GUIDEBOOK

Ocean & Society Survey

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Welcome to the Ocean & Society Survey (OSS)

The OSS is a collaborative research tool designed to answer two key questions:

> 1. How do people around the world connect with and value the ocean?
> 2. What influences peoples' interests and concerns about the ocean, and their willingness and capacity to take action for the ocean?

What is the goal?

To administer the survey in at least 100 countries by 2030, to better understand public ocean perceptions, specifically how people understand, value, and/or engage with the ocean.

Why does it matter?

By understanding the connections between people and the ocean, we can better identify what motivates peoples' behaviour, what helps them take action, and what might get in the way. These insights can help guide, for example, ocean communication strategies, effective community engagement practices, and broader ocean decision-making and investments in ways that consider peoples' lived experiences and realities.

Who is it for?

The survey is designed to support the interests of a wide range of users – whether ocean researchers, communicators, educators, and/or policymakers.

At the same time, we are striving for the survey to be administered in 100 countries before 2030, starting with 20+ before the third United Nations Ocean Conference (UNOC3) in June, 2025. To achieve these goals, we seek support from:
✔ Organizations & Nonprofits
✔ Community Practitioners
✔ Academic Institutions
✔ Governments & Agencies
✔ Businesses & Foundations

The survey is tailored to respondents age 18 years and older, and it can be adapted for various cultures, languages, and contexts.

Please see the Administration section below for more detail.

Why get involved?

- Mobilize shared resources: Contribute data to an open-access database on how people understand, value, and/or engage with the ocean over time and across global regions (i.e., track ocean literacy progress);
- Collaborate and exchange: Join a global team of transdisciplinary researchers and partners to identify regional and global insights;
- Enhance decision-making and advocacy: Use evidence-based insights to inform people-centred and solution-focused ocean campaigns, engagement initiatives, decision-making, and investments.

Contact us with any questions: jen@colcoalition.ca (Jen McRuer, Research Manager, Canadian Ocean Literacy Coalition; Lead Coordinator of the OSS)

How to access the OSS

After exploring the OSS guidebook sections below, interested users can access the OSS and/or raw data sets of participating countries by completing and submitting a short form. Our team will contact you to discuss specific needs and next steps.

OSS coordination & co-design partners

- Canadian Ocean Literacy Coalition (Dalhousie University) – Jen McRuer and Diz Glithero
- Centre d'Estudis Avançats de Blanes (CEAB-CSIC) – Jordi F. Pagès
- Communications INC – Natalie Hart, Sophie Hulme, and Eliott Barfield
- Connecticut Sea Grant and University of Connecticut – Diana Payne
- Fundação Grupo Boticário – Janaina Bumbeer
- Instituto do Mar–Universidade Federal de São Paulo – Ronaldo Christofoletti and Ivan Machado Martins (early contributions from Bárbara Pinheiro and Marilia Bueno Fernandes)

