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Perceptions of the Human-Ocean Relationship in Europe

Deliverable 3.3

Report on the methodology and work organization to study the ocean perception

WP3

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Perceptions of the

Human-Ocean Relationship in Europe

WP3 Deliverable 3.3

Tamer Fawzy[1], Célia Quico[2], Marieke Verweij[3,6], Maria Uyarra[4], Sian Rees[5], Heidrun Fammler[1]

[1]Baltic Environmental Forum, Germany
[2] Universidade Lusófona – COFAC, Portugal
[3] Van Hall Larenstein, University of Applied Science, Coastal and Marine Management, Netherlands
[4] AZTI, Marine and Coastal Environmental Management, Spain
[5] Plymouth University, United Kingdom
[6] ProSea Foundation, Netherlands

Content

Introduction

This document describes the approach and workflow of the 'effect analysis', where we have studied which information is received and digested by different stakeholders (complementing and validating the media analysis) and with what effect on their behaviour. It includes the specific questionnaires on the perception of actors on each key story (Annex 1), general guidelines on the approach for project partners (Annex 2), and result spreadsheets (Annex 3).

Information, perceptions and behaviour

The original concept of ocean literacy is highly related to the more general concept of science literacy, in that it seeks to increase the general understanding of scientific knowledge and perspectives on the marine environment. Within the framework of ResponSEAble, this concept of ocean literacy has been adapted to include not only scientific knowledge on the marine environment, but also on a variety of interlinkages between the human society and the ocean. In our understanding, ocean literacy refers to an understanding of our own influence on the ocean and the ocean's influence on us. Furthermore, our concept of ocean literacy includes the aim to support positive behaviour changes of key actors in the society, including individual consumers, corporate producers and actors from the regulative (administrations) and social (NGOs etc.) framework. As we are building this aim based on ocean literacy, the behaviour change we want to support is highly knowledge driven. In opposition to other widespread approaches, where an actual understanding of the issues at hand is not seen as necessary to achieve a positive change, we stand to the view that behaviour that is not based on understanding is highly accessible for manipulation by other interests. But as outlined above, the knowledge that we see as essential for behaviour changing ocean literacy is not restricted on facts of the marine ecosystem, but includes information on economic systems and governance structures too.

Knowledge on the human-ocean relationship is the basis of a responsible behaviour of societal actors, it is, however not sufficient to trigger a behaviour change in all cases. Knowledge communicated as information can influence people's perceptions of the oceans in general, and of how humans affect the oceans. It can lead to an increased feeling of personal responsibility towards the ocean, which in turn can lead to changed behaviour towards the ocean. Whether information has the ability to influence perceptions and behaviour depends, amongst others, on its content, the source/sender, the way it is transferred (media channel), and how it is received and interpreted. Information can only be captured and processed if it is adequate (readable, relevant, and proportional) (Verweij et al. 2010), and what is adequate for one person, may not be adequate for another.

ResponSEAble strives to influence behaviour by increasing ocean literacy via appropriate information, leading to personal knowledge. Knowledge can be seen as 'the basic means through

which we understand and give meaning to the world around us' (Leeuwis 2004). Knowledge can also be understood as a collection of 'interconnected schemes of interpretation' that we have available in our heads, and that we can mobilize to give meaning to a particular situation (Leeuwis 2004), and/or information.

