy used by the first-generation change-makers.

#### 3.3. Gaps and barriers

## **Gaps and barriers according to tourists:**

- Lack of information, lack of good user-friendly infrastructure and waste management are obstacles for tourists to be environmentally responsible in the location.
- Even in plastic free accommodations, store bought plastic bottles with water are brought in by tourists who are mostly unsure of whether the water in the location is drinkable.
- There is an unpleasant odour in the location and a general problem with waste management (no noticeable recycle bins, their location nor if waste is to be recycled or not, which waste is recycled in which bins, no recycling instructions for tourists in different languages, not recycling glass and aluminium).
- Lack of organic shops and small to no variety in bio products.
- Still a lot of plastic waste from previous years on the first plastic free island/location, the focus should have been based on first cleaning up the island/location.
- First-generation changemakers (locations and tourist service providers) in Croatia weren't advertised enough.
- Not motivating tourists to behave responsibly on the destination so there are many irresponsible people that just don't care about plastics or cigarettes and they litter, there is not enough pressure on such negative behaviour.
- Not enough communal workers and garbage-patrols (binmen, utility crew, public workers) on beaches and other tourist locations nor recycle/garbage bins emptying.
- Not educating locals nor tourists about other ways of contributing to the environment/planet (reusing
  or refusing plastic bags, shopping responsibly, picking up trash, saving resources, composting...)
   besides recycling which should be the last resort in environmental preservation.

# **Gaps and barriers according to tourist service providers:**

- Advocacy and planning/development in the local community is the most challenging aspect and the largest area where additional support is needed for successful project implementation.
- Nominal agreement with change but extremely rigid set of values and practices towards environmental protection as a secondary or tertiary concern following primary concern with economic growth through tourism.
- Replacement products could not be ordered from Croatia so had to be ordered in enormous quantities (too much for each provider individually) for a lot of money from other countries or were ordered in to small quantities locally and were too expensive.
- If it is not "clean" tourist service providers' businesses will not be able to function, tourists will not come to Croatia.
- Big financial cost for replacing single use plastic and many don't want these costs.

- Not enough alternative products for guests who want their food for "to go".
- The standard of alternative products must meet tourist service providers' standards, every item must fit the whole image of a hotel and have quality in all fields.
- Many providers don't know where to start, it all sounds complicated and difficult to do.
- Smaller apartments, businesses, tourist services and private accommodation need significant information and support to be plastic-free and environmentally responsible, they are left out and have no representative to get replacement products cheaper by wholesale.
- The media and visibility boom in Zlarin put a lot of pressure, frustration, stress to fulfill the expectations of the created plastic free island brand as well as the time needed to repeat the statements to many actors during the high tourist season.
- Problem with microplastics created by numerous washing of bedding during the season.
- Small entrepreneurs are not all equally successful in implementing the plastic free initiative.

## 3.3. Best practices

#### **Best practices according to tourists:**

- Tourists consider residing in the first plastic-free island/hotel in Croatia a great thing and are happy to support/promote/recommend it perceiving it as a great added value to the original location/price value for money calculation that landed them there in the first place.
- Tourists like being informed by tourist service providers where to recycle and about waste separation in the location.
- Croatia is making a better effort to recycle than other popular destinations (Venice), it's a location with hardly any graffiti or littering.
- Croatia is enforcing environment protection trends, that is the future and the location/hotel could be an example to all other locations/hotels in Croatia/the World.
- Tourists like the concept of return bottles and that there was very little plastic waste on the location.
- Zlarin has implemented in just one-year proportional waste charges to the non-recyclable garbage produced.

# Best practices according to tourist service providers:

- Tourists seem to be willing to pay more for plastic-free accommodation, services and products
- A clear understanding of the responsibility that the hotel has for the impact on plastic waste volume in the community.
- Being a first-generation change-maker is good for the promotion/marketing and for the environment,
   providers are doing something useful while not losing anything and the feedback is great.
- Local people and providers are starting to be more aware and environmentally conscious bringing the good habits and implementing the change from the workplace in their own homes. Active involvement of employees in designing applicable and simple solutions within their workplace and domain.
- The new meaning of luxury is leisure, ecology and health, meaning the guests now want to feel cared for while knowing that the provider where they spend their summer in takes care of the environment.
- Whether providers contact the supplier for single use plastic or alternative products the same amount of time is "wasted".

- If many big providers were in collaboration, the demand and diversity for alternative products would increase and the price would drop. Big providers also have a greater impact on the chain of supply, availability, alternative products and their price as well as which of the items will be used as opposed to small tourist service providers.
- All the shampoos are now provided in ceramic bottles that work on refill systems.
- Refusing plastic products to guests doesn't result in bad reactions, objections or complaints.
- For first-generation change-maker the biggest wave of promotion happened though Terra Hub, the providers did not spend much time or any promotion at all.
- In more than 40 events held on Zlarin during the season there was no single-use plastic at any of them!

#### 3.4. Conclusions and recommendations

Following the analysis Terra Hub team of experts identified a need for a data-driven advocacy/development effort in order to use the first wave of change for generating further shifts in the value system and priority hierarchy. Very concrete data on the specifics of tourism demand related to environmental quality of the tourist offer, as well as documenting the paths and the needs of the changemakers in the tourist service industry is the only thing we believe can be critical to creating a shift in values and/or priorities.

- There was a combination of economy and ecology involved when a decision about the destination is being made. While almost all tourists support ecological ideas and have a broad sense of the importance of environmental policies, when considering the intersection of ecology and economy as well as behaviour and attitudes, the situation is not as uniform. That means that although ecology in seen as an important issue on general level, not everybody can afford to calculate that cost in their budget and that is another important piece of information for advocacy and marketing.
- The majority of tourists are arriving in smaller groups of 4-5 people then couples or singles. So, this is something to consider when thinking about the accommodation types, local policies, marketing and advocacy
- Translated into strategy and policy: while luxury tourist services such as high end hotels or apartments may be able to raise the price of their service due to the economic category of their potential guests, lower-end accommodation and service will not be able to do so and will require additional support and stimulation from the local government in order to provide plastic-free or ecologically friendly services.
- Since tourists are willing to replace plastic products (such as plastic straws and shopping bags, plastic bottles, plates, cups and cutlery) serving food and drinks without plastic is an obvious possibility. There are also tourists willing to pay more to use an environmentally friendly product even if it costs more. This is an important finding because it can help designing the policy of the use of plastic on locations, as tourists are not equally willing to pay more for certain products. One of the recommendations stemming from the research is the local government procurement for the whole community and then distribution or the joint orders by groups of tourist providers.
- An interesting point was raised during the discussion of the preliminary results at the Climate KIC workshop were the issue of having to pay more (from the tourist standpoint) for a service that is for the good of the environment and the society is wrong and the additional price (on the tourist and the provider) should not be for the environmental tourist services /products but rather, via taxation or other means on those that are harmful for the society and environment.

When asked if they knew they were on a first plastic-free island/hotel in Croatia and how they felt about it the tourists that were unaware suggested disseminating that information to future tourists upon arrival at the location and via hotel/location marketing. As for media covered plastic free locations (Zlarin - island without plastic), people already knew, have enjoyed that news and have discussed what could have been done better, what had disappointed them or compared it to their home country.

# 4. GREECE

## 4.1. Surveys and questionnaires

The survey was based on a common questionnaire designed by all beneficiaries of the BL.EU project, which was targeting tourists that reside in the relevant touristic areas. The survey was implemented in two stages: the survey ran in the wider Piraeus region between 15-30 September 2019 and in Milos island during the first half of October 2019.

Participation rate at the survey was around 50%, leading to a sample of 54 respondents. The participation rate is considered low; perhaps implementing the survey during the summer months with higher touristic demand (i.e. July and August) could lead to higher participation rates.

The results of the survey were acquired in two stages, (1<sup>st</sup> stage 24 responses from Piraeus and 21 responses containing also with additional questions received), therefore, the report is structured in two chapters.

The responses were obtained using a random sampling method. Five out of ten respondents were females (56%) and the rest 44% were males.

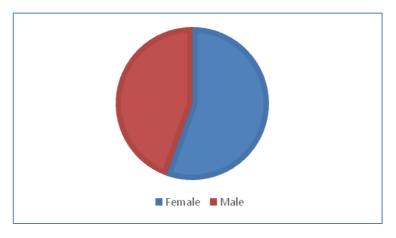


Figure 10: Respondents' sample - Gender split.

The majority of respondents were Greeks (70%), while the remaining 30% came from other countries including the United Kingdom, Spain and Italy (Figure 11). In total, 88% of the tourists belonged to the European Union (28 Member States), while only 12% were tourists from non-EU countries (i.e. USA, Kazakhstan).

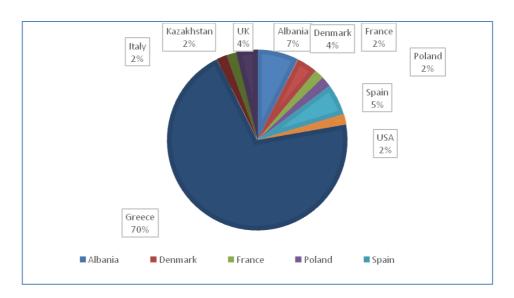


Figure 11: Country of origin.

Regarding age distribution, the majority of the respondents were between 20 to 30 years old (46%). The second most represented age group was the people from 30 to 40 years old (26%). The rest of the age groups participated less at the survey, since only 19% of the respondents were 40 - 50 years old, and 9% were 50 -60 years old.

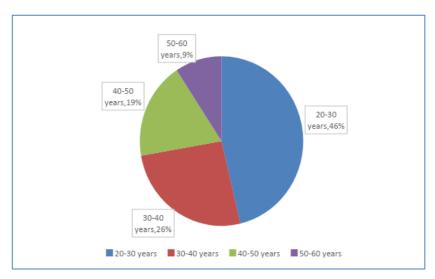


Figure 12: Age groups.

In terms of education level of the participants, it is noted that most of them participants (59%) have a Master's degrees or higher education. Around 35% of the respondents have graduated from Universities (Bachelor degrees), while the remaining 6% has concluded secondary education (Figure 13).

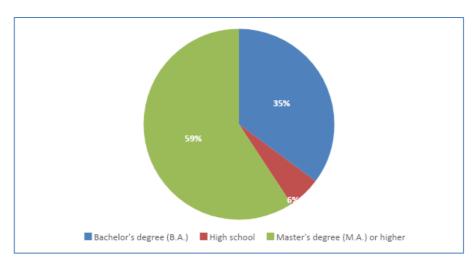


Figure 13: Education level.

When combining the age and educational characteristics, the main characteristics of identified are the following:

- Participation rate in the survey was higher among younger people and especially those belonging in the age class of 20-30 years old. People belonging to other age classes (above 50) participated less at this survey, despite the fact that the surveys took place during September and October, when the touristic demand is higher for people of these age classes (i.e. pensioners).
- The vast majority of the young participants, which was 95% of the 20-30 years old tourists have completed tertiary education. Most of the respondents in this sub-category were young women (72%).
- Most of the respondents that belong to the age group of 30-40 years old (93%) are also well educated (Bachelor degree and above). The remaining 7% of this category has completed high school.
- The responses from people above 40 years old came also from highly educated people.
- The sample of tourists that chose to respond to the BL.EU questionnaire were good (Bachelor degree) or highly educated people (Master or above). This characteristic was evident across all age classes; however, participation frequency decreases with age.

The above can be explained by the assumption that older people have not received proper education about environmental protection and climate change. Besides, the discussion on climate change and its impact is still rather new and had not entered the educational curriculums of the European educational systems earlier than the past 15-20 years (Stokes, Edge, & West, 2001). Another element that could explain the low participation rate of older people is their overall resistance to behavioral change on topics related to the protection of the environment and climate change, despite the fact that this age class is more vulnerable to environmental changes (Geller & Zenick, 2005). In contrast, the older generations entering retirement are increasingly using volunteering work (cleaning riverbanks, scrubbing bird feathers, rescuing sea turtles) as part of their environmental awareness (Coughlin, 2018).

## 4.1.1. Examining preferences

To draw better conclusions on the properties of the sample, the survey includes questions relevant to the type of stay and the budget spent.

Most of the tourists surveyed are willing to spend between €30-80 per night (41%), whereas, 26% of the sample would prefer that their accommodation costs between €80-120. Almost one fifth of the sample is willing to pay more than €120, whereas, 15% of the respondents prefer low budget vacations (daily accommodation cost below €30).