- IOC-UNESCO and Research for Purpose Ltd – Vinicius Lindoso
- Lawrence Hall of Science – Craig Strang
- MarSocSci and Cardiff University – Emma McKinley
- Ocean Conservation Trust – Nicola Bridge
- Nordlandsforskning, Nordland Research Institute – Liz Morris-Webb
- Simon Fraser University – David Zandvliet
- University of Gothenburg – Géraldine Fauville
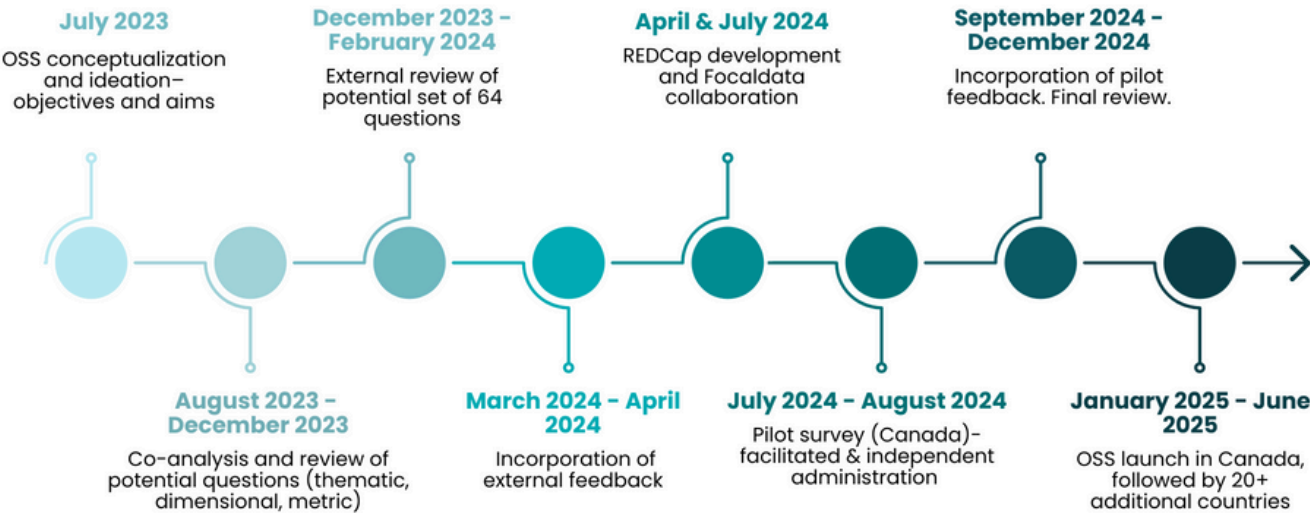
Ocean & Society Survey
Co-design process

Rationale & objectives

The OSS is the culmination of 18 months of collaboration by an international and multi-sectoral team of researchers and partners from the Global North and South. Its primary objective is to better understand and utilize public insights about people-ocean connections, specifically on how we understand, value, and/or engage with the ocean, to help inform people-centred and solution-focused ocean campaigns, engagement initiatives, decision-making, and investments.

To achieve this objective, 20 standardized questions focus on connections with the ocean related to emotions, lifestyle choices, willingness to change habits and behaviours, awareness of ocean benefits, access to the ocean, sources of information about the ocean, perceived ocean threats and concerns, and place-based perspectives on personal and collective actions and solutions.

OCEAN & SOCIETY SURVEY TIMELINE

July 2023
OSS conceptualization and ideation–objectives and aims

August 2023 – December 2023
Co-analysis and review of potential questions (thematic, dimensional, metric)

December 2023 – February 2024
External review of potential set of 64 questions

March 2024 – April 2024
Incorporation of external feedback

April & July 2024
REDCap development and Focaldata collaboration

July 2024 – August 2024
Pilot survey (Canada)-facilitated & independent administration

September 2024 – December 2024
Incorporation of pilot feedback. Final review.

January 2025 – June 2025
OSS launch in Canada, followed by 20+ additional countries

