

# Scottish Education Roadshow

Engaging young people  
with the marine  
environment



**Crown Estate  
Scotland**  
Oighreachd a' Chrùin Alba

# About the Marine Conservation Society

The Marine Conservation Society is the UK's leading marine conservation and education charity. Our vision is for seas full of life, where nature can flourish and people thrive. We have worked in Scotland for over 20 years, with a team committed to strengthening marine protection, tackling pollution and educating schools and a range of diverse communities.

## Project Summary

The Marine Conservation Society Cool Seas education programme encourages young people to explore conservation and improve their 'ocean literacy'. For several years, we have offered two problem-based learning initiatives: Cool Seas Explorers for primary and Cool Seas Investigators for secondary.

These original elements were merged to create the 'Protecting Scotland's Seas' roadshow, which was generously supported with a grant of £10,000 from Crown Estate Scotland, together with a further £25,000 secured from charitable trusts and foundations, plus a contribution from Marine Conservation Society's core funds. After a period of lockdown due to Covid-19, from September 2021 – September 2022, the Roadshow travelled across Scotland with an aim of reaching 6,000 children across 50 schools and youth groups, engaging them in new workshops, citizen science and immersive outdoor sessions.

To ensure a lasting legacy to this work, we wanted to stimulate youth-led action in citizen science programmes such as our Great British Beach Clean and the Big Seaweed Search. We successfully engaged young people located in Scottish Index of Multiple Deprivation areas, with a travel fund allowing participants to visit the coast for outdoor learning and to access remote, rural areas such as the Highlands and Islands and Outer Hebrides.



# The Project in Numbers

In total, we worked with **90** different schools and groups, delivering sessions in **24** Scottish Local Authority Areas. Participants ranged from 4 years – 25 years old, covering formal education settings in nursery, primary and secondary school and non-formal routes through youth clubs, Scouts and Brownies and extra-curricular clubs.

We saw **5,058** participants take part in a range of sessions. In the early period between Oct 2021 – Jan 2022, when restrictions made face to face delivery difficult, we delivered 35 online sessions. Education videos on our YouTube channel, and a newly designed package of curriculum-based lesson plans also allowed schools to access our education offer as a self-led session. We printed materials such as our seaweed citizen science survey pack, and *Seashore Safari*, a fold-out identification guide to common coastal species.

## Delivery in Scottish Index of Multiple Deprivation

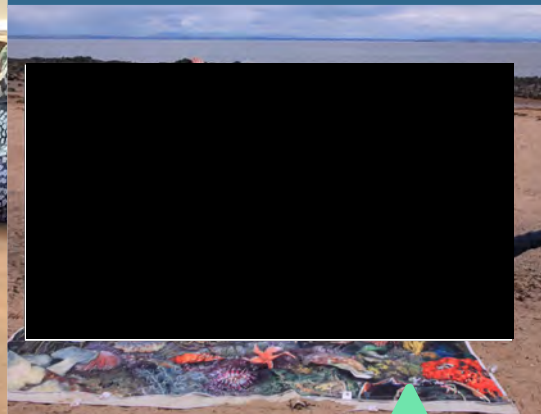
- 50% deprivation areas – 49 sessions engaging with 3,122 participants
- 80% deprivation areas in Scotland – 18 sessions engaging with 1,839 participants

 **5,058**

Over all activities, **5,058** participants took part in the classroom and at the beach

**90**

sessions delivered in Scotland across **24** Scottish Local Authority areas



**49**

sessions delivered in areas with **50% deprivation**, and **18** sessions in areas with **80% deprivation**. Of these, **9 sessions** reaching **1,342 participants** were in areas with the **90% deprivation**.

