

SOPHIE

pan-European citizen survey on
Oceans and Human Health



Seas, Oceans & Public
Health in Europe

About the SOPHIE project

Whilst the ocean can **benefit human health** and boost wellbeing via activities like recreation and relaxation, it can also pose **risks to human health** – through factors such as flooding and pollution. This complex mix of **threats** and **opportunities** interact in ways we do not always fully understand. As a maritime continent, conducting research in this area is important for Europe, its inhabitants and its ocean.

Seas, Oceans and Public Health in Europe (SOPHIE), a pan-European project, was funded by the European Union's **Horizon 2020** programme. It brought together different groups (e.g. marine scientists, medical and social scientists, experts from the public health, marine tourism and other fields) and created a platform for these communities to work together to explore the complex interactions between the marine environment and human health and wellbeing.

One of the major pieces of work of the SOPHIE project was a 14 country pan-European citizen survey to gather information on public perceptions about 'Oceans and Human Health'.

This report provides a visual synopsis of the results from the survey. The full survey report can be downloaded from the SOPHIE website:

<https://sophie2020.eu/activities/sophie-survey/>

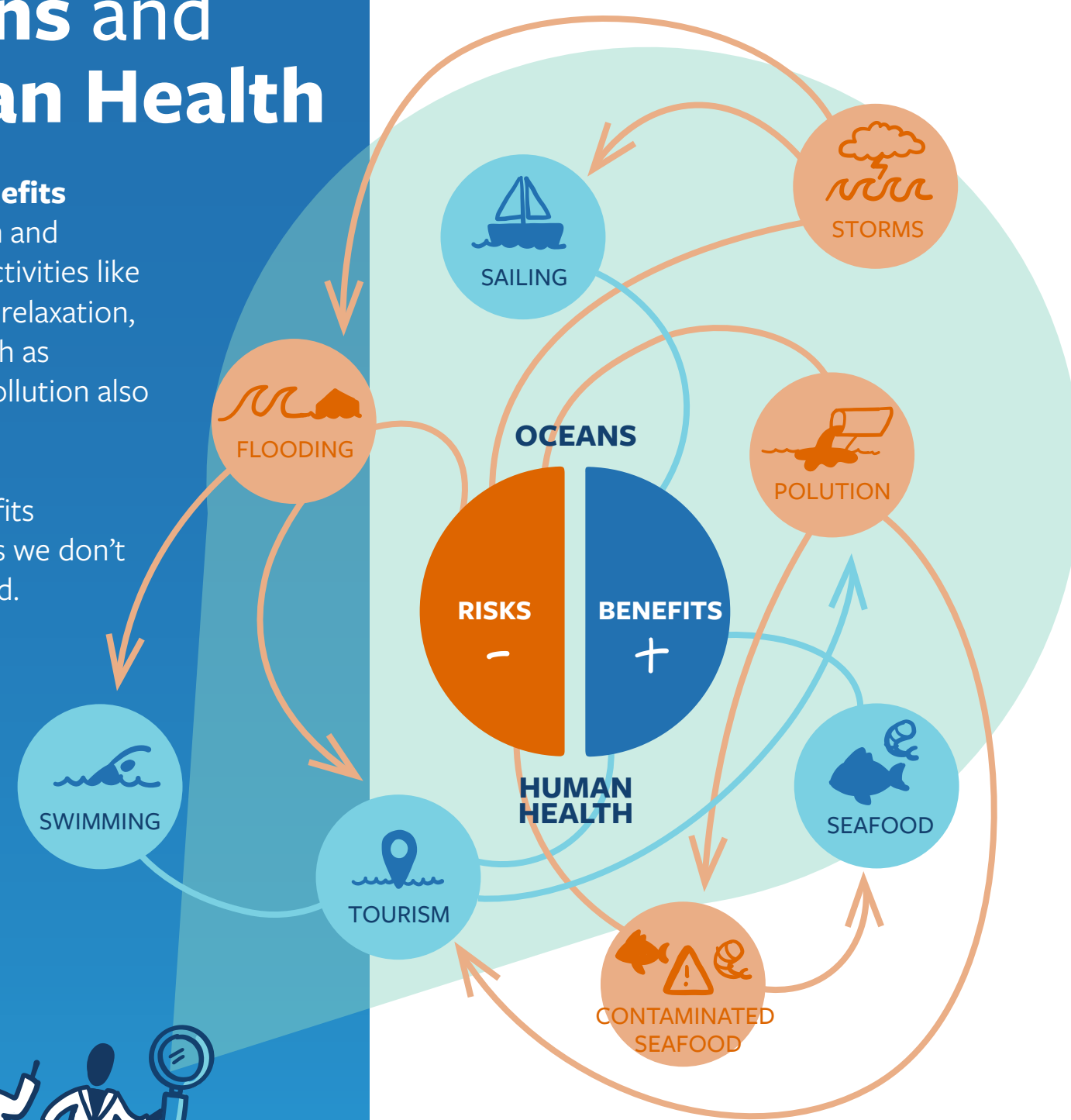
Visit the SOPHIE website:
<https://sophie2020.eu/>



Oceans and Human Health

The ocean **benefits** human health and wellbeing via activities like recreation and relaxation, but factors such as flooding and pollution also **cause risks**.

Risks and benefits interact in ways we don't fully understand.



Seas, Oceans & Public Health in Europe

The **Seas, Oceans and Public Health in Europe (SOPHIE) project** has developed a framework to inspire collaboration across sectors, disciplines and borders to help take this forward.
Find out more: sophie2020.eu

The **SOPHIE project** produced a range of resources, exploring the links between oceans and human health, and gathering evidence from:



European citizens



our policy frameworks



marine and public health data



the research literature



stakeholders



innovative solutions



citizen science



marine tourism

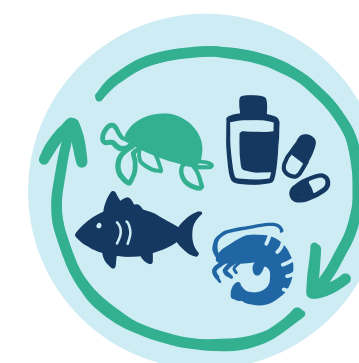
SOPHIE used this knowledge to create the **Strategic Research Agenda** – a roadmap with priorities for Oceans and Human Health focused on three main areas:



Sustainable seafood and healthy people



Blue spaces, tourism and well-being



Marine biodiversity, medicine and biotechnology



Now is the time for action!

If Europe is to achieve its climate targets and simultaneously protect and improve public health and marine environment health, then we need to act now to establish Oceans and Human Health in Europe.

Join the conversation: sophie2020.eu/linkedin

Post using: **#OceansHumanHealth**



Seas, Oceans & Public Health in Europe

Citizens, oceans and health: the SOPHIE citizen survey

Europe's ocean wealth

4 million jobs €684 billion turnover in 2017

Our marine environment provides jobs, transport, food, recreation, raw materials and energy. These demands will increase as part of the **Green Deal** to achieve a climate neutral Europe by 2050.

