

CleanAtlantic

Tackling Marine Litter in the Atlantic Area

Identification of floating litter pollution and response
techniques in ports of the Atlantic area

Key findings of the online survey



d-sidd



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EXECUTIVE SUMMARY

As part of the Interreg project CleanAtlantic, Cedre elaborated an online survey on floating litter in ports, with a two-fold objective:

- (i) to map and characterise floating litter presence in ports of the Atlantic area; and*
- (ii) to review clean-up operations (techniques and resources, costs) and good clean-up practices.*

The survey was disseminated in the countries involved in the CleanAtlantic project (France, Ireland, Portugal, Spain and United Kingdom) for one month and a half in November 2022.

The survey targeted the stakeholders involved in implementing and financing clean-up, namely: administration/agency, regional/departmental authority, local authority/municipality, port authority/harbour master.

This report presents the results of the survey conducted in France, Ireland, Portugal, Spain and United Kingdom, starting with a description of the respondents, the size of their port area, their role in conducting clean-up operations. Overall, 71 usable responses were obtained on a total of 202 responses, with 34 responses for France, 2 for Ireland, 8 for Portugal, 12 for Spain, 12 for United Kingdom and 3 non located. The number of responses appears to be limited which can be explained by difficulties in accessing the targeted stakeholders.

The informations obtained on the diagnosis of floating litter pollution indicated that the respondents consider the pressure on the environment from plastic pollution to be moderate and that there are no real seasonal variations in the intensity of pollution. The sources would mainly come from fishing and leisure activities (recreational boating, tourism, restaurants) but also from urban wastewater treatment systems.

The identification of port clean-up techniques is also a part of the report, presenting the environmental considerations of the respondents and the overall clean-up operations, the resources involved and their cost. The main operators involved in the clean-ups are the port authorities. They can deploy human, material and financial resources to carry out these cleaning operations.

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Overview and key findings

1. SURVEY BACKGROUND AND IMPLEMENTATION

As part of the Interreg project CleanAtlantic, Cedre elaborated an online survey on floating litter in ports, with a two-fold objective:

- (i) to map and characterise floating litter presence in ports of the Atlantic area; and
- (ii) to review clean-up operations (techniques and resources, costs) and good clean-up practices.

The expansion of the CleanAtlantic project has resulted in another survey, this time targeting accumulation areas and collection techniques in port areas.

The survey elaborated in French, was translated in English, Spanish and Portuguese with the support of CleanAtlantic partners, and disseminated in France, Ireland, Portugal, Spain and United Kingdom with the support of CleanAtlantic partners and the consultant D-SIDD (<https://d-sidd.github.io/>). The survey was launched in November 2022 for 1.5 month.

The survey targeted the stakeholders involved in implementing and financing clean-up, namely: administration/agency, regional/departmental authority, local authority/municipality, port authority/harbour master.

The survey questionnaire circulated is presented in **Appendix 1**. The key information obtained from the survey responses is presented below.

Acknowledgements

We would like to express our sincere thanks to the organisations and individuals who agreed to share the link to the survey via their own network, and of course to those who took time to complete the survey.

2. SURVEY RESULTS

2.1. Number of respondents who completed the survey

The link to the online survey was emailed by the partners to stakeholders potentially involved in port clean-ups. Certain recipients, who were asked to share the link within their own network, helped to broaden the survey's reach.

202 responses were collected online (Figure 1) in the 5 countries targeted (France, Ireland, Portugal, Spain and United Kingdom). Of the 202 responses, just over **35%** were considered usable, i.e. 71 responses (Figure 2). The survey analysis presented below is based on these 71 usable responses.

Unusable questionnaires consisted mainly in:

- (i) Blanks;
- (ii) Partially filled in with irrelevant responses;
- (iii) Duplicated.

Thus, questionnaires considered "incomplete" but giving information that could nevertheless be used in the data processing were also used.

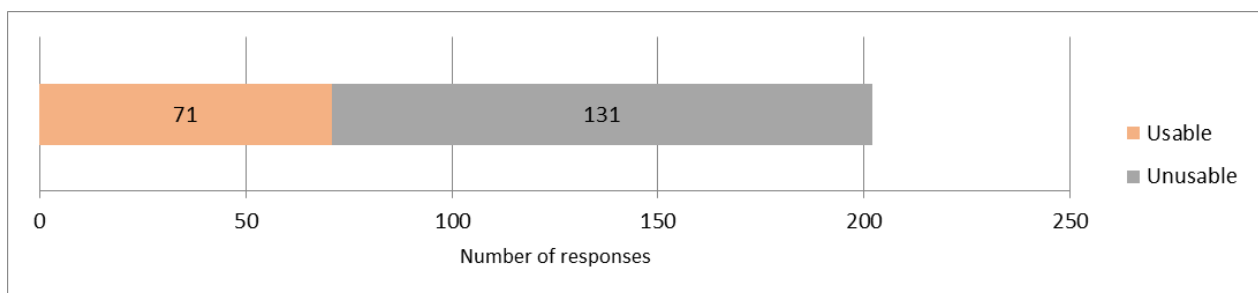


Figure 1: Number of usable responses (71 of 202)

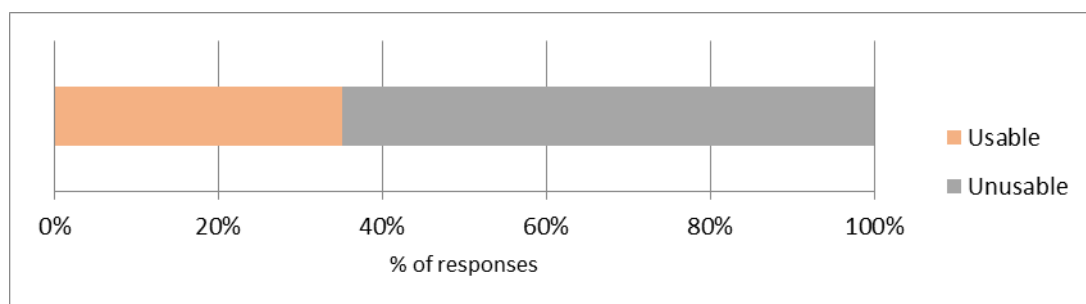


Figure 2 : % of usable responses (around 35%)

2.2. Description of the respondents

The questionnaire was targeted to local stakeholders liable to have good field knowledge of the ports: (i) local authorities, (ii) port master, (iii) protected areas.

It must be noted that very few respondents provided GPS coordinates and the name of the port for which they had information, leading to difficulties in mapping the ports mentioned in responses. Indeed, most questionnaires were returned "unlocated" and most locations had to be added manually based on

information obtained in the rest of the questionnaire. Despite the limited response rates and percentage of usable questionnaires, the 5 Atlantic area countries are represented in responses even if the majority of responses were obtained in France (Figure 3).

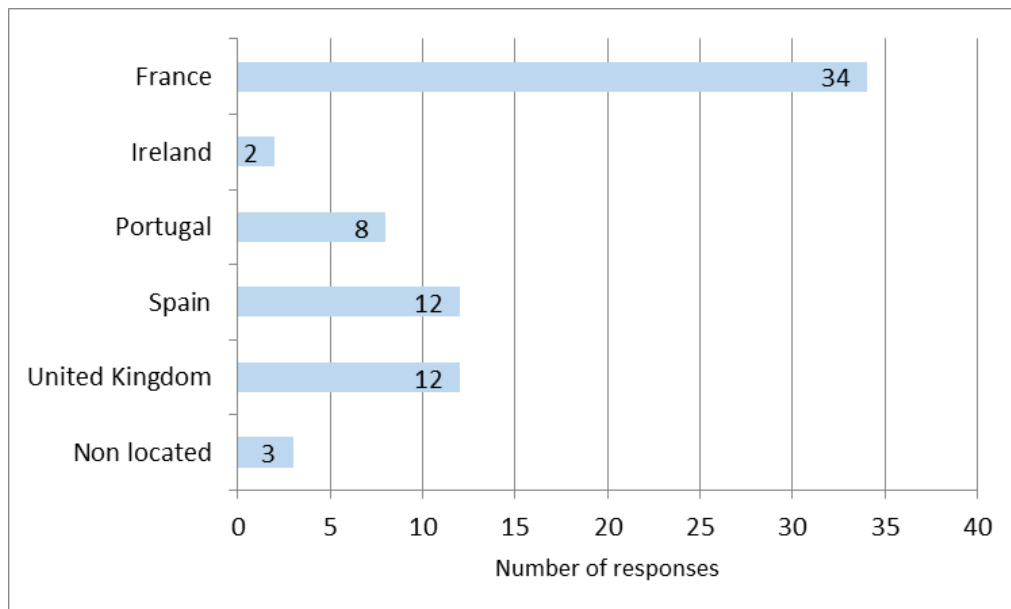


Figure 3 : Number of respondents related to their country (71 respondents)

Among the respondents, the organisation types with the highest response rate (Figure 4) were: (i) administration/agency and (ii) port authority/harbour master, (iii) local authority/municipality. The "other" category was the first one selected by the respondents. The comments, however, seem to indicate a lack of knowledge of their organisation's status. Several respondents who answered "other" appear to be harbour managers or members of an administration (as specified in the comments). In fact, these respondents did not have access to the questions in the questionnaire that were intended for them. The other comments mentioned joined syndicates, concessionaires, public establishments of an industrial and commercial nature or even fishing professionals.

Due to the limited participation rate, several categories, such as organizations in charge of a protected natural site and private clean-up operators, are poorly represented. Furthermore, it seems difficult to make comparisons between countries as the response rate is low in each country.

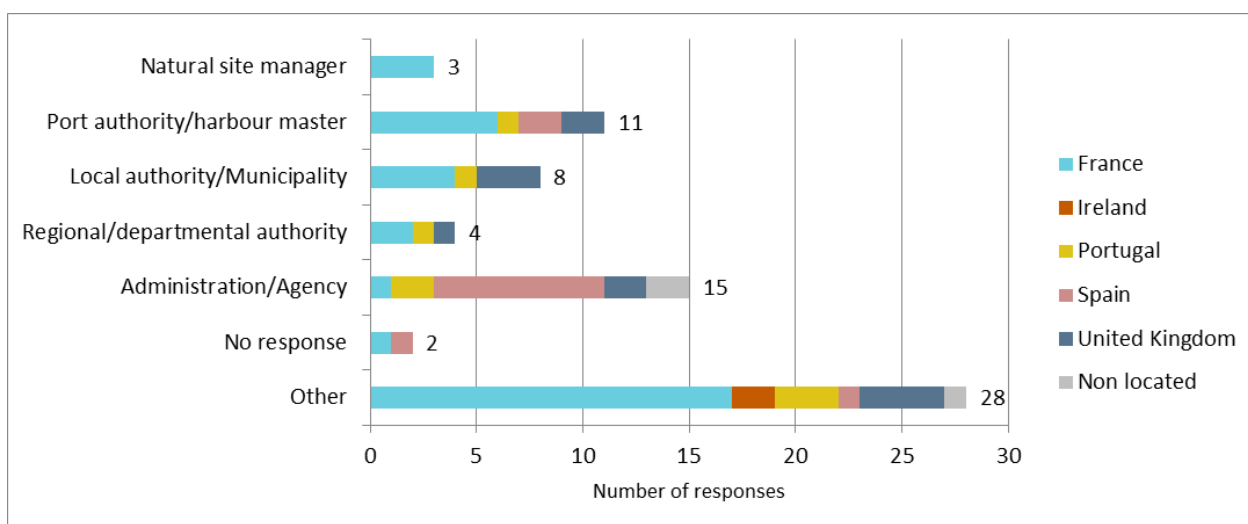


Figure 4: Status of the survey respondents (71 respondents), according to the countries

2.3. Role of the respondents in field of port clean-up

The main role played in port cleaning by the organisations surveyed is the implementation of cleaning operations (65% of respondents; Figure 5). Approximately 34% of respondents fund these operations. For those who answered "other", the comments indicated: no involvement in port clean-up, occasional volunteering, or law enforcement.

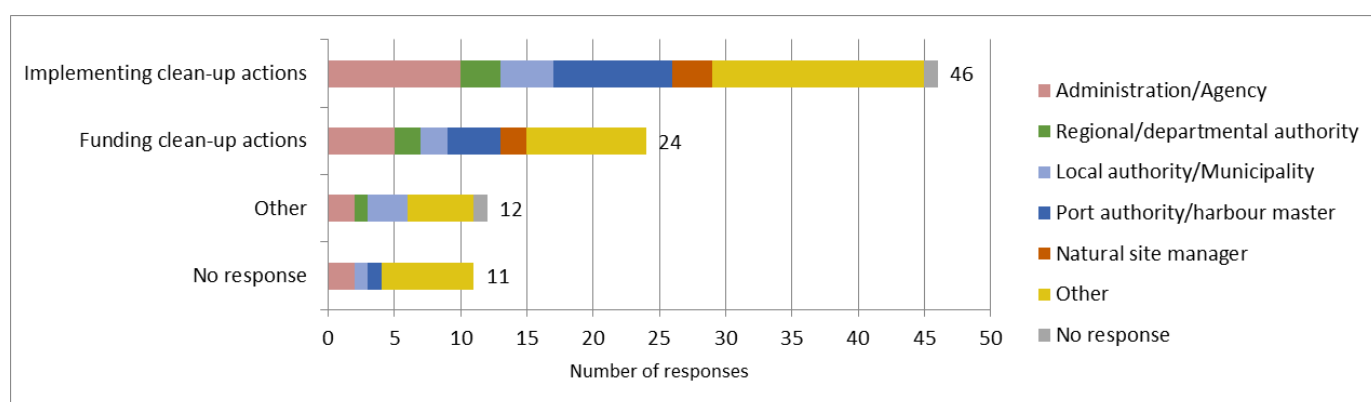


Figure 5 : Respondent organisation's roles in port clean-up according to their status (several possible responses per respondent; 71 respondents)

2.4. Ports considered by the respondents

According to the responses of those who answered that they were a port authority (Figure 8) (thus excluding those who checked "other" and specified that they were nevertheless a port manager), all types of ports are represented, with a greater representation of marinas (Figure 6) and port with a local scope (Figure 7).