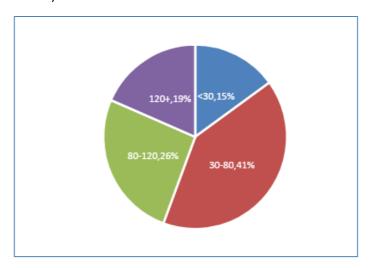


Figure 14: Accommodation spending per night (€).

The analysis of the above data in relation to the age classes of the sample does not reveal a specific trend. These results are consistent with the expected financial planning of people as per age group. For example, older people in their retirement are looking to save more on their pensions, while people in the age band of 40-50 year old being in the workplace for longer, can have accumulated higher disposable income and have perhaps climbed the corporate ladder resulting in higher salaries. In contrast, the tendency of young people in the age band of 20-30 to spend lower for their accommodation is consistent with them entering just now the workplace taking also into account youth unemployment rates in Europe and Greece.

Regarding the daily budget besides accommodation, the results reveal that 48% of the younger tourists (age 20-30) spend less than €30 per day. The 71% of the tourists that belong to the 30-40 age group are willing to spend significantly more and between €50-100 per day. The daily spending of tourists from age classes of 40-60 has been reported to be around €50-60.

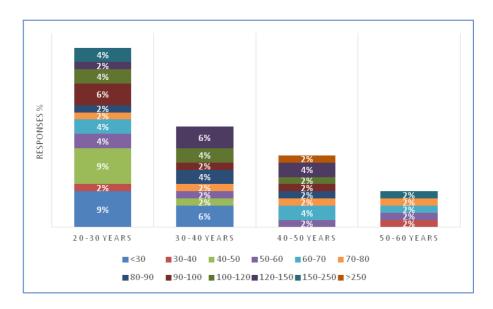


Figure 15: Age group vs. accommodation spending per night (€)

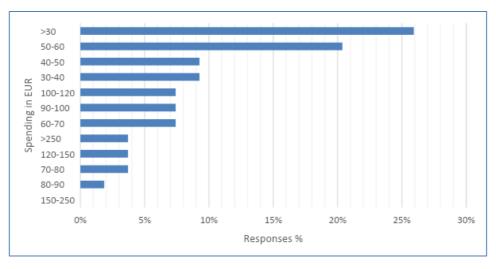


Figure 16: General spending per day, (€)

Respondents aged 20-30 stated that they are willing to pay less for both accommodation (Figure 2-2) and general spending besides accommodation (Figure 2-4). For older respondents aged 50-60, they also prefer to pay less for both accommodation and general spending per day. For the rest of the age groups, the results are mixed but nevertheless, the age group 40-50 are generally willing to pay higher for their accommodation and on general spending per day.

From the above, it can be observed that participants in the study aged 40-50 are generally more willing to spend more on their vacations, perhaps due to the higher disposable income they have accumulated because of their higher salaries due to them being more years active in the workplace than other age groups.

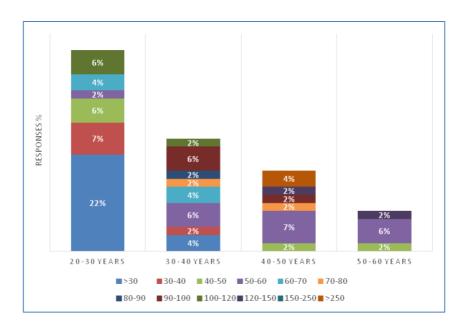


Figure 17: General spending per day vs. age group

Another indicator of the type of tourism interviewed is the fact that the vast majority (72%) responded that good nightlife is not very important or neither important nor unimportant. This finding could perhaps seem odd given the age structure of the sample, however, it should also be noted that people with higher environmental awareness, such as those that seem to have participated at the survey are also following healthier life models, where early sleep is highly appreciated. A further 28% has indicated that good nightlife is crucial/important when planning a vacation.

# 4.1.2 Perceptions on environmental values

The following section contains an analysis of the responses in questions that are mostly related to environmental awareness and ecosystemic protection.

Cleanliness of the accommodation has been reported as an important factor for the majority (94%) of tourists interviewed (Figure 18). All age and education classes scored this factor as extremely important for their selection of the accommodation venue and tourist destination in general. The importance of this factor not only for the selection of the destination but also for the return visitation is highlighted across literature (Schuhmann, 2011).

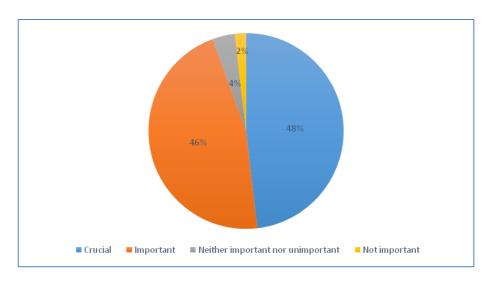


Figure 17: Importance of cleanliness

On the other hand, the majority of the respondents (76%) perceive that the environmental responsibility of the accommodation provider is an important factor when planning their vacation. The rest of the respondents (24%) mentioned that that their choice of vacations is indifferent with regards to the environmental responsibility of the accommodation provider. Similar results also appear at another recent survey conducted in Greece in the summer of 2019 with the support of the LIFE programme (LIFE-IP AdaptInGR, 2019). The scope of the survey was to assess the perceptions of the Greek citizens on climate change and its impact in the Greek environment and economy. Among others, the survey identified that almost 77% of the citizens are well informed on climate change, a percentage which is similar to the one presented above. However, the fraction of those that were "a little" or "not at all" informed exceeded 22%, which is three times higher to the present survey. This could be attributed to the small sample and also to the time period that the survey took place. Even though the BL.EU survey was focusing more on environmental awareness and not on climate change as the LIFE survey, it is easy to understand that these two notions are highly interrelated.

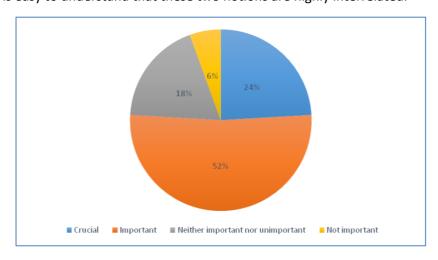


Figure 18: Importance of environmental responsibility

On a more positive side, the respondents mentioned that their selection of the tourist destination is more defined by the environmental responsibility (56%) and less of the coast location (44%).

By examining the above findings, it is obvious that there is a significant part of the respondents that have difficulties in identifying the premises they reside in (i.e. house, room, beach) as part of the natural environment, or their natural ecosystem. Believing that the impact of environmental degradation does not affect the citizen's "ecosystem" is a notion that possibly derives from poor environmental education and awareness.

One of the most important valuation tools that are used in the assessment of the environmental policies is the willingness to pay ("WTP"). Under this, the respondents of the questionnaire are invited to mention a price that they are willing to pay for different types of green services during their vacations. The notion of the "WTP" is based on the economic value that a consumer is expected to receive from an ecosystem service.

By analyzing the responses (Figure 2 10) of the WTP versus the perception of importance of environmental responsibility, the following findings are extracted: Firstly, it appears that people that find the environmental responsibility crucial are willing to pay less compared to others. Secondly, those who rate environmental responsibility lower appear to be more responsible, since they have higher WTP, which is contradictory. Thirdly, the majority of the respondents, regardless of their preferences are willing to pay €5 more to receive more environmentally friendly services. Fourthly, wealthier tourists, such as those residing in more expensive hotels and those that present a higher daily spending, do not necessarily present higher WTP. In literature, there are evidence that households of higher incomes are more likely to book ecotourism holidays (GlobalData, 2017). The gap between the literature example and the results of the survey is again related with the lower level of environmental education and awareness of the respondents. In addition, the younger age classes (below 30 years old) appear to have higher WTP compared to the other age classes, despite the fact that their income level is usually lower.

Despite the responses above, most of the participants (89%) identify the added-value of greener services and they are willing to select them provided that they do not have to bare the additional cost for them. This is a common finding across numerous relevant surveys conducted in Europe and the USA. However, as it is pointed out simply believing and/or accepting the importance of environmental responsibility does not always translate into pro-environmental activity. Even though consumers mention that they want more greener services, it is actually (Coughlin, 2018).

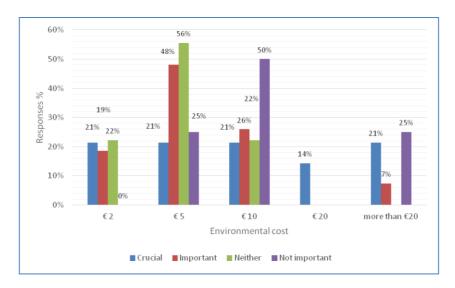


Figure 19: Environmental responsibility vs Environmental cost

Furthermore, the survey reveals that 62% of the respondents mentioned that the ecological standards are important for choosing a travel destination, while 28% mentioned that the ecological standards do not drive their decision.

When comparing the ecological standards between the home country and the visiting country, most of the participants (66%) responded that not significant differences are noted. Considering that 76% of the sample is coming from EU countries and a further 43% coming from Greece, the above paragraph is alarming, since it denotes the lack in environmental education and also a significant lack of awareness of the European and national policies that are being implemented among different environmental aspects across the EU.

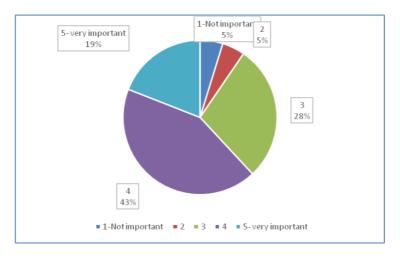


Figure 20: How important are ecological standards for choosing a vacation destination?

In terms of plastics and waste management, both key issues denoted in the European policy framework, most of the participants (81% and 90% respectively) mentioned that they are willing to pay to create the necessary conditions for a single-use plastic free environment and for the implementation of integrated waste management systems. However, as it was mentioned in previous sections of this report, willingness does not always translate into action, (Coughlin, 2018).

Despite their willingness, most of the respondents mentioned that they are not aware of the Plastics directive<sup>1</sup> (62%). Given the young age of the sample and taking into account that the sample is otherwise environmentally conscious, this finding indicates a gap in engaging in education and information of the public. This finding is consistent with findings from the AdaptInGR project (LIFE-IP AdaptInGR, 2019) which identified that 22% of Greek respondents were "a little" or "not at all" informed about climate change.

In connection to the above, the questionnaire asked whether the participants would consider replacing certain single use plastic products. Almost 40% of the participants mentioned that they plan to replace plastic shopping bags provided that they wouldn't have to bare the relevant costs. This indicates another significant lack of awareness among the sample. In Greece, the consumption of single use plastic bags is levied (€0.09 per bag). Therefore, the costs of purchasing cloth reusable bags or other means of carrying containers will pay off quite soon for an average-sized family.

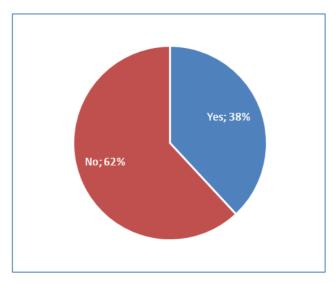


Figure 21: Aware of the EU Single-Use Plastics Directive

A further 30% of the sample indicated that they have stopped using plastic bags. Given that a significant part of the sample are Europeans, this finding can be linked to the effective implementation of the Directive 2015/720/EC on the plastic bags that imposed a levy on the use of plastic bags. In fact, the consumption of plastic bags was halved in Greece, after the adoption of the European directive and the imposition of the environmental fee in single use plastic bags.

<sup>&</sup>lt;sup>1</sup> According to the EU Single-Use Plastics Directive 2019/904 (European Parliament and the Council of the European Union, 2019), the single-use plastic products of cutlery, plates and straws shall be gradually discontinued from the market within a period of two years from the date the Directive becomes enforceable. In addition, measures shall be taken for plastic food containers and cups to diminish their use.

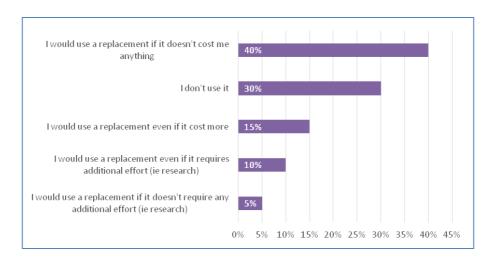


Figure 22: Replacing plastic shopping bags.

The same fraction of respondents that mentioned that they do not use plastic bags mentioned that they have stopped using plastic straws. In addition, 40% of the sample indicated that they would replace them if the replacement solution doesn't cost anything. A significant 20% have indicated that they would consider replacing even if it costs more.