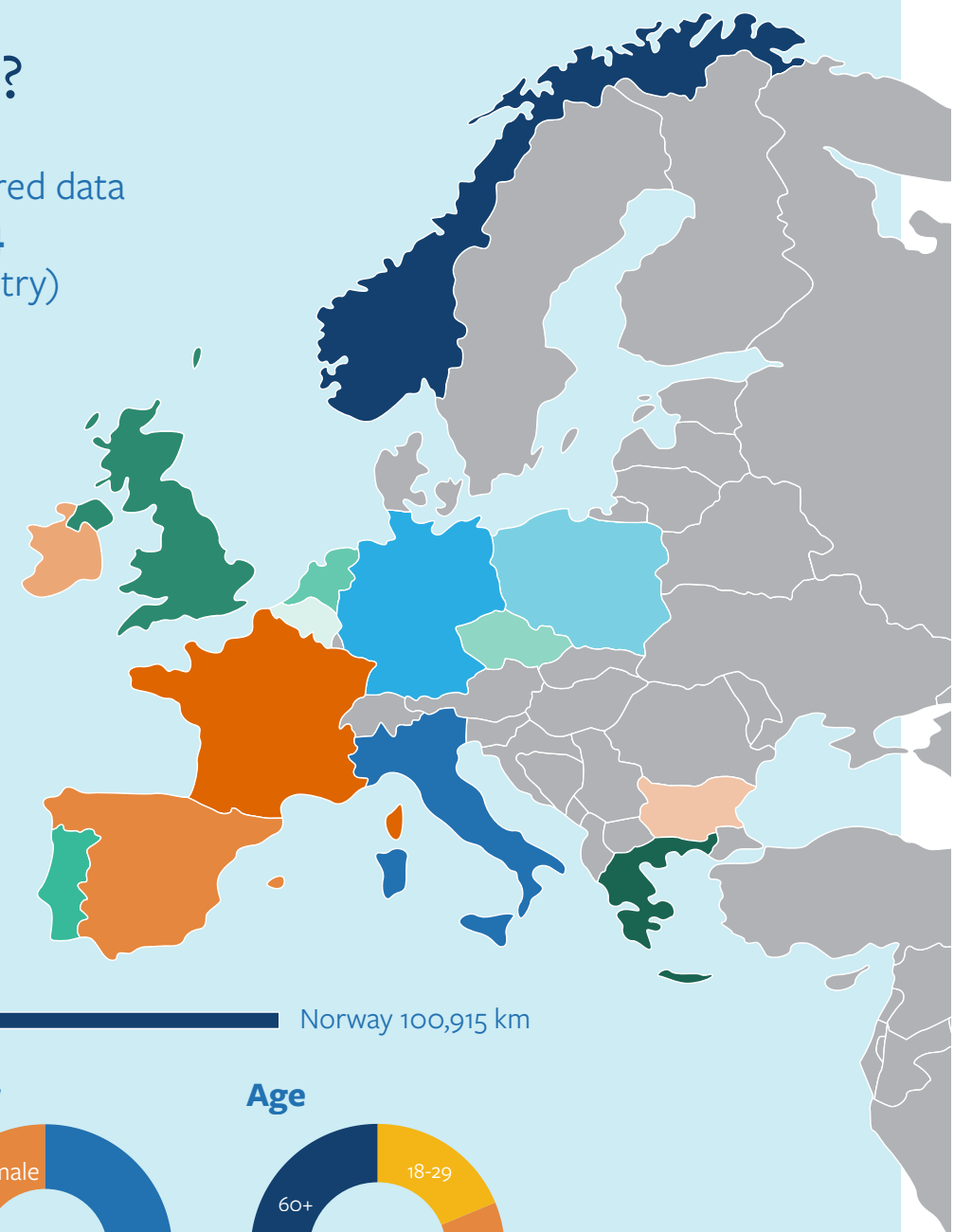
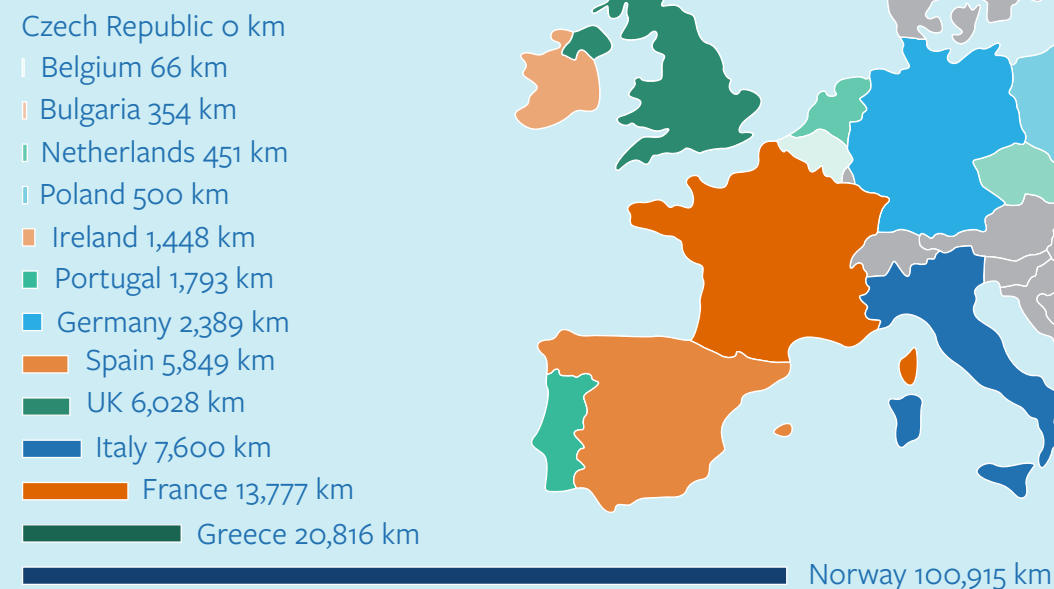
The SOPHIE project carried out **the first large-scale, pan-European survey on Oceans and Human Health** to understand public perceptions about the risks and benefits of marine ecosystems for human health and wellbeing.



Where and who?

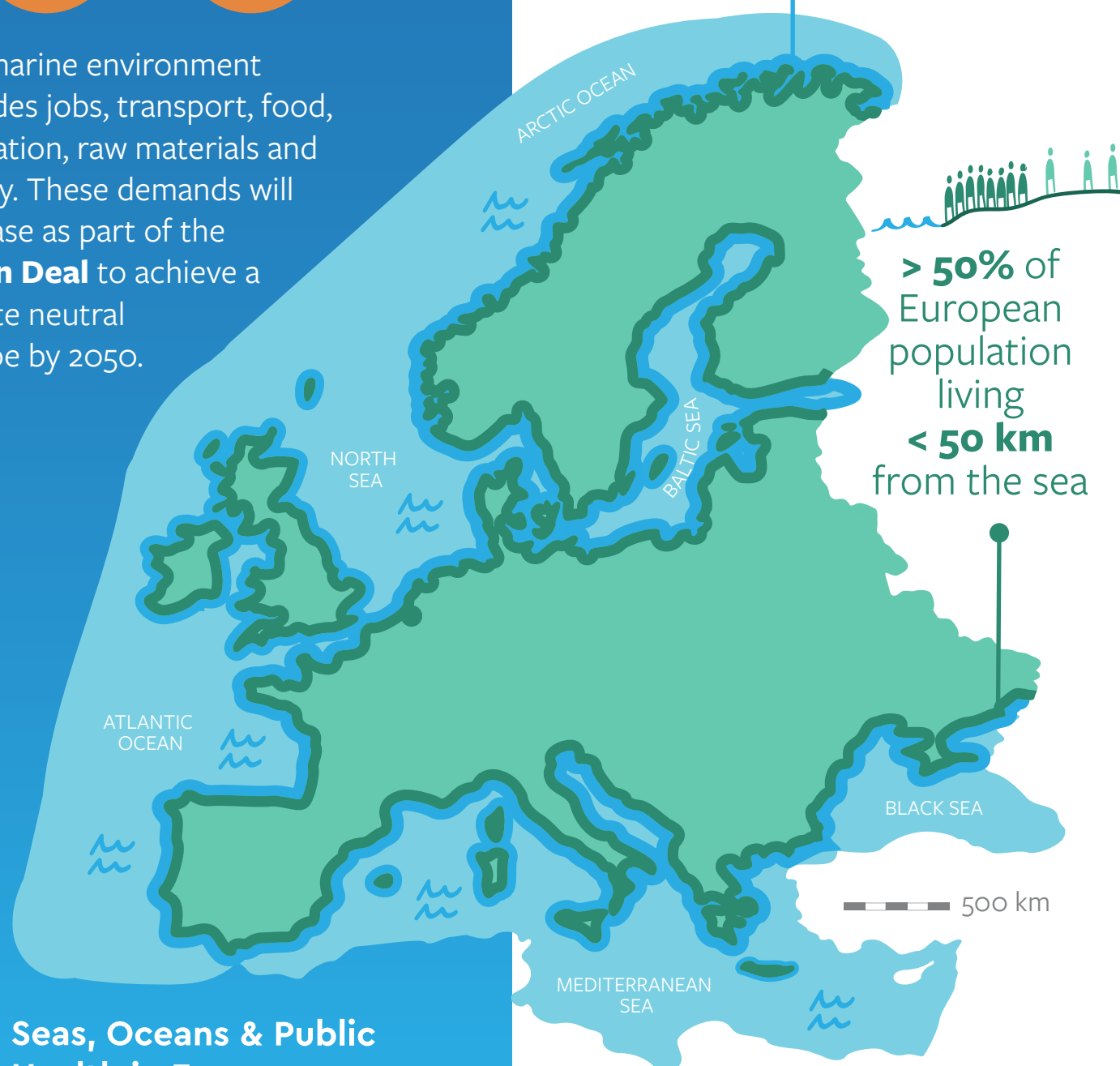
The **SOPHIE survey** gathered data from **14,167** people from **14 countries** (c1000 per country)

