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Introduction

Ocean Conservation Trust is a charity that exists to protect and restore the Ocean. Our work is centred around people and positive action through pro-Ocean behaviour and habitat restoration. We are using our knowledge and expertise to incite a passion for the Ocean across the globe, working in a collaborative manner to ensure the best outcome for our planet.

Ocean Conservation Trust are taking a people-centric approach to seagrass restoration in our flagship restoration project, Blue Meadows. The Blue Meadows team are working to protect and restore subtidal seagrass habitats across the Southwest UK.

Our restoration work is centred on the development of new ideas and technologies to upscale seagrass rewilding, implemented in our National Seagrass Nursery – **the UK's largest dedicated seagrass growing facility**.

Protection takes many forms, starting with raising the visibility of seagrass meadows to marine users through Sensitive Habitat Marker Buoys outlining their location.

This is coupled with an extensive community engagement programme, with the ambition of connecting communities to their local seagrass meadows and empowering them to take action for its protection.

In order to effectively engage with communities, it is important to first understand how members of these communities perceive seagrass. To address this knowledge gap, we designed and shared a seagrass perception survey, encompassing general knowledge, emotional and physical connections to seagrass, barriers preventing people from engaging with its conservation and opportunities for overcoming these barriers. The outcomes of this study will contribute to the ongoing development of the Blue Meadows community engagement programme.

Aim of the study: To explore public perceptions of seagrass by examining associated knowledge, emotions, and attitudes; and to identify key barriers that limit engagement with, and understanding of, seagrass ecosystems

Methods

The Seagrass Perception Survey consisted of 15 questions, followed by two questions collecting demographic information and a final choice to stay in touch with Ocean Conservation Trust (OCT)/ Blue Meadows.

Many initial responses to this survey were removed before analysis due to not meeting our baseline criteria. These criteria included: **answers provided for more than 50% of questions and free form text being legible and sensible.**

The survey was distributed in a variety of formats and locations, including:



Tablets within the National Marine Aquarium



During engagement events held across the Southwest



Online - on the Blue Meadows website and OCT's social media pages



On advertising boards on the Torpoint (Plymouth) and Sandbanks (Poole) ferries



On posters in community locations across Blue Meadows sites

OCT's privacy policy was linked to the final question which asked participants whether they wanted to stay in touch. If participants have consented to keep in touch and are 13 years or older, their details will be added to the CRM software Blackbaud, and they will be signed up to the mailing list for the Blue Meadows Bulletin. Data was analysed and visualised in Microsoft Excel, Microsoft Power BI, and NVIVO.

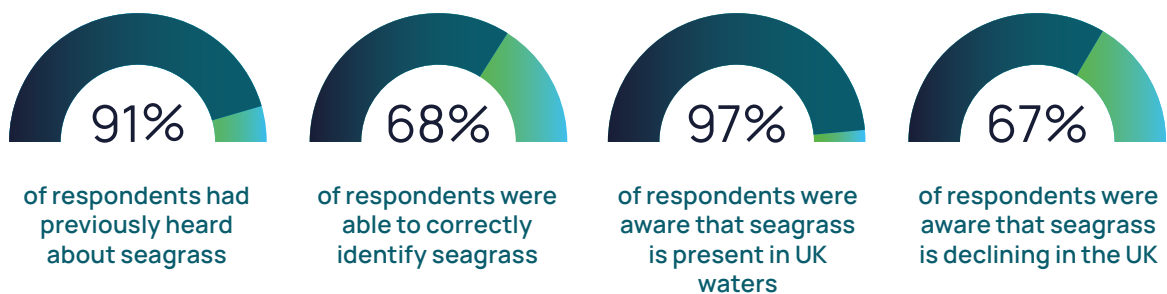


Results

Over the course of 16 months, a total of 3058 responses were collected that met our baseline criteria - excluding 309 illegible responses.