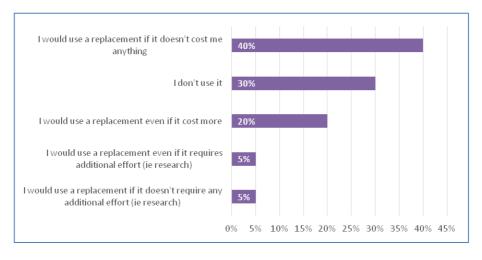


Figure 23: Replacing plastic straws.

In connection with ice-cream cups, as per Figure 2-12, a 43% of the sample have indicated that they would consider replacing if no extra effort is required and a 24% replied that they would replace if no extra cost is present (Figure 2-12). It seems that ice-cream cups are widely used since only a 5% have indicated that they do not use this product.

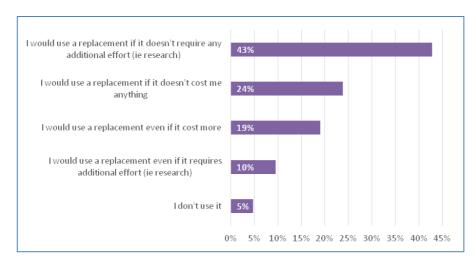


Figure 24: Replacing ice-cream cups.

With reference to take-away drink cups and their lids (i.e. coffee cups), a 33% of the sample have indicated that they would use a replacement even if it cost more while a 24% would replace if no additional cost is present. A further 24% would replace if it does not require extra effort. Finally, a 10% have said that they do not use single use coffee cups. Perhaps these respondents have already made the switch to alternatives (e.g. reusable cups).

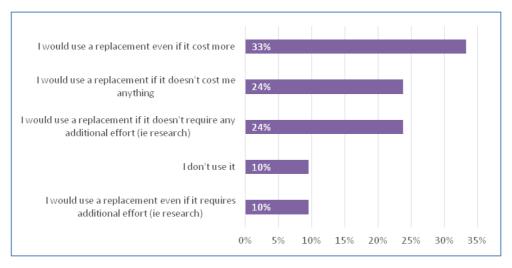


Figure 25: Replacing take-away drink cups and lids.

Concerning single-use plastic plates, cups and cutlery, a 38% of the sample have indicated that they are willing to replace even if it costs more while a 19% have said that they would replace if no extra cost is present (Figure 2-14). A further 19% said they would replace if no additional efforts were required. The results are satisfactory given that these products are targeted by the EU Directive and are scheduled to be discontinued.

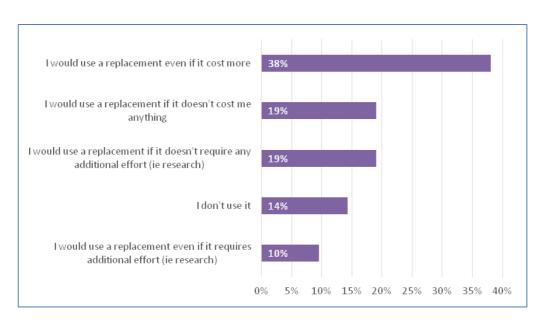


Figure 26: Replacing plates, cups and cutlery.

With respect to plastic bottles for beverages, a 38% have indicated that they would consider replacement even if it cost more while a 19% would consider replacement if there was no extra cost (Figure 2-15). A further 19% would consider replacing if there were no additional efforts involved.

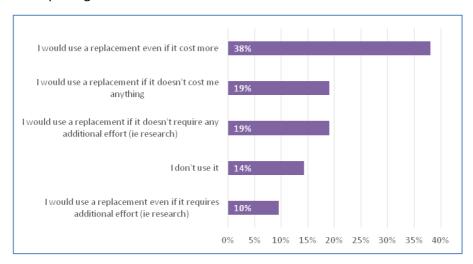


Figure 27: Replacing plastic bottles for beverages.

Finally, as regards to cotton buds a 38% would consider replacing if there was no extra effort required while a 19% would replace if there was no extra cost. A significant 19% indicated that they do not use this product.

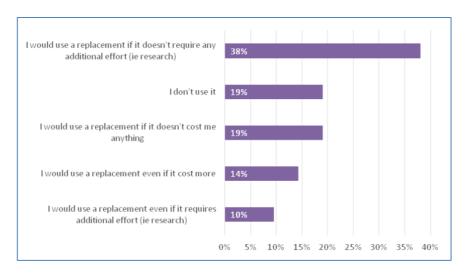


Figure 28: Replacing cotton buds.

Concerning the above graphs, which consist the behavioral change part of the survey, as an overall comment, we can observe that the respondents show a preference over replacement methods that do not require extra cost nor additional effort. However, for specific products (plastic bottles, plates, cups and cutlery), the most common answer was that they would consider replacing even if it costs more.

Finally, the survey asked respondents to offer their opinion for a series of statements that could help us build upon the awareness level of the participants. The respondents mentioned that they found the level of ecological crisis exaggerated (33%), whereas 48% replied that ecological crisis communication is not exaggerate implying that this is an issue of high importance. One fifth of the responses appear to be neutral to this statement. This raises more questions on the factors that affect the perceptions of the wider public and how this is linked with the existing level of environmental education and awareness.

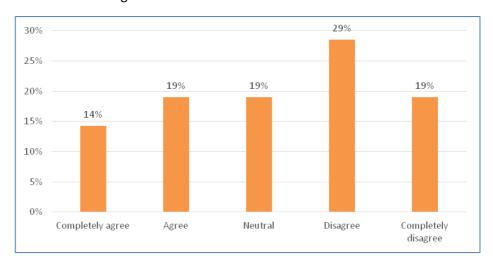


Figure 29: The so-called "ecological crisis" facing humankind has been greatly exaggerated.

On the brighter side, 81% of the sample agrees that balance of nature is very delicate and easily upset, while unanimously agreed that human activities are negatively affecting the environment. In the same context, almost 76% of the sample identified that the humans do not have the right to modify the natural environment to suit their needs. The same fraction of the respondents also agreed that the human interference with nature leads to ecosystemic degradation.

In general, the above responses are consistently showing good environmental consciousness, which however is not compatible with the characteristics of the sample presented in previous chapters and related with their willingness to pay for higher quality environmental services. This enhances the view that public awareness may only be superficial taking under consideration that a significant part of the audience had not heard about the EU Single Plastics Directive.

Moreover, the tendency of the participants to avoid extra effort or additional cost in their behavioral change preferences may be an indicator of a lack of awareness on the link between environmental challenges and the impact that environmental deterioration implies for human health and for the economic systems. .

#### 4.2. Other data collection

No other data have been used during this exercise.

#### 4.3. Gaps and barriers

The next section contains an identification of the gaps and barriers that were identified during the analysis of the survey results, which is also available in previous sections.

The main finding that was highlighted across the survey is related with awareness and perceptions of the citizens. Under all cases, there was a lack of awareness at some degree among almost all citizens that participated in the survey. This limited awareness is not only related to the perception of the citizens about the causes of the deterioration of the ecosystems but also extends to more generic issues relevant to institutional trust and sustainability.

For example, a significant knowledge gap of key European policy texts relevant to single use plastics and plastic waste in general was identified. Effective communication campaigns can lead to a) the successful implementation of the European policy and b) the building a strong European message which is critical during the current era of Euroscepticism.

In addition, a significant gap that is also closely related to low awareness is that the citizens that participated in the survey are willing to pay (WTP) higher amounts to receive better accommodation services than green environmental services during their vacations. It was evident that the citizens could not easily understand the impact of low sustainability in the natural ecosystems in their own lives and this could have been one of the factors for this WTP gap.

Going deeper in the systemic characteristics of the participants, it was evident that elderly people are less eager to understand and support environmental protection, despite identifying the importance of having a good environmental standards. These people are more reluctant in understanding core elements of sustainability and adaptation measures. In contrast, younger generations identify better climate risks and the importance of sound environmental management.

#### 4.4. Best practices

Best practices will be identified during the validation workshop taking place in the mid of December.

#### 4.5 Conclusions and recommendations

The analysis of the questionnaire responses highlighted findings that are relevant to the wider range of stakeholders related to marine litter, such as policy makers at national and regional levels, entrepreneurs of the tourist sector, tourists and researchers.

As a first finding, most of the respondents understand that the natural environment is at crisis and this is caused mainly by anthropogenic factors. Human intervention is perceived to have had bad consequences at the environmental ecosystems, while, most of the participants in the survey mentioned that humans do not have the right to modify the natural environment based on their own needs, which after all, is one of the basic notions of environmental sustainability.

In contrast to the above, the survey revealed that even though the level of environmental awareness exists, in some cases this is considered to be superficial. Around one fourth of the participants do not understand some core environmental problems and therefore cannot be engaged in further actions, either during their vacations (i.e. use of single use plastics at the beach) or in their home country.

It was also evident that the participants could not identify the importance of sustainability and its potential links to environmental and economic systems. A striking example is that a significant number of people were not aware of the extent of the marine plastic pollution and its detrimental effects on the marine ecosystems.

That gap was evident across almost all questions asked. For example, many of the participants did not consider the natural environment as part of their own living niche. In fact, they are ready to pay more for a clean hotel room but were not willing to pay more for a clean ecosystem. It is obvious that despite acknowledging the importance of sound environmental management, these respondents could not understand how environmental degradation could affect them and therefore considered it as a problem related to the wider society. Most of them were not willing to pay more than €5 to receive green environmental services during their vacations.

In addition to the above, even though a significant part of the sample identified the importance of preserving the natural environment and have already stopped using plastic bags, plastic straws and other single use plastics, few were aware of key European policies on plastics (such as the Plastics Directive). In more structural characteristics, higher levels of awareness were denoted among younger people, whereas people belonging to older age classes appear to be more reluctant in understanding core elements of sustainability and designing adaptation measures. Higher income families of the sample have not yet developed the need to purchase greener vacations, a finding which is significantly different to the tourist sectors of other EU Member States (Italy, Sweden, Norway, etc.).

Even though a great share of the responses identified the significance of environmental responsibility, it was observed that the WTP was low. Additionally, when the cost factor was removed from their decision, the respondents were willing to adapt their needs. When the participants in the study where asked to rate different behavioral change strategies, they showed preference to methods that do not involve additional efforts or costs. This of course is linked with the effect of social momentum, which surpasses with the design and implementation of effective policies.

# 5. PORTUGAL

This section is composed by: i) surveys and questionnaires applied, ii) other data collection, iii) gaps and barriers identified by stakeholders regarding plastic problem, iv) best practices indicated by stakeholders.

## 5.1. Surveys and questionnaires

This section includes: i) the methodology adopted and, ii) the results obtained from surveys and questionnaires for tourists and fishermen.

# 5.1.1. Methodology

#### **Tourists**

Questionnaire design was adapted from Croatian team. The questionnaire consisted mainly of closed-ended questions. Open-ended questions were used for age, country of origin and some numbers respondents have to say (e.g. how many people traveling with the respondent and how many nights staying at Lisbon).

Regarding, surveying two approaches were used: i) face to face approach, done by FCT NOVA team, on October 16 2019 in Port of Lisbon and, ii) online approach between October 16th and 31st - tourists in Port of Lisbon received a flyer with the questionnaire link. In both approaches English and Portuguese versions were used. Data analysis was done by FCT NOVA team.

#### Fishermen

Questionnaire was designed by FCT NOVA and APLM team. The questionnaire is mainly composed by closedended questions. Open-ended questions were used for age, years of experience, vessel characteristics and few questions where respondents were able to specify in detail some answers.

Surveying occurred between November and December 2019, in several fishing ports in North, Center, Lisbon Metropolitan Area and South Regions in Portugal. It was used only Portuguese version of the questionnaire. Data analysis was done by FCT NOVA team.

Both questionnaires can be found in the Annex II.

#### 5.1.2. Results

Results of surveying consisting in two parts, namely tourists' survey and fishermen's survey.

Other results of this WP can be found on the section 3.2., regarding the results of other stakeholders interviews and research, as well as the waste compositional campaigns carried out for plastic waste generated on passengers cruises, cargo and fishing sectors.

## 5.1.2.1. Tourists' survey

33 participants answered the questionnaire. Most of questionnaires (94%) were obtained by face to face approach.

The questionnaire consists mainly of closed-ended questions. Some questions have the option to describe or add comments, which was also registered, although they are not statically analyzed in this report.

Characteristics of survey respondents are: i) gender, ii) age, iii) country of origin and, iv) level of education.

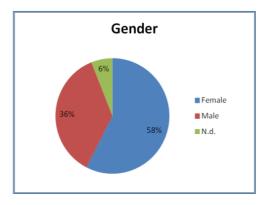


Figure 30: Gender.