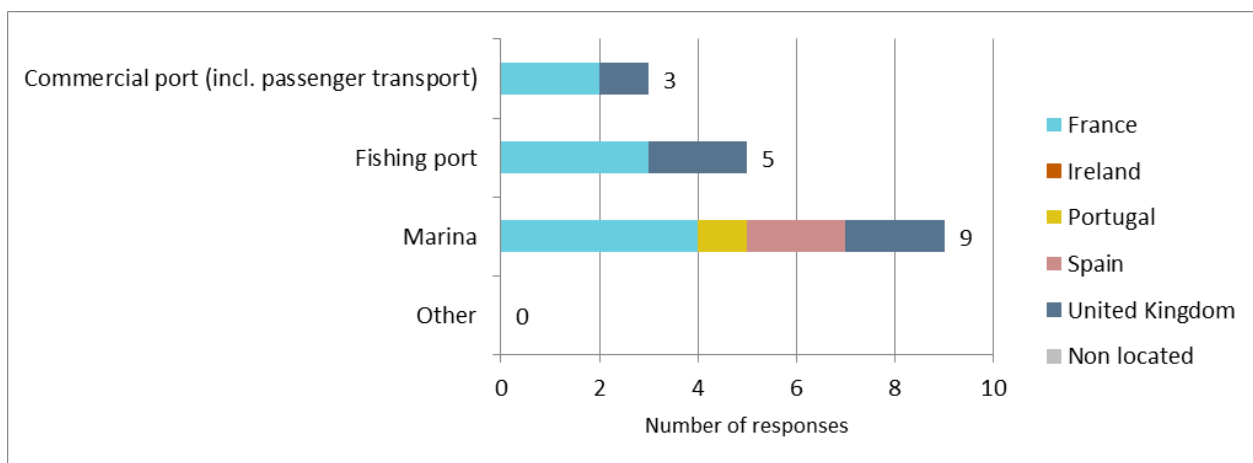


Figure 6: Type of ports considered by respondents according to their country [multiple responses possible; 11 respondents (port authorities)]

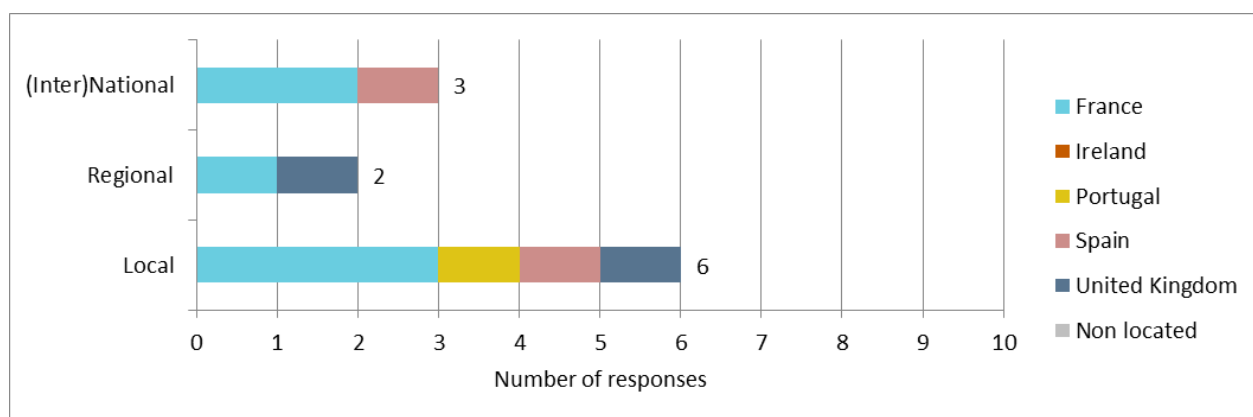


Figure 7: Size of ports considered by respondents according to their country [multiple responses possible; 11 respondents (port authorities)]

Geographical distribution of port authorities responding to the online survey.

11 of 71 respondents

Source : Online survey "Beach litter survey 2022 - CleanAtlantic projet".

Map design : Cedre, 2023

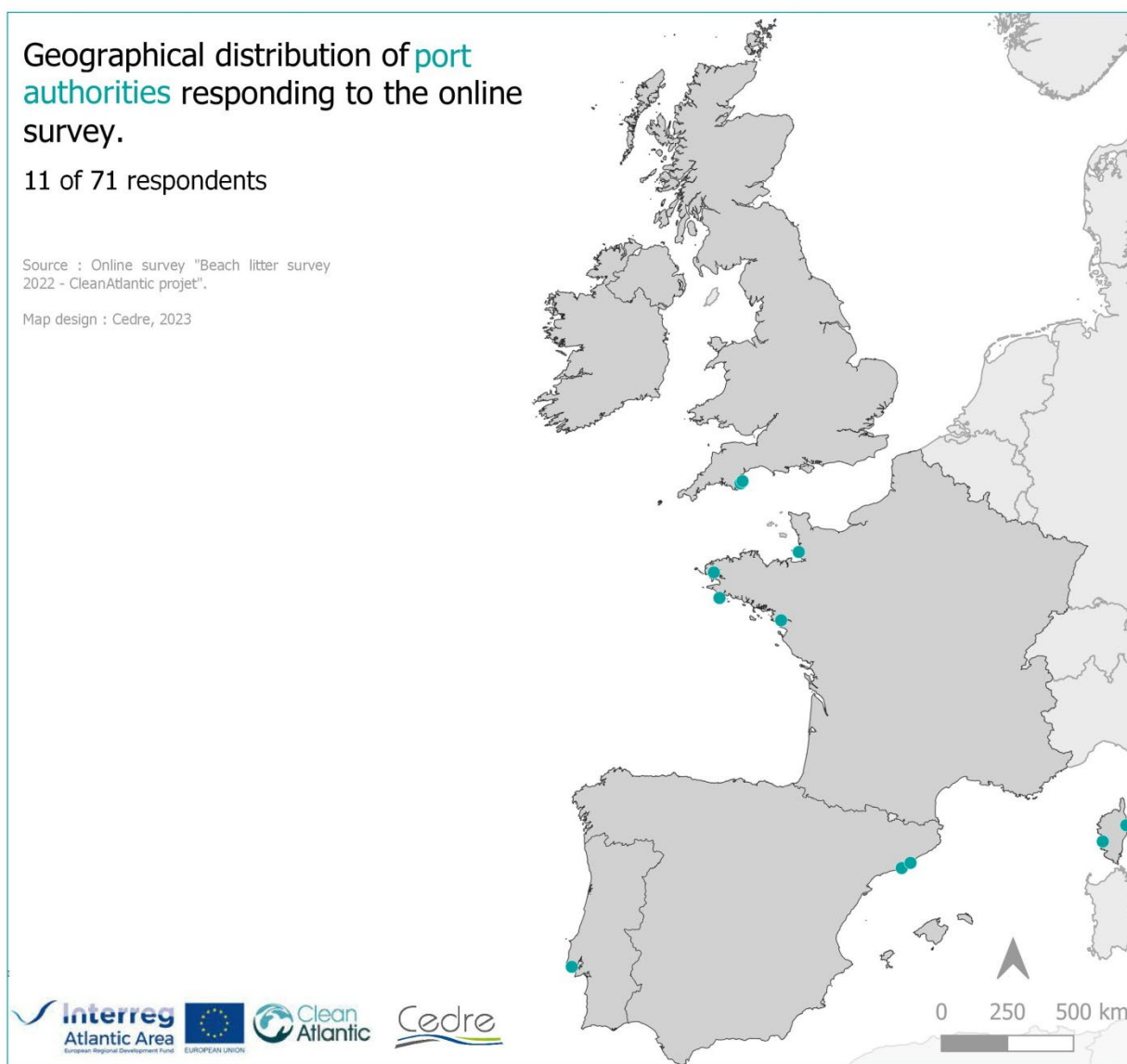


Figure 8: Distribution of port authorities responding to the survey (11 of 71 respondents)

3. DIAGNOSIS OF LITTER POLLUTION IN PORT AREAS: PERCEPTION OF THE POLLUTION

3.1. Litter pollution pressure

About 44% of the respondents consider that pollution causes a moderate pressure on their port area and 11% consider this pressure strong (Figure 9). 39% consider this pressure weak and 3% completely non-existent.

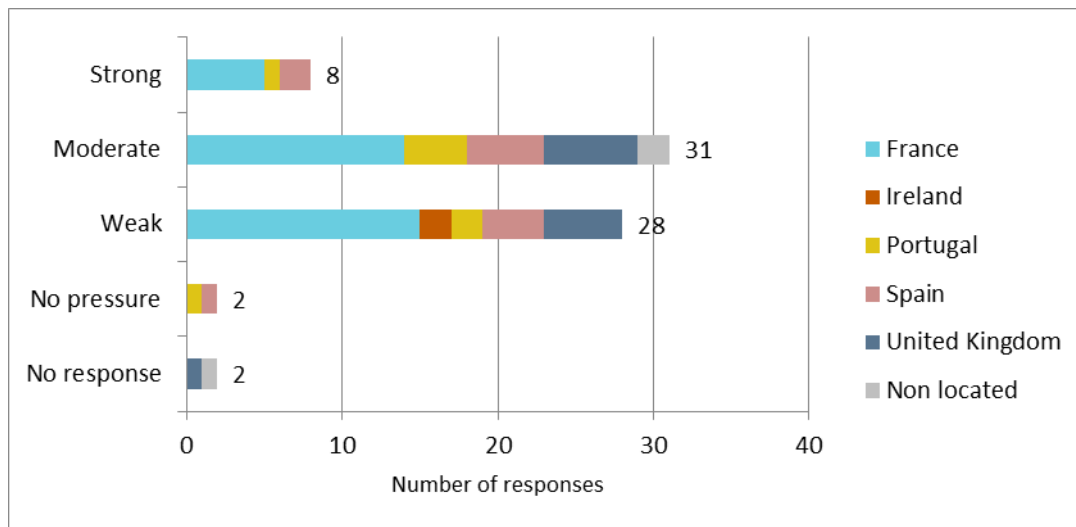


Figure 9: Intensity of the perceived port litter pollution (only one response possible; 71 respondents)

3.2. Perceived impact

The majority of respondents (58%) did not answer the question of the nature of the impact potentially caused by floating litter pollution in port areas (Figure 10). However, 24% felt that there would be an ecological impact on the fauna and flora, 15% felt that the impact would be mainly economic, with damaged landscapes. The remaining 3% thought that the impact would be more of a loss of economic activity.

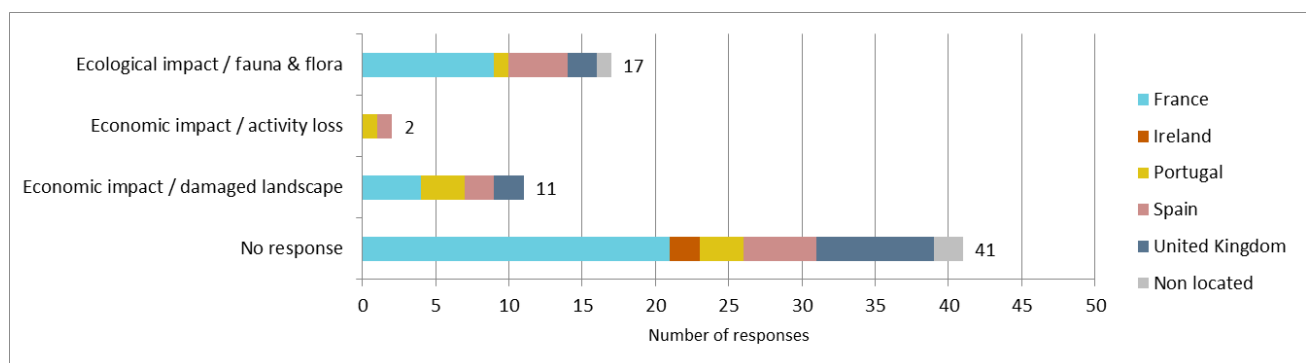


Figure 10: Perceived pressure of the pollution (only one response possible; 71 respondents)

3.3. Seasonal specificities of litter presence

The responses (Figure 11) show that the two seasons considered to be most conducive to the presence of litter in the ports are summer (31% of the respondents; more direct dumping by users and tourists, greater flow of people) and winter (30% of the respondents; due to weather conditions including wind and rain). However, 32% of respondents consider that there is no difference between the seasons and that the presence of litter is a persistent problem. Spring and autumn are not considered particularly conducive seasons for litter accumulation in ports, with 8% and 14% of respondents checking off those seasons, respectively.