94% of the eligible responses were collected from the tablets within the National Marine Aquarium.

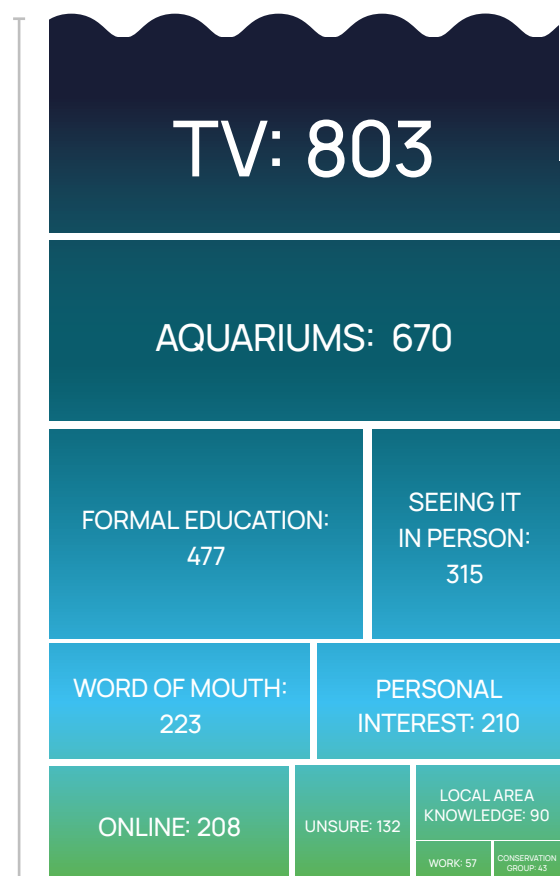
The questions have been split into three sections: general knowledge; emotional and physical connections; and barriers and opportunities.



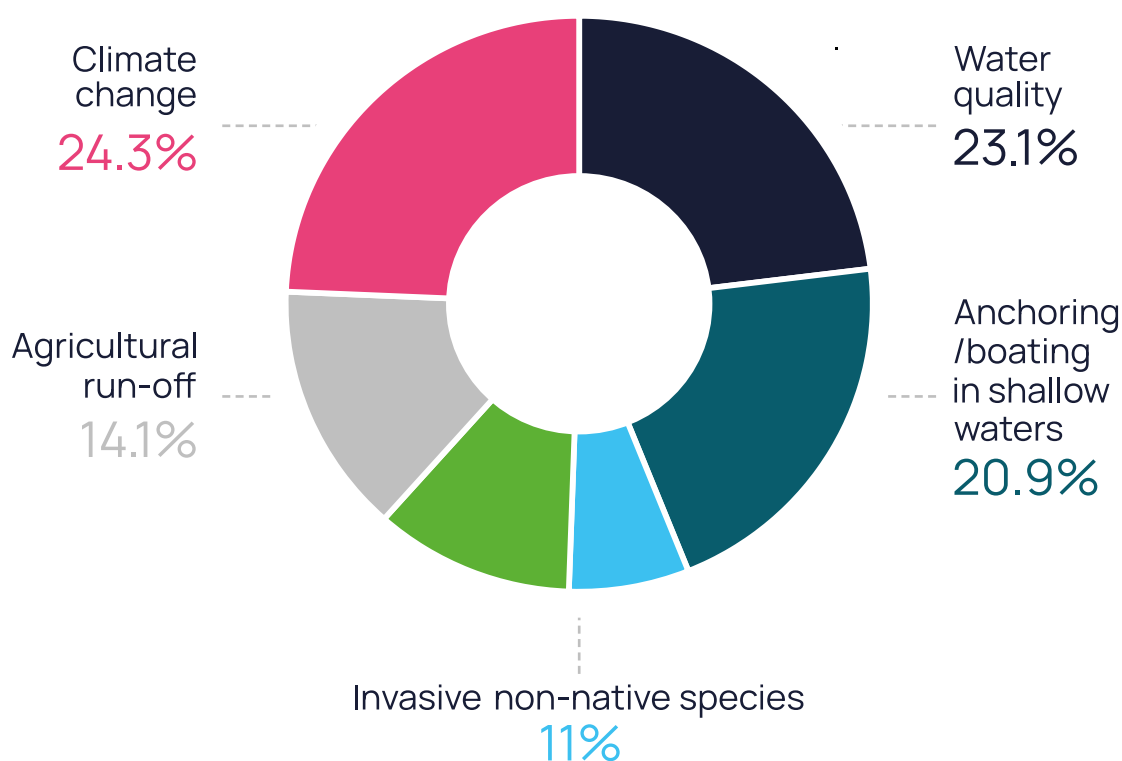
Power BI data visualisation suggests that a participant's ability to correctly identify seagrass from an image correlated with a knowledge of UK seagrass being in decline. There was also a correlation between increased age and these factors, indicating a higher level of general knowledge in the older age groups.