Length of the coastline

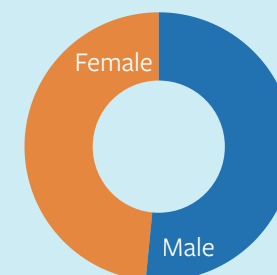


70,000 km of coastline

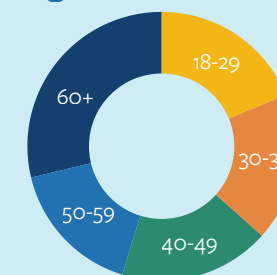
> 50% of European population living < 50 km from the sea



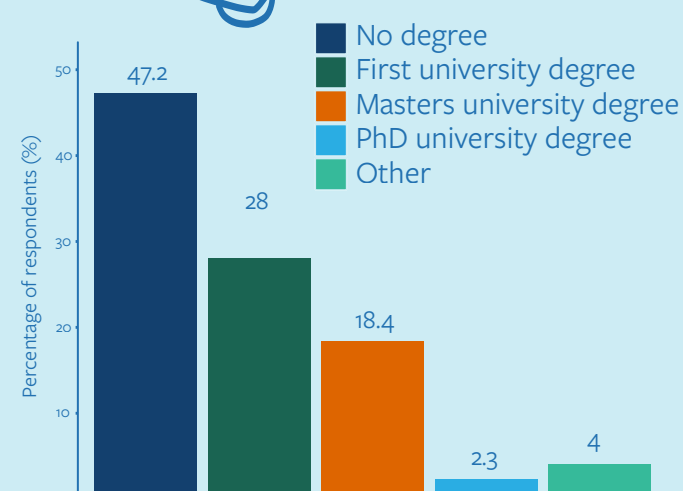
Gender



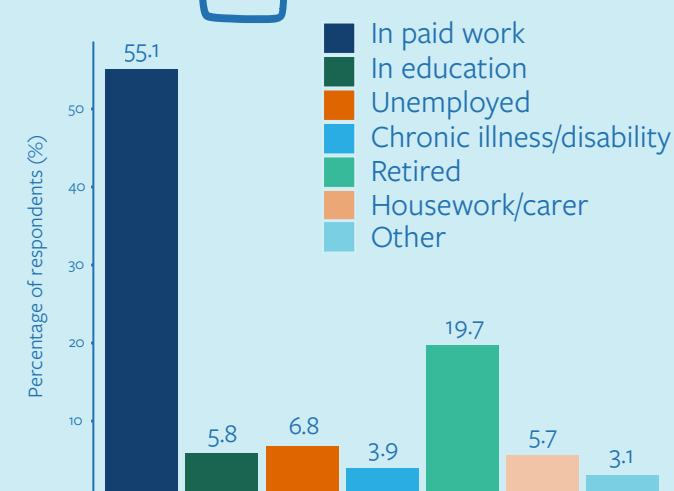
Age



Educational attainment

