

Sea Scotland 2019
19th June, 2019, Edinburgh Centre for Carbon Innovation

Sea, Soul and Society: Adapting to Climate Change

Summary points

- Scotland and its environment have changed, and will continue to, as a result of a changing climate, as indicated by scientific evidence and observations of local people;
- Scotland is taking action on adaptation (e.g. Scottish Climate Change Adaptation Plan) and mitigation (e.g. emissions reduction targets) but more is needed, urgently;
- Healthy ecosystems and some marine activities offer solutions to help mitigate climate change (e.g. conservation and recovery/restoration of blue carbon habitats, sustainable development of renewable energy) but adaptation to existing impacts can be more challenging;
- Greater, and more tailored, efforts could be made to reach out to people and groups on climate change adaptation – particularly the younger generation and industries;
- Scientific evidence needs to be made more available and more accessible to help people adapt to climate change in their respective circumstances and feel empowered to make environmental decisions with confidence.

Introduction and background

On 19th June, 2019, 100 delegates gathered in Edinburgh for the fourth Sea Scotland conference, themed Sea, Soul and Society: Adapting to Climate Change. The theme was chosen in connection with the recent publication of the Scottish Government's draft Climate Change Adaptation Programme for 2019 – 2024 and a general perception that there is broadly more policy and public engagement focus on marine and coastal climate change mitigation than adaptation. A short blog was produced by the Sea Scotland steering group ahead of the conference to set the context. The objectives for the conference were as follows:

- Raise awareness of climate change adaptation with a broad audience, encouraging innovative thinking and action;
- Encouraging integrated policy and action on climate change adaptation across stakeholders, from communities and businesses to regional planners and decision-makers;
- Contribute to awareness-raising and implementation of the Scottish Government's Climate Change Adaptation Programme;
- Produce a report that captures stakeholder views on climate change adaptation and priorities; showcase different perspectives of climate change to highlight entry points for adaptation.

Further details about the history of Sea Scotland and its administrative arrangements can be found on the conference website: www.seascotland.scot

Keynote Address

The conference was opened by Mairi Gougeon, MSP and Minister for Rural Affairs and the Natural Environment, who welcomed the invitation and acknowledged the environmental credentials of the ECCI as the conference venue. She described the importance of the oceans for life on a global to a local scale and highlighted some of the steps the Scottish Government has taken so far to conserve Scotland's marine environment, including the implementation of the Marine (Scotland) Act 2010.

Ms Gougeon emphasised climate change as one of the main issues facing society, and the role of the oceans in mitigating and adapting to it. As one of the first nations to declare a 'Global Climate Emergency', Scotland is seeking to respond swiftly and ambitiously to ensure that its "contribution to climate change will end, definitively, within a generation". Ms Gougeon described the importance of Scotland's natural marine resources ("blue carbon" habitats) in mitigating and adapting to climate change impacts and announced a further stream of research funding being awarded to St Andrews and Glasgow universities for carbon dating analyses on blue carbon samples. She also highlighted the Scottish Government's updated outcomes-based approach within its revised Climate Change Adaptation Programme, which aims to "give our oceans the best chance at adapting to the changing climate" and recognises the "cross-cutting and collaborative nature of climate change adaptation".

Presentations

Following the Minister's keynote address, four invited presentations were given. These were intended to offer different perspectives on climate change adaptation: pure science, maritime industry, local coastal communities and for and from the point of view of the next generation. The latter two ideas connect to last year's Sea Scotland theme: Empowerment in marine stewardship – Emerging opportunities for citizens and communities in Scotland.

The four talks were:

1. The role of MCCIP in understanding, and responding to, marine climate change impacts (Paul Buckley, Marine Climate Change Impacts Partnership);
2. Climate impacts on Scottish fish stocks and ideas for adapting the fishing industry (Tara Marshall, University of Aberdeen);
3. Coastal communities adapting to climate change (Neil Thomson, Fair Isle Marine Research Organisation);
4. Adaptation for the future: A case for meaningful youth involvement (Naomi Arnold, Chair of Climate 2050 Young Leader's Development Programme).

Key points from the talks included a stark reminder that Scotland's average ecological footprint alone is equivalent to needing 2.1 Earths, were everyone on the planet consuming at the same level! This fact in itself illustrates that the status quo cannot continue, a common theme voiced by all four speakers in their talks. Young people are becoming increasingly vocal and active in seeking policy and practice change to ensure that their generation have the chance to cope with the added pressures caused by climate change in future.

The importance of science was highlighted but also the additional need for making it available in an understandable way – and building trust in the science and those delivering it to help acceptance of its conclusions. The information about climate change impacts that is communicated needs to be not just industry-specific, but sector-specific (e.g. at the fishing fleet level) as impacts will be different across sectors and business plans will need to be modified to ensure successful adaptation. Furthermore, industry adaptation begins with stakeholder engagement, including raising awareness and ambition, increasing capacity and sharing information.

Local coastal and island communities have been observing changes caused by climate change for many decades (e.g. rates of egg-laying in seabirds) and are well aware of the need to adapt in practice. The Fair Isle community have installed three wind turbines since the 1980s that provide power direct to houses; since November 2018 only five days of diesel generation have been

required, as the turbines are now providing the majority of the island's power demand. Relatively small actions can go a long way and set the example to others.