There are many theoretical frameworks explaining the links between environmental knowledge/information, the individual's awareness/perceptions, and their display of pro-environmental behaviour (Kollmuss & Agyeman 2002). According to these authors, developing a model that tries to capture *all* factors might not be feasible or not useful. The model for pro-environmental behaviour that Kollmuss and Agyeman suggest is depicted in Figure 1. It includes the role of (the lack of) knowledge, values and barriers. For the purpose of our project we use a very simplified model linking information to perceptions and behaviour: see Figure 2.
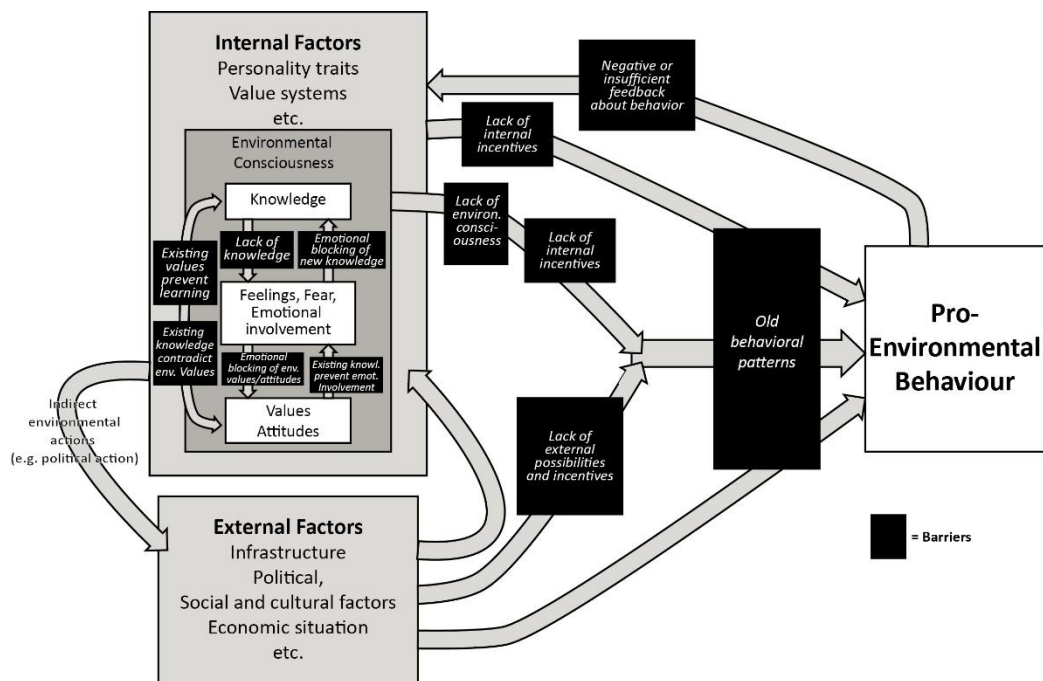

Figure 1: Model of pro-environmental behaviour (Kollmuss & Agyeman 2002).
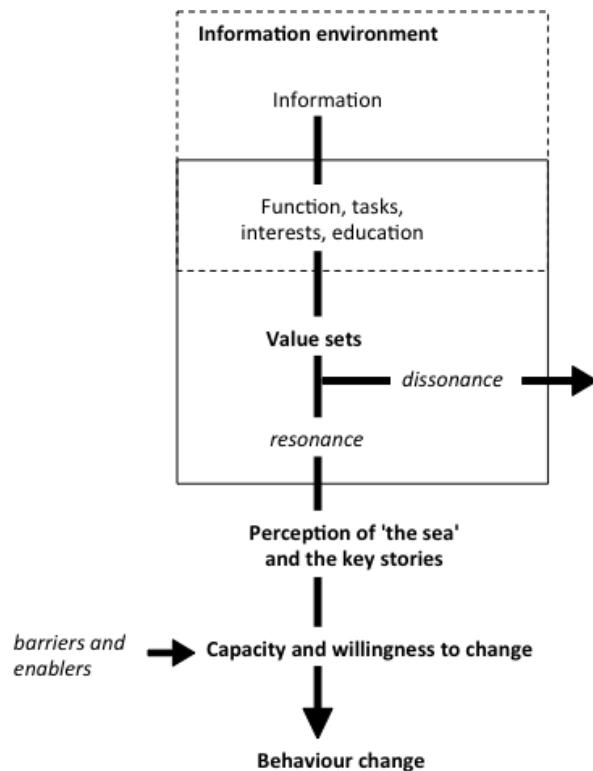
Figure 2: Simplified model of the link between information, perceptions and behaviour.