**5,292**

items of litter removed from Scottish beaches, totalling a whopping **210 kg**

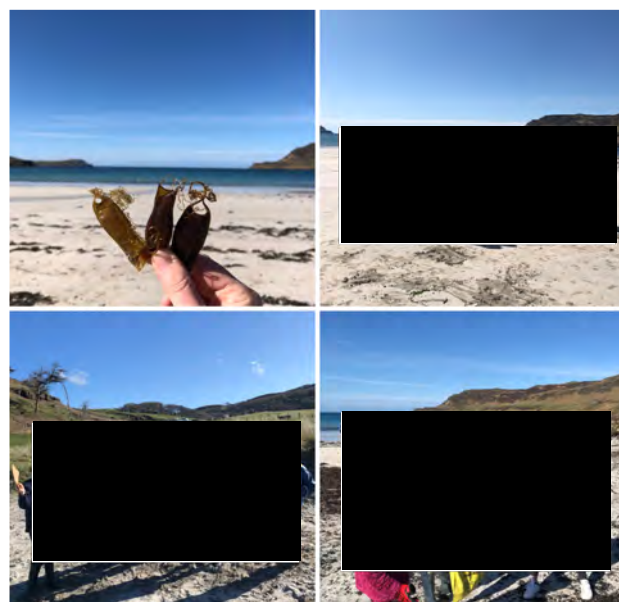


**74**

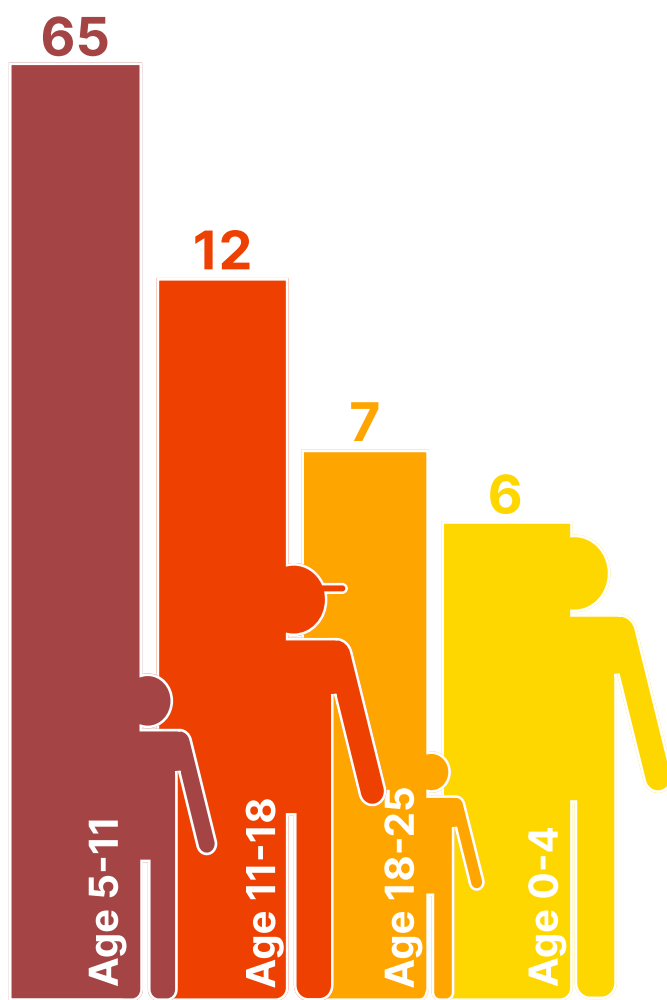
schools (primary & secondary) engaged in activities, alongside **2** nurseries, **5** youth groups, **4** special learning schools, **2** university societies, and **3** festival events



# People Reached



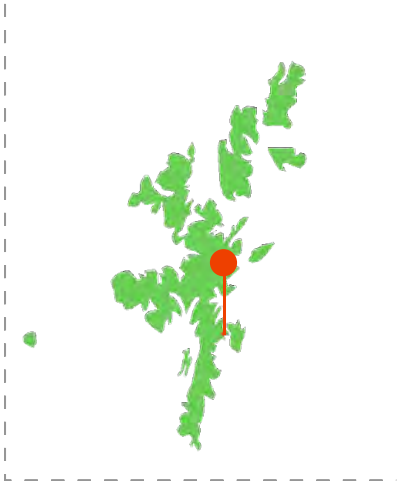
## Number of Sessions



Across the year we were able to meet 54 groups in person. These included 20 outdoor workshops at various beach locations, 11 sessions with an indoor workshop plus a visit to the beach, 22 indoor classroom workshops and 1 Source to Sea session in the city.

The roadshow worked with diverse groups, including 4 sessions for children with additional support needs, 3 sessions working with refugee and asylum seeker families and 5 sessions using travel funds to access ocean education, where travelling to the coastline would usually be faced with barriers.