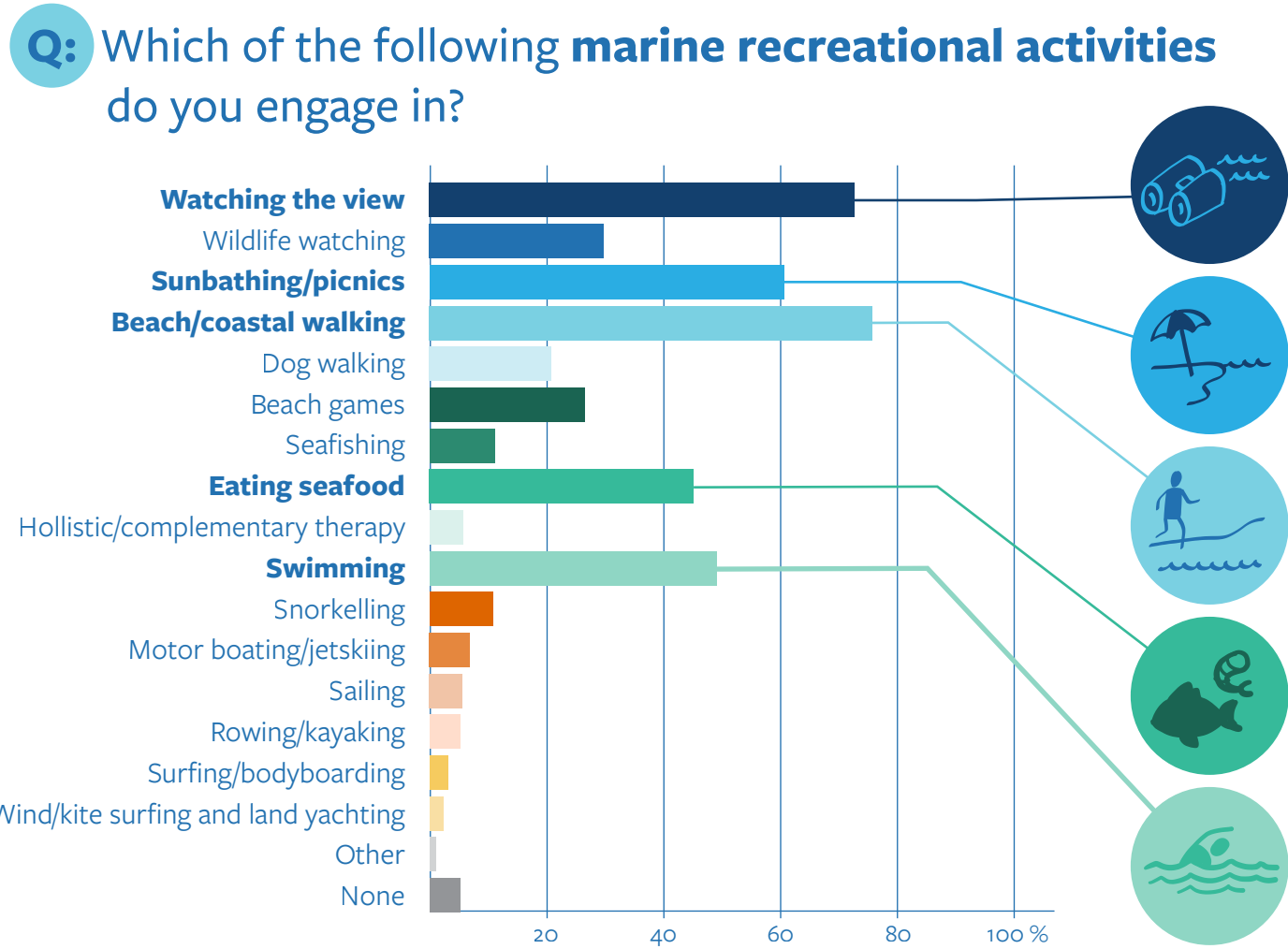
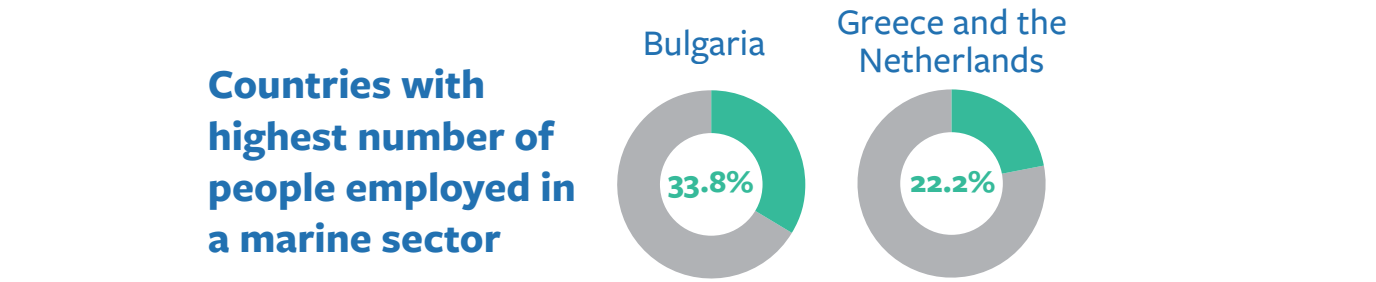
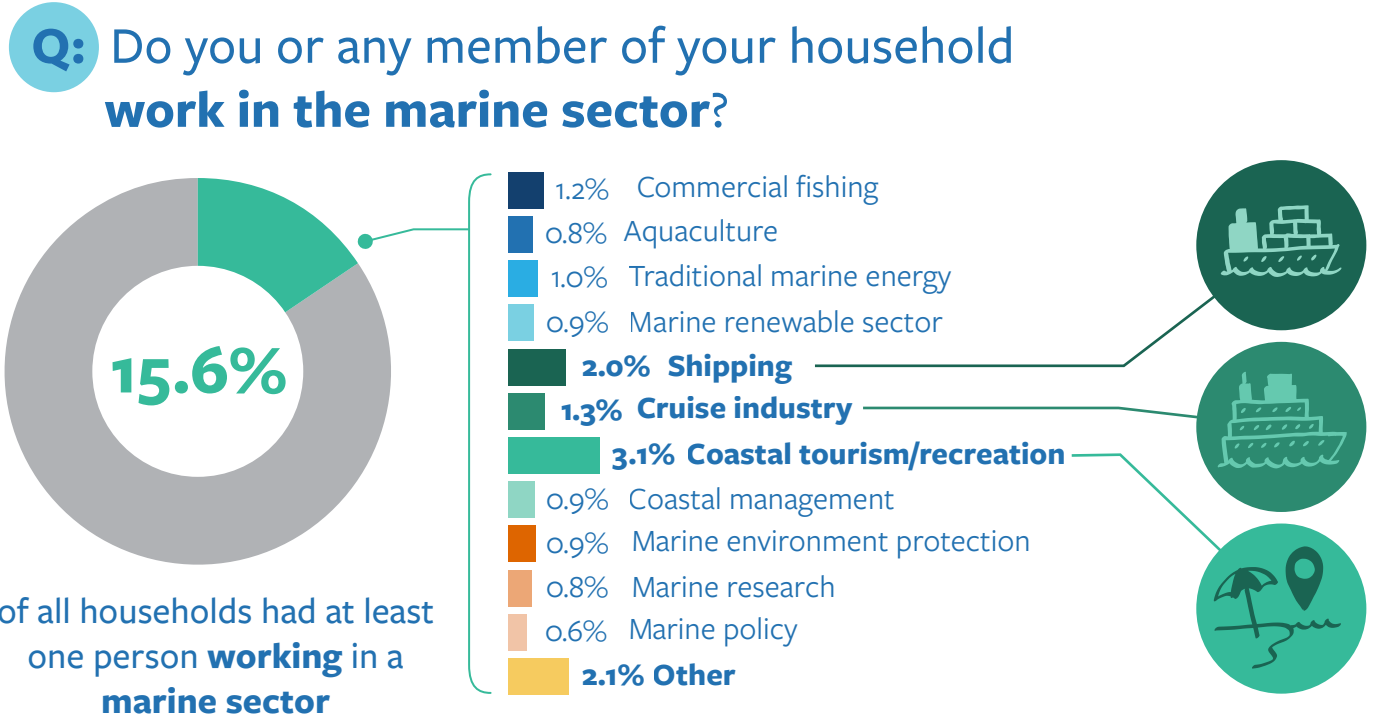
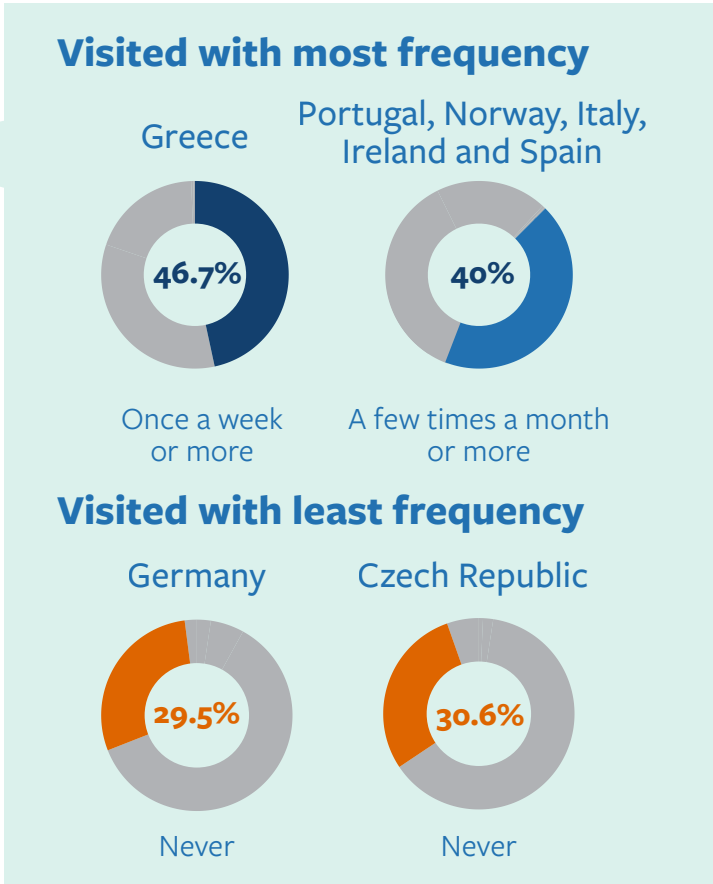
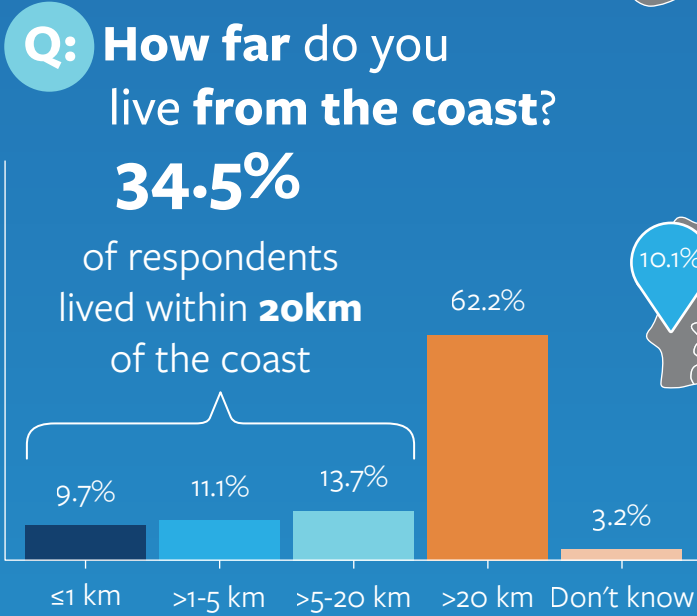


Work situation



Seas, Oceans & Public Health in Europe

What did European citizens say about their contact with the marine environment?