The top three ways that people had heard of seagrass were:

- **TV** (with just over 10% of these responses citing David Attenborough).
- **Aquariums** (two-thirds of which cited the National Marine Aquarium).
- **Formal education** – from primary school to higher education.

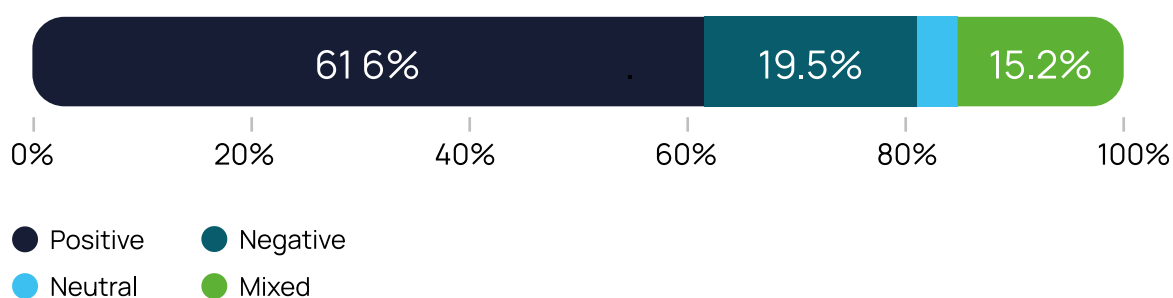


Climate change, water quality, and anchoring/boating in shallow water were chosen from the provided options as the three most important threats to seagrass meadows.



Physical and Emotional Connections:

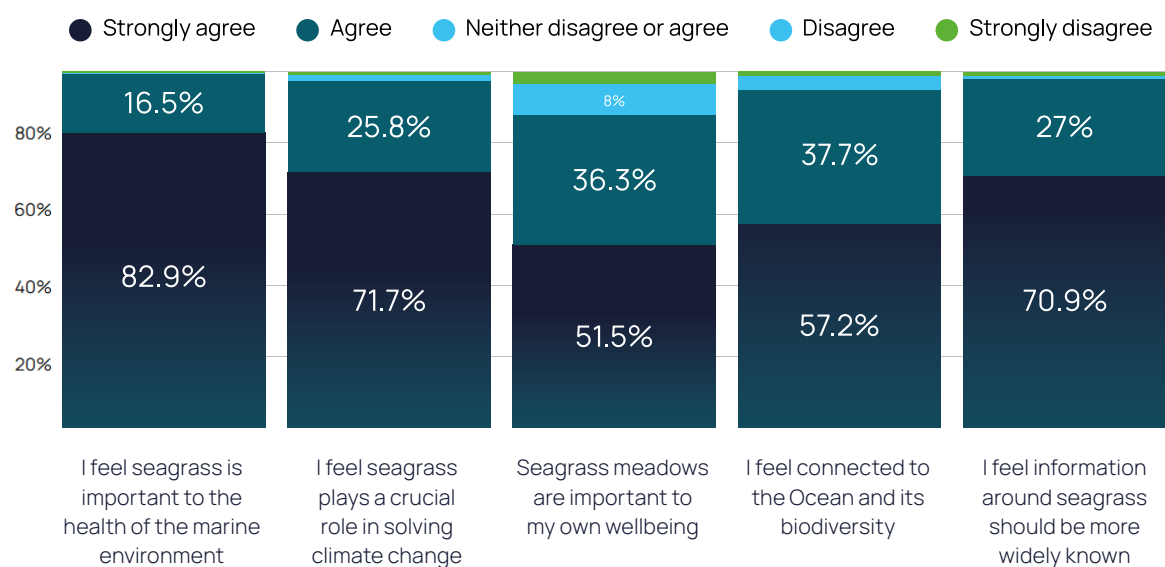
When interacting with seagrass, the majority of participants (62%) experienced positive emotions, 20% of individuals felt neutrally about seagrass, and 3% had negative feelings towards seagrass. 15% of responses were coded as "Mixed", with participants selecting a mixture of positive, negative and neutral options.