Regarding gender, 58% of the total of respondents was female, 36% male and only 6% there is no data (Figure 30).

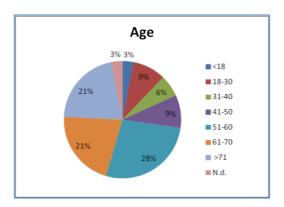


Figure 31: Age.

More than 70% of respondents have 50 or more years old, as shown on Figure 31.

There were a lot of countries registered as the respondents' country of origin, but most of them were from European countries, representing 82% of total answers (i.e. Belgium, Czech Republic, France, Italy, Hungary, Netherlands, Portugal, Slovenia, Switzerland and the United Kingdom). The rest 18% respondents were from America (i.e. Brazil, Canada and Uruguay).

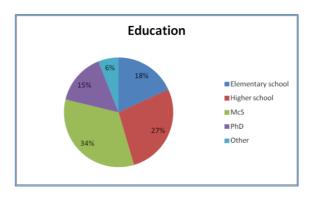


Figure 32: Level of education.

When asked about their level of education (Figure 32), 34% of the total respondents pointed Master degree, 27% higher school, 15% PhD degree and 18% of elementary school. Only for 6% was registered another level of education, without specifying which.

## Holidays' characteristics

To better understand holidays' characteristics, respondents were asked about: i) how many people traveling, ii) accommodation costs per day, iii) holidays' costs per day, iv) number of nights staying at Lisbon, v) level of importance of some aspects when planning holidays.

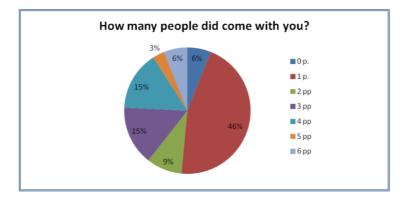


Figure 33: Number of people on holidays.

Most of the respondents travel in couple (46%) or in group/family (48%, 3 to 6 people), as shown on Figure 33. Only 6% were traveling alone.

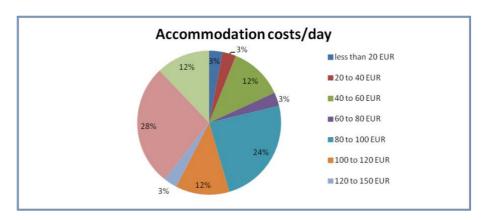


Figure 34: Accommodation costs per day.

Regarding only accommodation costs per day (Figure 34), 67% admitted that costs are around 80 or more Euros per day (24% - 80 to 100 Euros/day, 12% - 100 to 120 Euros/day, 3% - 120 to 150 Euros/day and 28% - more than 150 Euros/day). Few respondents pointed less than 20 Euros/day (3%), 20 to 40 Euros/day (3%) and 60 to 80 Euros/day (3%). No data was registered for 12% respondents.

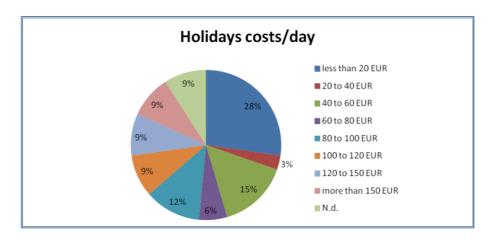


Figure 35: Holidays costs per day.

Concerning total costs of holidays (Figure 35), the perception of respondents indicated less the accommodation costs/per day in general. In that case: i) 28% of total respondents pointed out less than 20 Euros/day, ii) 15% of total respondents indicated 40 to 60 Euros/day and, iii) 12% indicated 80 to 100 Euros/day. No data was registered for 9% of total answers.

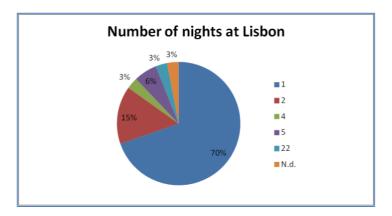


Figure 36: Number of nights at Lisbon.

When asked for how many nights passengers were staying at Lisbon (Figure 36), most of the total respondents indicated 1 night (70%) or 2 nights (15%).

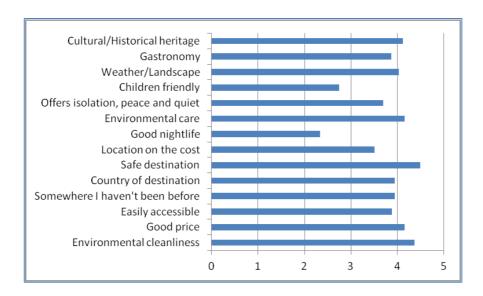


Figure 37: Important aspects when planning a vacation.

Regarding different aspects that were used to plan holidays (Figure 37), in average safe destination is the one that is highlighted by the respondents in terms of importance.

## Environmental issues on holidays

Environmental issues on holidays are described in: i) plastic free destination, ii) willing to pay for a location that invests in environmental responsibility, iii) importance of ecological standards attributed by respondents, iv) plastic products - intention to use or replace, v) knowledge about the existence of EU Single Use Plastic Products Directive, vi) agreement with environmental statements and, vii) the perception of Lisbon environmental standards in comparison with respondents country of origin.



Figure 38: Plastic free destination option.

When asked about if respondents had the option to choose a plastic free destination (Figure 38), 76% answered without any doubt they choose a plastic free destination than another that did not implemented environmental measures.

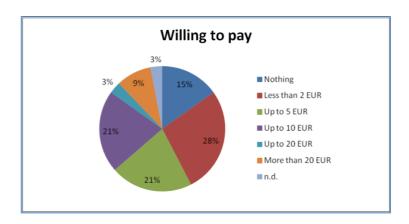


Figure 39: Willing to pay for a location that invests in environmental responsibility.

Regarding willing to pay for a location that invests in environmental responsibility (Figure 39), less than 2 Euros was the answer most registered (28%), followed by up to 5 Euros option (21%) and up to 10 Euros option (21%). 15% of total respondents said they were willing to pay nothing for a location with environmental responsibility. The option of more than 20 Euros was pointed by 9% of respondents. No data was registered for 3% of respondents.

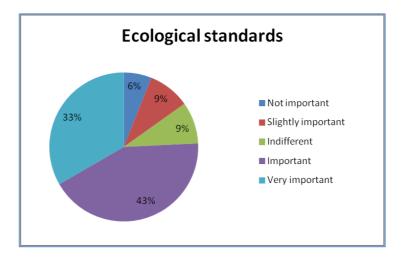


Figure 40: Importance of ecological standards.

Although they are unwilling to pay, ecological standards are important (43%) or very important (33%) for 76% of total respondents, as shown in Figure 40. Only 6% of respondents indicated that ecological standards are not important. Few answers were registered in case of slightly important (9%) and indifferent (9%) options.

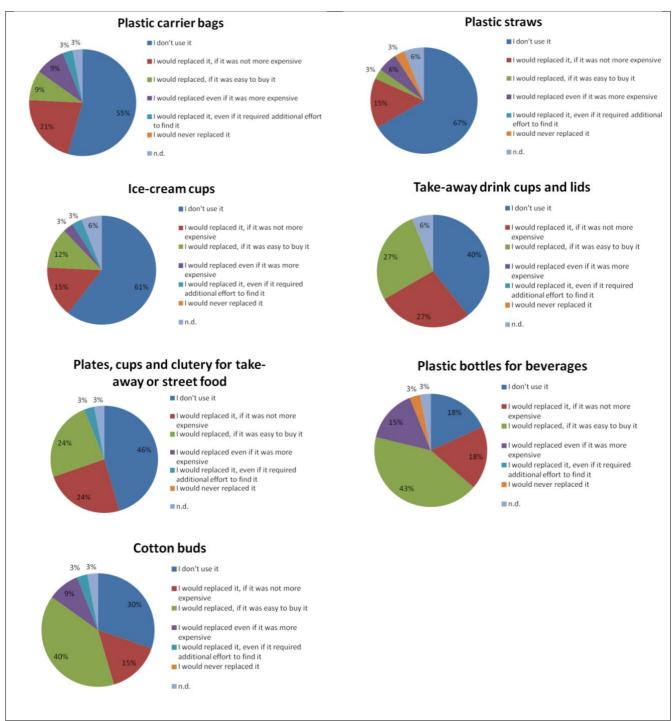


Figure 41: Plastic products to be replaced.

Regarding plastic products, tourists response patterns were found to vary from item to item (Figure 41). Nevertheless, respondents said that they do not use at all some items, such as i) plastic straws (67%), ii) icecream cups (61%), iii) plastic carrier bags (55%), iv) plates, cups and cutlery for take-away/street food (46%), v) take-away drink cups and lids (40%), vi) cotton buds (30%) and vii) plastic bottles (18%).

For all these mentioned items, respondents would like replace them if it was not more expensive or if it was easy to buy, highlighting the convenience as the major factor for change on consumption pattern.

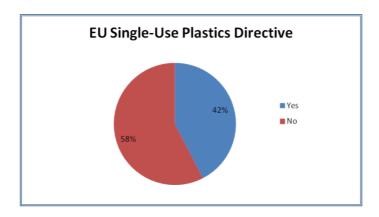


Figure 42: EU Single-Use Plastics Directive.

Most of respondents said that they did not know about the EU Single-Use Plastics Directive (58%), as shown on Figure 42.

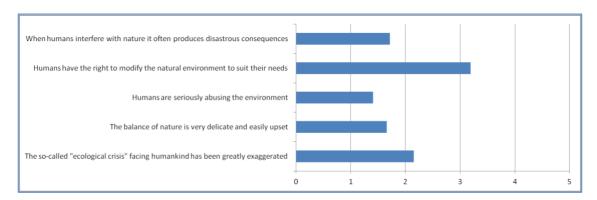


Figure 43: Level of agreement - environmental statements.

When tourists were asked to think about how they agree with the environment statements presented, most of the respondents tend to strongly agree (1) or agree (2) with all of them, as shown on Figure 43.



Figure 44: Lisbon environmental standards in comparison with country of origin.

Tourists' perception on Lisbon environmental standards (Figure 44) is very similar when in comparison with respondents' country of origin for most of them (64%). Only 15% answered they were higher or much higher (3%). Lisbon standards were lower for 9% of total respondents. 6% of tourists prefer not to answer to this question, as it was the first time visiting Lisbon and they were asked immediately after they landed. No data was registered for 3% of the answers.

## 5.1.2.2. Fishermen's survey

## Characteristics of survey respondents

Fishermen characteristics are shown for these aspects: i) ports, where they were inquired, ii) gender of respondents, iii) age, iv) number of years regarding experience, v) level of education. There were also some questions regarding their crew and vessel issues, such as: i) crew - number of fishermen, ii) crew - age, on average, iii) crew - number of female fishermen, iv) vessel size and, v) trip duration.

Face-to-face Approach was used. 86 participants answered the questionnaire in fishing ports.

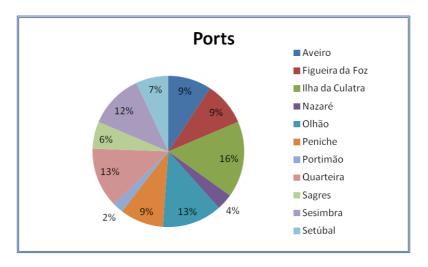


Figure 45: Portuguese ports.

Most of the answers were from Algarve region fishermen in the south of Portugal (51% of total answers, grouping Culatra Island, Olhão, Quarteira, Sagres and Portimão). Metropolitan Lisbon Area (Sesimbra and Setúbal) ports represented 19% of total answers. Similar values were registered in North region of Portugal (Aveiro and Figueira da Foz) - 18%. Center region (Peniche and Nazaré) had less fishermen answers, representing 12% of total respondents. This distribution is shown on Figure 45.

Regarding gender, all fishermen inquired were male.

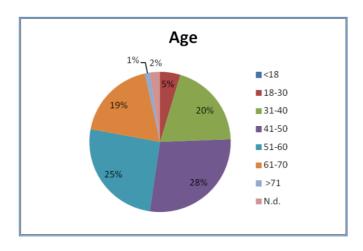


Figure 46: Age.

Most of respondents had between 41 and 60 years old (53% of total respondents). Only 5% was under 30 years old and 1% older than 71 years old. No one of the respondents was under 18 years old. No data was registered for 2% of total respondents. Age data is shown on Figure 46.