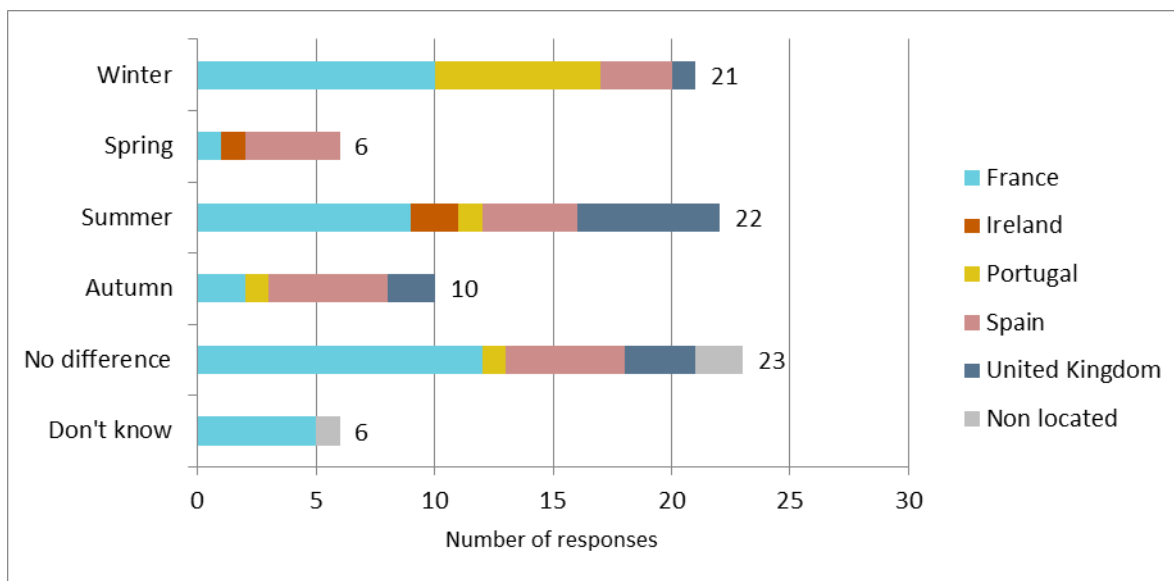


Figure 11: Seasonality of litter presence (several possible responses per respondents; 71 respondents)

3.4. Sources of litter pollution

According to the respondents, the main sectors of activity that generate litter in port areas (Figure 12) are fishing (51% of the respondents), followed by the tourism and the recreational boating and fishing sector (respectively 37 and 35%). This is closely followed by urban drainage and waste water systems (34%), then the shopping/food retail sector (27%) and the port/harbour/marina sector itself (24%). The sectors with a similar rate of incidence (< 20%) are: aquaculture, industry, other leisure/sport.

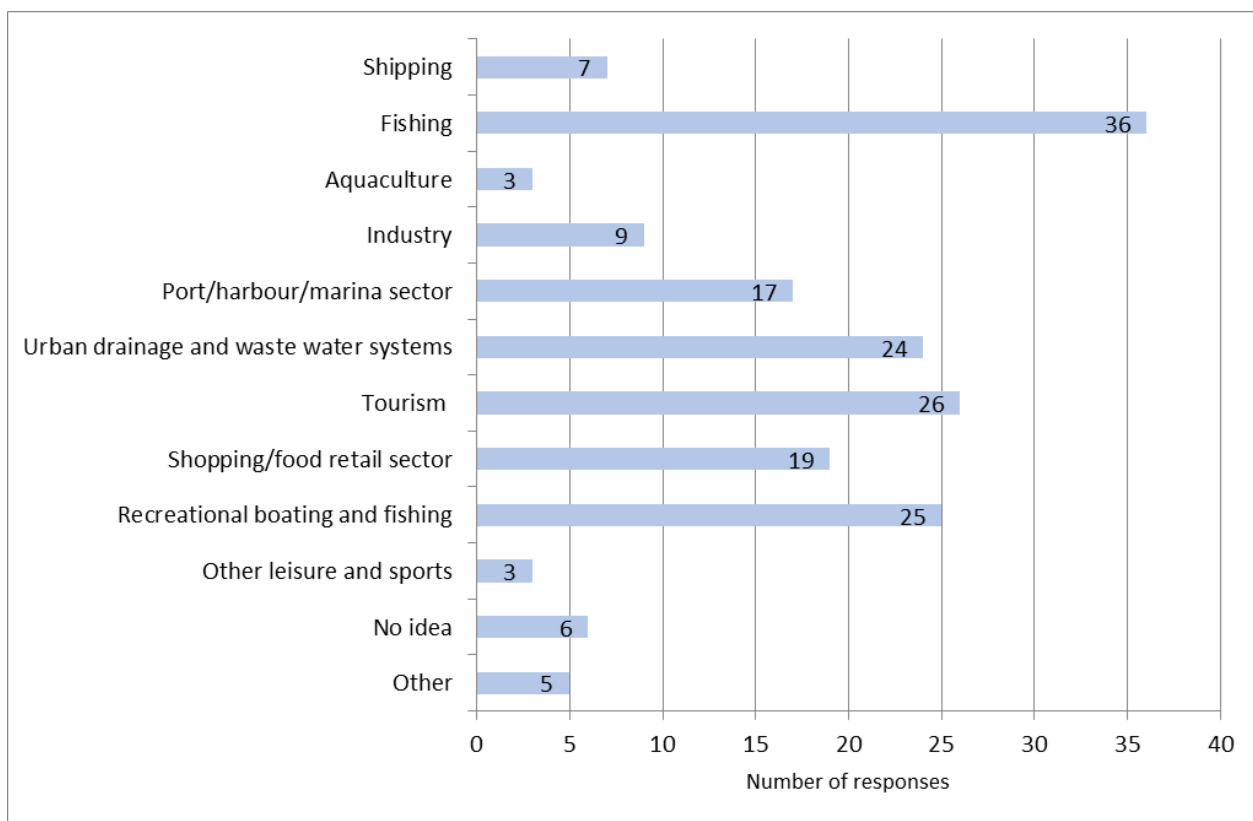


Figure 12: Principal sector of activity that generate litter in port area (3 possible choices; 71 respondents)

The differences between countries are not significant (Figure 13) except for Ireland for which the results are not very representative given the very low response rate. If we exclude Ireland and the non-localized responses, we notice that the same sectors are mentioned in roughly similar proportions. However, the shopping/food retail sector is not mentioned in Spain and the urban drainage/waste water system is not mentioned in the UK, whereas it is considered in France, Portugal and Spain as a relatively important source of litter in the port areas (between 12 and 27% of the respondents).

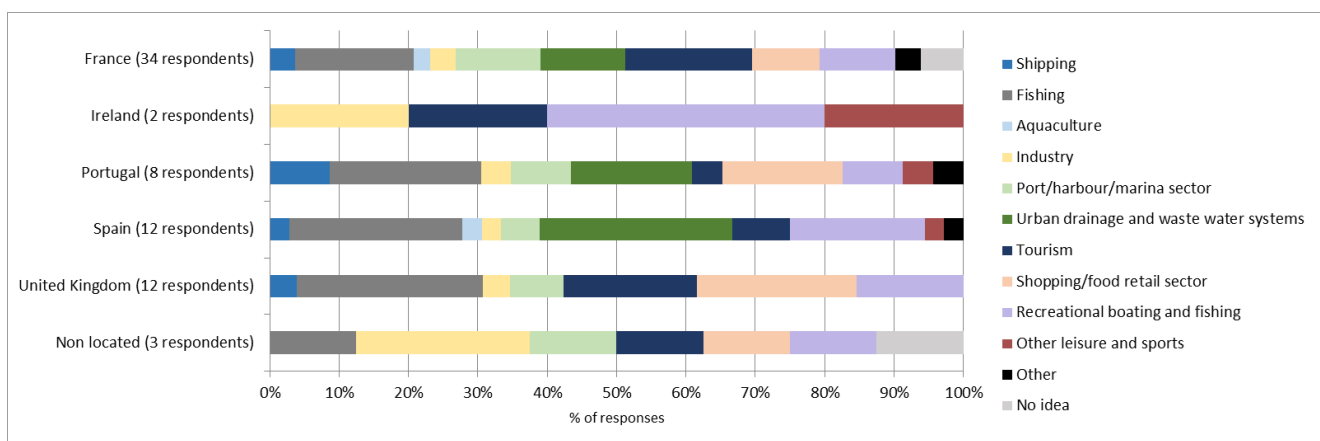


Figure 13: Principal sectors of activity that generate litter in port areas by countries (%)

3.5. Most common types of litter found in the ports

The materials and litter types most often mentioned in the comments are:

- 1) Plastic: packaging, fragments, nets and ropes, bottles, polystyrene (fish box in particular);
- 2) Wood: worked wood, trunks;
- 3) Far behind the first two but mentioned in third position, hydrocarbons and greases, and also aluminium cans.

Other litter types or materials were mentioned several times in the comments which included glass, cigarette butts, and dead animals.

3.6. Focus on foamed polystyrene

For about 46% of respondents, expanded polystyrene is not particularly present in their port areas; 25% of respondents confirmed the presence of EPS/XPS and 28% did not answer the question (Figure 14).

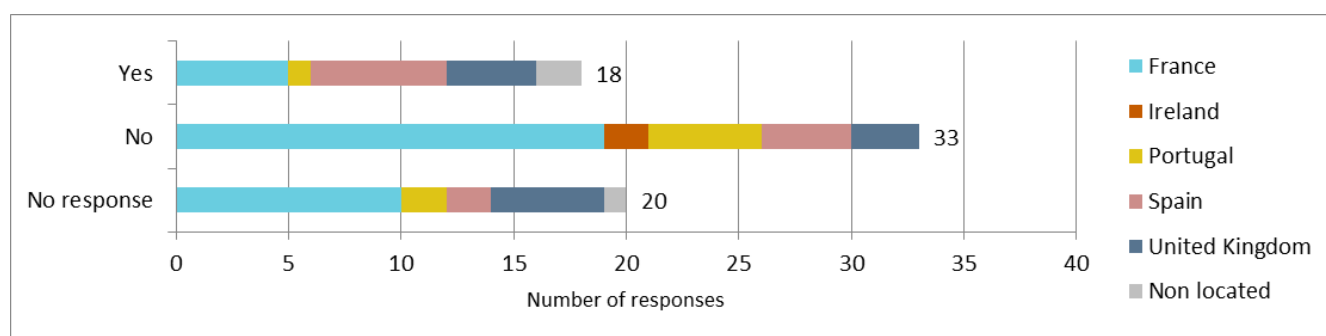


Figure 14: Presence of foamed polystyrenes (EPS/XPS) according to the respondents (only one response possible; 71 respondents)

3.7. Pathways of entry for litter

For 73% of the respondents (Figure 15), the litter found in ports comes directly from the docks (either lost or directly dumped by the users). 60% of the respondents also consider that the litter comes from land and is transported by the wind, and 58% that it is lost from boats or thrown overboard (for litter type such as fishing waste, yachting equipment, hydrocarbons). 34% of respondents also believe that rivers and urban storm drainage / waste water systems are pathways for entry of litter in ports. Only 2% have no idea where the litter comes from.

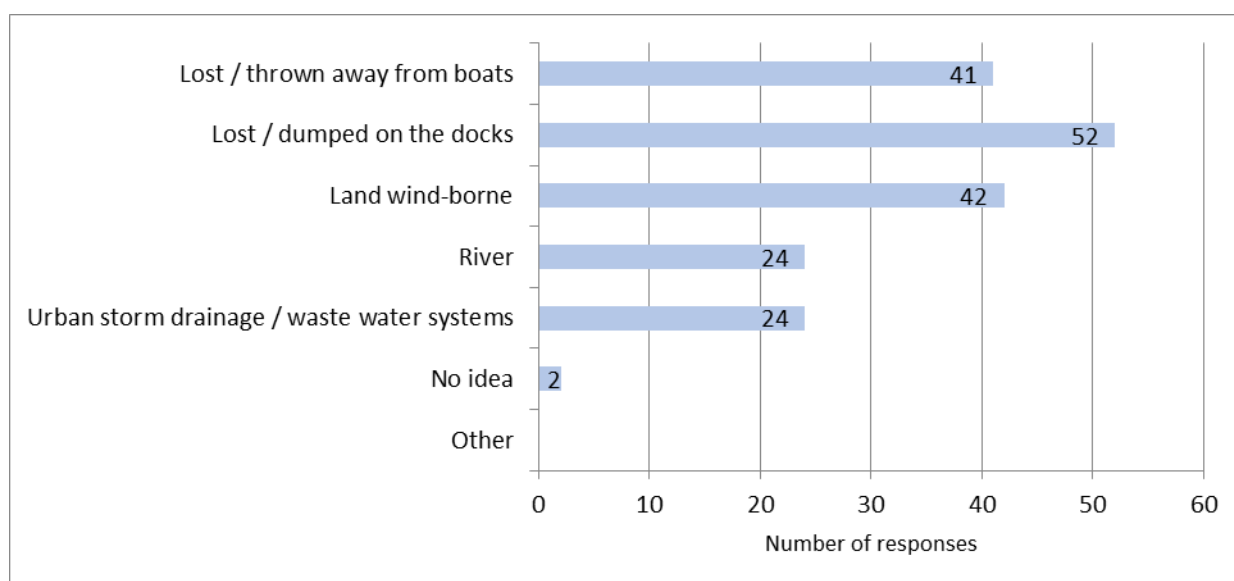


Figure 15: Main pathways of entry for litter into port areas (several responses possible per respondents; 71 respondents)

Regarding the differences in responses between countries (Figure 16), it is possible to note that the three main entry pathways mentioned earlier are unanimously cited. No respondent from the UK mentioned the river as a litter entry pathway, unlike the other responding countries. As Ireland only had two respondents, the responses are not representative and therefore cannot be compared with the other countries.