What did European citizens say about their perceptions of marine activities?



Commercial fishing



Aquaculture



Offshore windfarms



Offshore oil/ gas mining



Holiday cruises



Recreational visits



Seas, Oceans & Public Health in Europe

Q: On balance, how **good** or **bad** do you think the following **marine activities** are for the **economy**, the **environment** and **public health and wellbeing** across Europe?



Deep-sea mineral extraction



Producing medicines from marine organisms



Shipping



Planning the use of marine space



Water sports



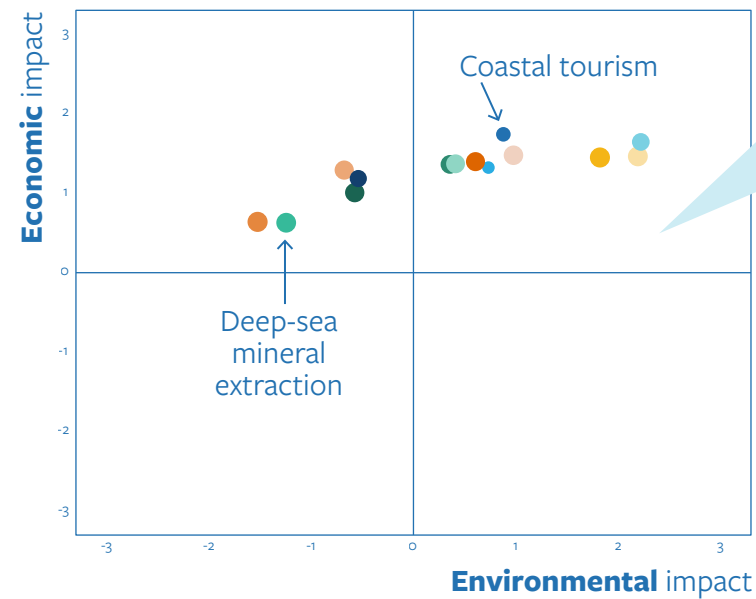
Community events



Coastal protection



Conservation activities



All activities were perceived as positive for the **economy**



Coastal tourism



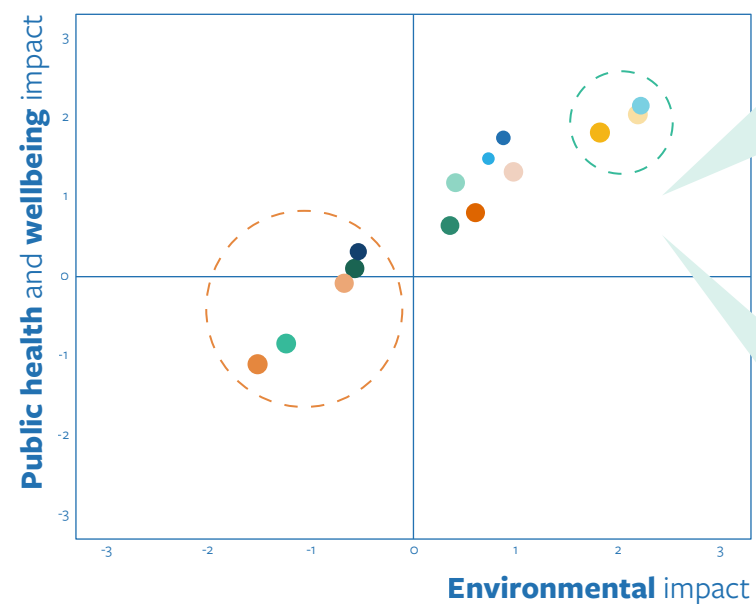
most beneficial



Deep-sea mineral extraction



least beneficial



Considering the **environment**:



- Community events
- Conservation activities
- Coastal protection

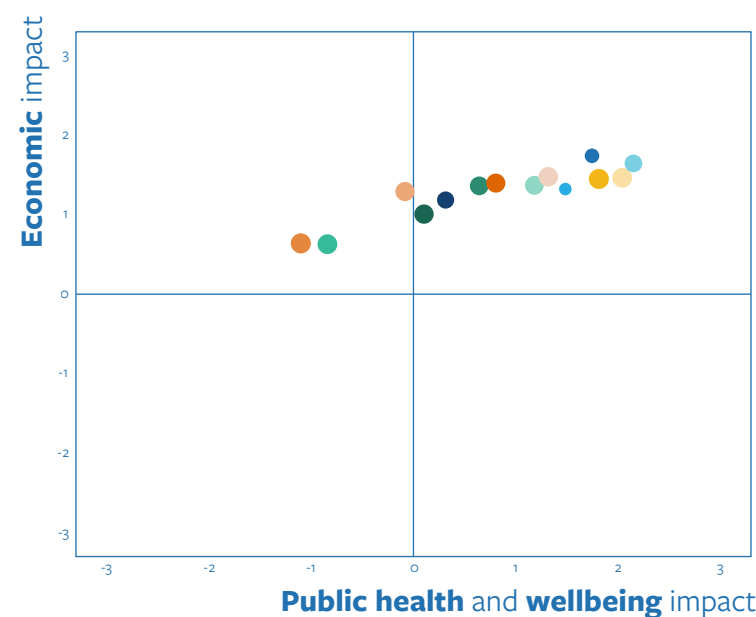
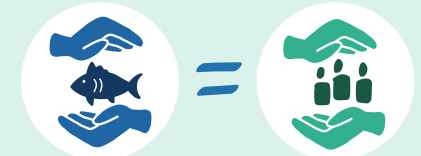
32.2% negative responses



- Holiday cruises
- Commercial fishing
- Shipping
- Deep-sea mineral extraction
- Offshore oil/ gas mining

41.2% negative responses

What's good for the **environment** is good for **public health**.



Desire for **policy intervention**:

— least intervention

- Water sports
- Recreational visits

+ most intervention

- Deep-sea mineral extraction
- Offshore oil/ gas mining

Very little



Desired level of health-related **policy intervention**

What did European citizens say about marine priorities for them and policy makers?

Q: How important do you think each of the following goals are for **yourself** and for **policy makers** across Europe currently?

Increasing **economic growth** for marine businesses

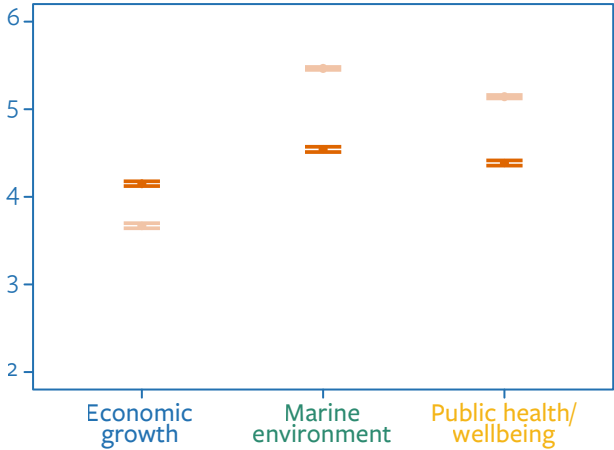
Protecting the **marine environment**

Protecting and promoting **public health and wellbeing** from the marine environment

‘Protecting the marine environment’ was considered to be the most important goal for the respondents.