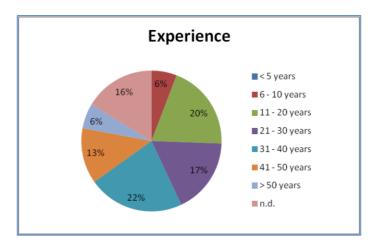


Figure 47: Experience.

When asked for the number of years of experience on fishing sector (Figure 47), 22% of respondents indicated 31 to 40 years range, 20% pointed 11 to 20 years range and 17% said 21 to 30 years range. No data was registered for 16% of the total of the respondents.

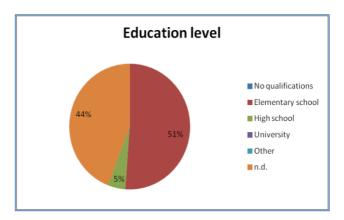


Figure 48: Education level.

Regarding level of education (Figure 48), most of the respondents indicated elementary school (51%) and high school (5%). However, no data was registered for 44% of the total of the respondents.

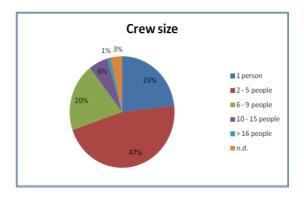


Figure 49: Crew size.

Related with the number of people that composed the crew (Figure 49), most of the fishermen indicated 2 to 5 people in the crew (47%). Some of them worked alone (23% of the total of the respondents). Only few of them have crews with 6 to 15 people (20% - 6 to 9 people, and 6% - 10 to 15 people). More than 16 people in the crew was very rare (1%). No data was registered for 3% of the total of the respondents.

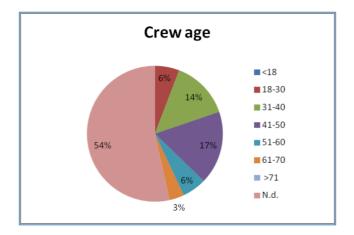


Figure 50: Crew age.

On average, the range between 31 and 50 years old was the most pointed out by the fishermen about their crew age (Figure 50). No data was registered for 54% of total answers.

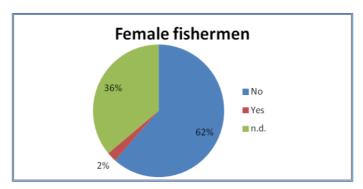


Figure 51: Female fishermen.

When asked about female fishermen in the crew (Figure 51), 62% of the total of the respondents indicated that there were no women on the crew. Only 2% answered yes to this question. No data was registered for 36% of the total of the respondents.

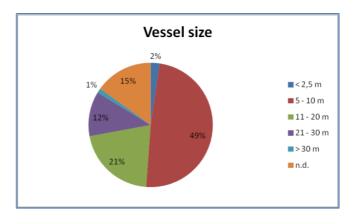


Figure 52: Vessel size.

Regarding vessel characteristics (Figure 52), 49% of fishermen indicated that their vessels size are between 5 and 10 m. 34% pointed out that their vessels were 11 or more than 30 m. No data was registered for 15% of the total of the respondents.

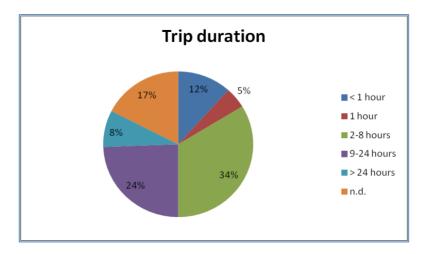


Figure 53: Trip duration.

Concerning trip duration (Figure 53), and depending on the fishing activity, answers varied. In this case, the most common range indicated by fishermen was: i) 2 to 8 hours (34%), ii) 9 to 24 hours (24%), iii) less than 1 hour (12%), iv) more than 24 hours (8%) and, v) 1 hour (5%). No data was registered for 17% of the total of the respondents.

## Fishing activity and marine litter perception

This section is focused on fishermen perception about plastic waste and marine litter, their behaviours and their roles in marine litter collection and source segregation, as well as awareness campaigns about marine litter for fishing sector.

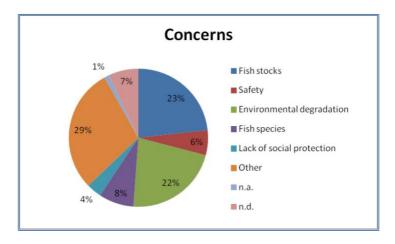


Figure 54: Concerns.

Regarding fishing sector, the respondents highlighted their concerns related with (Figure 54), namely: i) fish stocks (23%), ii) environmental degradation (22%), iii) fish species (8%), iv) their own safety (6%) and v) lack of social protection (4%). Many of them pointed out other reasons, but did not specify them. No data was registered for 8% of the total of the answers.

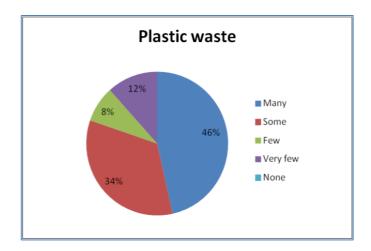


Figure 55: Plastic waste.

When asked about plastic waste, all fishermen indicated to see plastic waste on seas (Figure 55). 46% of the respondents answered many, 34% said some, 12% pointed out very few and 8% indicated few plastic waste.

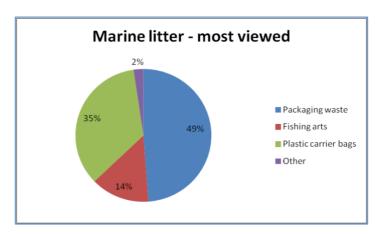


Figure 56: Plastic marine litter.

Regarding marine litter most viewed by the respondents (Figure 56), fishermen indicated packaging waste (49%), plastic carrier bags (35%) and fishing arts (14%).

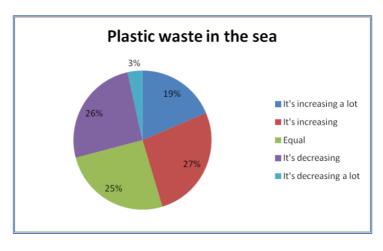


Figure 57: Perception of plastic marine litter in the sea.

When they were asked about their perception of plastic marine litter (Figure 57), it was very similar values for different answers, such as: i) it is increasing (27%) or increasing a lot (19%), ii) it is decreasing (26%) or iii) it is equal (26%). Only 3% considered marine litter it is decreasing a lot.

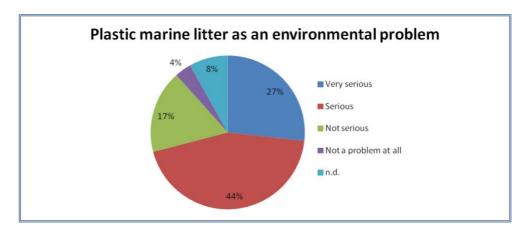


Figure 58: Perception of plastic marine litter as an environmental problem.

Plastic marine litter as an environmental problem (Figure 58) is perceived by fishermen as a serious (44%) or a very serious problem (27%). On the other hand, few fishermen considered that is not a serious problem (17%) or a problem at all (4%). No data was registered for 8% of total answers.

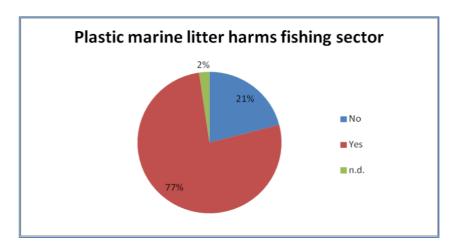


Figure 59: Perception of plastic marine litter and fishing activity.

77% of fishermen considered that plastic marine litter harms fishing activity, against 21% that did not consider it (Figure 59). No data was registered for 2% of the total of respondents.

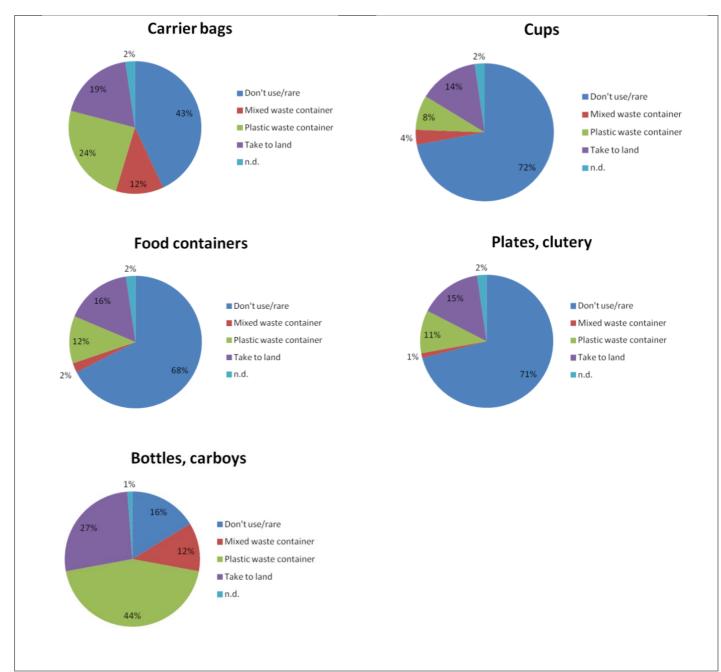


Figure 60: Plastic products consumption and waste management.

Most of the plastic items mentioned on the survey (i.e. carrier bags, cups, food containers, and plates and cutlery), many fishermen affirmed they do not use it or it is rare to use it (Figure 60). Take to land was the second option most chosen for the mentioned items. Bottles and carboys had a different response pattern, as it is a plastic product that fishermen had the habit to use.

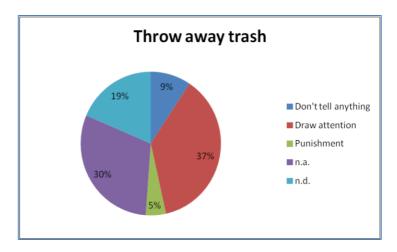


Figure 61: Throw away trash onboard.

In case of a crew member throw away trash when onboard, it was asked what fishermen do (Figure 61). Draw attention (37%) and punishment (5%) were the options most said by fishermen. Do not tell anything option was pointed out by 9%. No data was registered for 49% of total responses.

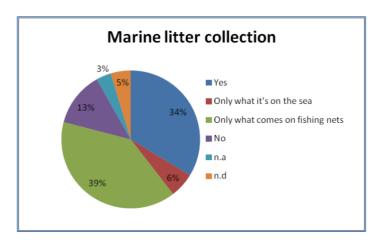


Figure 62: Marine litter collection.

Regarding marine litter collection, most of the fishermen collect it (79%), as shown on Figure 62, but in different ways: i) 39% of fishermen affirmed that only what comes on fishing nets, ii) 34% chose the option yes and, iii) 6% said only what it is on the sea. Only 13% of fishermen said they did not collect marine litter. No data was registered for 8% of responses.

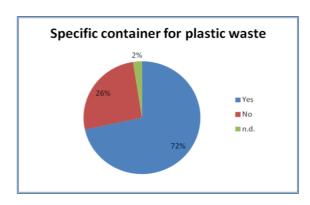


Figure 63: Specific container for plastic waste.

Regarding waste management onboard (Figure 63), 72% of fishermen said they had a specific container for plastic waste, against 26% that did not have. No data was registered for 2% of the total responses.

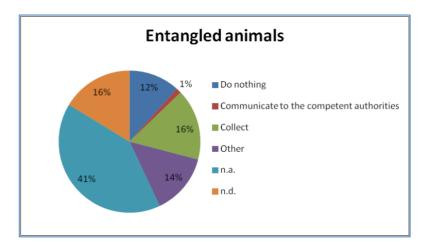


Figure 64: Entangled animals.

When asked about entangled animals on fishing arts/marine litter (Figure 64), different answers were pointed out, namely: i) 16% of fishermen said they collect them, ii) 12% of fishermen said they do nothing and iii) 1% affirmed they communicate to the competent authorities. Other option was pointed out by 14%, but it was not specified. No data was registered for 57% of total responses.

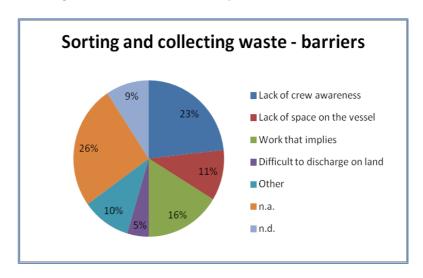


Figure 65: Barriers of sorting and waste collection.

When asked to identify barriers for sorting and collecting waste (Figure 65), and the answers were: i) lack of awareness of the crew, ii) the work that it implies (16%), iii) lack of space on the vessel and, iv) discharge on land difficulty (5%). Other option was pointed out by 10% of fishermen, but barriers were not specified. No data was registered for 35% of total responses.