# Map of Activity



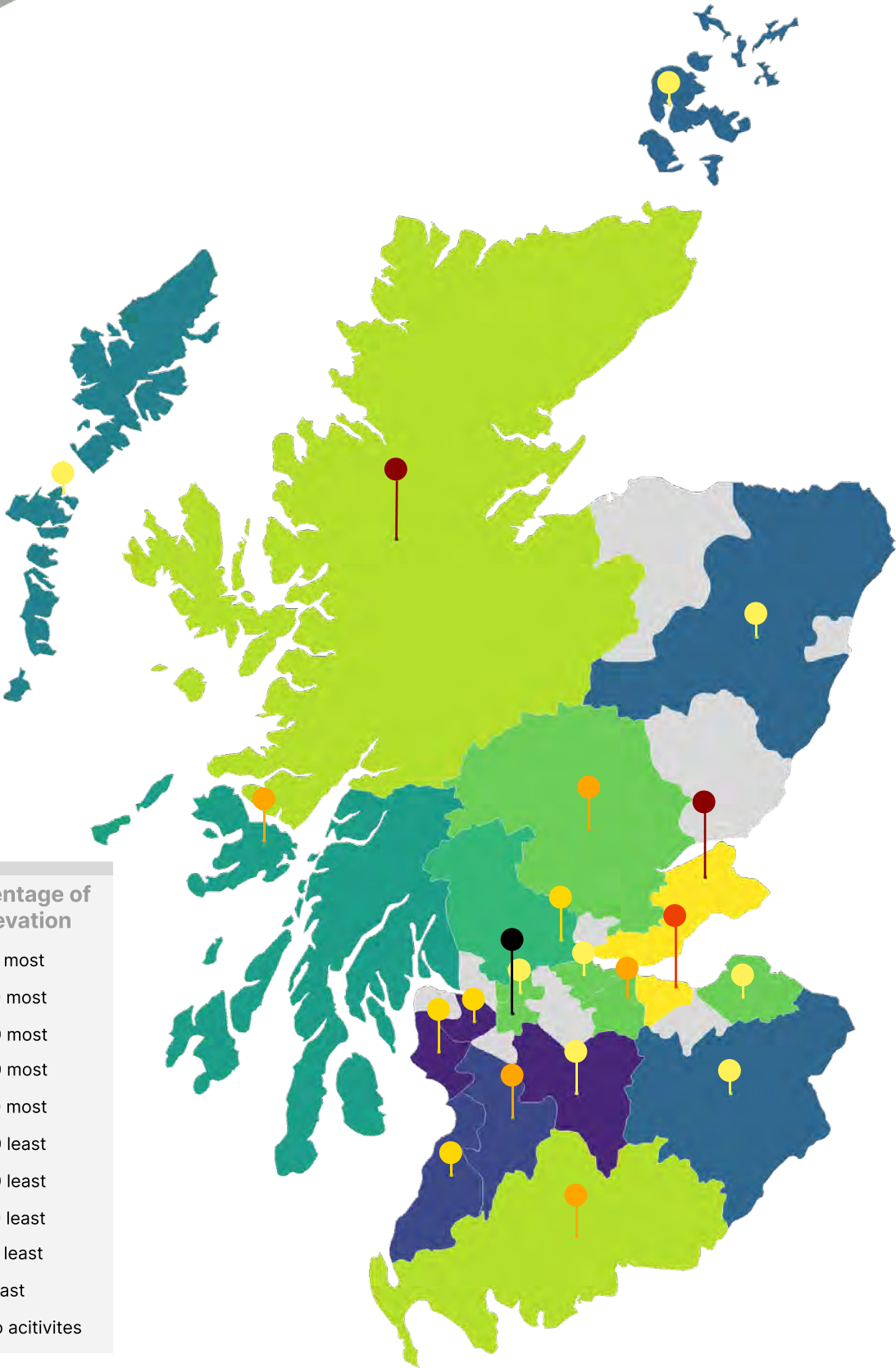
**Number of Participants**

- 1-50
- 51-100
- 101-200
- 201-500
- 501-1000
- 1001-2000

*\*height of marker helps depict number of activities in each council area*

**Percentage of Deprivation**

- 10 most
- 20 most
- 30 most
- 40 most
- 50 most
- 40 least
- 30 least
- 20 least
- 10 least
- Least
- No activities



# The Engagement Need & Our Approach

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Scotland's  
seas are  
globally  
important

//

They provide wildlife habitat and are a tool in the battle against climate change. Huge stores of 'blue carbon' are locked up in healthy seabed, an amount which equates to half of Scotland's carbon emissions. Yet habitats are being pushed to the edge by pollution and poor protection, and we are seeing sea levels rise and temperatures warm faster than predicted.