Co-development of a robust tool

- The OSS arose from the efforts of a co-design team of ocean literacy researchers and strategic ocean communicators from North America, South America, and Europe. Its development built upon three existing, validated national ocean literacy surveys:
- Canadian Ocean Literacy Survey (Canadian Ocean Literacy Coalition, 2020)
- United Kingdom Ocean Literacy Survey (Department for Environment, Food & Rural Affairs and Ocean Conservation Trust, 2022)
- Brazil Ocean Literacy Survey (Instituto do Mar–Universidade Federal de São Paulo and Fundação Grupo Boticário, 2022)
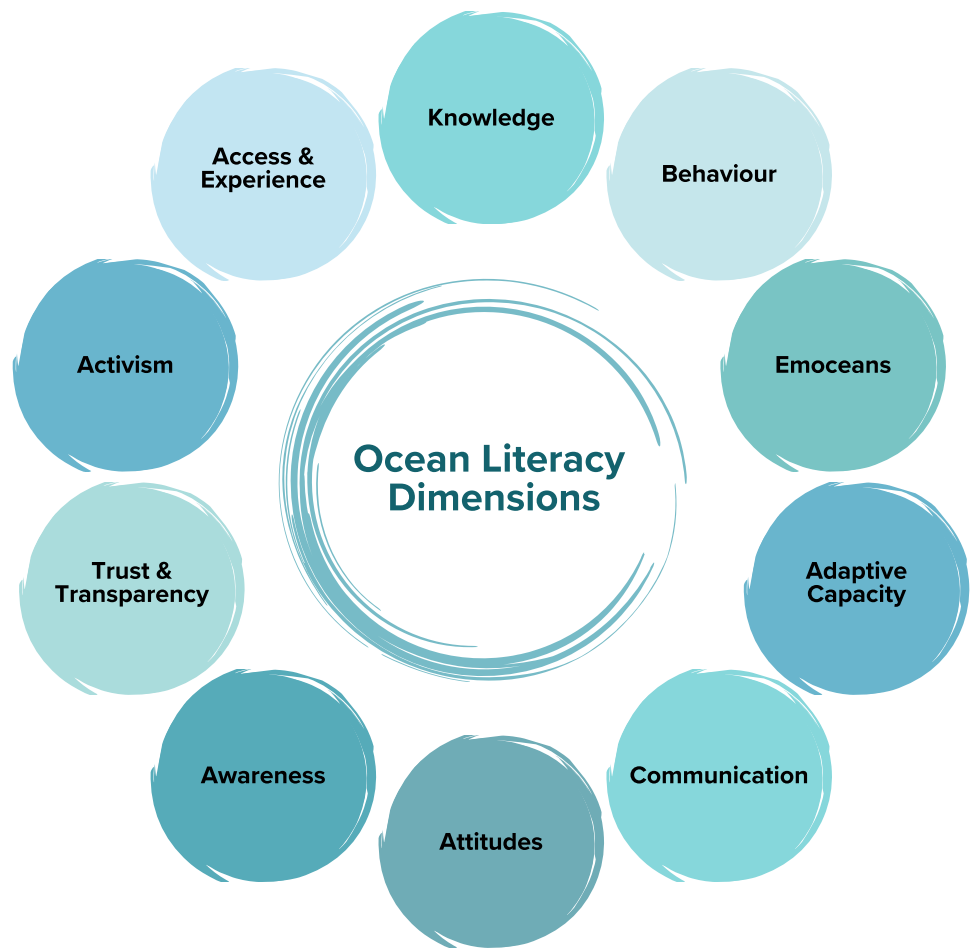
The comparative analysis of these 3 national surveys informed the OSS, importantly reflecting the ways ocean literacy includes and values diverse ocean perspectives: Canada's survey examined ocean perceptions and values through place-based perspectives and multiple ways of knowing, the UK's survey focused on the measurement of key ocean literacy dimensions, and Brazil's survey focused on ocean culture and communication.

The selection of core OSS questions was guided by a public ocean perceptions comparative analysis study by the Canadian Ocean Literacy Coalition in 2022 (McRuer & Glithero, 2025), and involved the following three stages:

1. Identifying arising themes in question sets

Ocean Connection	Reciprocal influences (actual or perceived) between people and the ocean; or references to the physical, emotional, spiritual relationship(s) with the ocean
Ocean Health	Perceptions of ocean health, its importance to daily lives, ocean health priorities, and objectives
Ocean Protection	Ocean protection awareness, priorities, strategies, and leadership
Ocean Threats	Awareness and concerns related to ocean threats (actual or perceived)
Ocean Values	Ocean values related to daily lives, resources, protection, economics, governance
Knowledge/Awareness	Understanding of the ocean and how information is sourced, taken up, and shared
Blue Economy	Perceptions and understanding related to ocean-based economic activities, assets, growth, and services
Governance	Perceptions related to processes of enforcement/modification related to ocean and coastal activities, health, and protection
Ocean Influences & Solutions	Actions, influences, and innovation to support a healthy ocean

2. **Assigning ocean literacy dimension(s) to each question.** Adapted from McKinley et al., 2023.