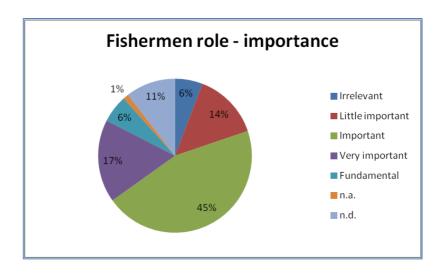


Figure 66: Level of importance attributed to fishermen role.

When asked about the importance of fishermen role against marine litter production (Figure 66), most of the answers attributed important (45%) to very important (17%) role. Even fundamental role was pointed out by 6% of total answers. Irrelevant (6%) or little important (14%) were pointed out by few fishermen. No data was registered for 12% of total responses.

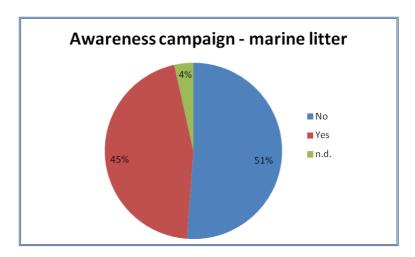


Figure 67: Awareness campaign about marine litter.

When asked if fishermen had recently been involved in an awareness campaign on marine litter (Figure 67), no was the option more registered (51%) against yes (45%). No data was registered for 4% of total answers.

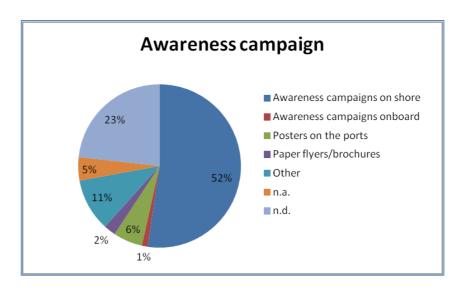


Figure 68: Awareness campaigns, how to do it.

When asked about the best way to develop awareness campaigns (Figure 68), 52% of fishermen pointed out awareness campaigns on shore (52%), posters on ports (6%), paper flyers/brochures (2%) and awareness campaigns onboard (1%). 11% of answers were registered as other option, but it was not specified. No data was registered for 28% of total responses.

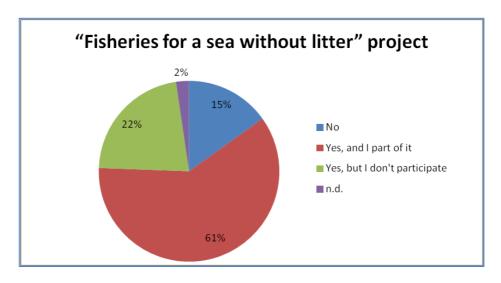


Figure 69: Fisheries for a sea without litter project.

"Fisheries for a sea without litter" project is well known by the fishermen interviewed: i) 61% affirmed they knew it and had been participating in it, ii) 22% although affirmed they knew the project they did not participate and, iii) 15% did not know the project. No data was registered for 2% of total answers.

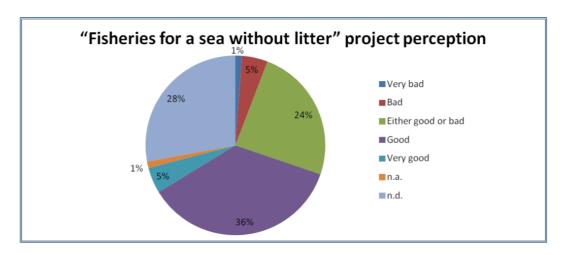


Figure 70: Perception of "Fisheries for a sea without litter project".

In general, the perception of "Fisheries for a sea without litter" project (Figure 70) is good and very good (41%). Only 1% considered a very bad and 5% a bad project. For 24% of the total of the respondents this project is not either good or bad. No data was registered for 29% of the total of answers.

### 5.2. Other data collection

Regarding other data collection, we highlighted in this section the waste characterization carried out, to obtain waste compositional data from ports.

The waste characterization in many cases has the purpose of providing information for addressing a problem or issue. As physical characterization using manual sorting or picking analysis is time-consuming and expensive, and thus such analysis is often done on limited samples (size and number) and usually not very often (Lagerkvist et al., 2010). In this case, it was possible carried out specific campaigns regarding plastic waste generated in one cargo ship, in one passenger's ship and in one fishing port.

## 5.2.1. Methodology

Waste physical compositional campaigns were prepared in order to know more about waste generated in the Portuguese Ports. Only plastic waste (bale waste or in containers) were analysed.

Two campaigns were organized in October: i) Port of Lisbon - October 17 and, ii) Port of Sesimbra - October 30.

In Port of Lisbon it was possible to characterize plastic waste from one cruise ship and one cargo ship. The cruise ship chosen was the same that team applied the surveys o passengers on the day before.

Manual sorting was used. Sample was sorted and grouped by material (visually identifiable fraction in the waste with common features such as paper/cardboard, glass, plastic, composites, metal or others). Subfractions were then weighted and registers were made, in order to analyse data obtained.

## 5.2.2. Results

Results are organized regarding sectors, namely: cargo, tourism and fishing sectors.

## Cargo sector

Table 1 shows the results obtained for cargo sector waste plastic characterization.

Table 1: Waste compositional data - plastic waste - cargo sector.

Material	Catagory	Quantity (i	Quantity (in weight)				
	Category	kg	%				
	Bags	0,6	7,1				
Plastic	Boxes	3,0	33,0				
	Non packaging	5,4	59,9				
Total		9,0	100,0				

In the case of waste physical characterization from cargo sector, 100% was plastic waste: i) around 40% packaging waste (bags and boxes) and, ii) 60% of non packaging waste.



Figure 71: Plastic waste compositional campaign - cargo sector.

## Tourism sector

The cruise ship arrived in October 16 at Port of Lisbon and discharge 15 waste bales of plastic (1 934 kg). All plastic waste bales had cardboard to give it structured, and they were wrapped with plastic film, as shown on Figure 72.





Figure 72: Plastic waste compositional campaign - tourism sector.

Results from waste compositional characterized are shown on Table 2.

Table 2: Waste compositional data - plastic waste - tourism sector.

B.d. at a wind	Catagoni	Quantity,	Quantity, in weight			
Material	Category	kg	%			
Composite (Tetra Brik)	Beverages packaging	23,1	3,1			
	Cardboard	84,9	11,4			
	Cardboard	15,9	2,1			
	Cardboard boxes	18,5	2,5			
Danar/sardhaard	Paper	59,8	8,0			
Paper/cardboard	Paper/cardboard	123,8	16,6			
	Paper/mixed waste	0,9	0,1			
	Hands tissue	22,3	3,0			
	Napkins/hand tissues	2,3	0,3			
Metals	Metals	2,0	0,3			
	Mixed packaging	81,5	10,9			
Mixed and other	Mixed waste	65,6	8,8			
	Personal protective equipment	2,2	0,3			
	EPS	0,2	0,0			
	Non packaging	13,6	1,8			
	Bags	5,1	0,7			
Plastic	Bottles	64,1	8,6			
	Boxes	17,2	2,3			
	Film/wrap	15,6	2,1			
	Mixed	128,8	17,2			

Total		747,3	100,0
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Regarding the tourism sector, the sample analyzed showed that only 36% was plastic waste. Mixed plastics and plastic bottles were the items most found on the sample.

# Fishing sector

In the case of fishing sector, one container from Port of Sesimbra was analysed. In this container, fishermen should put plastic, metal and composite (e.g. Tetra Brik) packaging waste, as well as other plastics such non packaging waste. Results from waste compositional campaign can be found on Table 3 and Figure 44.

Table 3: Waste compositional data - plastic waste - fishing sector.

Material	Catagoni	Quantity, in weight				
Material	Category	kg	%			
Composite (Tetra Brik)	Beverages packaging	0,2	1,0			
Paper/cardboard	Cardboard	2,0	9,5			
Paper/Caraboara	Paper	0,7	3,3			
Glass	Bottles	8,4 41				
Metals	Hazardous waste packaging	1,4	6,8			
IVIELAIS	Metals	0,3	1,7			
Mixed waste	Mixed waste	1,4	6,6			
Mixed waste	Other	0,2	0,9			
	Mixed	0,3	1,7			
	Non packaging	0,3	1,7			
	Bags	1,3	6,1			
Plastic	Bottles	1,1	5,1			
Plastic	Carboy	0,4	1,9			
	Cups	0,1	0,5			
	Film/wrap	0,2	0,8			
	Plate	0,0	0,0			
Fishing soctor	Ropes	0,5	2,2			
Fishing sector	Fishing net	0,6	2,8			
Textiles	Textiles	1,3	6,5			
Total		20,6	100			



Figure 73: Plastic waste compositional campaign - fishing sector

## 5.3. Gaps and barriers

Gaps and barriers identified by stakeholders are related with:

- Law and regulation: i) not adapted to fishing reality; ii) difference between regulation at the sea and on land;
- Activity concerns: i) plastic waste damages fish species; ii) plastic waste damages fishing nets;
- Convenience: i) it is more convenient to mix all waste in one container than sort them (e.g. lack of space in vessel for more than one container); ii) enormous quantity of plastic marine litter difficult to collect and have it all aboard, in order to bring it to land;
- Other concerns: i) awareness campaigns should be more effective (e.g. training ministered by masters
  of fishing vessels / posters on ports are not functional); ii) economic incentives could help to collect
  marine litter.

## 5.4. Best practices

Visits to cruise ships, interviews and questionnaires applied to environmental officers were another way to collect information.

Best practices were pointed by stakeholders from all sectors, as highlighted below:

- Waste prevention programs regarding plastic waste (e.g. reusable bottles);
- Sorting for recycling is a common practice in most of ships (cargo, tourism or fishing sectors);
- Alternative materials to substitute plastic materials (e.g. straws);
- Awareness campaigns for staff (tourism and cargo sectors) and/or passengers (tourism sector), or for fishermen (fishing sector).

## 5.5. Conclusions and recommendations

The development of this Work Package it was possible to learn more about three sectors: tourism, cargo and fishing sectors focused on marine litter and waste management onboard and in land.

In Port of Lisbon, it was possible to have few tourists and environmental officers perceptions about plastic marine litter, and visit waste rooms of cruise ships and verify waste management procedures. Many of cruises' companies are aware about plastic problematic. In all ships visited, waste sorting was done in order to recycling. Plastic products are being substituted by alternative materials. Some companies have already waste prevention programmes.

In partnership with APLM, many fishing ports all over the country were visited. Fishermen that are participating in the Fisheries for a Sea without Litter Project were surveyed, as well as those who are not participating in it. Both perceptions were analysed, and their main concerns are related to fish stocks, as well as how plastic waste can damage fish and/or fishing nets. Awareness campaigns are needed, but they should be more effective.

Data collected was very important, as in some cases it was the first opportunity to obtain it. But surveys, questionnaires and compositional data waste campaigns, should continue monitoring the perception, behaviours and attitudes among all stakeholders from cargo, tourism and fishing sectors.

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# **Annexes**

ANNEX I - Research Questionnaire applied in Croatia

**ANNEX II - Research Questionnaires applied in Portugal** 

## **ANNEX I - Research Questionnaire applied in Croatia**

"BIEu" - research on environmentally responsible tourist demand

Hello!

Male

Prefer not to say

We are a team of researchers and activists from Croatia working on a project in the field of climate change and seas/oceans called "BIEu" and we are trying to find out a bit more about how tourists feel about environmentally responsible destinations. So if you are anyone who is planning a vacation or currently on vacation please fill out this form until the 22nd of September 2019. This questionnaire is anonymous, short (it takes approx 3-5 min to fill):) and very useful to us so we thank you for donating your time and helping us. The information gathered in this survey will solely be used to better understand and advocate environmentalism in tourism.

A. Tell us a little bit about yourself, please :)

In this part of the questionnaire we will ask You a few basic questions about Yourself.