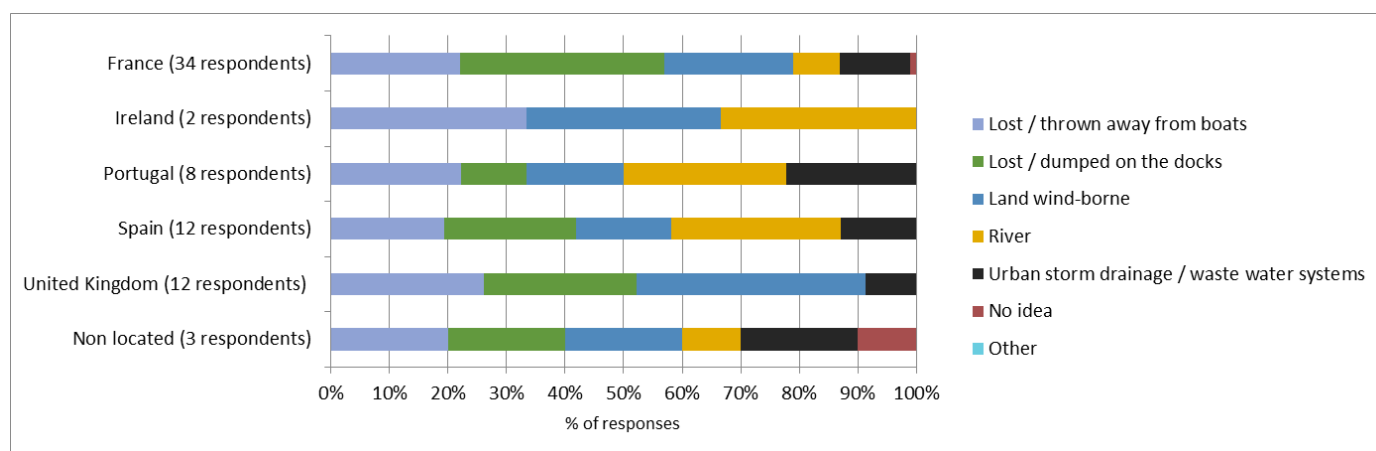


Figure 16: Main pathways of entry for litter into port areas by country (%)

4. PORT CLEANING OPERATIONS: IDENTIFICATION OF TECHNIQUES AND COSTS

The results of the survey indicate that several factors should be considered almost equally in the implementation of port area cleaning actions (Figure 17). Access and price were mentioned by 35% of respondents, organization and management by 34%, logistics by 32% and availability by 28%. Less emphasized by respondents were the size and weight of the litter (14%) and the consideration of sensitive natural areas (13%). Other limiting points were also highlighted in the comments, such as the transportation of litter for treatment on land, the disposal of litter and the frequency of cleaning.

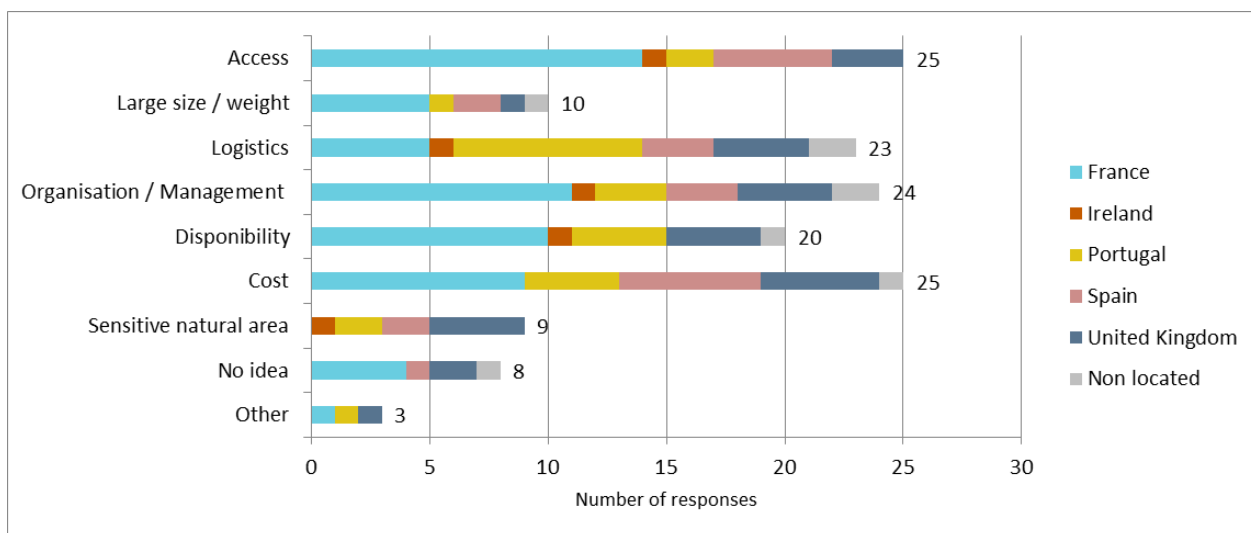


Figure 17: Key factors to consider for port areas clean-up per country (several possible responses; 71 respondents)

4.1. Environmental considerations

For respondents, the first factor taken into consideration in the implementation of litter collection in port areas (Figure 18) is the presence of species (28% of respondents), followed closely by the sensitivity of habitats (27%; in particular seagrass beds, as specified in the comments). About 15% of the respondents think that the environment is not taken into account in the implementation of cleaning actions. They justified this by mentioning the lack of environmental impact of these actions (removal benefits the species, disturbance is not a problem). For 8% of them, the sensitivity to erosion is also taken into consideration. Only 3% of respondents selected the "other" category, mentioning for example the fuel consumption for the implementation of mechanical collection (boat or robot).

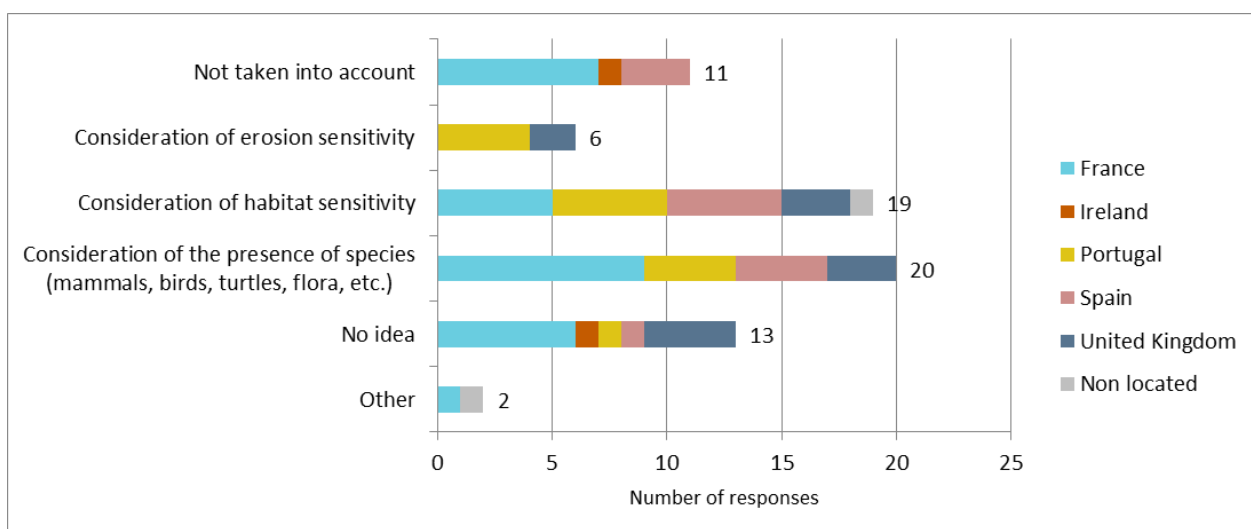


Figure 18: Environmental issues taken into account (several possible responses; 71 respondents)

4.2. Type of cleaning

Almost all respondents (48%) answered that the cleaning of their port area is exclusively manual (Figure 19). 25% indicated that cleaning is both manual and mechanical and only 3% indicated that it is exclusively mechanical. There was no significant difference in responses between countries.

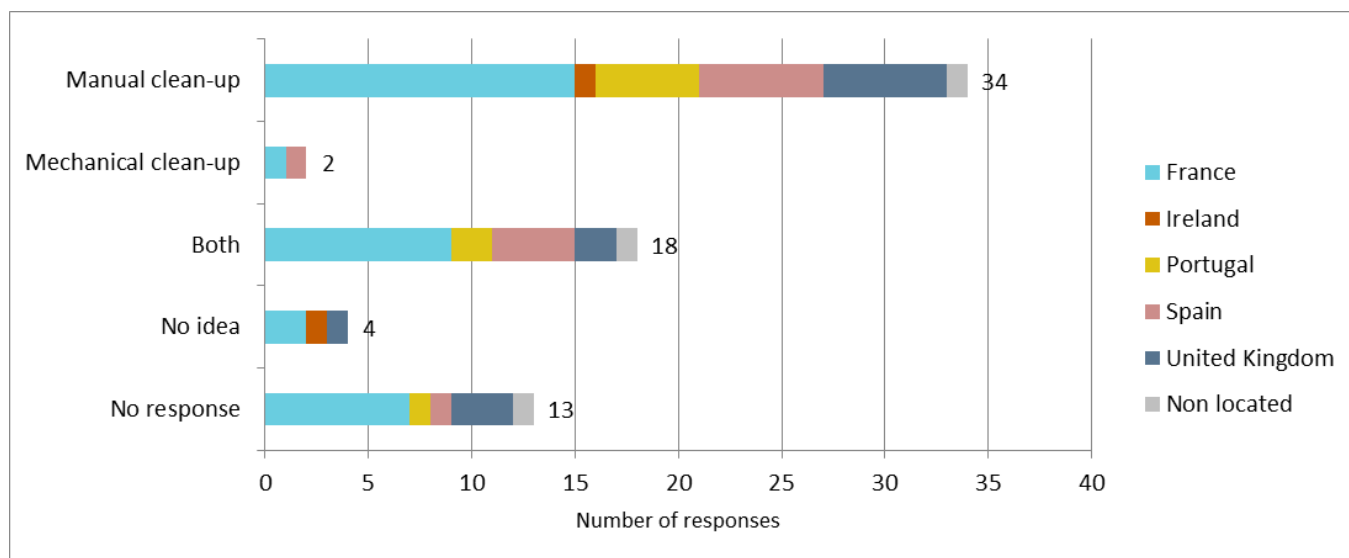


Figure 19: Type of cleaning per country (one response possible; 71 respondents)

4.3. Cleaning frequency

To the question: Is floating litter regularly collected in your port area, 65% of respondents answered "yes" against 14% who answered "no" (Figure 20).

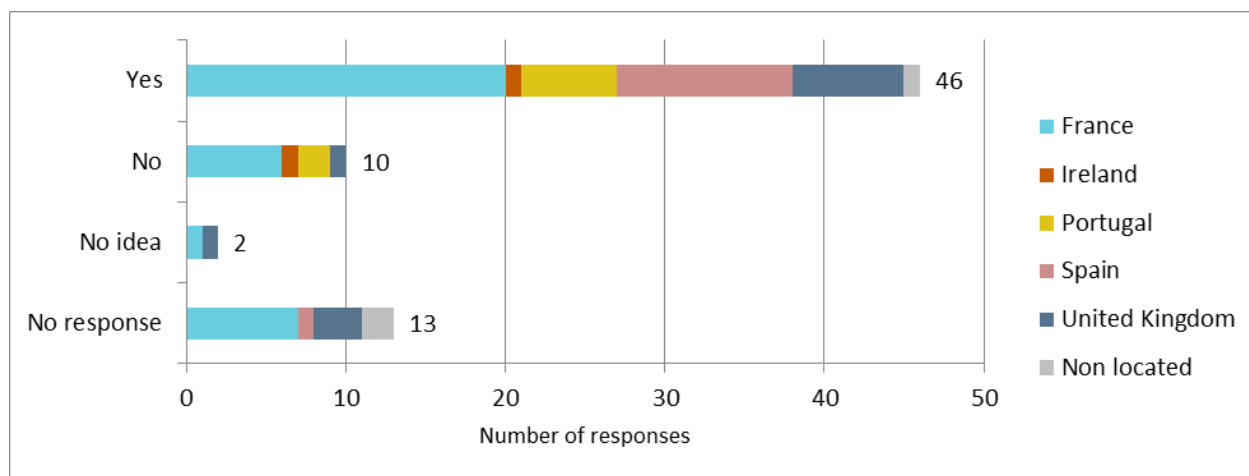


Figure 20: Cleaning frequency by country (one possible response; 71 respondents)

Unsurprisingly, the frequency of cleaning varies according to the season (Figure 21). Based on responses provided by organisations that classified themselves as "port authorities", cleaning efforts accelerate in spring to reach its peak in summer (increase of daily cleaning). Overall, however, respondents report very regular cleaning in their ports.