Outside of the offered answers, participants also had the opportunity to contribute their own answers, with some of the responses being: “interested/intrigued”, “optimistic”, “hopeful”, “confused”, “uncomfortable”, “guilty” and “pleased”. The most common selected answers are below:



Positive responses were received to the following questions, which were asked on a Likert scale (**strongly agree – strongly disagree**), with no question receiving less than **88% agreement**.



The balance between people who had experienced seagrass first-hand, and those who hadn't was evenly split (**51% and 49% respectively**). The most common methods of experiencing seagrass first-hand were seeing it washed up on the beach, swimming/snorkelling over seagrass and seeing it within an aquarium.

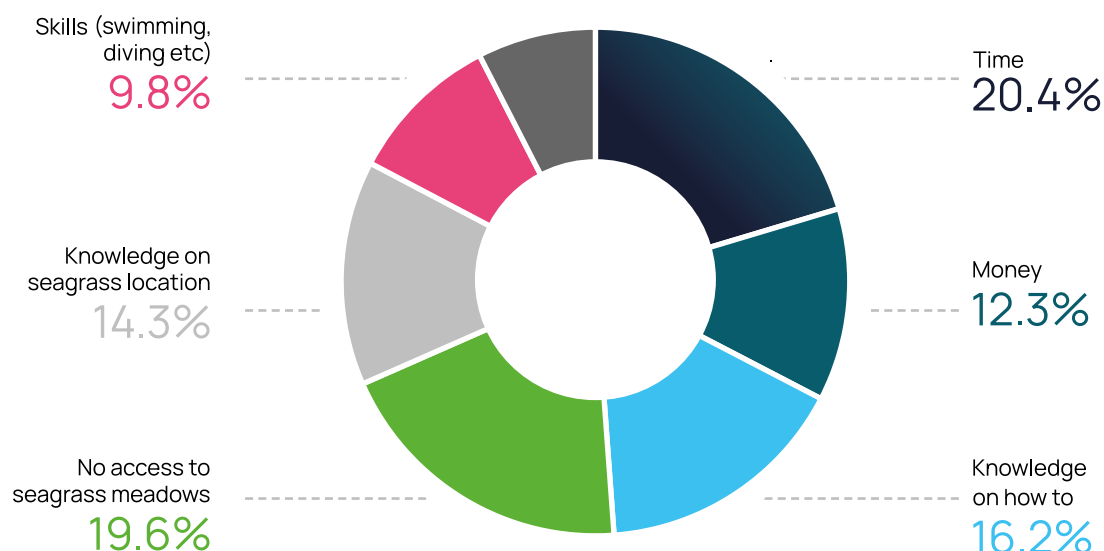


A similar balance was seen when asking participants whether they carried out any activities that indirectly connected with seagrass, with **49%** of individuals selecting "yes", **50%** of individuals selecting "no" and 1% of participants not providing an answer.