In this part of the questionnaire we will ask You a few basic questions about Yourself.
1. Age *
less than 10
10-20
20-30
30-40
40-50
50-60
60-70
more than 70
2. Gender *
Female

3. Country of origin *
4. Highest achieved level of education *
Elementary school
High school
Bachelor's degree (B.A.)
Master's degree (M.A.) or higher
B. Who, how much and for how long?
In this part we will ask you a few brief questions about Your vacation plans.
5. How many people are you planning to travel with, on your next vacation? *
just me
1
2
3
4
5
more than 5

How much are you planning to spend on accommodation (per night and for all the persons in your group):     *
less than 10 EUR
10-15 EUR
15-20 EUR
20-30 EUR
30-40 EUR
40-50 EUR
50-60 EUR
60-70 EUR
70-80 EUR
80-90 EUR
90-100 EUR
100-120 EUR
120-150 EUR
more than 150 EUR
7. How much are you planning to spend per day, during Your vacation? *
less than 10 EUR
10-15 EUR
15-20 EUR
20-30 EUR
30-40 EUR
40-50 EUR
50-60 EUR
60-70 EUR
70-80 EUR
80-90 EUR

90-100 EUR
100-120 EUR
120-150 EUR
more than 150 EUR
8. How many nights are You planning to stay in your first destination? *
1
2
3
4
5
6
7
8
9
10
11
12
13
14
more than 14

9. How important for You are the following aspects when planning a vacation? *
Not important at all
Not very important
Neither important nor unimportant
Important
Crucial
Easily accessible
Children friendly
Country of the destination
Offers isolation, peace and quiet
Environmentally responsible
Clean
Good price
Good nightlife
Location on the coast
Somewhere I haven't been before
10. There are two locations you are looking at, costing the same and offering the same content, one is environmentally responsible and the other isn't, which would you choose? *
I would choose the location that is environmentally responsible
I would choose a location that is not environmentally responsible
Either, it doesn't make a difference

responsibility? *
up to 2 EUR
up to 5 EUR
up to 10 EUR
up to 20 EUR
more than 20 EUR
C. Let's talk about the environment. And plastic, in particular.
12. How important are ecological standards of a destination when You are making a decision about Your vacation? $^{\ast}$
Not important at al / I Very important
12345
13. Could You compare environmental standards in Your country with the one at the planned vacation destination? Would You say that the environmental standards in Your country is *
Much lower/ Much higher
12345
14. I am willing to pay more to be in a single-use plastic free environment. *
Yes
No
15. Which of these items could you replace? *
I don't use it
I would use a replacement
if it doesn't cost me anything I would use a replacement
if it doesn't require any additional effort (ie research)
I would use a replacement even if it cost more

I would use a replacement even if it requires additional effort (ie research)
I would never use a replacement
plastic shopping
bags
plastic straws
ice-cream cups
take-away drink
cups and lids
plates, cups and
cutlery for takeaway
or street
food
plastic bottles for
beverages
Q tips (cotton
buds)
16. I am willing to pay more to be in an environment that has good waste management *
Yes
No
D And finally, some general questions about the environment, nature and humankind.
17. Have you heard of the EU Single-Use Plastics Directive?
Yes
No

18. We will show You several claims about the environment. Please state Your agreement or disagreement with them. \*

Completely disagree/Disagree/Neutral/Agree /Completely agree

The so-called "ecological crisis" facing humankind has been greatly exaggerated.

The balance of nature is very delicate and easily upset.

Humans are seriously abusing the environment

Humans have the right to modify the natural environment to suit their needs.

When humans interfere with nature it often produces disastrous consequences.

Thank you for donating your time... and please continue reading if you want to find out a bit more about the project and plastic pollution in the sea/ocean as well as how you can help.

### IF YOU WANT TO KNOW A LITTLE BIT ABOUT PLASTIC POLLUTION AND WHAT YOU CAN DO:

There are more than 8 million tonnes of plastic waste getting into our oceans and seas each year, degrading nature, killing birds, fish, turtles and whales and entering our food-chain as microplastics whether form waste waters, disintegration of larger plastic in the sea or other sources. For example, cigarette buts are the most common litter found on beaches, shores and streets, they are made of cellulose acetate, which is a type of plastic that takes up to 10 years to degrade in nature and contains many different toxins generated during smoking and one cigarette can pollute 500 litres of freshwater. This summer, dispose of cigarette butts responsibly, don't use plastic bags, cups, straws and other single -use plastic items and help us keep the oceans and coasts clean and healthy!

## IF YOU WANT TO KNOW A LITTLE BIT ABOUT US AND THE PROJECT:

We at Terra Hub work on sustainable development and specifically are working with the local community in Croatia to help clean and protect our coast and our oceans. BL.EU stands for Climate innovation in Southern European Waters, it is an EIT Climate-KIC Pathfinder project and it is being implemented in Portugal and Greece too.

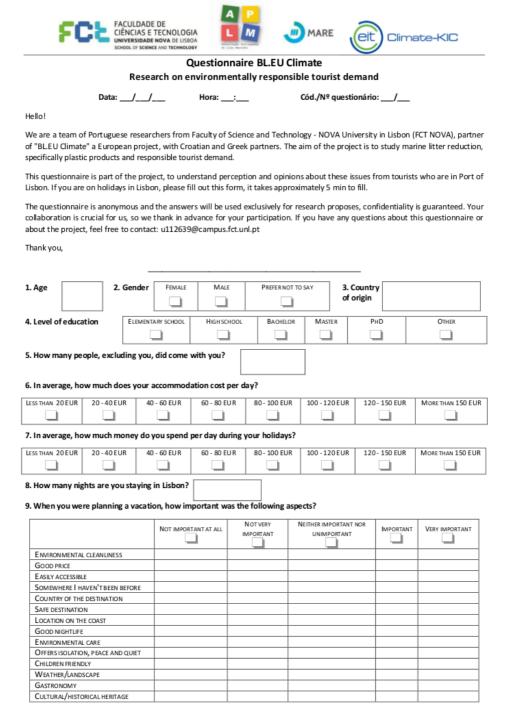
# IF YOU WANT TO CONTACT US, CONNECT, OR WATCH THE VIDEO:

You can find out more about what we do on facebook or our webpages (<a href="www.terrahub.eu">www.terrahub.eu</a> and www.bezplastike.eu) as well as see the results of this research later this fall. You can also watch a video here: <a href="https://www.youtube.com/watch">https://www.youtube.com/watch</a>?

v=lJQagfOfUvM&fbclid=lwAR2GKXCjjn4p8yMxaoRgMktV8g15UN7QvKellK WVsrQJM1znyui9Tyt6p8

## **ANNEX II - Research Questionnaires applied in Portugal**

## 1A. Tourism - English Version - face to face approach



G											_		
GASTRONOMY CULTURAL/HISTOR	NCAL HERITAGE			$\rightarrow$						+	+		
		huo destinatio	ne tha	t cost i	c tha ca	me and	offers	the came o	onton	t but one is	anvi	ironmentally	
10. If you could chose between two destinations that cost is the same and offers the same content but one is environmentally													
responsible and banned single use plastic products (packaging, cups, straws, etc.) and the other didn't do anything, which one would you chose?													
WITHOUT ANY DOUBT, THE PLASTIC FREE MAYBE THE PLASTIC FREE DESTINATION DESTINATION WITH NO PLASTIC FREE MEASURES EITHER DESTINATIONS, IT DOESN'T MAKE A													
	TINATION											RENCE	
	1	- 1	1.1									1	
											_		
11. How much, per day and per person, would you be willing to pay for a location that invests in environmental responsibility and the total ban of plastic disposable?													
	Nothing	Less than 2 EU	R	U⊬ то 5 Е	EUR UP TO 10 EUR UP		U≥ to 20 EU	Up to 20 EUR More tha		E THAN 20 EUR			
		1 1						1 6					
			$\perp$										
12. How import	tant are ecologi	cal standards of	f a des	tinatio	n when	You are	makin	ng a decisio	n abou	ıt Your vaca	tion	?	
Not in	MPORTANT				NOFFERB	NT	Т	IMPORTANT		Ves	Y IMPO	DRTANT	
		SUGHTLY IMPORTANT	_					$\Box$				1	
13. Which of th	ese items would	d you be willing	to rep	olace ar	nd in wh	nich situ	ations	?		•			
			Lwo	KLD.	Lwo		Lwou	LD REPLACED,	Lwous	D REPLACED IT, EV	EN	I WOULD NEVER	
		Loon't use it	REPLACED		REPLACE	,		IT WAS MORE		QUIRED ADDITIONA		REPLACED IT	
			WAS NO	NOT MORE WAS EASY			Đ	KPENSIVE	ER	FORT TO FIND IT			
		-	EXPENSIVE		"	· .							
_			DOP DISTRE	ISVE -							_		
PLASTIC CARRIER BAG	5										$\dashv$		
PLASTIC STRAWS											$\dashv$		
ICE-CREAM CUPS TAKE-AWAY DRINK CU											$\dashv$		
											$\dashv$		
PLATES, CUPS AND CU TAKE-AWAY OR STREE													
PLASTIC BOTTLES FOR											$\dashv$		
COTTON BUDS	DEVENINGES.										$\dashv$		
Yes No 14. Have you heard about the EU Single-Use Plastics Directive?  15. How do you agree with the following statements?													
				STRONGLY AGREE		AGREE		E UNDECIDED				STRONGLY DISAGREE	
				_	]	-	┙		D	ISAGREE		_	
THE SO-CALLED "E	COLOGICAL CRISIS" FA	CING HUMANKIND HAS								+			
BEEN GREATLY EXAC	GERATE D.		$\perp$						$\perp$				
THE BALANCE OF NATURE IS VERY DELICATE AND EASILY UPSET.													
HUMANS ARE SERIOUSLY ABUSING THE ENVIRONMENT			_						$\perp$				
HUMANS HAVE THE RIGHT TO MODIFY THE NATURAL						1		1					
ENVIRONMENT TO SUIT THEIR NEEDS.						-		+	+				
	TERFERE WITH NATUR	E IT OFTEN PRODUCES											
DISASTROUS CONSEQUENCES.													
16. Comparing	with your count	try, Lisbon envir	ronme	ntal sta	ndards	are:							
Ver	HIGHER	HIGHER			Similar	t		Lower		V	ERY LO	WER	
	_						1				i l		
							_		J				









		OF SCIENCE AND TECHN		Kasselação Port do Lixo Marinho	toposta				
Questionário BL.EU Climate									
Turistas falantes de português, que chegam/partem do porto de Lisboa									
	Data:	JJ_	Hora:	_:_	-	Cód./Nº qu	estionário: _	_/_	
Exmo(a) Senhor(	a)								
	rojeto de inve	stigação europ	eu - "BL.EU	J Climat	e", sobre a pro	ocura de ofe	rta turística a	ambiental	T NOVA) que está a mente responsável Croácia.
	a, sobre est	as questões.							negam e partem do estionário, demora
O questionário e sendo assegurad			rão tratada	s estati	isticamente e	utilizadas ex	kclusivament	e para fir	ns de investigação,
A sua participaçã esclarecimento s		•					-		cessite de qualquer ous.fct.unl.pt
Muito obrigado									
Walto obligado									
1. Idade	2. G	nero FEMINI	NO MASC	ULINO	PREFIRO NÃO ME	NCIONAR	3. País de		
				٦ I			origem		
			_	_					
4. Grau de escola	aridade	Ensino básico	Ensino Sec	UNDÁRIO	LICENCIATURA	MESTRADO	DOUTORAME	ито С	DUTRA FORMAÇÃO
				1					
						<u> </u>			
5. Para além de s	si, quantas pe	ssoas vieram o	onsigo de f	érias?					
6. Quanto custa,			-						
MENOS DE 20 EUR	20 A 40 EUR	40 A 60 EUR	60 A 80	EUR	80 A 100 EUR	100 A 120 E	UR 120 A 1	L50 EUR	MAIS DE 150 EUR
			_				-	_	
7. E quanto gasta	a, em média,	por dia, durant	e suas féria	is?					
MENOS DE 20 EUR	20 A 40 EUR	40 A 60 EUR	60 A 80	EUR	80 A 100 EUR	100 A 120 E	UR 120 A 1	150 EUR	Mais de 150 EUR
8. Quantas noite	: 6:	Lieban2							
8. Quantas noite	s vai ficar em	Lisboar							
9. Qual o grau de	e importância	que atribuiu a	os seguinte	s aspet	os quando pla	neou as sua	s férias:		
	NENHUMAIN	MPORTÂNCIA	POUCA IMPORTÂNCIA		Indiferente	ALGUMAIN	MPORTÂNCIA	MUITA IMPORTÂNCIA	
LIMPEZA / QUALIDAD	E DO AMBIENTE								
BOM PREÇO									
ACESSIBILIDADE									
LUGAR ONDE NUNCA	ESTIVE ANTES								
O PAÍS DE DESTINO				_					-
DESTINO SEGURO									
	LOCALIZAÇÃO PERTO DA COSTA / PRAIA								
ATRAÇÕES/VIDA NOT							+		1
PREOCUPAÇÃO AMBIE				_			+		
	O DATE CALLS				I .				
ADECHADO DARA COL	O, PAZ E CALMA						_		1
ADEQUADO PARA CRI. CLIMA/PAISAGEM									