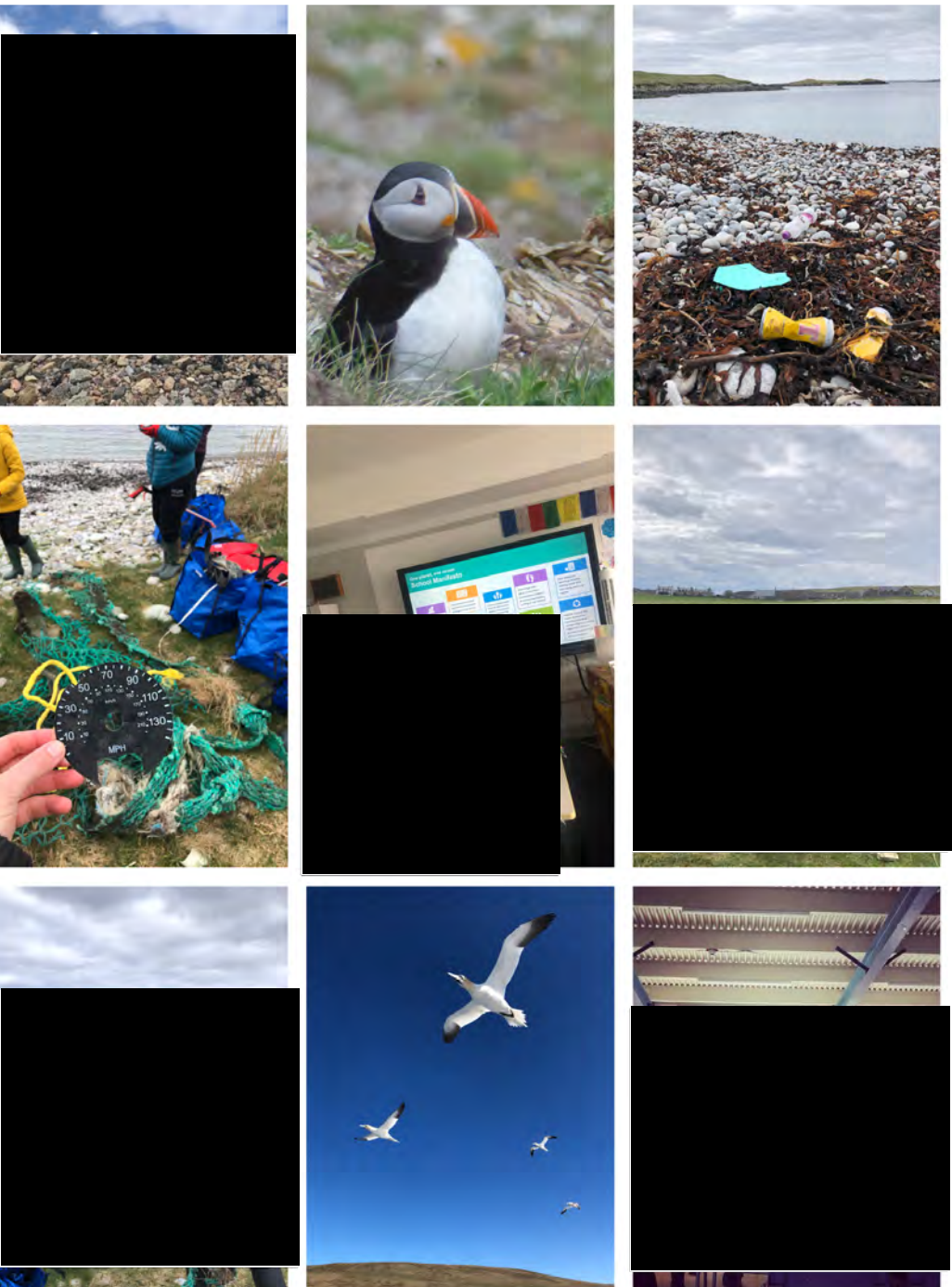
The disconnect between people and nature is growing: **90% of our population now live in urban areas** and the number of children playing outdoors has halved in a generation. There is a great need for more ocean and climate literacy in classrooms, and access to coastal environments.





Our approach to meet this need was to design indoor and outdoor education sessions, linking with ocean literacy goals, which introduced topics such as **ocean acidification**, climate science, and Scotland's marine biodiversity.