For the 'effect analysis', we collect the following data (for different actors, key-stories, regions):

1. Information environments that influence perceptions;
2. Perceptions of 'the sea' and 'people and the sea' in general and the key stories in particular;
3. Capacity and willingness to change; barriers and enablers with respect to personal behaviour change.

Personal 'information environments' influence perceptions about the human-ocean relationship. The information environment can be seen as a very literal environment, as a physical surrounding, for instance the boat of a fisherman or the office of a policy maker. Here, experiences, colleagues, screen displays, charts, documents, etc., constitute the full array of information sources (Verweij et al. 2010). Nowadays, lots of information is also accessible through the Internet, in different media channels (e.g. scientific documents, brochures, movies, etc.).

'Perception' refers to the outcome of applying our knowledge to a particular situation (Leeuwis 2004) and/or new information. In this document, 'perception' represents the 'ideas' / 'narratives' / 'discourses' different actors have about the oceans in general and about specific key stories of human-ocean interaction (actors and key stories will be explained in the methods). These perceptions can be linked to the DAPSI(W)R framework, for instance, when talking about a certain key story, do interviewees mention drivers, pressures, state changes, welfare effects, responses, etc.

For people to change their behaviour they must be aware of the problem, have the capacity to contribute to the solution and have the willingness to change. The willingness to change is affected by all kinds of barriers and enablers in turn. Enablers or barriers to act ecologically can be external (e.g. infrastructural and economic factors), or more internal (e.g. social desirability, quality of life, monetary savings) (Fietkau & Kessel, 1981). A very concrete example in the ocean context comes from McKinley and Fletcher (2012): *an individual might understand the causes of a marine problem and have the capacity to act to limit his personal contribution to that problem, but choose not to act, perhaps because he does not value the marine environment, or obtain no personal benefit from the changed behaviour.*

Aim and research questions

In the WP3, 'effect analysis', we study the effect of information about the human-ocean relationship on individual perceptions and attitudes towards behaviour (change). More specifically, we study perceptions ('ideas' / 'narratives' / 'discourses') about the oceans and the specific key stories, how these perceptions arise (based on which information) and what are the barriers and enablers influencing behaviour change.

From the results of the effect analysis, WP3 can advise WP4 and WP5, on issues like:

- what are 'best practices' for information that has had success and has been effective in influencing perceptions/raising awareness first and then in changing behaviour;
- which media genres to use to reach certain target groups;
- who are 'key influencers'; individuals or (formal and informal) organisations that can change the thinking, literacy and behaviour of large groups of people;
- how messages about the ocean should be framed in a way that they account for barriers/enablers towards behaviour change, so that the message has the most chance of influencing informed behaviour change

The main research question of the effect analysis is: ***What do people know about the oceans and key stories (perception, ideas, narratives), how do they know this (based on which information) and how does this influence their behaviour (or not)?***

Subquestions:

- How do different actors perceive the key stories?
- What are the characteristics of the information about the oceans and specific key stories that is captured and processed? (Which content, media channel, sender, etc.)
- How do key sources of information and perceptions relate to different aspects of the DAPSI(W)R framework (drivers, state, responses, etc.)?

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- How do people view responsibilities (their own/of others) related to the key stories?
- What is the (perceived) capacity and willingness to change?
- What are barriers and enablers with respect to personal behaviour change?

Methods

Key stories and actors

With the objective to increase ocean literacy of European actors, ResponSEAble targets the following six key stories: 'Eutrophication and Agriculture', 'Sustainable Fisheries', 'Ballast Water and Invasive Species', 'Marine Renewable Energy', 'Microplastics and Cosmetics', and 'Coastal Development and Tourism'.

For all of these key stories available and relevant Knowledge has been gathered and structured along the DAPSIWR framework. In our view, the framework allows for an identification the influence of human actors and societies on the ocean and the benefits that might be in danger if we do not act in a responsible manner. The DAPSIWR framework was elaborated by WP1 and has been presented in respective deliverables.