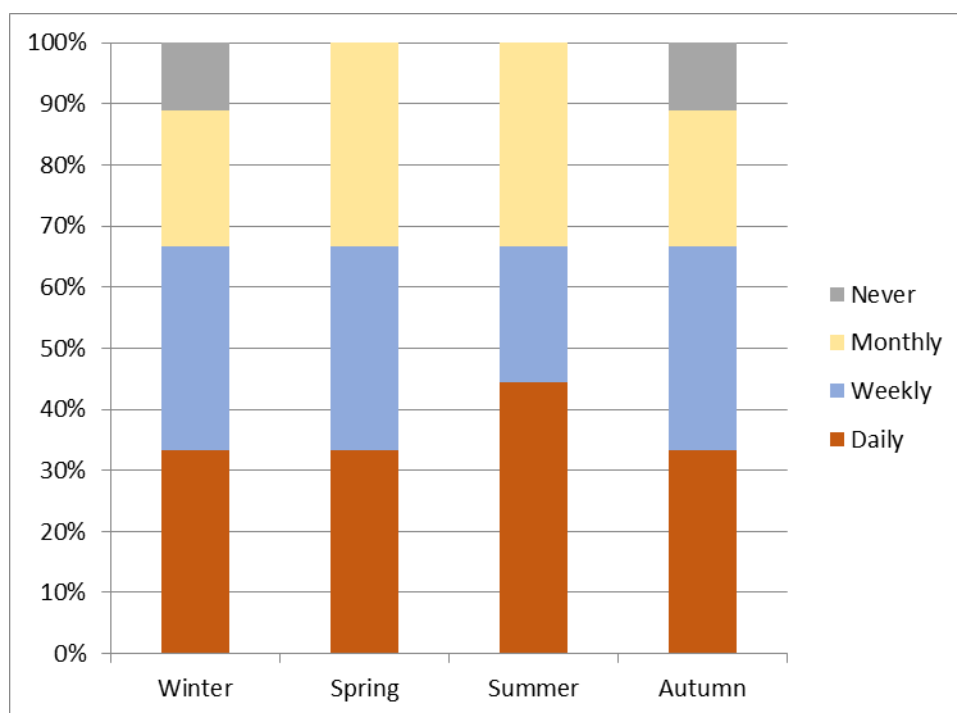


Figure 21: Frequency of port clean-up actions according to the port authorities (%; 11 respondents)

4.4. Amount of litter collected

30% of respondents did not really have an idea of the volume of litter collected each year in their port area (Figure 22). 39% of them estimated that the volume of litter is greater than 1 m³, 18% that it is greater than 10 m³, and 18% that it is greater than 100 m³. 6% of the respondents thought that the volumes collected are even higher than that.

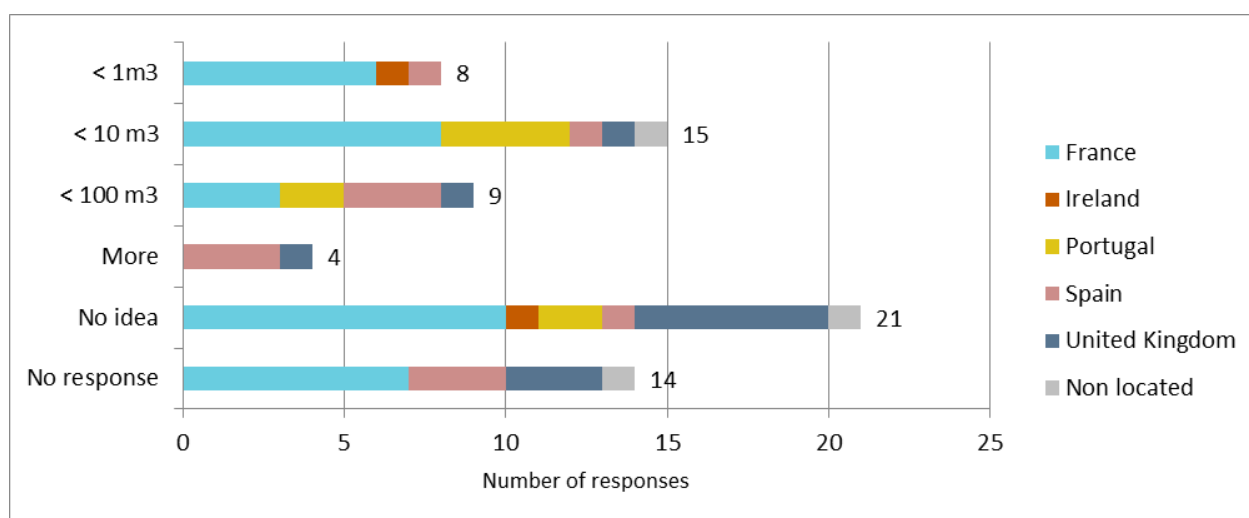


Figure 22: Volume (m³) of floating litter collected annually by volume category and country (one possible response; 71 respondents)

4.5. Port clean-up funding

Few respondents answered the question of funding for clean-up operations (Figure 23), and a lot of them (20%) had no idea who funds these operations. For the majority of those who responded (35%), funding would not come from the proposed choices but from others. The idea that emerged from the comments was that funding would come directly from port authorities.

However, 11% thought that the government fund the clean-up operations, 9% for the local authorities, 7% for chambers of commerce, 4% for the regions, 3% for the departments/counties and 1% for protected areas administrations.

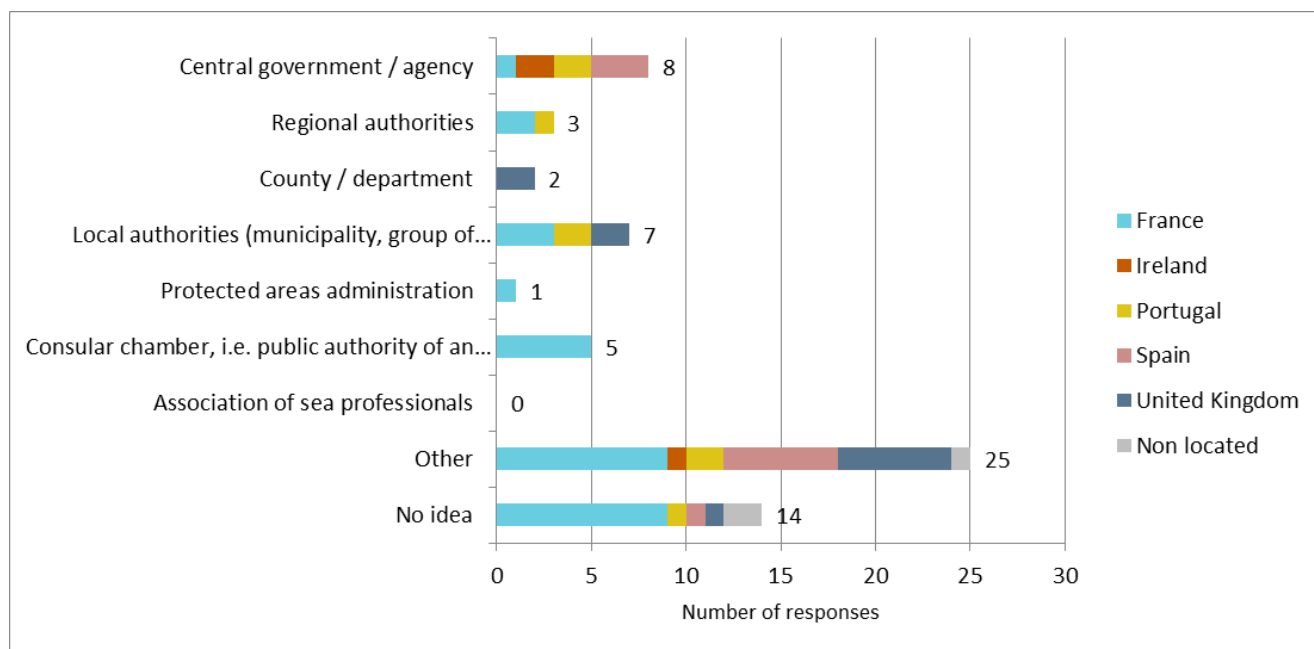


Figure 23: Types of organisation paying for cleaning operations per country (several possible responses; 71 respondents)

4.6. Cost of port cleaning operations

The responses show that most respondents have no idea of the costs associated with port clean-up operations. Only three respondents provided an approximation of the yearly costs. The costs presented range from 3 k€ (local harbor) to 90 k€ (harbor size not specified). The responding organisations are:

- A port authority of a local-scale port: general costs of 3 k€ fully funded by the port authority itself;
- An authority/agency (although the name is "port authority of...") of an unknown size port: general costs of 20 k€ fully funded by the port authority itself;
- A regional/departmental authority of an unknown size port: general costs of 90 k€ fully funded by the authority itself.

4.7. Resources involved: focus on port authorities

This part was directed to the port authorities in order to have more specific information regarding port clean-up operations.

4.7.1. Floating litter cleaning operations

Responses provided by organisations that classified themselves as “port authorities” indicated (Figure 24) that the resources used for litter collection are almost exclusively owned by the ports (82% of the respondents), but also by municipalities (or other type of local authority; 18%). However, the small number of responses does not provide very significant results.

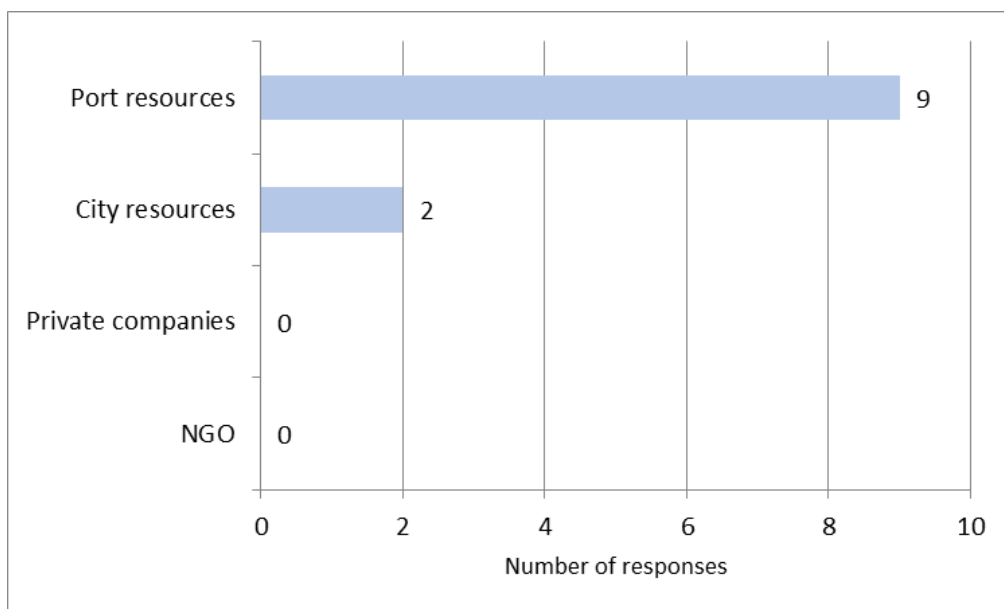


Figure 24: Resources used by port authorities for clean-up actions (several possible responses; 11 respondents)

According to the respondents, less than 5 people generally take part in the clean-up operations (Figure 25).

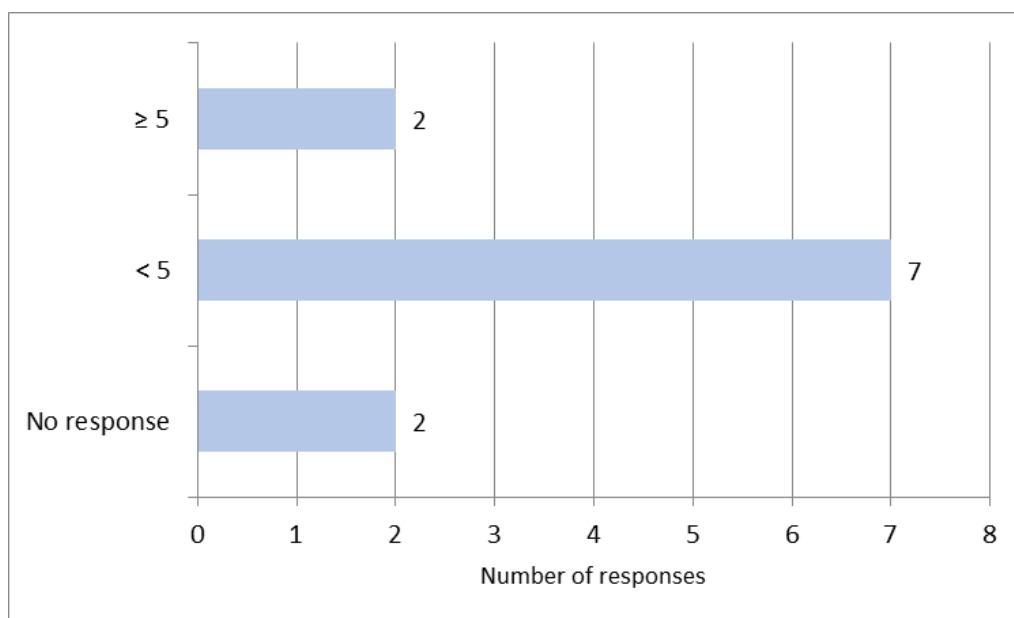


Figure 25: Number of people participating in clean-up actions (one possible response; 11 respondents)

Respondents reported that manual tools like long scoops, boat hooks or landing nets, are mainly used for cleaning operations (73%). They also use dedicated boats or robots (Figure 26).