The workshop package included **interactive activities** on marine litter, and experiments on ocean climate. Education elements were built into group discussion, time for free questions and an art activity to finish the session. We left each group with a task to implement a key way to tackle plastic pollution and **climate change** within their school or setting, using our Ocean Manifesto materials to help encourage change.



## Volunteers

To allow our **Sea Champion** volunteer network access to more volunteering and skills opportunities, we held online training courses and shadowing sessions to train up volunteers in different areas of Scotland.

Three volunteers took on sections of Edinburgh, Moray, and Perthshire to assist in delivery of the roadshow.

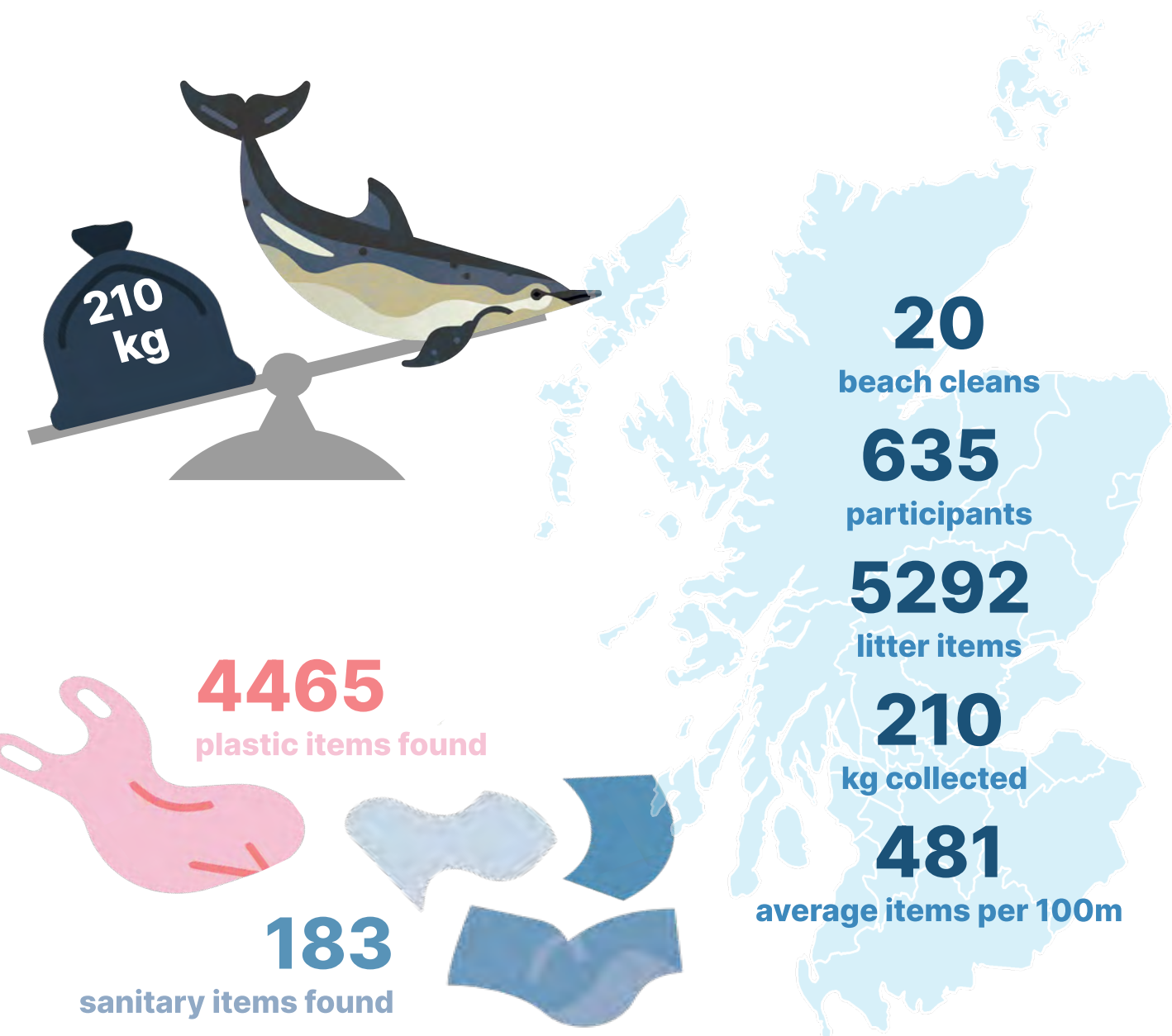
# Beach litter Collected



Our **Beachwatch** project has been running for over 20 years. Data gathered here is used to evidence marine litter issues across Scotland and the UK, and to push for change in legislation such as the 2011 plastic bag tax, and 2019 Scottish ban on plastic-based cotton bud sticks.