WP2 worked extensively on the identification of key actors for a positive change in each of the key stories. A list of key actor groups has been passed on from WP2 to be targeted with interviews or focus groups in WP3. The following table presents the key actor group for all key stories.

Key Story	Region	Key Actors
Eutrophication and agriculture	Baltic, Black	Agricultural Producers Wholesalers Decision-makers
Sustainable Fisheries	Atlantic	The Public Wholesalers
Ballast water/invasive species	Baltic, Black, Med	Shipowners European and National Legislators Marine Equipment Suppliers and Manufacturers of paints and coatings
Marine Renewable Energy	Atlantic	The Public Investors (public & private)
Microplastics and cosmetics	EU-wide	Cosmetic Producers NGOs Decision Makers
Coastal development/tourism	Med	Local/ regional public-private tourism promotion consortia National marine industry association

For each of the key stories a questionnaire was developed, to be used in semi structured interviews and / or focus groups (See Annex 1).

Data collection and analysis

To collect the data three following methods were used:

- semi-structured interviews,

- focus groups.

The selection of the method depends on the stakeholder group, time available and resources. As mentioned above, the stakeholder groups are key story-specific, and the stakeholders selected should be those whose behaviour change will have the biggest positive influence on solving the problem. The WP3 lead for each key story (see Table 2) was asked to agree with the teams that are collecting the data which method to use with which stakeholder group.

Semi-structured interviews
Semi-structured interviews were carried out face to face or by skype / telephone.

Semi-structured interviews enable the interviewer to access a range of stakeholders. For this method, it is important that the interviewer introduces the study and gains consent (script provided, see Annex 1). There is a mix of quantitative and qualitative questions provided (Questionnaire, see Annex 1). Interviewers should note down all answers to the personal questions e.g. name, age etc. For the qualitative questions, the interviewer's role is to listen and take notes of the main points of the response. The interviewer should not try to prompt the interviewee but do clarify the question by using suggestions made in the questionnaire (italics – see Annex 1) or use your own words if needed. If the interviewee goes off track or does not quite grasp the question then the interviewer should give more information, but has to be careful not to force the interviewee in any direction. The idea of the interviews is to get the opinion and perception of the interviewee as it is framed in their mind rather than giving an answer related to the topics, we want to hear. The interviewer should try to remain impartial, nod and smile, but do not turn this part into a two-way conversation.

If possible, the conversation should be recorded and saved for later revision/transcription and analysis. For the analysis of the responses, the interviewers are asked to provide a pre-analysis for some questions. This pre-analysis involves assigning the responses to some of the categories of the DAPSIWR framework. The response spreadsheet has been prepared for this task (see Annex 3). All original data (hand written information sheets, voice recordings) should be retained for future reference and validation.

Sample size: The number of stakeholders represented by the sector should be considered in order to collect a representative sample. If interviewers are targeting 'the public' then as many interviews as possible (given time and resource constraints) should be conducted.

Focus groups

Focus groups are a means to gather a group of people together to discuss an issue. Exactly the same data collection protocols apply as for the semi-structured interview. In addition **'reflective listening' techniques can be used to keep the conversation going.** For example, the leader of the focus group can 'mirror' or paraphrase the last point made and ask the rest of the group what they think or if they have anything to add. This technique can also be used to direct the conversation towards the less vocal members of the group. The interviewers should not be afraid to leave long silences. Providing 'space' in the conversation can encourage the quieter members of the group to participate.

Interviewers should make sure that comprehensive notes are taken throughout the interview. All original data (hand written information sheets, flip chart paper) must be retained for future reference and validation. The interview should also be recorded if possible. This enables the interviewer to review the conversation when entering data into a spreadsheet provided by the core group of WP3.

Sample size: The number of people that is manageable for this type of conversation and the size of the stakeholder sector should be considered. Literature advises to limit a focus group to 10 – 12 people.