3. **Assessing question alignment with indicators of change(s) over time.** Adapted from Hattam et al., 2015.

Measurability	Will data result in something that can be measured?
Sensitivity	Can data reflect change over time?
Specificity	Is the change resulting from a response to a particular ocean literacy dimension or specific to a particular topic?
Scalability	Is the data adaptive to different scales?
Transferability	Is the question applicable across regions?
Policy Relevance	Is the resultant data impactful for policy?

Multiple rounds of revisions by the OSS team determined 64 potential questions relevant to a wide range of audiences and contexts. Review processes involved 30 additional collaborators before a pilot stage in Canada (June-August 2024) served to test the questions, platform, and design prior to international uptake and use. In particular, the pilot stage helped with data cleaning and quality checks, and provided insight on metrics of survey fatigue, language uncertainty, inconsistent responses, lack of attention, and time to completion. Following review and pilot stages, the potential set of 64 questions was refined to 20 core, standardized questions (in addition to 9 demographic questions) primarily consisting of open, ranking, likert, multiple select, and single select formats. (N.B. to aid in inclusivity and accessibility on a global scale, the core set can be augmented to afford context-specific, place-based, and culturally appropriate questions - see section on OSS contextualization).

References

- Hattam, C., Atkins, J. P., Beaumont, N., Börger, T., Böhnke-Henrichs, A., Burdon, D., ... & Austen, M. C. (2015). Marine ecosystem services: linking indicators to their classification. Ecological Indicators, 49, 61-75.;
- McKinley, E., Burdon, D., & Shellock, R. J. (2023). The evolution of ocean literacy: A new framework for the United Nations Ocean Decade and beyond. Marine Pollution Bulletin, 186, 114467.
- McRuer, J., & Glithero, D. L. (2025). Advancing Public Perceptions Ocean Research: A Guiding Approach to Strengthen Collaboration for Ocean Health. Facets. 10.1139/facets-2024-0039

Ocean & Society Survey
Administration

To support international uptake and use, the OSS can be administered in two ways:

1. Facilitated Administration: To expedite and standardize country-level, nationally representative data collection, <u>Focaldata</u> – a public opinion survey agency based in the UK – is leading OSS administration.

Focaldata was chosen, based on:
- expertise and respected reputation in market research administration
- affordability
- capacity for wide global reach, and ability to contextualize for regional needs
- high efficiency, with globally diverse panels and data collection in under a week
- ease of comparative analysis across countries through an online dashboard
- ready access and rights to collected data
- support for translation and analysis outputs

Benefits of facilitated administration:
- Common platform & visualization: All participating countries use a shared platform with access to dashboards and data tables for easy visualization and comparison.
- Contribution to Ocean Decade events: Invites your participation in co-analysis and/or enables your data to be included in comparative co-analysis to inform insights for ocean communications campaigns, effective public engagement practices, decision-making and investments.
- Networking: Presents an opportunity to be a part of an established and growing international team of transdisciplinary collaborators.

See <u>FAQs</u> on Focaldata administration.

2. Independent administration: Any individual/group/organization can engage in independent administration in a particular country, region, or subset population, and/or can share the survey toward these ends, in the following ways:

A) The OSS is also available through the REDCap survey platform which stores data securely on <u>Dalhousie University</u>'s Canadian servers. To use the OSS, administrators will be provided with a username and password for access to a survey link that has been tailored for your country, region, or subpopulation. The link can be publicly shared with your intended user groups. The resultant data will be stored on the REDCap platform, accessible for download and use through survey administrator login details.

- If you are interested in using the REDCap survey platform to collect data, we ask that you share your data with us for upload on an open-access, centralized hub to afford a) wider comparison with globally participating countries, and b) knowledge exchange and identification of regional trends and patterns throughout the Ocean Decade and beyond. See Data Sharing section for more information.