Gastronomia							$\perp$				
Património cultural	/ HISTÓRICO						$\perp$				
10. Se pudesse	escolher entre d	lois destinos	que cu	istam o	mesmo	e oferece	em o	mesmo con	teúdo, s	sendo que um	ıé
ambiental mente	e responsável e	eliminou os p	olástic	os não r	eutilizá	veis (emb	alage	ens, copos,	palhinh	as, etc.), e um	outro que não
tomou estas me	didas, qual esco	olheria?									
£		T								0	
	Sem qualquer dúvda, o destino luyre de Talvez o destino luyre de plásticos O destino que não tem medidas de Qualquer um, é-me indiferente rasticos										
1	F. ASTALAS										
4								<u> </u>			
	11. Quanto, por dia e por pessoa, estaria disposto a pagar por um local que investe na responsabilidade ambiental e na										
			alsp	osto a	pagar p	or um io	ocai q	ue investe	na res	ponsabilidade	ambientai e na
elimi nação tota	i dos piasticos d	iescartaveisr									
	Nada	MENOS DE 2 E	UR	ATÉ 5 E	EUR	ATÉ 10 E	UR	ATÉ 20 EU	IR I	Mas de 20 EUR	٦
					-				.		
		-		_	-			-		_	
											_
12. Qual a impo	rtancia que atril	buiu a um de	stino I	ivre de p	plastico	s na sua o	decisa	io sobre o lo	ocal de 1	rerias?	
Neverima	IMPORTÂNCIA	Pauca import	SACIA.		NDIFERE	NTE	1	ALGUMA IMPORTÀ	NO.	Митаи	IPORTÂNCIA
					110100	h	'				
							$\perp$				_
13. Qual desses	produtos de plá	ástico estaria	na dis	posição	de sub	stituir po	r outr	os alternati	vos e ei	m que situaçõ	ies?
		1	Suga	TITUM SE	Sugar	TTUM SE			Superito	IA MESMO SE DESSE	Nunca substituiria
		Nunca	Nunca		FOSSE MAIS FOSSE			TUM MESMO SE		S TRABALHO A	THURCA SUBSTITUTION
		uso	USO		CARO ENCO		FOSS	SE MAIS CARO		ENCONTRAR	
								$\Box$	l		
SACOS DE COMPRAS DE	E DIÁSTICO				_	_			_		
PALHINHAS DE PLÁSTICO					_						
COPOS DE PLÁSTICO PA					_						
COPOS E TAMPAS PARA		.v"			_						
PRATOS, TALHERES E A											
VENDIDA NA RUA					1				l		
GARRAFAS DE PLÁSTICO	0										
COTONETES COM HAST											
	_		•		•				•		
SIM NÃO											
14. Já ouviu fala	r da diretiva eu	roneia sohre	nrodu	tos de n	lástico	de uso úr	nico?				
14. Ja Odvid Tala	ii da diretiva ed	ropeia sobre	produ	tos ac p	nastico	uc uso u					
15. Qual o seu g	rau de concordá	ância com as	seguin	tes afir	marñes	2					
15. Quai o scu g	rau de concorde	aricia corri as	3C g uii	ice s a i ii i	nações	•					
				Сомсово		Concordo		NEM CONCORDO, NEM		Discondo	Discorpo
				TOTALMENTE		CONCORDO		DISCORDO		DISCORDO	TOTALMENTE
				_							
A CHAMADA "CRISE	E ECOLÓGICA" QUE A F	H UMANIDADE ENFR	ENTA								
TEM SIDO MUITO EX	CAGERADA										
O EQUILÍBRIO DA N	ΠE										
PERTURBAD O											
Os seres humano											
Os seres humanos têm o direito de modificar o ambiente											
NATURAL PARA ATE	NDER ÀS SUAS NECESSI	IDADES									
Quando os seres humanos interferem na natureza,											
MUITAS VEZES PROD	DUZ CONSEQUÊNCIAS D	ESASTROSAS									
16. Comparativa	amente ao seu p	país/local de	origen	n, os pad	drões ar	mbientais	da ci	dade de Lis	boa são	:	
				_							
Muiton	MAIS ALTOS	Mais auto	os		SEMELHA	NTES		Mas baxos		Митом	IAIS BANOS
	<b>」</b> │	-			_	l	1	$\neg$		_	_
-											



# Hello!

We are a team of Portuguese researchers from FCT NOVA University, partner of BLEU Climate European Project, with Croatian and Creek partners.

The aim of this project is to study marine litter reduction, specifically plastic products and responsible tourist demand.

We invite you to participate in this study by answering a short questionnaire about the perceptions and opinions of tourists on these issues.

The questionnaire is anonymous and the answers will be used exclusively for research proposes.

Your collaboration is crucial for us, please use the QR code or the link

#### HTTP://SHORTURL AT/ALQR3

Please fill out this form until the 31st October, and thank you in advance for your participation!















# Olá!

Somos uma equipa de investigadores Portugueses da Faculdade de Ciências e Tecnologia da Universidade NOVA de Lisboa, parceira do projeto BLEU Climate. Para além de Portugal, participam neste proj também a Grécia e a Croácia.

Convidamos a participar neste estudo, respondendo a um breve questionário sobre as percepções dos turistas em relação a esta temática.

O questionário é anónimo, as respostas serão tratadas exclusivamente para fins de investigação, sendo assegurada a sua confidencialidade.

A sua colaboração é crucial para nós. Use o código QR ou o link abaixo para aceder ao questionário:

Por favor, preencha este formulário até o dia 31 de outubro. Agradecemos desde já a sua participação!



















## Questionário BL.EU Climate Pescadores

Local:	Data://	Hora:	: Cód	./№ questionário:/
Bom dia/Boa tarde				
Chamo-me e faço parte de uma equip NOVA) que está a colaborar num projeto de in plásticos. Para além de Portugal, participam ta	vestigação europe	eu, intitulado "BL.El	J Climate", sobre lixo mari	
No âmbito deste projeto interessa-nos conhec lixo marinho.	er a realidade do:	s portos de pesca e	as opiniões e as práticas o	dos pescadores relativamente ao
Não se importa de me dispensar 5 min do seu t	empo para respo	nder a um pequeno	questionário?	
(Se sim, muito obrigada(o); se não, posso comb	inar consigo uma	outra hora?)		
I. Dados sobre a embarcação				
Nome da embarcação:		ARTE DE PESCA:		
Nome do Mestre:		Duração média da via	AGEM (H) :	
TAMANHO EMBARCAÇÃO:		PORTO ONDE HABITUALM (DESCARREGA PESCADO/RESID	ENTE FAZ AMARRAÇÃO:	
II – Caraterização do mestre e da tripulação	io	(Darwing Carry) Its	, and a second	
1. Idade do mestre 2. Género	FEMININO 🔲	MASCULINO 3.	Anos de experiência na p	esca
4. Nível de escolaridade SEM HABILITAÇÕES	Ensino Básico	SECUNDÁRIO	ENSINO SUPERIOR	O UTRA FORMAÇÃO
5. № médio de pescadores a bordo	6. № de pesca	dores mulheres	7. Idade média da 1	ripulação
II. Perceção e importância atribuída ao lix	-			
8. Atualmente, o que mais lhe preocupa na su		· ·	· · · · ·	
STOCKS DE ALGUMAS FALTA DE SEGURANÇA ESPÉCIES MUITO BAIXOS DURANTE A FA INA	DEGRADAÇÃO DO MEIO MARINHO	DESVALORIZAÇÃO DO PESCADO	FALTA DE PROTEÇÃO SOCIAL À PROFISSÃO DO PESCADOR	OUTRO, QUAL?
9. Quando anda na faina, vê muito lixo d	e plástico no mar	? MUITO AL	GUM POUCO MUI	TO POUCO NENHUM
10. Qual o tipo de lixo de plástico que mais ob	serva no mar (esc	colha 1):		
EMBALAGENS DE PLÁSTICO	ARTES DE PESCA	SACOS DE PLÁSTICO =	Outros, qu	IAIS?
11. Na sua opinião, a quantidade de lixo de pla	ístico que vê no r	mar está a aumenta	r ou a diminuir de ano par	a ano?
A AUMENTAR MUITO A AUME	NTAR M	MANTÉM-SE IGUAL	A DIMINUIR A	IMINUIR BASTANTE
12. Isto para si representa um problema a	nbiental	MUITO GRAVE	GRAVE POUCO GRAV	NÃO É UM PROBLEMA
13. Na sua opinião, pode o lixo de plástico no	mar prejudicar a	atividade de pesca?		
NÃO SIM SESIM, DE C	UE FORMA?			

## IV. Comportamentos a bordo

14. A sua tripulação costuma trazer para bordo algum destes produtos? .... e o que lhes fazem depois de usados?

									I		
			NÃO USAM/É RARO	DEITAM NO	CAIXOTE DO LIXO	COMUM	DEITAM NO DESTINADO AO		LEVAM CONSIG	O PARA TERRA	
SACOS DE PLÁS	TICO										
COPOS DE PLÁS											
CAIXAS DE PLÁS		OMIDA									
PRATOS, TALHE											
GARRAFAS OU C											
15. Como reage perante um elemento da sua tripulação que deita uma embalagem ou outro tipo de resíduo para o mar?											
NÃO DIGO NADA — CHAMO A ATENÇÃO — CASTIGO — COMO?											
16. Recolher	m o lixo de	plástico que e	stá no mar ou nas red	les de pesca	?						
SIM =	SIM SÓ O QUE ESTÁ NO MAR SÓ O QUE O VEM NAS PRÓPRIAS REDES NÃO SE NÃO, PORQUÉ?										
			m contentor específic oduzidos a bordo?	o para o lix	o de plástico,	que rec	olhem do mar	ou que faz	æm a bordo,	ou é	
SIM G			O PESO DE LIXO RECOLHIDO?	NÃO 🗀	SE NÃO, PORQU	Ė?					
					_						
18. No caso	de avistam	ento de anima	nis enredados, vivos o	u mortos, co	omo reagem?						
NÃO FAZEMOS	NADA 🕌	COMUNICAMOS À	S AUTORIDADES COMPETENTE	S REC	OLHEMOS —	OUTRAS F	ORMAS, QUAIS?				
			dades para a separaçã					-		1	
FALTA DE SENS II		FALTA DE ESPAÇ		ISTO IMPLICA	DIFÍCIL DESCARR	EGAR EM	Outr	AS CAUSAS, QL	JAIS?		
TRIPULA	vÇÃO	EMBARCAÇÃ	io		TERRA						
20. Que imp	ortância a	tribuiu ao pape	el dos pescadores no c	ombate ao	lixo marinho	?				-	
	IF	RELEVANTE -	POUCO IMPORTANTE	IMPORTANTE	<u></u> мито в	MPORTANTE	FUND	AMENTAL			
V. Sensibil	lização/f	ormação									
21. Nos últin	nos anos f	requentou algu	ıma ação de sensibiliz	ação sobre	lixo marinho?	?					
NÃO 🔲	SIM	SE SI	M, QUAL E QUANDO (ANO)?								
22. Qual julg	ga ser a me	lhor forma de	sensibilizar um pesca	dor para o p	roblema do li	ixo marii	nho? (escolha	1 opção)			
AÇÕES DE SENSIE	BILIZAÇÃO	AÇÕES DE SENSIBILIZ NA EMBARCAÇÃO	- CARIAZES N	IA ZONA PORTU	ária 🔲	FOLHETO	S DE PAPEL	Ou	TRAS FORMAS, QI	JAIS?	
23. Já ouviu falar do projeto "Pesca por um mar sem lixo"?											
NÃO SIM, E PARTICIPO SIM, MAS NÃO PARTICIPO PORQUE NÃO PARTICIPA?											
(Se <b>não</b> , explicar em que consiste)											
24. Como avalia o projeto "Pesca por um mar sem lixo"?  Muito Mau Mau Nem Bom, Nem Mau Bom Muito Bom											
	IVIU		IAIMO	HEMBOM	, sem mau		JOM	WIGHT	O SOM		
							<u> </u>				
O inquérito finalizou (apontar neste espaço observações dos inquiridos ou apontamentos do entrevistador sobre a forma como decorreu a entrevista e que sejam relevantes para o estudo)											
					Αε	ua colah	oração foi mu	ito import	ante, muito r	obrigada(o)	
					4 5	ua coidb	o ação foi mi	o import	ance, munto c	igada(U).	