Data analysis

Contributors of the effect analysis were asked to return all collected data in English in an excel format (See Annex 3). The results were summarised across each of the KS, using the Excel file to present quantitative data and summarising the qualitative data with regard to the main themes per country/per study region. Real quotes from the original data should be used to back this up e.g. one respondent stated, "If I had known that there are microplastics in toothpaste then I never would have bought it".

Challenges

Challenges were presented by the fact that the designed questionnaire, actually only a guide for the interviewers, was regarded as too general by both the executive team members and the interviewees. This led to some of the questions being omitted by the interviewees. The questions on sources of information were often answered only very vaguely, as the respondents were not always able to recall specific sources, or could not complete all the fields in the table. Although in the questionnaire it was pointed out that the table was intended as an aid to the interviewer and not as a requirement, the table presented a barrier for the interviewers to continue the interview. In the aftermath, training the team in interviewing techniques would have made sense to carry out the work with even quality.

Moreover, depending on the key story, it was not always easy to move the identified key players to an interview or conversation. This is especially true for economic and industrial players, e.g. in the key story "microplastic and cosmetics". It was tried to point out that the intention of the interviews as well as the project in general is not to blame certain actors for environmental problems, but to portray the situation neutrally in order to find common solutions and to communicate them.

Another challenge, as in the media analysis, was that WP2 did not conduct interviews and started later. As a result, no synergy effects could be gained with the work package.
Ultimately, the composition of the overall work package has shown that it would have been more efficient to first carry out the media analysis in order to design the effect analysis based on the knowledge gained there. However, this was not possible due to the time constraints. A detailed description of this circumstance and the consequences thereof will be given in the deliverable D3.5.

Conclusions

The questionnaires, their development and specific and general guidelines presented in this report illustrate how WP3 has aligned itself with the tasks and results of WP1 and WP2. While the key actors identified by WP2 are considered the target groups for the effect analysis, the gathered knowledge of WP1 serves as a backdrop for analysing the understanding of these actors. The results of the analysis will feed into D3.5, the key story documents and ultimately into WP5. By this WP3 provides essential directions for the synthesis of the work accomplished on the development of the key story documents.

WP5 will develop innovative ocean literacy tools based on the outcomes of WP1-3. Within the framework of ResponSEAble these tools will consider three basic dimensions of communication tools, (1) knowledge content as identified by WP1, key target groups as identified by WP2, and appropriate media types for these actor groups. In addition to a synthesis of relevant and potentially ignored information from the pool of gathered knowledge in WP1 (as identified in the media analysis of WP3) the work package will contribute information on the information environment and perception of key actors that show the biggest potential for a positive change as identified by WP2.

This synthesis was presented in deliverable D3.4. It was based on the findings of WP3 included in the key story documents as well as discussions at the synthesis workshop. These consist of results from both the media (see deliverable 3.2) and effect analysis.

Annex 1: Example of questionnaire for semi-structured interviews in the key story of 'Microplastics in cosmetics'

ResponSEAble WP3 Questionnaire on "Microplastic in Cometics"

Pre-amble and Consent

Please make the interviewee(s) aware of the following and provide copies of the information sheet and a reference copy of the consent form:

This questionnaire forms part of a study being carried out by research institutions across Europe to understand how information influences behaviour, with particular regard to human interactions with the ocean. This work is funded by the European Union Horizon 2020 programme under the theme of 'Ocean Literacy'.

This questionnaire can be used for face to face interviews and focus groups.

The survey should last 20-45 min. for a face to face interview and 45-90 minutes for a focus group. Answers given will **remain confidential** and only anonymised and grouped data will be used in the analysis and reporting. By taking part in this survey you are consenting to your data being used as part of this study. You have the right to withdraw from this interview or to request your data is removed from the project at any time. You do not have to answer any individual question that you do not wish to answer.

The interview/focus group will be recorded and notes taken.

Ticking the following box indicates that you have read and understand the information provided above, that you willingly agree to participate and that you may withdraw your consent at any time and discontinue participation.