B) You can also utilize the question set (or subset thereof) in a survey platform of choice, for particular aims. Please note that unless the use is standardized in accordance with specified terms, you may not be able to compare your survey results with the wider data sets from participating countries. If this is not an issue, and you are interested in using the OSS survey questions in whole or part for your own research, we kindly ask the following:

- To afford comparability with the wider effort, the question types, wording and answer choices must remain unchanged and consistent with the standardized question set.
- To support OSS uptake on different scales, we'd appreciate feedback on your experience, the successes and benefits, challenges you run into, what you learn from the data you collect, etc.
- To promote learning and sharing of your experience, users are invited to write a short synopsis story of your study, your research approach, why you chose the OSS, your experience of its use, and any related visuals for potential highlights in OSS-related outputs (e.g., website features, conference presentations and posters, publication case study examples).

Citation & acknowledgement

Whether facilitated or independent administration, the following citation is for use in all outputs and deliverables (e.g., reports, visual, publications, presentations, theses, articles, website site content) to acknowledge co-design efforts of the collaborating research team: McRuer, J., Glithero, D., McKinley, E., Pagès, J., Fauville, G., Morris-Webb, E., Hart, N., Strang, C., Christofoletti, R., Hulme, S., Grainger, E., Pinheiro, B., Payne, D., Bridge, N., Lindoso, V., Machado Martins, I., Zandvliet, D., Bueno Fernandes, M., Bumbeer, J., & Shellock, R. (2025). Co-designing the Ocean & Society Survey–A Global Tool for Understanding People-Ocean Connections and Mobilizing Ocean Action. Ocean & Society.

In cases of facilitated administration, Focaldata must also be cited as the source of survey administration.

In cases of independent administration with REDCap, please cite the publications below. REDCAP recommends the following boilerplate language:

Study data were collected and managed using REDCap electronic data capture tools hosted at Dalhousie University. REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies, providing:

- an intuitive interface for validated data capture;
- audit trails for tracking data manipulation and export procedures;
- automated export procedures for seamless data downloads to common statistical packages; and
- procedures for data integration and interoperability with external sources.

1) Harris, P.A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., Conde, J.G. (2009). Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Information. 42(2)*: 377-81.

2) Harris, P. A., Taylor, R., Minor, B. L., Elliott, V., Fernandez, M., O'Neal, L., ... & REDCap Consortium. (2019). The REDCap consortium: Building an international community of software platform partners. *Journal of Biomedical Informatics, 95, 103208.*

Ocean & Society Survey
Contextualization

Contextualization may be needed prior to uptake and use of the OSS survey tool, to suit particular aims. The OSS can be used in different ways and for a range of potential reasons, including, but not limited to:

- Collecting baseline information on public levels of ocean literacy;
- Evaluating the impact of ocean literacy initiatives and programs through carrying out data collection before and after an activity or intervention, so that any change in attitudes, perceptions, and relationships can be tracked and assessed.
- Collecting data to inform evidence-based ocean communications campaigns, decision-making, and investments

With these (and other) uses in mind, it may be necessary to consider the inclusion of additional questions. Contextual questions must follow particular protocols if the intention is to contribute to the global database or benefit from comparative analysis of participating countries (see Contextualization Considerations below); otherwise collected data may be relevant for independent analysis only.

Contextualization considerations

- For users wishing to undertake facilitated administration, the OSS may be amended to reflect respective regional/national contexts. To ensure datasets are comparable across regions and countries, user groups must maintain the core set of standardized questions and answers provided in the OSS. Should additional questions (3-5) be of interest for data collection, these questions may be added at the end of the core set (prior to demographic question section provided).
- The OSS includes a section on participants' socio-demographic characteristics (e.g., age, gender). These have been included to help us to understand participant responses in relation to their grouped contexts - please note, no participant will be identifiable from these responses and the data will only be used to support analysis of trends within the data. Research has shown that socio-demographic insights can help us to understand how public ocean perceptions vary within and across communities. Some demographic questions (e.g., voting, annual income) can be reframed to ensure relevance in participating countries.