The talks were followed by an audience-panel discussion facilitated by Professor John Baxter. Three main themes arose:

- Adaptation planning for maritime industries:
 - it can be difficult to get buy-in to the need for change from parts of the fishing industry, especially those who have been working at sea for many decades, as long-term planning is not always a priority.
 - Adaptation planning needs to reach throughout the supply chain, including onshore and offshore infrastructure, as well as in exports and imports.
 - It was also noted that the fishing industry can provide vital data, e.g. log books, lipid records from fish processing plants, and engaging with them is essential.
 - Onshore fish production was also discussed as a possible adaptation solution (e.g. closed-containment), but there is a lack of worked examples. At a small scale it works well; when scaled up it doesn't have much longevity, therefore lack of financial commitment from investors. Wild capture fisheries are increasingly more carbon neutral; but it was suggested that more effort and transparency is needed in the supply chain.
- the support needed to enable young people to become more involved in marine science and decision-making:
 - young people fundamentally need to be involved in decision-making and discussions, mixing demographics, including all voices around the table. Sometimes it may be useful to have sessions specifically for young people, but as a genuine part of the process rather than a token gesture. It was noted that in smaller communities the young people grow up with it all and are not so distant from marine issues. In areas where many of the fishing boats are owned by the operators there is a familial responsibility that passes to the next generation.
 - How can marine science be made more accessible to young people? Suggestions included student placements within marine organisations, open up development opportunities for young people through flexible working, and follow the US university ethos of 'research, teaching and outreach'. The acid test for any science output could be: would a young person understand it?
 - There is also a need for public consultations to be more digestible as the documents contain lots of (necessary) long technical information. Policy-makers need to find a way to simplify and condense – e.g. video, webinar – a more accessible medium is more likely to get other voices responding (e.g. young people).
 - Basic access to the marine environment for young people should be mainstreamed. Not all young people get the opportunity to visit the coast or a beach (as revealed in the results of Sea Scotland 2018 young people's survey) – national funds could potentially be used or set up to make this happen.
 - Social media platforms provide increasingly helpful ways to get a more accessible message across and should be used more widely.
 - The panel were challenged to give a "soundbite summary" of their talks in the spirit of making their key messages more accessible to a less technical audience. These included: "the future is going to be different, let's get ready for it now" and "time is running out, we have to act now".
- The legislative and policy processes to enable change:

- One delegate asked whether any new laws are needed to enable the change needed to adapt to climate change. It was noted that legislative change takes around five years to get into place, which doesn't help when change is needed immediately. The issue is more about changing the process than the actual law. Any change of this nature must fit in with global law and commitments. What is needed is a more joined up and coordinated landscape – the current legislative landscape is highly complex.
- It was also noted that there are still gaps in research that need to be filled to improve decision-making (e.g. impacts of climate change mitigation and adaptation planning across and between maritime sectors).

Workshops

Three workshops were held concurrently throughout the afternoon session on the following themes:

1. Marine Protected Areas, biodiversity and climate change (Sarah Cunningham, Scottish Natural Heritage)
2. #Scotland Adapts: changing behaviours for a changing climate (Scottish Government Climate Change Adaptation team)
3. Marine habitat restoration for ecosystem resilience – opportunities and challenges (Richard Lilley, Project Seagrass; Calum Duncan, MCS and representing DEEP)

Summaries of the three workshops can be found individually on the Sea Scotland website and can be accessed directly by following the hyperlinks above.

Plenary discussion and summing up

The leaders of each workshop gave a summary of their workshops and main discussion points from their groups, which was followed by a short whole group plenary facilitated by Professor Beth Scott.

The workshop leaders were again challenged to give a 'soundbite summary' of the session they led to make the main message accessible to anyone:

1. "MPAs can do a lot more than they were designated for"
2. "If we're going to be climate ready, multiple people need to do multiple things all the time"
3. "We need to put back what we've lost"

There was a suggestion that marine professionals could have an under-30-year-old mentor to help them frame their work in a more accessible way and keep things relevant to the next generation. More broadly everyone has a responsibility to think about how to make technical messages and solutions more accessible to the people you represent, not only young people. Young people are becoming more interested and inspired to get involved in environmental issues, but we must ask ourselves: why are children leading the way right now? There is an imperative for working together in a participatory way – look at the diversity in people and what we need to make adaptation solutions work.

Next steps

Sea Scotland this year was a sell-out event, helping to develop new collaborations and strengthening existing ones, and has stimulated positive discussion across a variety of stakeholder groups. The conference steering group is keen to build on this as we move towards 2020 – Scotland's year of Coasts and Waters, and the start of the UN decade of Ocean Recovery.



Thank you for your participation and interest; we look forward to seeing you in 2020!

The Sea Scotland conference series steering group:

Fauna and Flora International

Ocean Dialogues

Scottish Environment LINK (Secretariat), including members Marine Conservation Society and RSPB Scotland

Scottish Natural Heritage

University of Aberdeen

University of Edinburgh