☐

*Note to interviewer: There are several open questions in the survey. At this point your role is to listen. Ask the question and listen to the answer. Try not to prompt the interviewee but do clarify or reflect the original question in your own words if needed. The idea is to get their opinion as it is framed in their mind rather than giving an answer related to the topics we want to hear. Try to remain impartial, nod and smile, but don't turn this part into a conversation (very difficult!). **Make sure your recorder is on**. Please take detailed notes on the main points made by the interviewee.*

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Part 1: You and the sea (handout for a focus group)

1. How far is your home from the sea: … miles OR … kilometres
   Which sea? …

Sea or ocean depending on the translation into national languages. We are asking about people's personal and direct interaction with the sea.

2. How often do you visit the sea:

	Place	Sea/Ocean	Purpose (holiday, walking the dog, swimming, fishing, family day out etc)	Frequency (e.g. once or twice a year)
	e.g. Plymouth Sound	*The Channel, The Atlantic*	*swimming*	*Every weekend (so assume 52 visits a year)*
A				
B				
C				
…	*Add more lines if necessary*			

3. What role does the sea play in your life? This is an open question so please answer as freely as you like and in as much or as little detail as you like.
   …………………………………………………………………………………………
   ……………………………………

4. On a scale of 0-10, where **0 = very poor health/state and 10 =excellent health/state**, How would you rate the current health or state of the sea that you visit the most frequently? *(Please circle one)*

Very poor   Excellent

0 1 2 3 4 5 6 7 8 9 10

5. What reasons do you have for providing this rating?
   …………………………………………………………………………………………
   ……………………………………

If the interviewee is struggling to find an answer, ask a reflective question. "You gave this a 2 suggesting you feel the sea you most frequently visit is in poor health? Why do you think this?

6. On a scale of 0-10, where **0 = very poor health/state and 10 =excellent health/state**, How would you rate the current health or state of the seas and oceans in general? *(Please circle one)*

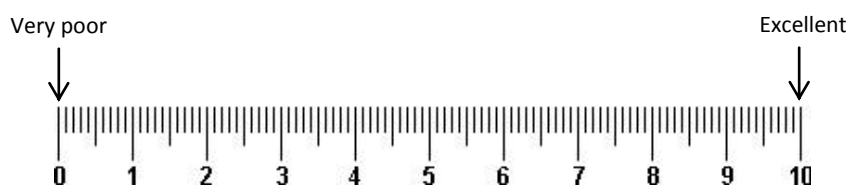Very poor   Excellent

0 1 2 3 4 5 6 7 8 9 10

7. What reasons do you have for providing this rating?

……………………………………………………………………………………………

……………………………………………………………………………………

Part 2: Current understanding/knowledge on key issues

This part of the survey is to gain an understanding with regard to your knowledge and understanding on key issues relating to the marine environment
The following questions are open so please answer as freely as you like and in as much or as little detail as you like.

8. When I use the term 'Microplastic' what does this mean to you?

………………………………………………………………………………………………

……………………………………………………………………………………

………………………………………………………………………………………………

……………………………………

Note: We want to find out people's perception of this issue, and avoid to imply a specific understanding.
If the question doesn't work then try to reframe:
What do you know about microplastic in the sea?
Do you know that microplastic in cosmetic products end up in the sea?

Part 3: Information environment

This part of the survey is to gain an understanding about how you access information and media regarding the key issues affecting the marine environment.

9. **Cosmetic Producers**
   - We would like to know how you receive or access information regarding the impact of microplastic on the marine environment.
   - What was the message of this information?
   - What effect did it have on you?

NGOs
We would like to know how you receive or access the information on microplastic in cosmetic products that you process and use for your own communication on the issue.
   - What was the message of this information?
   - What effect did it have on you?

Decision Makers
We would like to know how you receive or access information regarding the impact of microplastic on the marine environment.
   - What was the message of this information?
   - What effect did it have on you?