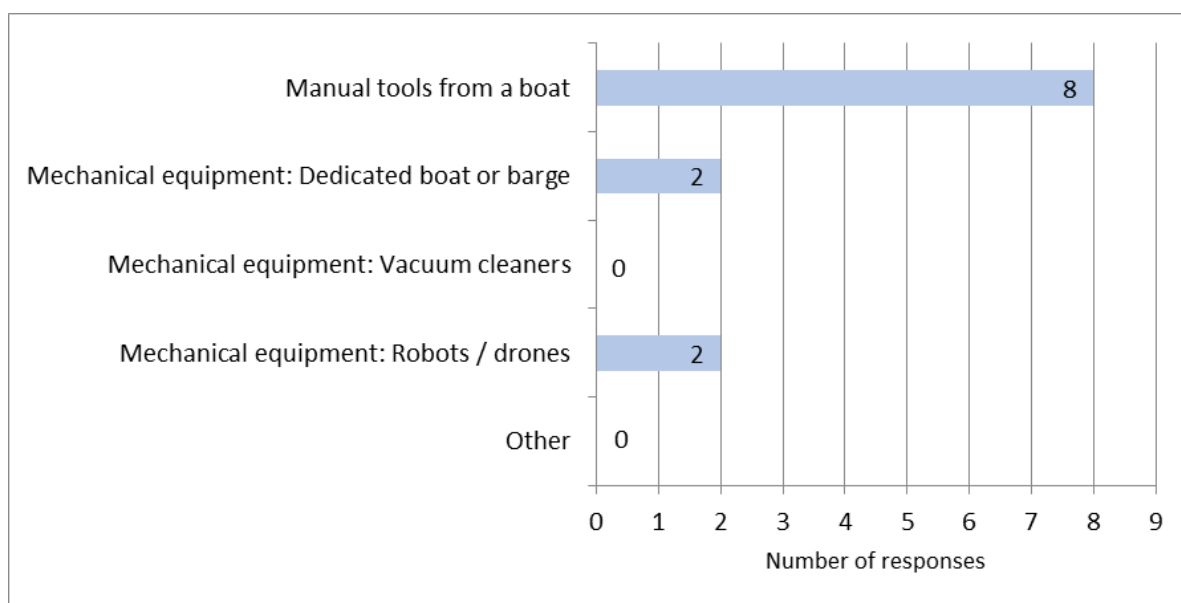


Figure 26: Equipment used by port authorities for cleaning operations (several possible responses; 11 respondents)

4.7.2. Emerged litter cleaning operations

The low response rate does not allow to give much indication about the submerged/sunken litter (Figure 27). However, the responses show that most of the submerged/sunken litter is removed generally once every 6 months. The removal of shipwrecks is more regular (once a month). The removal of fishing equipments can also be more regular with just over 30% removed more than once a month.

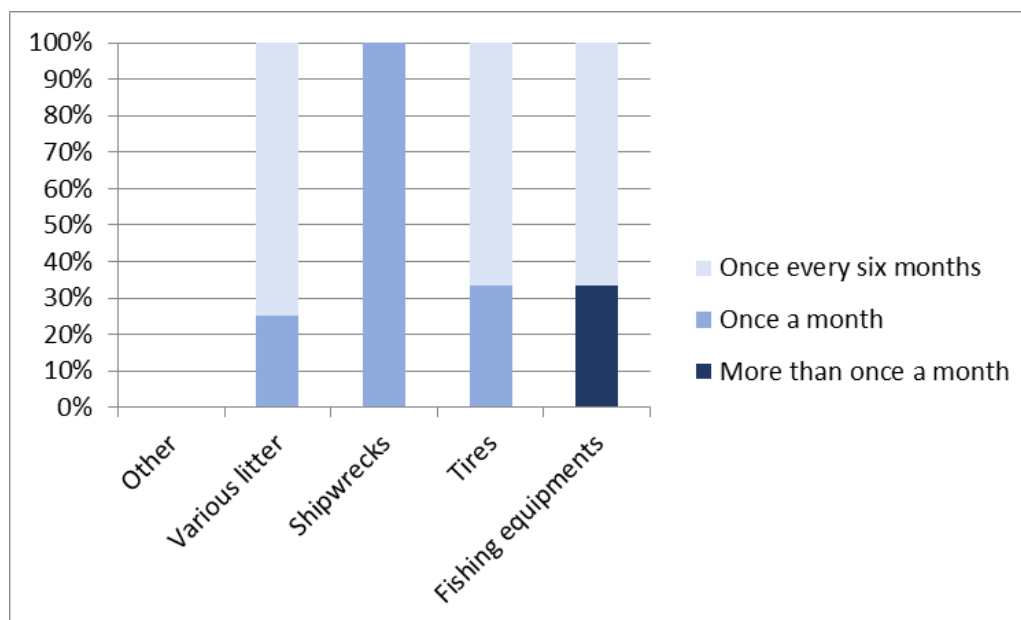


Figure 27: Frequency of removal of submerged/sunken litter in ports according to their typology (%; 11 respondents)

Only 3 of 11 respondents answered the question regarding means of recovering submerged/sunken litter (Figure 28). Divers are generally solicited for these actions, with also the solicitation of other means (no details in comments).

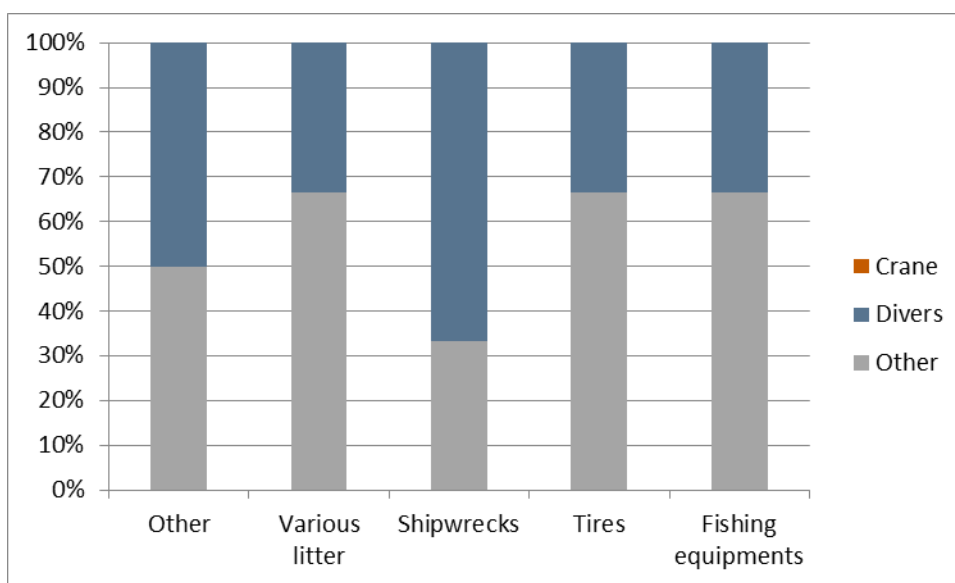


Figure 28: Means used for the recovery of submerged/sunken litter (%; 11 respondents)

5. IDENTIFICATION OF MEASURES IN PLACE TO REDUCE FLOATING LITTER

5.1. Awareness of floating litter issues in port areas

Some of the survey respondents are implementing awareness training in their port areas (Figure 29; Figure 30). 35% of them organize these trainings for port users (especially with the fishing committees and fishermen, boaters or visitors), 8% of them for port agents (notably clean port training, eco-actions campaigns, regular meetings), and 28% of them do it through communication actions (printed communication material, website, social networks).

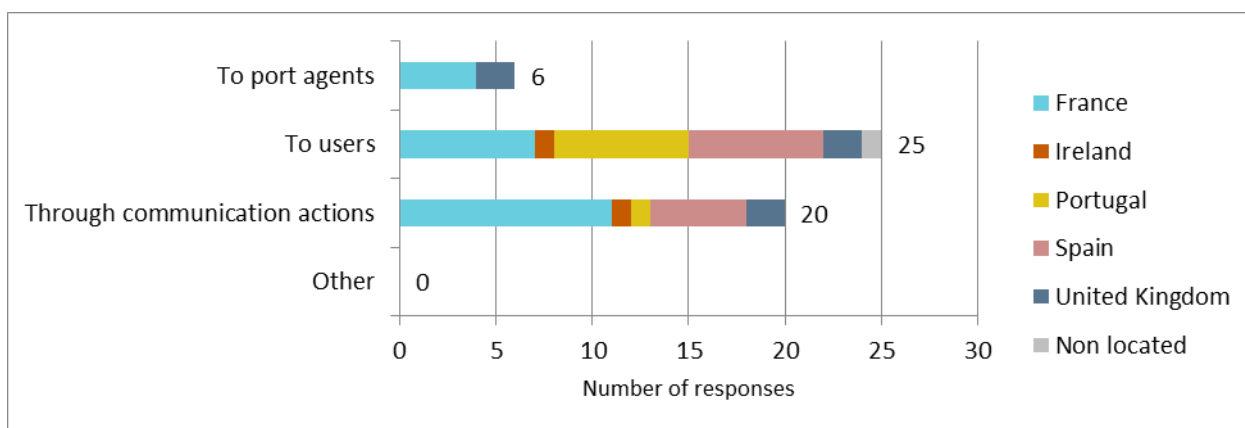


Figure 29: Implementation of awareness training by respondents (by country; several possible responses; 71 respondents)

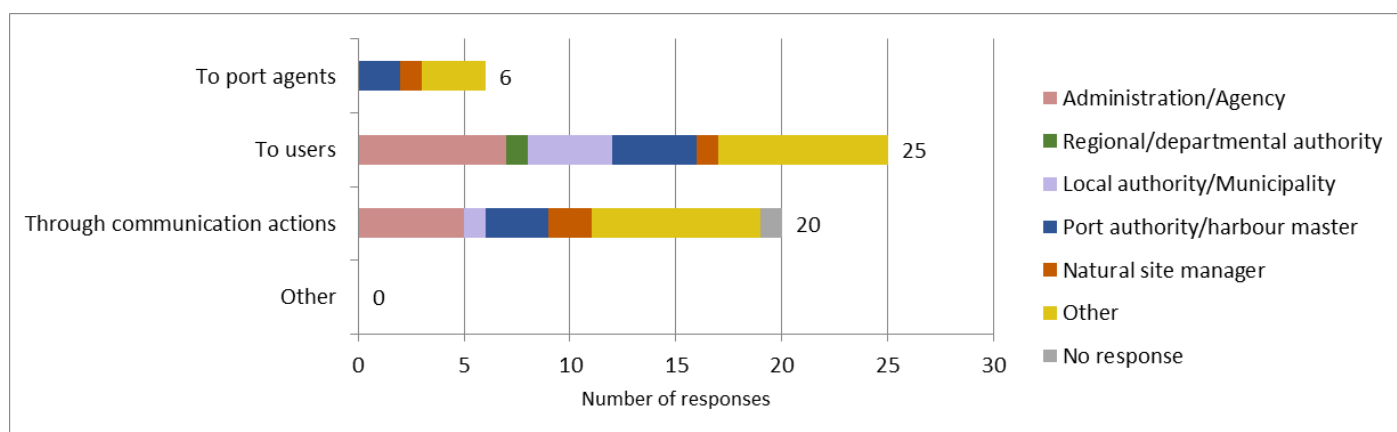


Figure 30: Implementation of awareness training by respondents (by organisation type; several possible responses; 71 respondents)

5.2. Incentives implemented to reduce floating litter

The responses show that measures are in place in the ports and known by the respondents (Figure 31). The dedicated bin for port litter is apparently the most common (about 44% of respondents). 24% of the respondents also mentioned the "Here begins the sea" sign and 18% the floating bin. 15% say that no measures are in place in their port area. In the "other" category, respondents mentioned: a net recycling scheme in the UK, communication and awareness actions or participatory cleaning operations.