- The survey may be modified for purposes of translation, aligning as accurately as possible with the English question and answer wording and format. This will importantly help to ensure comparability across regions and countries. In cases of facilitated administration, several translations are already available, and a how-to video is available to support further translations in a manner that affords comparison of national datasets.

Examples of additional questions sourced from national surveys:

Q1 I believe that [X Nationals] have a strong connection with the ocean. Please select the response that best reflects your feelings or experiences.
- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Q2 For each statement, select the response that best reflects your feelings or experiences. I believe [x Country] …
- Currently has an effective strategy to protect the ocean
- Is working toward an effective strategy to protect the ocean
- Does not have resources to have an effective strategy to protect the ocean
- Does not prioritize an effective strategy to protect the ocean
- Says it prioritizes ocean protection, but does not act toward this
- I want my country to have an effective strategy to protect the ocean in the next five years

  - Strongly Agree
  - Agree
  - Neither agree nor disagree
  - Disagree
  - Strongly Disagree
  - I have no idea

Q3 Do you know or have you heard about the "Ocean Economy" or the "Blue economy?"
- Know it well
- Know it just by hearing about it
- Do not know and have never heard of it

Q4 Do you know or have you heard of the Ocean Decade?
- Know it well but am not involved
- Know it well and am involved
- Know just by hearing about it
- Have never heard of it

Q5 In your opinion, what are the main economic activities related to the ocean that most impact your life? Scale 0-4

0-no idea
1-not at all important
2-somewhat important
3-important
4-very important

- Transport of people and goods
- Renewable energy generation
- Mineral extraction such as oil, gas, salt, limestone and precious stones;
- Infrastructure
- Communications & Internet
- Jobs & Income
- Fishing & seafood farming
- Production of medicines and cosmetics
- Tourism and hospitality
- Local entrepreneurship (crafts, commerce, food)
- Other

Q6 During the past year, how many times have you visited the ocean?
- More than once a day
- Once a day
- Once a week
- 1-2 times a month
- Rarely
- Never

Q8 Marine Protected Areas (MPAs) are specific areas of the marine environment which are managed to achieve long-term nature conservation and sustainable use. To what extent do you support or oppose the creation of MPAs in [X country or region]?
- Strongly support
- Tend to support
- Neither support or oppose
- Tend to oppose
- Strongly oppose
- Don't know

Q9 I would like [X country] to be an international leader in ocean protection.
- Strongly Agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly Disagree

Ocean & Society Survey
Ethics, Data Sharing & Analysis

Ethics

For facilitated administration: Ethics are pre-approved based on public opinion survey agency protocols. See Focaldata FAQs for more detail.

For independent administration:
- To ensure free, prior, informed consent of participants, you must consider whether ethics approval is necessary for your organization/institution. If this is the case, we have successfully applied and secured ethics approval through Dalhousie University (REDCap platform), and we can discuss avenues of support.
- Additionally, this survey is intended for any global citizen, age 18 and older, and is intended for anonymous, grouped results. The age of consent in respective countries must be considered, and the Survey Details section amended to suit current operative laws, regulations, or guidelines for research involving human subjects for respective jurisdictions. The Survey Details section must also be amended to include researcher contact information with each independent use.

Data sharing & analysis

Open-access use of participating country datasets (administered by FocalData) is available to inform shared learning and exchange. To access the datasets, we ask that you fill out a short form for purposes of tracking uptake and use.

Although broad analysis will be conducted by the OSS co-design team (for which interested country partners or team members are welcome to join), anyone can use datasets of interest to meet particular needs. External analyses are encouraged to be shared to ensure knowledge exchange, enabling the identification of regional trends and patterns throughout the Ocean Decade and beyond. Please contact jen@colcoalition.ca for more information on how to share.