Media (use list of media types)	Name	Who was the source	When?	Information (What was the message?)	How did this influence you?	For how long?
e.g. Book	*The end of the line by Charles Clover*	*Charles Clover founder of BLUE and NGO*	*5 years ago*	*That the fish stocks were in trouble.*	*I stopped buying fish that was unsustainable*	*I now sometimes buy MSC fish but not always*

This table must be filled in by the interviewer!
If the Interviewee does not know anything about the issue, extend the question to (1) the ocean in general, (2) the environment in

RESPONSEABLE

e.g. Twitter	#end discards	Hugh Fernley (River cottage)	2 years ago		I ate less fish	

general. Distinguish between permanent, long-term and short-term effects of information.

10. From all the information sources that you have mentioned which has had the most influence on you?

………………………………………………………………………………………………………

……………………………………………

11. Why has this information source influenced you? And how?

………………………………………………………………………………………………………

……………………………………………

12. Who do you trust to provide you with information which might influence your behaviour or practice?

………………………………………………………………………………………………………

……………………………………………

We want to learn about the information environment of the interviewee: Seek answers related to 'key influencers'; which information sources organisations, people)

13. Why do you trust this information source in particular?

………………………………………………………………………………………………………

……………………………………………

14. Who don't you trust to provide you with information on which you will base a decision to change your behaviour/practice?

………………………………………………………………………………………………………

……………………………………………

***Note for the interviewer:** Seek answers related to organisations, groups of people, media sources etc.*

15. Why don't you trust this information source in particular?

………………………………………………………………………………………………………

……………………………………………

Part 4: Barriers and enablers

This part of the survey is to gain an understanding about what you feel are the barriers and enablers to effective long-lasting change regarding the key issues affecting the marine environment.
The following questions are open so please answer as freely as you like and in as much or as little detail as you like.

16. Do you feel that you can have an influence with regard to 'Microplastic in Cometics'? Yes/No *(If yes, go to question 17. If no, go to question 19)*

17. If 'yes', what influence can you have?

………………………………………………………………………………………………………

……………….………………….…………

RESPONSEAble

18. Is there anything that stops you or prevents you from having more influence?

………………………………………………………………………………………

……………………………………

19. If 'no' what do you think stops you or prevents you from having an influence?

……………………………………………….……………………………………

……………………………………

20. Is there anything that would help you to overcome these barriers so that you can have an influence?

………………………………………………………………………………………

……………………………………

21. In your view, who has a bigger influence with regard with to 'Microplastic in Cometics

………………………………………………………………………………………

……………………………………

22. What is your vision for the future of the oceans – for the next 10 years and for the next 30 years?

………………………………………………………………………………………

……………………………………

Part 5: Personal Data *[for focus groups provide as a handout]*

The following questions are required to validate the study. Your cooperation in answering these questions is greatly appreciated. Please remember that the answers are anonymous and confidential, and only aggregated data will be used for the project.

23. Name:

24. Age: a) 18-24   d) 45-54
                  b) 25-34   e) 55-64
                  c) 35-44   f) Over 65   *(circle as applicable)*

25. Gender:

26. Nationality:

27. Profession/job:

28. What is the highest form of education that you have completed? *(circle as applicable)*
    a) Basic Education
    b) Secondary Education / High School
    c) Diploma, Vocational or Technical training
    d) University/College Graduate
    e) Postgraduate
    f) Other (please specify) ………..

29. Are you a member of an environmental charity? e.g. Greenpeace: Yes/No
    (If no proceed to question 31)

RESPONSEAble

30. Please can you provide the name(s) of the environmental charity of which you
    are member:

    ……………………………………………………………………………………
    ………………………………….

**Thank you for taking part in this survey. Please be assured that your details
will remain completely confidential.**

31. Do you have any comments on the interview that you would like to add?
    ……………………………………………………………………………………
    ……………………………………………………………………………………
    ………………………………….

*In case you are interested in more information about this project, and what will
happen with the interview results, please leave your email address here and we
will keep you updated*
Email: …

We would like to consult your community as widely as possible. Please could you   *If you are*
recommend another person to contact?   *seeking specific*
Name…………………………….   *stakeholders*
Telephone……………………….   *then use this.*
Email…………………………….