Sessions encouraged young people to take ownership of their local environment and take part in data collection and a range of learning activities on the beach. Including collecting valuable evidence on the sewage related debris impacts in Scotland, and the need for a solution to the wet wipe problem.

Education sessions at the beach had a real-world impact, linked to our real-time campaigns, and each survey completed was added to our database.





Along with Beachwatch, three further citizen science activities were included in our offer: The Big Seaweed Search, Great Eggcase Hunt and Wildlife Sightings.

- The Big Seaweed Search is a project that studies seaweed as an indicator of climate change, in partnership with the Natural History Museum London. Participants learned new identification skills, submitting data to this project.



- The Great Eggcase Hunt, run by The Shark Trust, asks for evidence of shark and ray egg cases washed up on UK shores. These are something most children had never encountered before, and this section was built in as a 'treasure hunt' activity, with uploading photos and map data afterwards to the online portal.

- Wildlife Sightings is our project looking at jellyfish and marine turtle sightings across the UK to track species distribution and rising sea temperatures.



# Connecting Science – based Learning

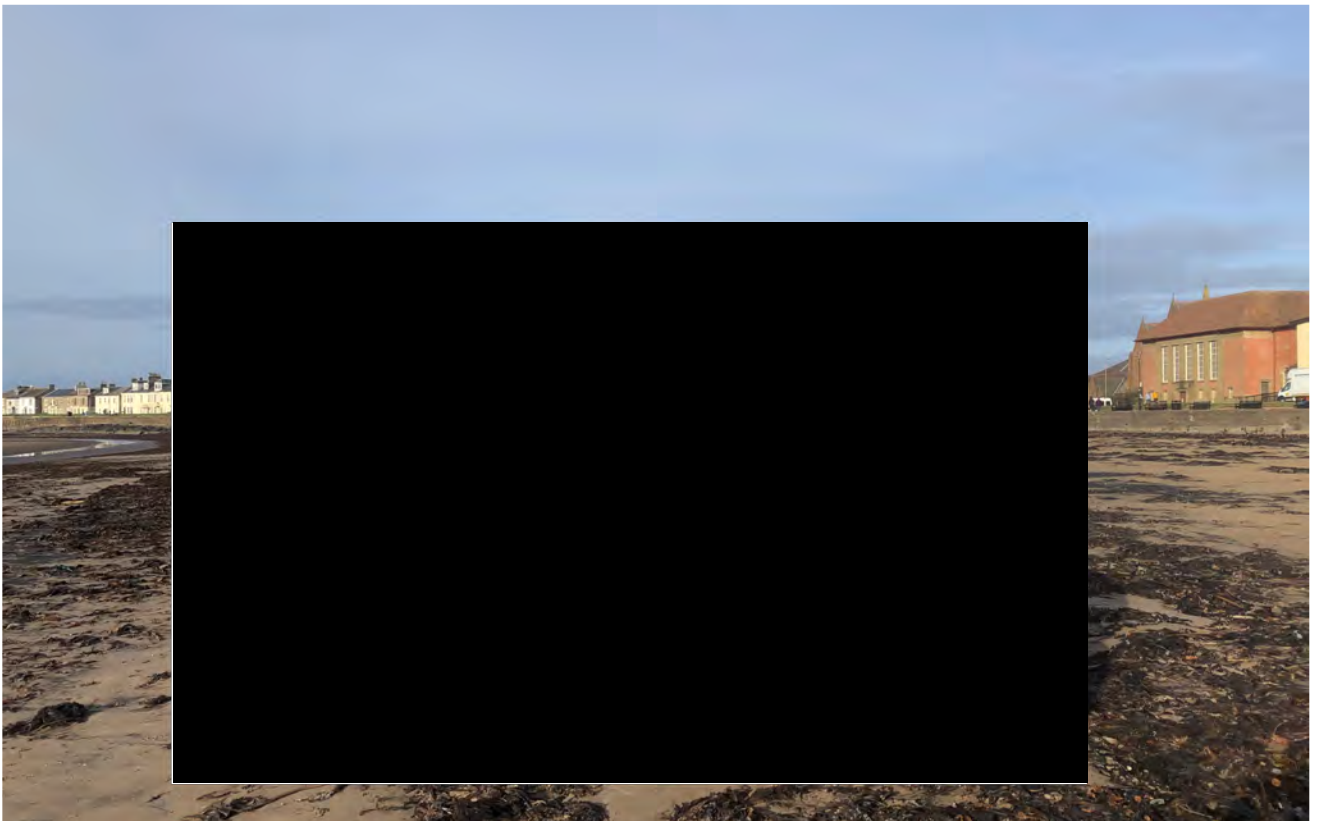
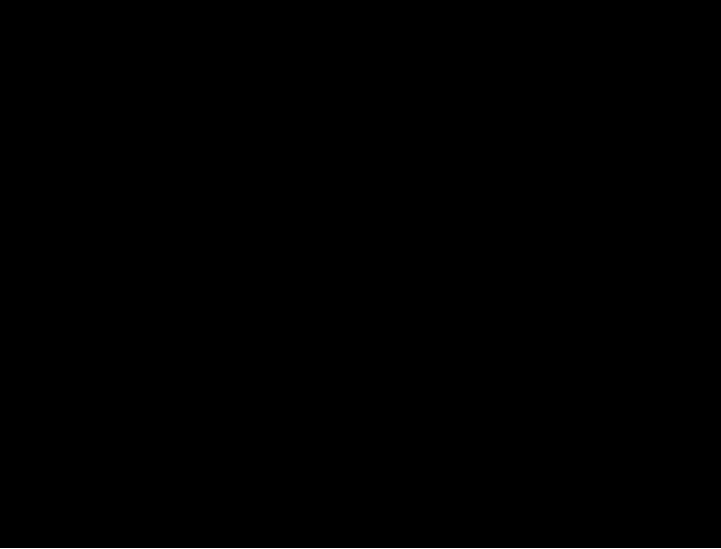
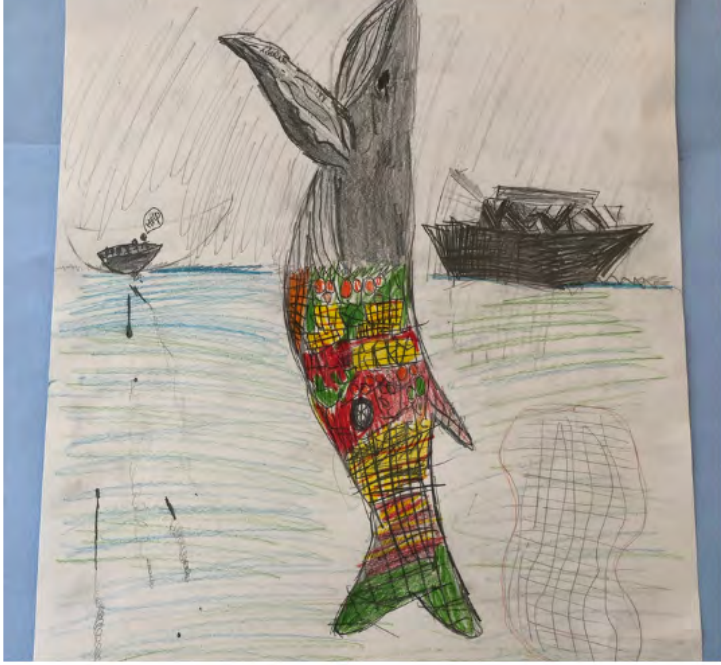
We worked with a variety of partners across the roadshow, bringing elements of the creative and sporting world to strengthen our science workshops.

Members of the **BBC Scottish Symphony** worked with us to add a musical element. After a workshop on wildlife and biodiversity, pupils created their own sea song with lyrics, melody and movement on classical instruments such as cello and violin.

We worked with the **Stephen Gallagher Foundation**, providing opportunities for young golfers in deprived areas to learn more about their role as environmentalists, as part of education events at the Scottish Open.

For **Scottish Climate Week**, we worked with young women and single-mothers from Glasgow. We hosted an inland litter pick, and in a second session, together with a sustainable Scottish designer, we hosted a mending and upcycling workshop followed by a rock-pooling explorer session on the beach.