The most common method of indirectly connecting with seagrass was "watching documentaries about seagrass", followed closely by "learning about seagrass". "Signing petitions to protect seagrass", or simply "protecting seagrass" were chosen significantly less frequently.

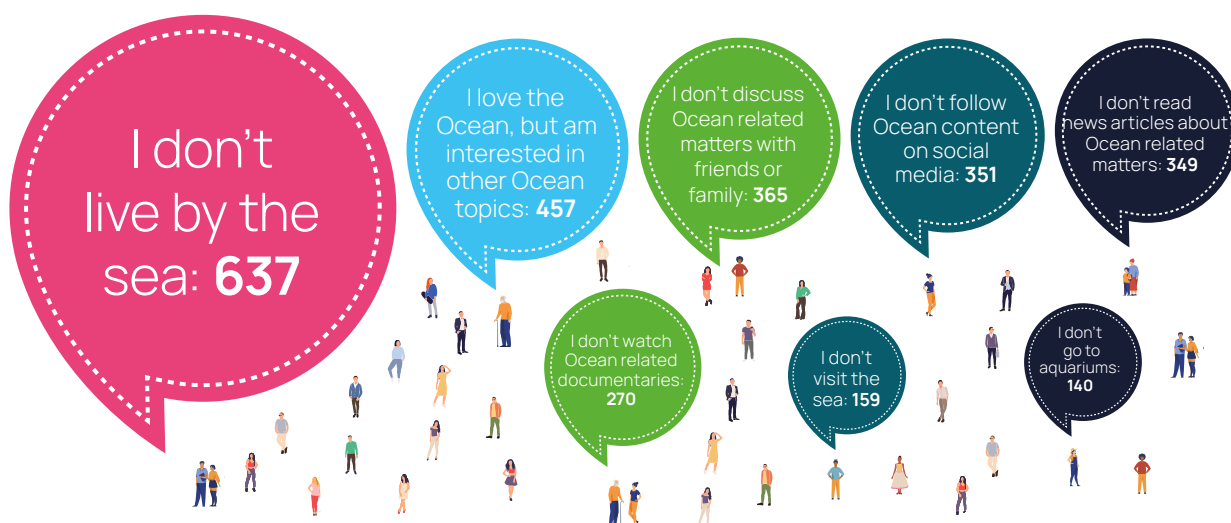
Barriers and opportunities:

The most common barrier identified from this survey was people not having enough time to experience seagrass meadows, shortly followed by "no access to seagrass meadows".



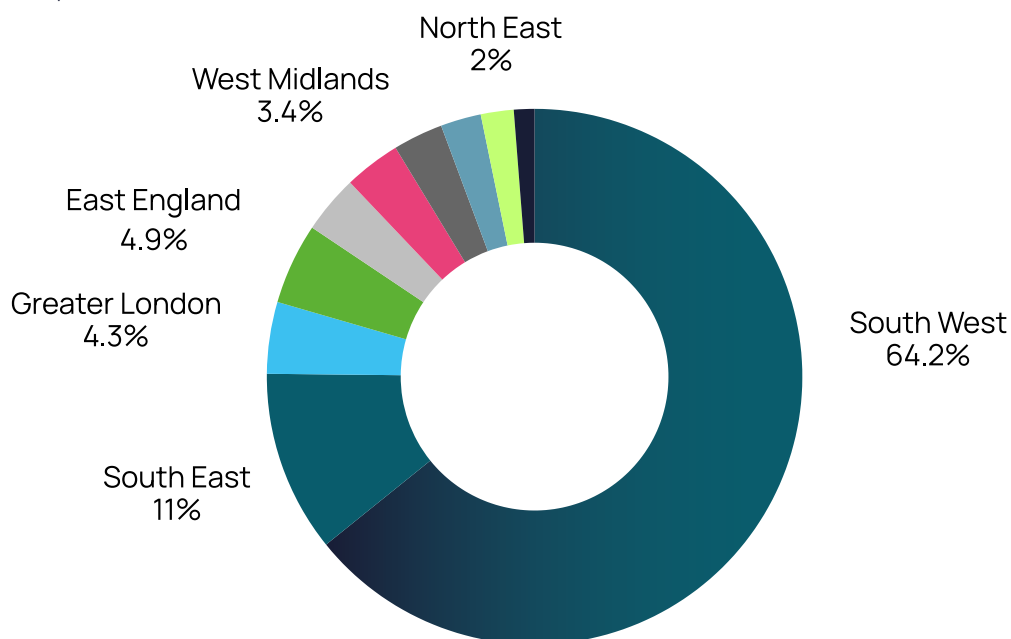
The most popular responses to our question asking people what would inspire them to become more involved in seagrass meadows were "learning more about seagrass" and "seagrass events". Fewer participants were inspired by the idea of keeping up to date with seagrass conservation or gaining knowledge on community groups helping seagrass or marine conservation.