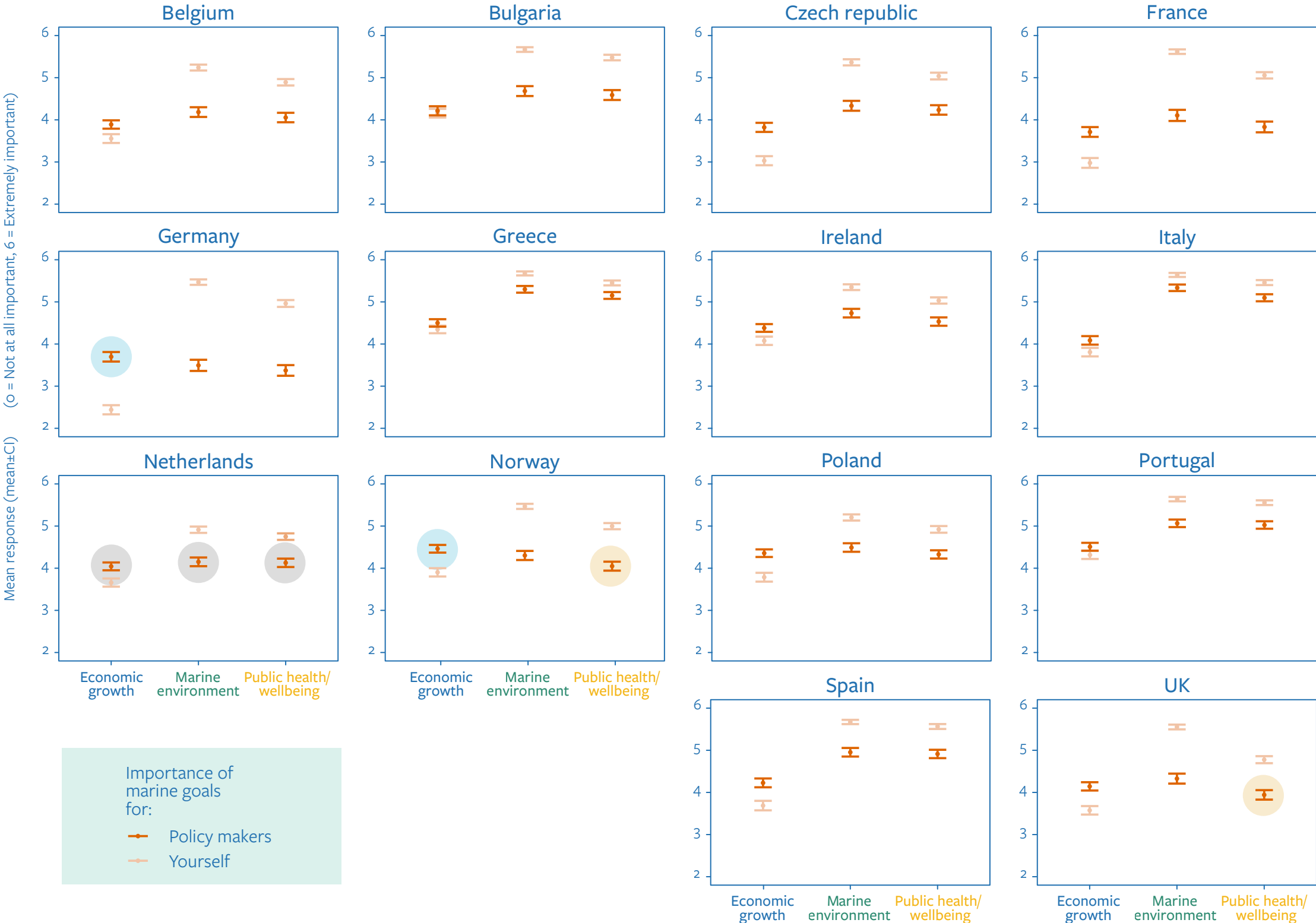
All countries



In Norway and Germany the most important marine goal for policy makers was promoting **‘economic growth’**.

In the Netherlands, respondents perceived all three goals to be equally important for policy makers.

The UK and Norway both perceived **‘public health and wellbeing’** to be the least important marine goal for policy makers.



Importance of marine goals for:

Policy makers

Yourself

How concerned did European citizens feel about risks and threats?

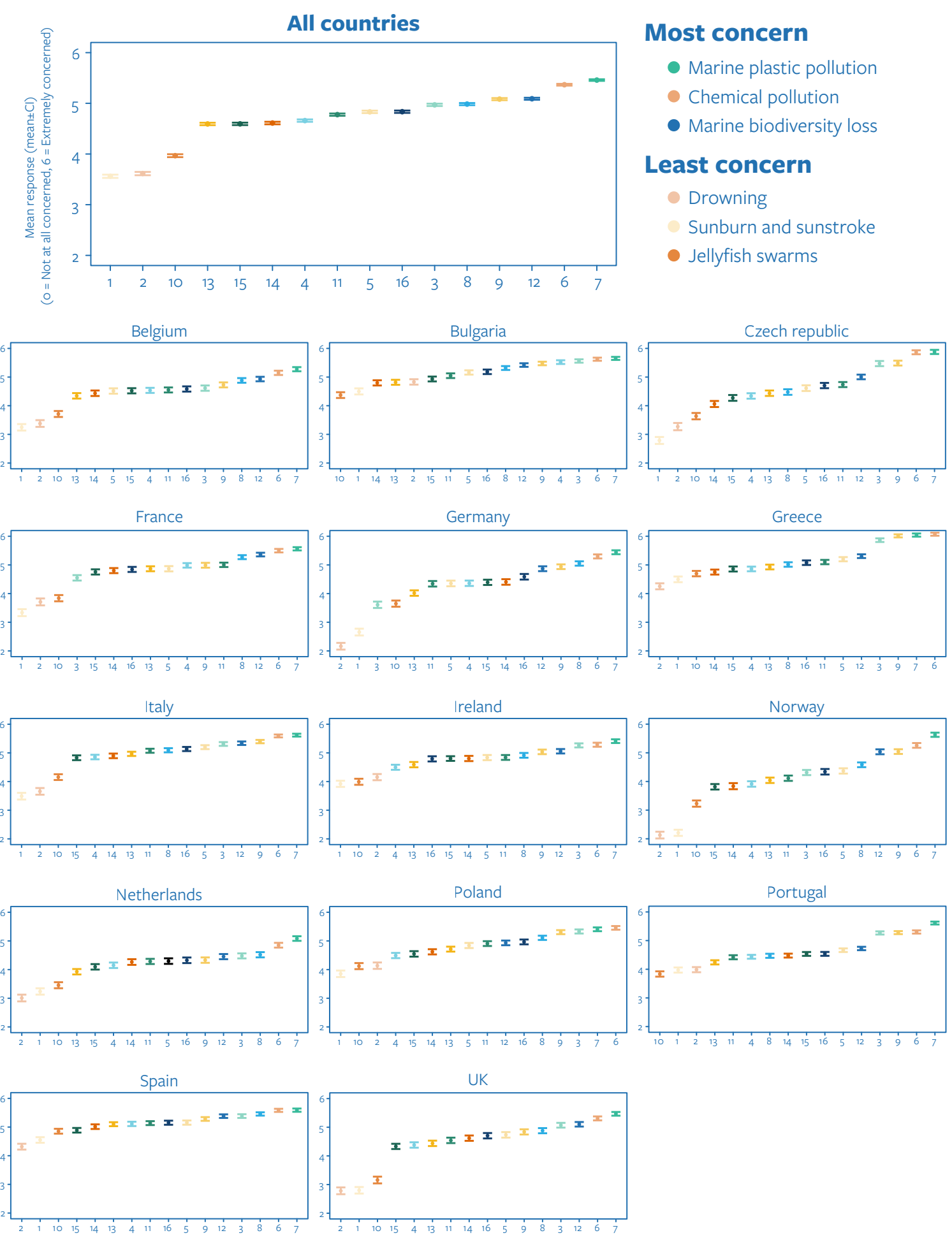
Potential risks and threats:

1. Sunburn & sunstroke on coastal visits
2. Drowning from recreational activities
5. Emergence of drug-resistant microbes in seawater
6. Chemical/ oil pollution of marine waters
9. Contamination of seafood
10. Jellyfish swarms
13. Invasive marine species introduced by humans
14. Sea-level rise

Q: How concerned do you feel about the following potential **threats** to **public health/ wellbeing**?