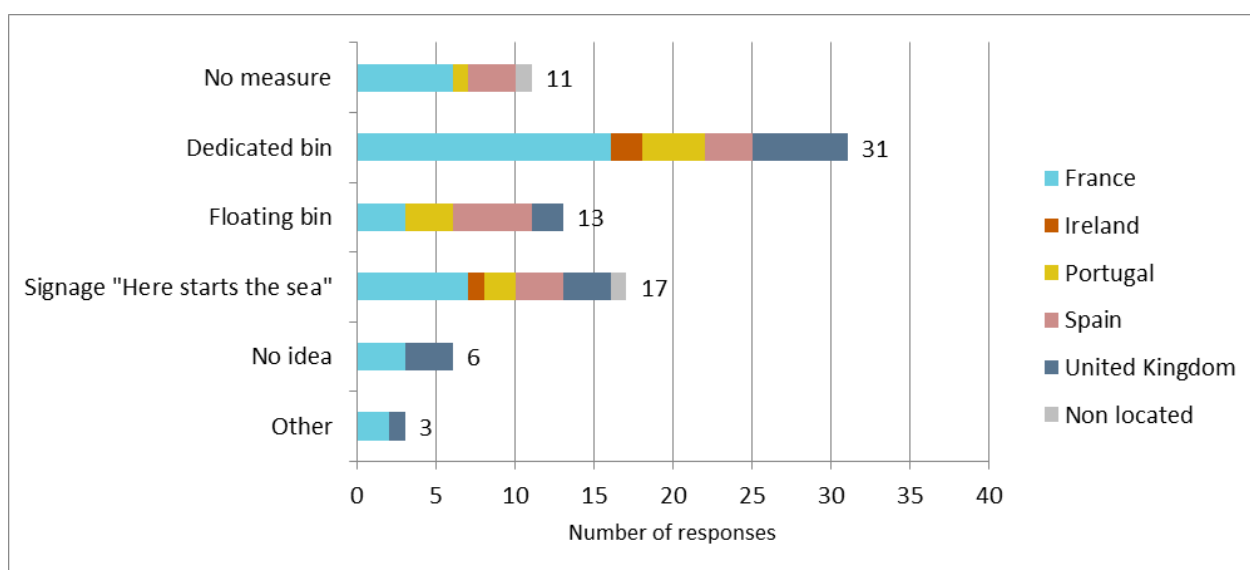


Figure 31: Incentive measures implemented to reduce floating litter in ports by country (several possible responses; 71 respondents)

5.3. Protective equipments in place to reduce floating litter

34% of respondents have not reported litter reduction equipment in their port areas (Figure 32). About 23% mention the presence of a boat dedicated to collecting litter along the coast. With respect to floating booms and recovery nets, about 16% of respondents answered having them in their port area (particularly set up during the ship fitting out phase or in case of accidental pollution with the use of sorbents) and only 1% (1 respondent) at a nearby river outlet. 6% of them mention specific tools within urban stormwater systems

and 13% do not know if their port area has set up protection equipment. In the category "other" (4% of the respondents) is mentioned in particular the robot "Jelly Fish" which aims to recover the litter in the port areas.

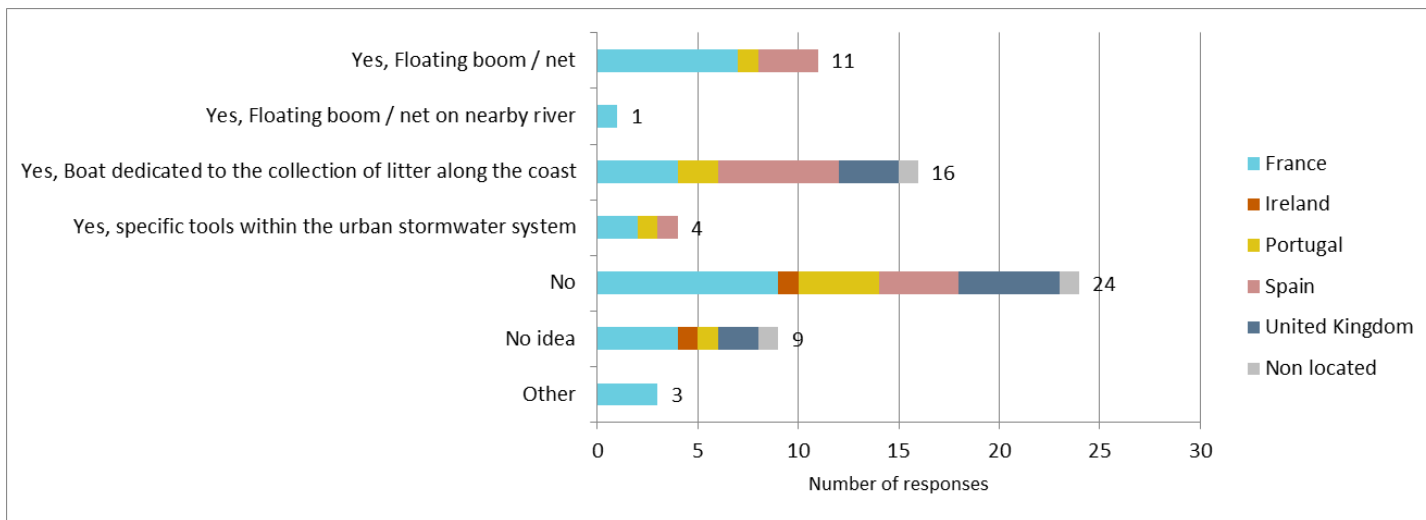


Figure 32: Protective equipments implemented to reduce floating litter in ports by country (several possible responses; 71 respondents)

5.4. Accreditation programme promoting the reduction of floating litter

Most respondents (25%) indicated that their port area is not involved in a labeling/certification program that takes into account the problem of marine litter or are not aware of it (24%) (Figure 33). Roughly equal shares of respondents cited programs at the European level (14%), national level (13%) and local level (9%).

Respondents appear to be unfamiliar with the scales to which the programs apply. However, several are mentioned, including:

- The "clean port" certification (<https://www.ports-propres.org> ; <https://www.unep.org/global-clean-ports-hub>);
- Bandera Azul / Blue Flag (<https://pavillonbleu.org> ; <https://www.banderaazul.org> ; <https://www.blueflag.global>);
- ISO certifications (especially 14001 which relates to environmental management);
- The Mar Viva program in Spain (<https://marviva.net>).

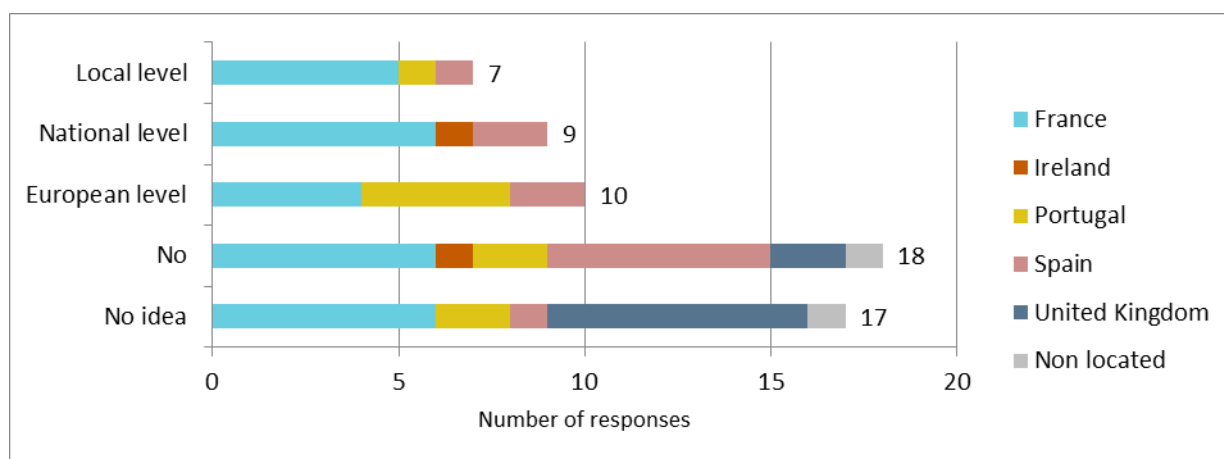


Figure 33: Accreditation programmes promoting the reduction of floating litter (several possible responses; 71 respondents)

6. FISHING FOR LITTER (FFL)

FFL initiatives aim to reduce marine litter by involving fishermen and engaging them to bring back to ports litter passively fished by the fishing gears. 41% of respondents (Figure 34) said they were aware of FFL initiatives whereas 35% indicated they were not (24% did not answer this question). However, 38% do not organize or take part in passive litter fishing actions, compared to 28% who do. 34% did not answer the question.

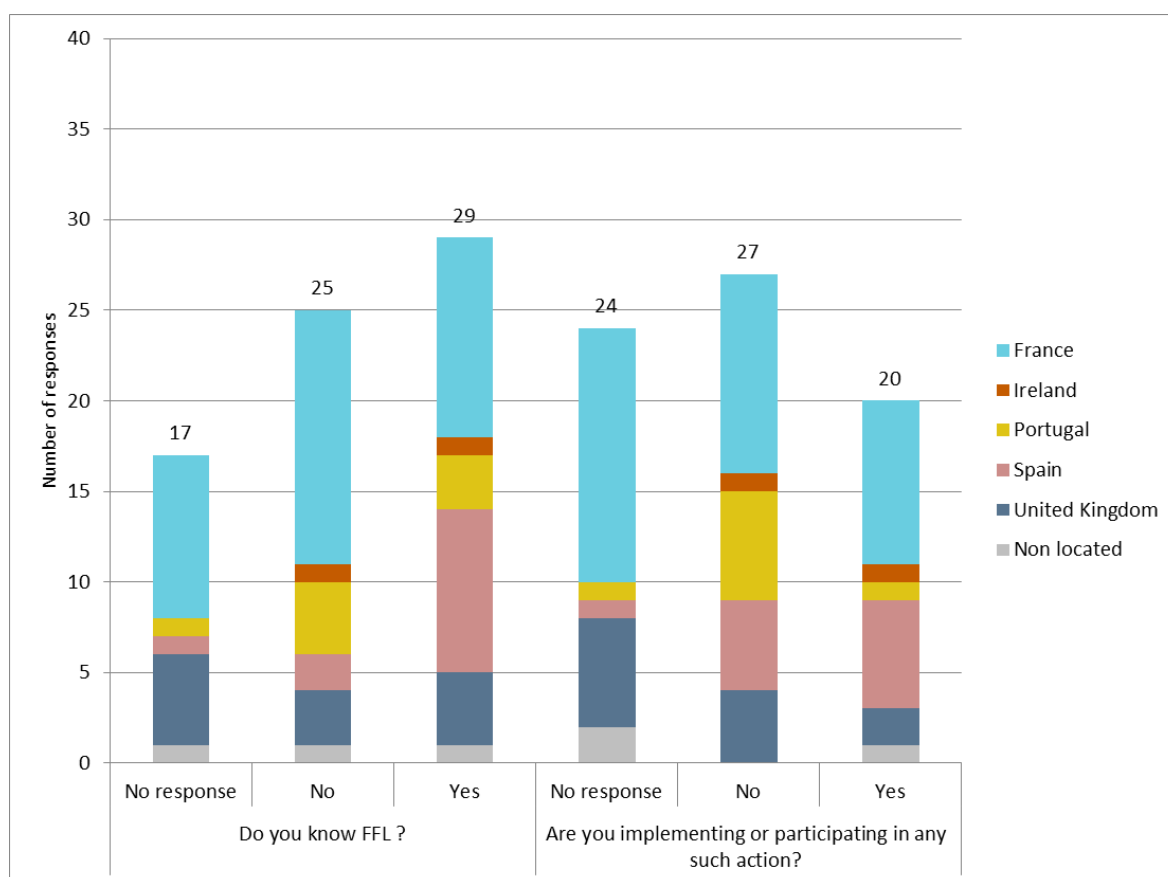


Figure 34: Respondents' awareness of and participation in FFL actions according to their country (71 respondents)

CONCLUSION

This report presents the results of the survey conducted in France, Ireland, Portugal, Spain and United Kingdom, starting with a description of the respondents, the size of their port area, their role in conducting clean-up operations. Overall, 71 usable responses were obtained on a total of 202 responses, with 34 responses for France, 2 for Ireland, 8 for Portugal, 12 for Spain, 12 for United Kingdom and 3 non located. The number of responses appears to be limited which can be explained by difficulties in accessing the targeted stakeholders.

The informations obtained on the diagnosis of floating litter pollution indicated that the respondents consider the pressure on the environment from plastic pollution to be moderate and that there are no real seasonal variations in the intensity of pollution. The sources would mainly come from fishing and leisure activities (recreational boating, tourism, restaurants) but also from urban wastewater treatment systems.

The identification of port clean-up techniques is also a part of the report, presenting the environmental considerations of the respondents and the overall clean-up operations, the resources involved and their cost. The main operators involved in the clean-ups are the port authorities. They can deploy human, material and financial resources to carry out these cleaning operations.

Appendices

Appendix 1: Beach litter online survey form

1. Appendix 1: Beach litter online survey form

WELCOME TO THE (FLOATING) LITTER IN PORT AREAS SURVEY

Thank you for taking the time to engage with this survey and assist with our research looking at best practices for dealing with marine litter in ports.

What is marine litter?

Marine litter is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter consists of items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly to the sea with rivers, sewage, storm water or winds; or accidentally lost, including material lost at sea in bad weather (UNEP) . Marine litter consists of a wide range of solid materials, including plastic, metal, wood, rubber, glass and paper (OSPAR).

What is the purpose of this survey?

This survey is distributed on behalf of the EU Interreg Atlantic Area funded project “CleanAtlantic” which seeks to address the marine litter problem by improving data management, monitoring, modelling, mapping, collection and removal of marine litter in the North-East Atlantic area.

The purpose of this survey which launched in the five Atlantic countries involved (Ireland, UK, France, Spain and Portugal), is to list (i) procedures and techniques used for recovering floating litter in port waters and (ii) as much as possible, provide recommendations for best practices of cleaning.

This survey will thus contribute to provide information from Atlantic countries about experiences on good cleaning practices in ports as recommended in the OSPAR Regional Action Plan (Action 54).

The present litter survey in port areas covers all categories of ports (commercial port, fishing port, sailing port and marina) and is mainly focused on floating litter; however sunken litter is also addressed in the questionnaire via one question.