Our final question of the perception survey asked people if they could identify a reason why they hadn't heard of seagrass. The most common answer was that they didn't live near the sea (23%).

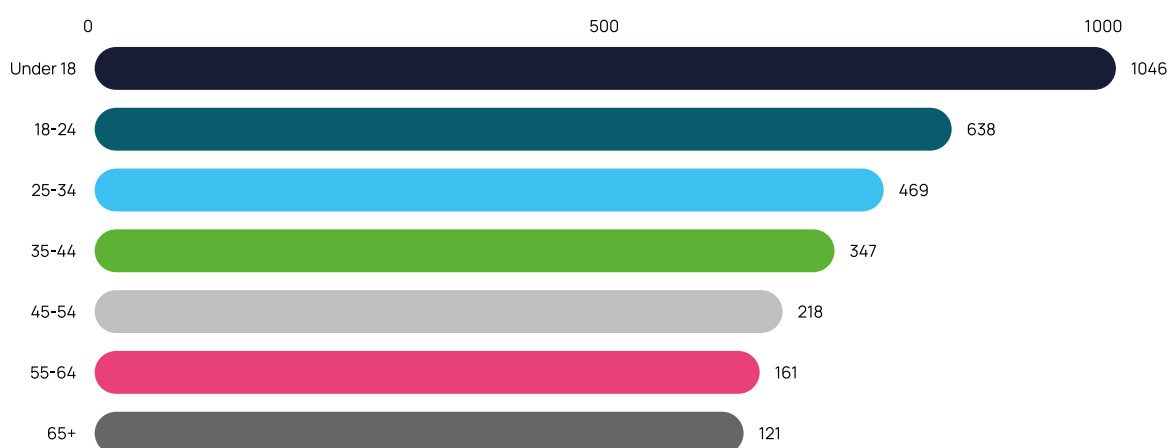


Demographics:

This survey was accessed by people as far away as Australia and China, with many other responses also coming from mainland Europe. Within the UK, the Southwest was by far the region with the most responses.



Under 18's and 18–24-year-olds were the most prominent age groups in the survey responses, with responses gradually decreasing with an increase in age.



The majority of participants (**69%**) did not want to stay in touch following the survey, with the remaining **949 individuals consenting to join the Blue Meadows Bulletin's mailing list following their participation in this survey.**

Discussion

These results were subject to bias due to many individuals completing the survey from inside the National Marine Aquarium, in front of the seagrass lab. This may have affected the answer to Question 1 – “Have you heard about seagrass before?”, Question 2 – “How have you heard of seagrass?”, and Question 4 – “Do you think seagrass is present in UK waters?”. The general age demographic of the National Marine Aquarium is also reflected in this study, with the highest proportion of responses coming from under 18’s, closely followed by 18-24 year old’s.