3. Human and animal sewage in bathing waters
4. Coastal overdevelopment
7. Plastic pollution of marine waters
8. Collapse of fish stocks
11. Overgrowth of harmful algae
15. Flooding and storms
16. Ocean acidification
12. Loss of marine biodiversity/ species

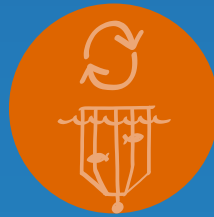


What did European citizens say about future research funding?

Research funding topics:



1. Bathing water quality



2. Sustainable aquaculture



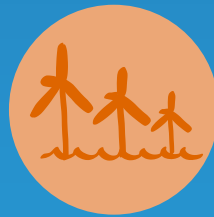
5. Marine species wildlife protection



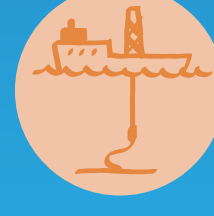
6. Health/wellbeing effects of living by the sea



9. Marine climate change issues

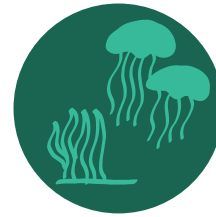


10. Marine renewable energy



13. Deep-sea mining

Q: To what extent would you **support more research funding** in the following areas to better understand public health/ wellbeing implications?



3. Jelly fish swarms and algal growth



4. Biotechnology from marine organisms



7. Health/wellbeing effects of leisure time on the sea



8. Plastic pollution in marine waters



11. Coastal protection/ defences



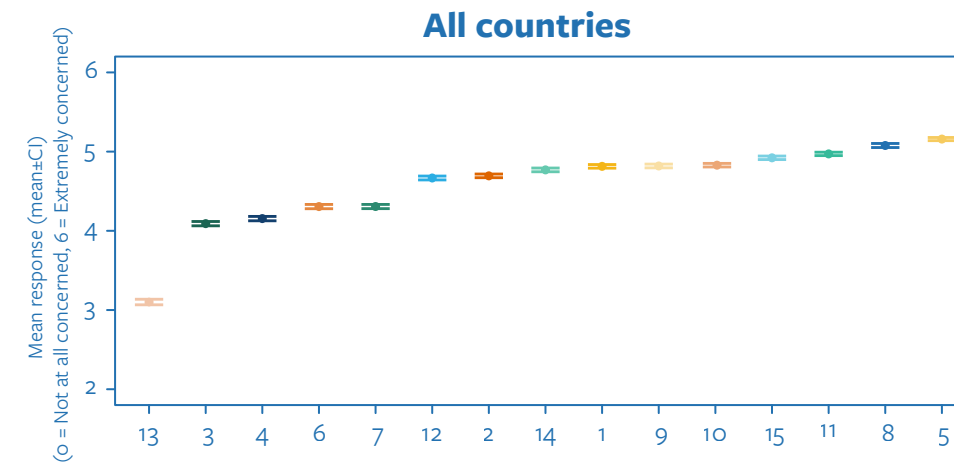
12. Sustainable shipping



14. Behavioural change to improve health/ wellbeing



15. Education and awareness raising

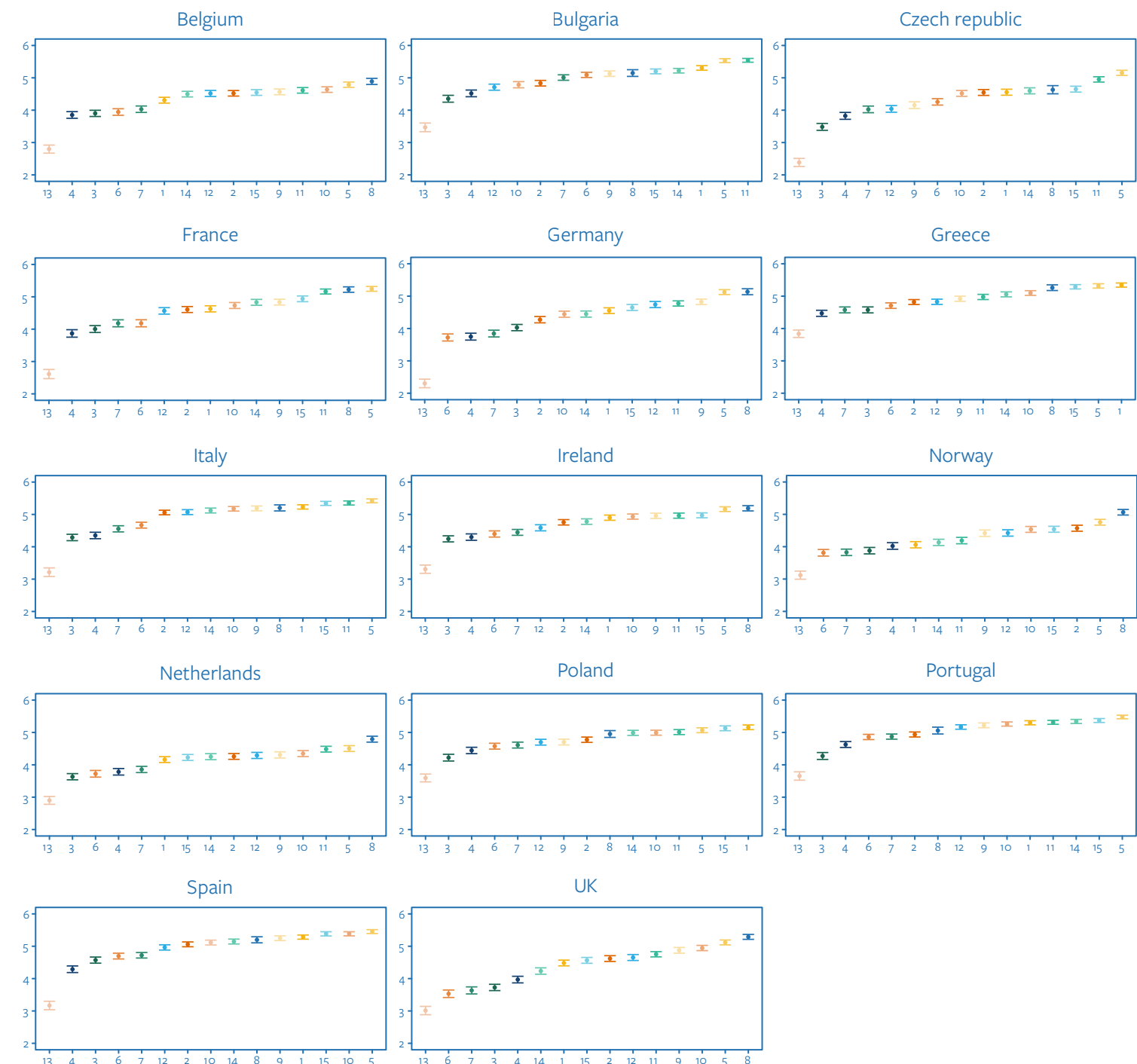


Most support for funding

- Marine species wildlife protection
- Plastic pollution in marine waters
- Coastal protection/defence

Least support for funding

- Biotechnology from marine organisms
- Jelly fish swarms and algal growth
- Deep-sea mining



What did European citizens say about their own priorities?