# From City

A significant aim of this education package was to engage those from under-represented groups and remote areas of Scotland. From visiting the mainland and islands of Shetland, to engaging with communities on Mull and Orkney – remote schools and groups appeared to have a different learning need. While having a higher level of ***ocean-based literacy*** and a sense of ***connection*** to beaches a few hundred feet from their house, the school setting was lacking outside involvement and ‘visits’ from external organisations. In this sense the roadshow was able to connect with groups with a high level of knowledge, but give them the ***empowerment*** tools to create meaningful change and a legacy of the project.

Pupils in urban settings typically had a lower level of competency on marine wildlife identification, some failing to recognise popular animals such as whale and puffin. This was evident also in Dumfries and Galloway. Our project recognised the increasing lack of time spent exploring the outdoors, which was amplified by periods of lockdown. A recent study by Oxford Home Schooling, did show that ***Glasgow*** had a particular need. It came second in the rankings of cities where children spend the ***least*** amount of time outdoors. This was felt in the roadshow sessions, but also in a positive light offering schools from Govan, inside the ***top 5% most deprived areas***, access to the coast through the travel fund. Some children remarked this was their first experience of visiting a beach, others their first to a beach in Scotland.

Edinburgh and Lothian participants, despite living in a busy coastal area had a more disconnected approach to the sea, and were unaware of the most basic marine litter problems in their immediate local area. In this sense the engagement from young people with the citizen science elements of the project such as Beachwatch was incredibly valuable.



# To Coast

After taking part in the Protecting Scotland's Seas roadshow, teachers, young people and groups were keen to implement change as seen below

# Impact



**Session fit very well with projects and activities already undertaken and we are looking to organise a beach clean of some description on a yearly basis.**

**We're starting a mini-project to allow the kids to decide what in school we can change and how we can do it.**

**Workshop was perfectly pitched, very visual as a lot of students do not have English as their first language.**

**Our school is working on using less plastic and producing less waste after this workshop.**

**Wonderfully informative and engaging!**

**We are going to involve parents in helping their children be more aware and assist when they are visiting the coastline.**

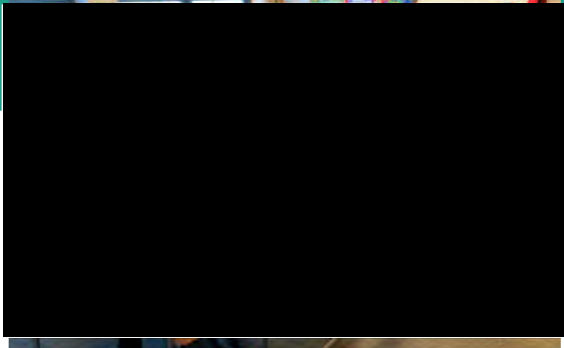
**We have recently introduced an Eco Pledge, and the workshop and link with The Marine Conservation Society has helped us begin this journey. We hope to do much more and set an example for other nurseries and encourage parents to support and join us.**

**We spent an afternoon further researching about Marine Conservation and endangered animals. We will continue exploring the global goals, with an increased emphasis on life below water.**

# Outcomes

It is clear from feedback that sessions were well received. 84% strongly agreed, and 16% agreed that the roadshow aligned to the curriculum, picking out topics of Science & the Environment, Living Things, Social Studies and Technology as covered by the education package.

95% strongly agreed and 5% agreed they would book a Marine Conservation Society session for their students again. From written feedback teachers highlighted the most popular elements as being interactive activities including experiments on ocean acidification, a litter timeline game, sections for asking marine wildlife questions, and hands-on discussion using shells and marine props like shark and whale teeth to highlight issues. Trips to the outdoors proved most popular overall.



**Strong Agree**   **Agree**   **Disagree**   **Strong Disagree**

The session met my expectations



It was appropriately designed for my students



It aligned with the curriculum




The presenter connected with my students to facilitate learning



I would book a Marine Conservation Society session again







Our education work continues to be a success, and an incredibly popular request across Scotland. . We are developing our plans for the next phase of the Education Roadshow, and are working to raise additional support to enable us to continue this work with young people and schools into 2023.

Crown Estate Scotland's support has been integral to delivering the programme across the 2021 – 2022 period, including such an extensive package in terms of content offer and locations.

It is with great thanks this support was received and has made a clear impact on access to ocean education in Scotland