Ocean & Society Survey
Questions

NB: Answer choices omitted for purposes of tracking OSS use and offering support in administration. To access the full survey <u>fill out this short form</u>.

Q1 (Ranked) [Rank top 3]
In your opinion, which of the following environmental topics are of highest priority to address?

Q2 (Ranked) [Rank top 3]
When you think about the ocean, how does it make you feel?

Q3 (Ranked) [Rank top 3]
When you think about the health of the ocean, how does it make you feel?

Q4 (Matrix - single select)
The ocean provides many benefits. How much do you value the following benefits of the ocean in your daily life?

Q5 (Matrix - single select)
In the past year, have any of the following experiences made you feel more connected to the ocean?

Q6 (Multi select)
Do any of the following reasons prevent you from participating in experiences that might connect you with the ocean?

Q7 (Multi select)
Where do you mostly learn or get information about the ocean?

Q8 (Matrix - single select)
In the past year, how often have you done the following actions?

T1 (Text instruction) [timer: 10 seconds]
The next set of questions ask if you are willing to change your lifestyle for the ocean, and to what degree (small ways, moderate ways, big ways).

> Examples of small ways: turning a tap off to brush your teeth, learning about single-use plastic, learning where food comes from

> Examples of moderate ways: buying appliances that save water, buying less single-use plastic, buying sustainably-sourced food

> Examples of big ways: self-restricting monthly water use, refusing any single-use plastic, becoming a vegan

Q9 (Single select)
In the next 12 months, how willing would you be to change your lifestyle if you knew it would help the ocean?

Display this question IF the answer to Q9 In the next 12 months, how will...f you knew it would help the ocean? is Fairly willing OR Very willing

Q10 (Single select)
I would be willing to change my lifestyle in...
1. Small ways
2. Moderate ways
3. Big ways

Display this question IF the answer to Q9 In the next 12 months, how will...f you knew it would help the ocean? is Fairly willing OR Very willing

Q11 (Multi select)
Why are you willing to change your lifestyle? Select up to 3 answers.
Display this question IF the answer to Q9 In the next 12 months, how will...f you knew it would help the ocean? is Not very willing OR Undecided OR Not willing

Q12 (Multi select)
Why are you not willing to change your lifestyle? Select up to 3 answers.

Q13 (Multi select)
Would any of the following incentives encourage you to make lifestyle change(s) to support ocean health? Select up to 3 answers.

Q14 (Matrix - single select)
To what extent do you agree or disagree with the following statements?
(Twelve answer statements are provided).

Q15 (Single select)
How often do you think about ocean health?

Q16 (Single select)
How often do you think about climate change?

Q17 (Ranked) [Rank top 3]
Which of the following threats to the ocean most concern you?

Q18 (Matrix - single select)
In your opinion, which of the following groups need to take responsibility to address ocean threats?

Q19 (Matrix - single select)
In your opinion, to what extent do you trust each of the following groups to take action to address ocean threats?

Q20 (Ranked) [All ranked]
Here are some actions that could be taken to strengthen society's understanding of and action for the ocean. How would you rank these by importance?

T2 (Text instruction)
To help us understand ocean connections from diverse perspectives worldwide, please share a bit about yourself for research analysis and comparison. Your answers are anonymous.

Q21 (Single select)
How long have you lived in X Country?

Q22 (Single select)
How would you best describe where you live in relation to the ocean?

Q23 (Single select)
Do you live near freshwater (e.g., walking or biking distance to lake, river, stream, wetland)?

Q24 (Single select)
How would you describe where you live in respect to community size?

Q25 (Multi select)
Do you identify as any of the following?

Q25 (Multi select)
Do you identify as any of the following?

Q26 (Single select)
Which of the following employment sectors best describes your current area of work?

Q27 (Single select)
Has your work or education focused on the environment (ocean, water, climate, other)?

Q28 (Single select)
What is your current household annual income, prior to tax being deducted?

Q29 (Single select)
How did you vote in the 2021 federal election, or did you not vote?