Q: What is the **key priority** for protecting both public health and the health of the marine environment for a sustainable future?

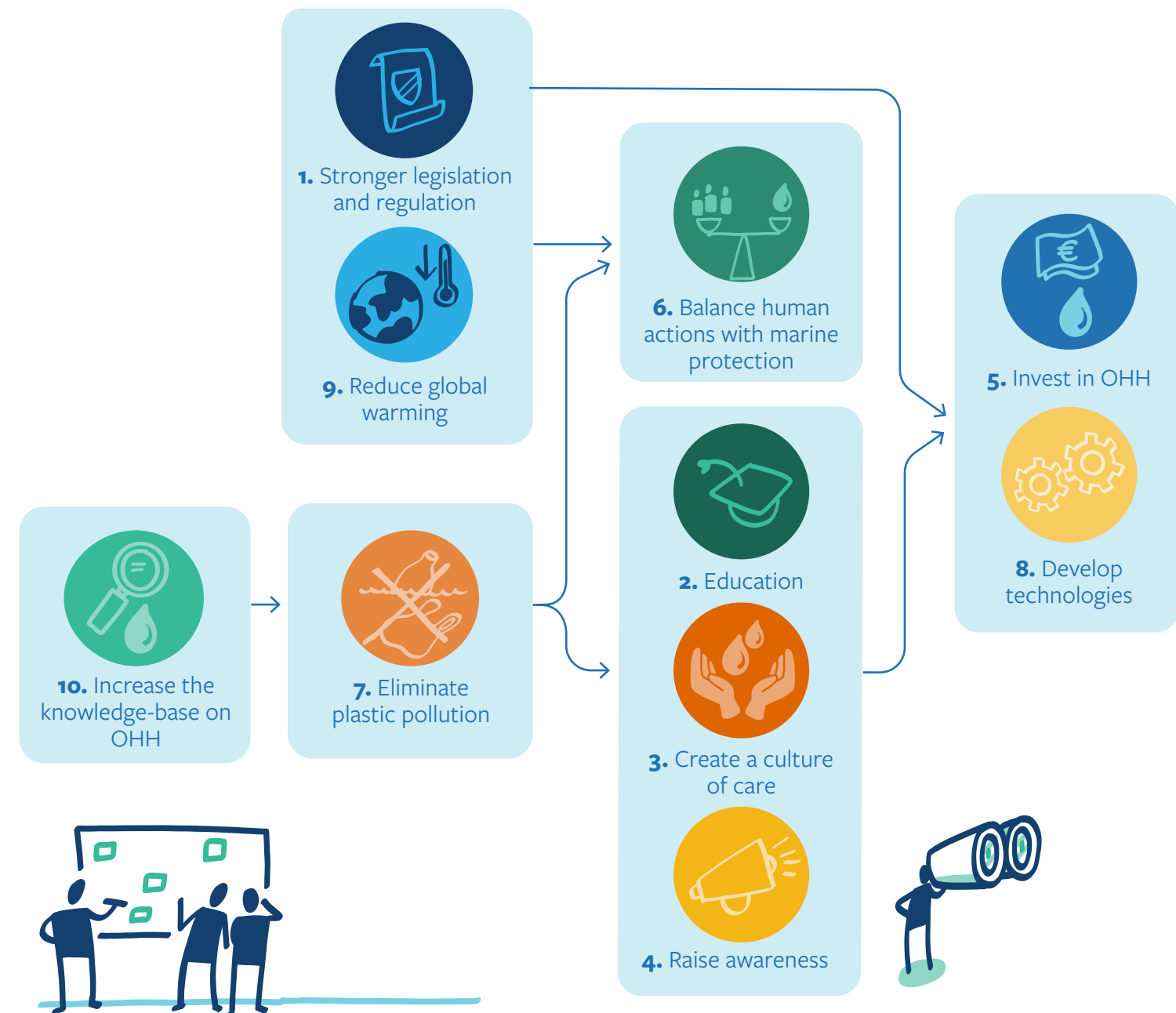
This was the only open-ended question in the survey. The results were brought to a **Citizen Workshop** that used **Collective Intelligence**, a methodology that specialises in facilitating group discussion and consensus building around priorities and solutions.



The **Top Ten Most Voted for Priorities for Oceans and Human Health by Citizens** include:

- 1 Stronger legislation and regulation of marine industrial activities** (23 votes)
- 2 Education** (20 votes)
- 3 Create a culture of care** (18 votes)
- 4 Raise awareness** (14 votes)
- 5 Invest in Oceans and Human Health** (11 votes)
- 6 Balance human actions with marine protection** (10 votes)
- 7 Eliminate plastic pollution** (10 votes)
- 8 Develop technologies** (10 votes)
- 9 Reduce global warming** (9 votes)
- 10 Increase the knowledge-base on OHH** (8 votes)

Oceans and Human Health Structural Priorities Map



This structural OHH priority map is read from left to right with the priorities to the left significantly impacting the priorities to the right.

Four different priority pathways are evident, with directional arrows indicating pathways of influence. For example, on the left, the need to **'Increase the Knowledge-Base on Oceans and Human Health'** significantly impacts the need to **'Eliminate Plastic Pollution'**, which in turn significantly impacts the need to **'Balance Human Actions with Marine Protection'**. The priorities grouped together in the same box, such as **'Education'**, **'Create a Culture of Care'** and **'Raise Awareness'** are highly interdependent, reciprocally inter-related and any outcome in one will greatly impact the others.

From Britton, E., McHugh, P. & Domegan, C. (2019) Our Oceans & Human Health Citizen Conversations Summary Report, EU SOPHIE Project, Whitaker Institute, NUI Galway, Ireland.

What **now** and what's **next**?

The SOPHIE survey is the first of its kind to gather data on the interlinkages between the **marine environment, human activities and public health and wellbeing**. These data provide the first baseline of what EU citizens think about their marine environment and its impacts on public health. This information will help us to understand the beliefs and perceptions in different groups and cultures across Europe, at least at the time the survey was carried out (Spring-Summer 2019). This information is timely as we stand ready to enter the **UN Decade of Ocean Science** (2021-2030) for **Sustainable Development**, to ensure that ocean science can fully support countries' actions to sustainably manage the oceans and achieve the **2030 Agenda for Sustainable Development**.

Europe has set an ambitious target to reach climate neutrality by 2050 (The European Green Deal). The European Commission, in its communication on the **European Green Deal**, recognises the role the ocean and the 'blue economy' will have to play in alleviating the demands on land resources and tackling climate change. Crucially it also recognises the importance of citizens in co-creating policy change.

The responses from this survey will help inform policy makers about the aspirations and fears of the public, and, in turn, may provide information to help decision makers balance the needs of economic development, environmental protection, and public health and wellbeing and address the marine and maritime trade-offs that will have to be made to achieve the European Green Deal.

This report provides the overview results from the SOPHIE survey. More detailed analyses is already available at the SOPHIE website and finer in-depth results will be coming soon, comparing the publics interactions and perceptions at an overall and country level, as well as examining the role of individual characteristics (e.g. sociodemographic, marine connectedness and psychological variables) in predicting these perceptions. As these resources become available they will be published on the SOPHIE website and the conversation will continue.

We invite you to join in.



Find out more about the SOPHIE Survey:

<https://sophie2020.eu/>

Visit the SOPHIE website:

<https://sophie2020.eu/>

Join the conversation:

www.sophie2020.eu/activities/community-platform

This report was produced by Seascope Belgium, based on the findings of the SOPHIE Survey which was carried out in collaboration with the University of Exeter and the National University of Ireland Galway.

Design by Visuality.eu



SOPHIE is funded by the European Union's Horizon 2020 research and innovation programme. grant agreement No 774567.

This output reflects the views only of the author(s), and the European Union cannot be held responsible for any use which may be made of the information contained therein.