General awareness of seagrass amongst survey participants was high, with the majority also being aware of the presence of seagrass in the UK. However, in contrast to this, the number of participants able to correctly identify seagrass from a picture, and those that were aware that UK seagrass is in decline was much lower. **This indicates a surface-level awareness of seagrass among survey participants, rather than deeper understanding.**

Question 2 (“How did you hear about seagrass?”) resulted in a huge variety of responses. A key takeaway from these responses is that many **people learn about seagrass in an informal setting** – such as playing video games (for example Minecraft or Animal Crossing) or watching cartoons (e.g. Octonauts or Spongebob Squarepants).

Formal education is also a valuable method of learning, with participants quoting educational settings from primary school to higher education. Many participants also quoted “local knowledge” as their source of awareness, indicating a passive education from multiple sources across locations close to seagrass meadows.

When asked whether participants agreed with a series of questions focused on both the ecological and cultural values of seagrass, **participants showed a deep respect for both seagrass and the Ocean**. The majority of people were able to link seagrass meadows to both the health of the Ocean and their own wellbeing, reflecting **a societal need to protect seagrass meadows**.

The balance of individuals that had experienced seagrass first hand and those who hadn’t was almost evenly split. Of those who had experienced the habitat first-hand, inwater activities such as swimming or snorkelling were the most common reasons, followed closely by seeing it washed up on a beach.

A similar split between respondents was seen when asking people whether they had indirectly interacted with seagrass. The most common responses related to seeing seagrass or taking in information about it – e.g. watching documentaries or learning about seagrass.

These results indicate that **activities that encourage deeper connections with seagrass are the most memorable**.

Many barriers to people becoming involved in seagrass conservation were identified throughout this study, with the most common barrier being **“lack of time”**.

Discussion (cont.)

This, coupled with **“watching documentaries”** being the most common indirect method of interacting with seagrass, indicates that **people are interested in learning about seagrass, but would prefer it to fit into their regular routine and/or hobbies.**

This barrier was closely followed by “no access to seagrass meadows”. This highlights the **need for a wider range of accessible activities** (for example activities that do not involve entering the water) **alongside a higher number of organised events in general, that specifically encourage connections to seagrass meadows.**

These barriers would also suggest that **passive engagement methods would be beneficial** (i.e. videos on social media, incorporating seagrass into other activities or even workplaces).

The final question asked if respondents that had not previously been involved with seagrass conservation could identify a reason why – the most common response was that they did not live by the sea. As above, **digital and passive engagement tools could be utilised more fully to reach non-coastal residents.**

From the barriers to seagrass conservation, we also received suggestions of what would inspire people to become more involved. The most common suggestions were “more seagrass events” and “learning more about seagrass” – highlighting the **importance of engagement practitioners within the field of seagrass conservation.**