Beach litter (i.e. litter stranded on the shoreline) within your port area is covered by another survey. In addition to this floating litter survey in port areas, another survey on beach litter is also being distributed during the same time period by the CleanAtlantic project. If relevant, please complete both.

Accessing results of the survey?

Analytical results (tables, graphs and maps) of the surveys will be available in the next few months on the following page: <http://www.cleanatlantic.eu/results/>

Thank you !

This is an opportunity for you to make your litter clean-up experience known and shared within the European Atlantic Area. Do not hesitate to circulate this survey to those concerned with floating litter management in port areas.

Questions ?

If you have any question about the project or the survey, do not hesitate to send an email at:

General contact for the project: cleanatlantic@cetmar.org

About the survey : survey@cedre.fr

This survey is distributed with the technical and methodological supports of D-SIDD.

General Data Protection Regulation (GDPR)

Here after are explained the reasons for the processing, the way we collect, handle and ensure protection of all personal data provided, how that information is used and what rights you may exercise in relation to your data (the right to access, rectify, block etc.).

Please note that:

- Data are collected in the framework of the EU-funded project CleanAtlantic;
- Contributions received from this survey will be used for research purposes. The purpose of the survey is mentioned above;
- Stakeholders contributions to the present survey are on a voluntary basis. The legal basis for processing is consent (Art. 6.1.a of the GDPR);
- Questions marked by an asterisk (*) are mandatory. Otherwise you will not be able to complete the questionnaire.
- Cedre (www.cedre.fr), as action leader of the CleanAtlantic project, is in charge of the survey;
- The survey will be carried out by Cedre with contribution from one national partner or NP (one NP per country – see after) aiming at (i) launching the questionnaire at national level towards national stakeholders, (ii) translating part of their answers and (iii) support partial analysis. NPs are as follows: Marine Institute (Ireland), Cefas (UK), Cedre (France), Cetmar (Spain,) and DGRM (Portugal)
- Each NP will provide a link for the questionnaire to ‘its’ national stakeholders. Each NP will respectively have access to data coming from ‘its’ national stakeholders;
- Data will be stored in the UK (on a dedicated LimeSurvey server) and will be managed from France by Cedre;
- All personal data (name, contacts) will be stored during the lifetime of the project;
- All personal data will be deleted one year after the last action in relation to the consultation;
- As a stakeholder, you are entitled to access your personal data and rectify, block or delete them in case the data is inaccurate or incomplete. You can exercise your rights by contacting Cedre (survey@cedre.fr).

1. YOUR ORGANISATION AND YOUR LOCATION

The purpose of this section of the survey is to characterize your organisation, its location and its link with the floating litter issue in port areas.

What is the name of your organisation?

What is the statute of your organisation?

- Administration / Agency
- Regional/ County authority
- Local authority / Municipality
- Port master or equivalent (supervisor, etc.)
- Natural Site manager
- Other (Specify:)

What is the location of your organisation?

Questions for port master or equivalent

Type of port

- Trading port (incl. cruise port)
- Fishing port
- Sailing port
- Marina
- Other

Scope of port

- State
- Regional
- Local

Name of port

Location (Town / Postal Code/ coordinates of harbour master's office)

Questions for other administration categories (regional county authority, local authority, natural site manager)

- Region:
- Department:
- Postal code:

What is the responsibility does your organization have with floating litter issues in your port areas?
(multiple choice)

- Funding of clean-up operations
- Implementation of clean-up operations

- Other (Specify)

2. LITTER ISSUES IN YOUR PORT AREA(S)

The purpose of this section of the survey is to collect information about the main litter issues you encounter in your port area and their related impacts

Same questions for all participants

- Administration / Agency
- Regional / county authority
- Local authority / Municipality
- Port master or equivalent
- Natural Site manager

In your opinion, is floating litter an issue in your port area(s)?

- Yes, it is a major issue
- Yes, it is a medium issue
- Yes, it is a minor issue
- No, it is not an issue

What are the main three specific materials and items that characterise the floating litter of your port area(s)?

- -----
- -----
- -----

Is Expanded Polystyrene (EPS) a particular issue in your port area(s)?

- No
- Yes (specify typical items) -----

1.

In your opinion, which are the 3 major entrance sources of floating litter in your port area(s)?

- Discards / losses from ships
- Waste disposal on the shoreline
- Land wind-born
- Rivers
- Urban storm drainage
- Other (specify)
- No idea / don't know

Comment:

In your opinion, which are the 3 main sectors contributing to floating litter in your port areas?

- Shipping sector
- Fishing sector

- Aquaculture sector
- Industry sector
- Port/harbour/marina sector
- Urban drainage & waste water systems
- Tourism sector
- Shopping/food retail sector
- Recreational boating and fishing
- Other Leisure / sport
- Other (specify)
- No idea / don't know

Comment:

Which season(s) does floating litter seems more prevalent in your port area(s)? Tick all that apply

- Winter
- Spring
- Summer
- Autumn
- No differences
- No idea / don't know

Comment:

Do you think your port area(s) is/are particularly affected by floating litter?

- No idea / don't know
- No impact
- Minor impact
- Medium impact
- Major impact

In your opinion, what is the main floating litter impact?

- Ecological impacts / fauna & flora
- Economic impacts / activity loss
- Economic impacts / damaged scenery

Comment:

3. COST OF PORT CLEANING OPERATIONS

The purpose of this section of the survey is to collect information about the economic impact of litter in ports (in terms of cleaning cost for collecting floating, sunken and stranded litter). Clean-up cost may cover several operations (incl. Logistics): litter clean-up; recovered litter storage, evacuation and treatment (disposal, valorisation, etc.): thank you in advance for providing as much detail as possible.

Do not hesitate to mention links or send any relevant documents (leaflet, report, etc.) to the following address: survey@cedre.fr

Same Questions for all participants

- Administration / Agency
- Regional/ county authority
- Local authority / Municipality
- Port master or equivalent
- Natural Site manager

Who pays for the cleaning operations in your port areas (that you are involved in)?

- Government / agency: Specify organisation name: ...
- Region: Specify organisation name: ...
- County: Specify organisation name: ...
- Municipality / Group of communities: Specify organization name: ...
- Marine protected areas administration: Specify organisation name: ...
- Consular chamber / public authority of an economic nature: Specify organisation name: ...
- Sea professionals' association: Specify organisation name: ...
- Other: Specify organisation name: ...
- No idea / Don't know

How much is spent for litter clean up in your port area(s) (estimation of annual costs)?

- No idea / Don't know
 - Total = k£/y
- Additional comment / detail costs:

How much does your organisation spend for litter clean up in your port areas?

- No idea / Don't know
 - Total = k£/y
- Additional comment detail costs:

4. PORT CLEANING OPERATIONS: constraints, techniques and equipment

Same introduction comment to all

- Administration / Agency
- Regional/ county authority
- Local authority / Municipality
- Port master or equivalent
- Natural Site manager

The purpose of this section of the survey is to list procedures and techniques used for port cleaning operations as well as good practices of cleaning.

Do not hesitate to mention links or send any relevant documents (leaflet, report, etc.) to the following address: survey@cedre.fr

Same complementary introduction comment to:

- Administration / Agency
- Regional/ county authority
- Local authority / Municipality

You may manage several ports (commercial port, fishing port, marina, etc.). Because of each port must be detailed in this section 4, we thank you in advance to verify that the port master or his /her equivalent is aware of this survey. If relevant, thank you to send the link of this survey to the appropriate agent/service for filling the questionnaire.

Same questions for all participants:

- Administration / Agency
- Regional/ County authority
- Local authority / Municipality
- Port master or equivalent
- Natural Site manager

Is floating litter regularly collected in your port areas?

- No
- Yes
- No idea / Don't know

In your port areas, how is floating litter collected?

- Manually
- Mechanically
- Both
- No idea / Don't know

What is the approximate annual volume of the total collected floating litter in your port areas?

- <1 m3

- <10 m3
- <100 m3
- More (Specify if known)
- No idea / Don't know

What are the main issues/key points that need to be considered for the cleaning operations in your port areas? (select all that apply)

- Access
- Extra size/weight of litter items
- Logistics
- Organisation/management
- Time availability
- Cost
- Sensitive natural environment
- Other → Specify:
- No idea / don't know

Do the cleaning operations in your port areas take environmental issues into account?

- No account taken of environmental issues
- Account taken of erosion sensitivity
- Please specify how this environmental issue is taken into account:
- Account taken of habitat sensitivity
Please specify how this environmental issue is taken into account:
- Account taken of species presence (mammals, birds, turtles, flora...)
Please specify how this environmental issue is taken into account:
- Other (Specify)
Please specify how this environmental issue is taken into account:
- No idea / don't know

Are there any awareness-raising initiative or preventive measure ongoing in your port areas to reduce litter? (Select all that apply)

- No measures in place for the public
 - Specific bins/containers
 - Floating bins
 - Plaques (e.g: "The sea begins here")
 - Other (Specify)
 - No idea / don't know
- Please provide further details on selected answers:

Several protection schemes or tools exist that prevent/reduce floating litter in port areas. Are such schemes/equipment present in your port areas?

- Yes

- Floating boom/net in front of the port
- Floating boom/net on nearby river (please specify the name of the river)
- Dedicated litter recovery vessel along the coast
- Specific tools within urban water drainage system
- Other (specify)
- No
- No idea / Don't know

Please provide further details on selected answers:

Is the/Are port(s) in your area involved in an environmental labelling program for marine litter issues?

- Yes
 - At local level : "name" (Specify)
 - At national level:
 - "CleanHarbour"
 - Other (Specify)
 - At European level:
 - Blue flag
 - Other (Specify)
- No
- No idea / Don't know

What kind of support would you need to strengthen your port cleaning actions? Please rank from most important to least important.

- More EU/national funding
- More inter-regional cooperation, exchange of best practices
- More scientific data/knowledge on the state of marine litter
- More frameworks for dialogue with sea users
- More awareness raising material for the general public
- Other (please specify)

Do you provide awareness training on port litter?

- Port agents
- To users
- Through communication actions
- Other (please specify)

Specific questions for

- *Natural site manager*
- *Port master or equivalent*

Are you involved in floating litter cleaning operations in your area(s)?

- No (If no, please move onto the next section)
- Yes (specify option)
 - Specific campaign
 - Targeted clean-up
 - Other (specify)

How often?

- Daily
- Weekly
- Monthly
- Never
- Other (specify)

What resources are used to recover floating litter?

- Own resources
- Municipal resources
- Private contractor
- Non-governmental organization
- Other (Specify)

How many people are involved in clean-up operations ?

- < 5
- >= 5

How is floating litter cleaned up?

- Manual
- Mechanical
- Both

Which types of tool/equipment are used? (select all that apply)

- **Manual tools**
 - Hand-tools from craft Specify type:
- **Mechanical equipment**
 - Dedicated recovery craft/barge Specify name brand & model / number:
 - Vacuum/air-lift equipment Specify name brand & model / number:
 - Robot / Unmanned aerial vehicle (UAV/drones) Specify name brand & model / number:
 - Other equipment Specify name brand & model / number:

Additional comments:

Are you involved in sunken litter cleaning operations in your area(s)?

Do you carried out specific operations for collecting sunken litter in your port?

- No (If no, please move onto the next section)
- Yes

How often?

- More than once a month
- Once a month
- Once every six months

Which type of litter? (select all that apply)

- Fishing gears
- Tires
- Wreck (vessel)
- Miscellaneous
- Other (Specify)

By using which means? (select all that apply)

- Grab /Crane
- Divers
- Other (Specify)

Specify:

2. *Do not hesitate to mention links and send any relevant documents (leaflet, report, etc.)*

Do you implement any other particular measures/actions for the port cleaning operations?

- No
- Yes

Specify: *Do not hesitate to mention links and send any relevant documents (leaflet, report, etc.)*

5. FISHING FOR LITTER

Fishing for litter aims to raise awareness among fishermen and to ensure that good practices are put in place so that waste caught accidentally at sea is brought back and collected at ports. This action contributes to the cleaning of the marine environment. The acquisition of associated data allows the effectiveness of the action to be evaluated, in particular the level of commitment of fishermen and the quantities of waste removed from the marine environment.

Are you familiar with Fishing For Litter schemes?

- No
- Yes (specify) -----

Are you implementing or collaborating in such those programmes an action in your port?

- No
- Yes
Specify: *Do not hesitate to mention links and send any relevant documents (leaflet, report, etc.)*

Same conclusion comment to all participants:

- Administration / Agency
- Regional/ county authority
- Local authority / Municipality
- Port master or equivalent
- Natural Site manager

If you have any other additional comment about floating litter and port cleaning operations, please specify:

In your opinion, what would be the major action(s) to be implemented (locally, globally) for reducing floating litter and for improving port cleaning operation? Please specify?

- *Do not hesitate to mention links and send any relevant documents (leaflet, report, etc.) at the following address: survey@cedre.fr*
- 3.
- If you agree to be contacted in the future about complementary questions and particular innovative measures/actions, please provide your contact details
Name: _____ E-mail address: _____
- *If you have any question about the project or the survey and its results, do not hesitate to send an email to: survey@cedre.fr*

4.

Thank you very much for participating in our floating litter in port areas survey!

Analytical results of the survey will be available in the next few months on the following page:
<http://www.cleanatlantic.eu/results/>

*If you have any question about the project or the survey and its results, do not hesitate to send an email to:
survey@cedre.fr*