Conclusion

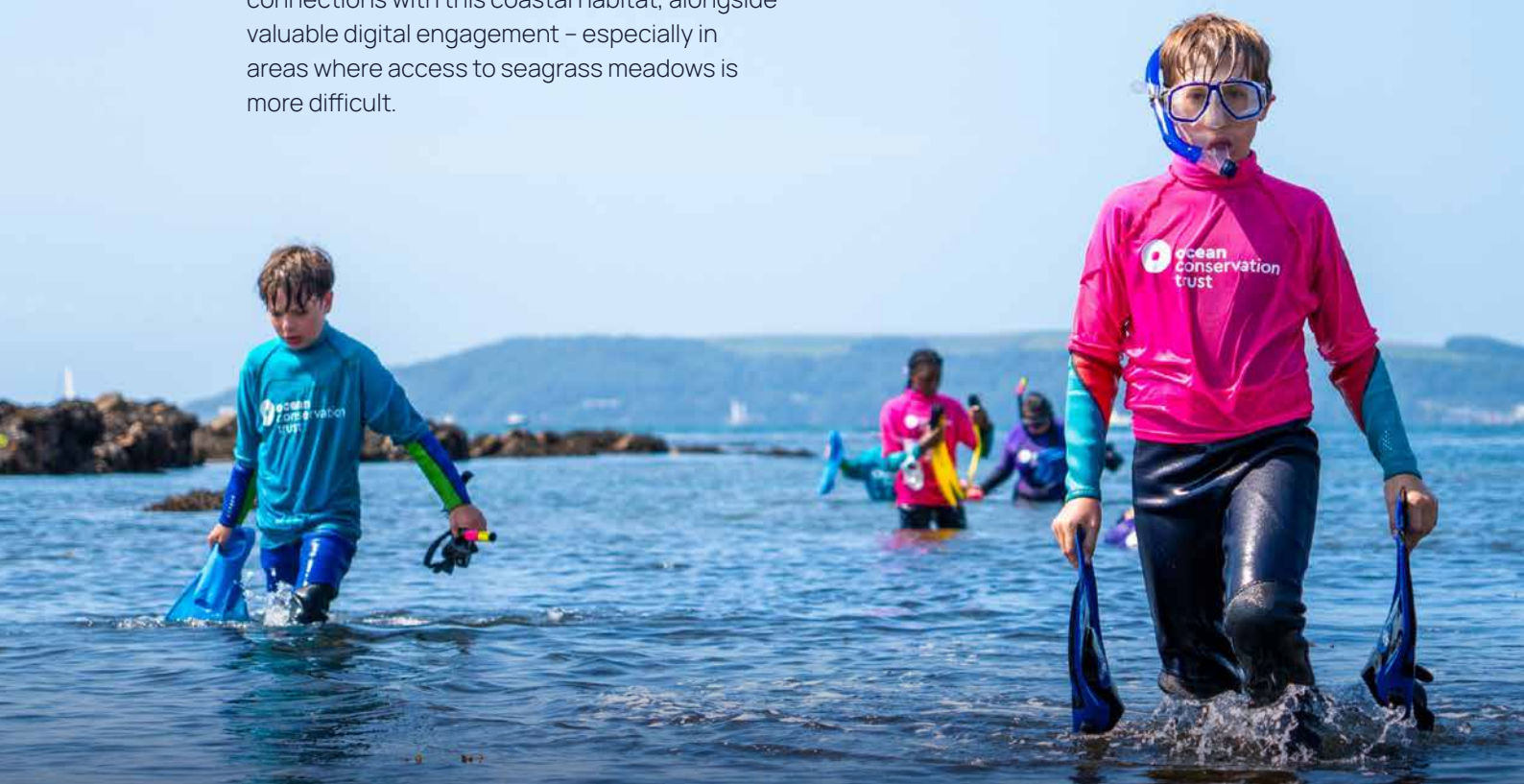
The responses to this survey were overwhelmingly positive, with the majority of participants having already had some level of awareness of seagrass, feel positive when interacting with seagrass and have a level of understanding surrounding the ecosystem services and cultural implications of seagrass meadows.

For many, this knowledge and understanding of seagrass habitats was surface level, highlighting the need for more in-depth knowledge sharing with the general public.

The barriers to people's involvement in seagrass conservation, as outlined in this study, should be addressed via increased quantity of in-person events to encourage deeper personal connections with this coastal habitat, alongside valuable digital engagement – especially in areas where access to seagrass meadows is more difficult.

Participants of this study stated that more seagrass events and learning more about seagrass would inspire them to become more involved in seagrass conservation, highlighting the need for further advocacy and engagement.

To provide a wider understanding of the general public's perceptions of seagrass, responses should be collected from a wider range of demographics – including age groups and location. An effort should also be made to collect responses from wider sources, to diminish any bias introduced.





Find out more by visiting:
bluemeadows.org



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oceanconservationtrust.org