



Meeting the Challenge of 30% of Scotland as Protected Areas

Pie and a Pint : Event Report

Zoom, 21st March 2021

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INTRODUCTION

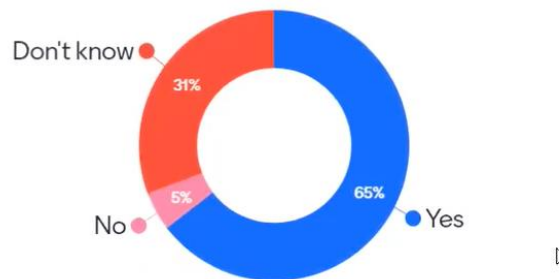
This event was held by the Scottish Policy Group (SPG) and Edinburgh Conservation Science (ECoS) and provided an opportunity to debate questions surrounding the topic of 'Meeting the challenge of 30% of Scotland as Protected Areas.' The event aimed to provide a forum to debate key questions on this topic. It also aimed to provide a space to network, share experiences and ask questions.

The session was opened and Chaired by Chris Pollard, the Vice-Chair of SPG. We started off with a Mentimeter asking the group two questions:

Go to www.menti.com and use the code 3982 7988

Is a target of 30% useful?

Mentimeter

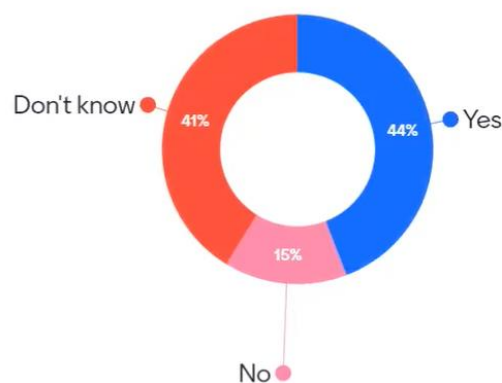


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Go to www.menti.com and use the code 3982 7988

Is the target achievable?

Mentimeter



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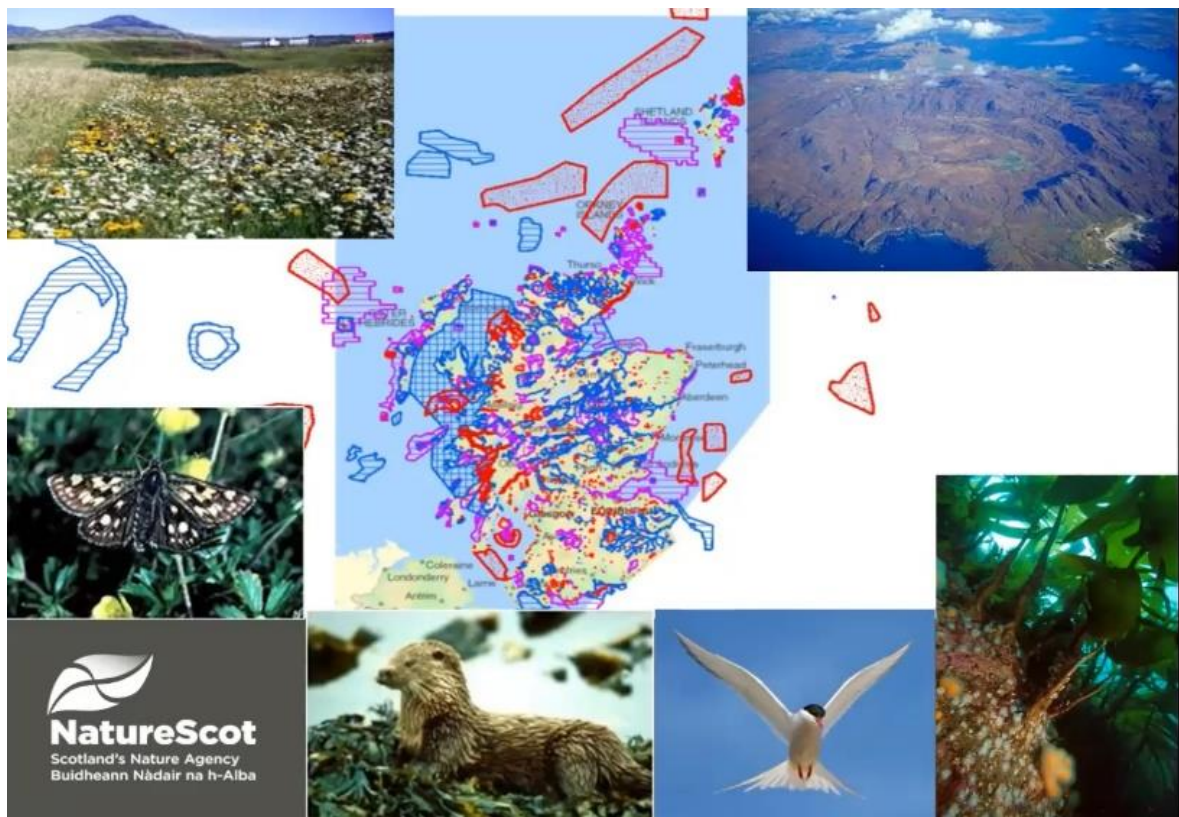
The workshop was co-hosted and facilitated by members of the SPG Committee and ECoS. We had 100+ people in attendance and 60 people stayed for the breakout sessions. There were several participants that indicated they were attending from an international location.

The Chair of the SPG and UKRI Fellow Dr Isabel Jones started off the session with an overview of what the SPG does, and how it functions. Dr Sílvia Pérez-Espona, Lecturer and Conservation Science Programme Coordinator at the University of Edinburgh introduced ECoS to the group.

SPEAKER PRESENTATIONS

1. 'Biodiversity Straitjacket or Path to a Nature Rich future?'

Brian Eardley - NatureScot.



Slide from Brian's presentation: map highlighting the protected areas in Scotland.

Key points:

- The talk focused on Protected Areas designated for nature conservation; Sites of Special Scientific Interest, Special Areas for Conservation (under the Habitats Directive), Special Protection Areas (under the Birds Directive) and RAMSAR sites.
- Protection covers species, habitats and geological features.
- Brian then outlined the pros and cons of protected areas.

Cons:

- The sites were designated a long time ago. They are not future focused in the context of climate change.
- International commitments to legislation may restrict our view focusing on individual features, we need a more holistic view.
- ⅓ of SSSIs are less than 25 hectares in area - this is too small and the boundary is often surrounded by intensive land use.
- They are seen as detached areas, this can mean that the public views them as a no go area which can create conflict.
- They are inflexible, takes a lot of evidence to protect an area. This makes it very hard to change.
- There are parts of legislation that allow enforcement action to be taken. How effective is this mechanism

Pros:

- The best areas for Scotland in terms of biodiversity. 85%+ have favourable conditions for biodiversity where there is on site management.
- They can bring people closer to nature through environmental education
- Over half of SSSIs are quite large, all MPAs are >500ha.
- PAs can be ambassadors for nature rich management for the rest of the countryside. They can demonstrate value.
- They are a focus for enforcement and provisions.

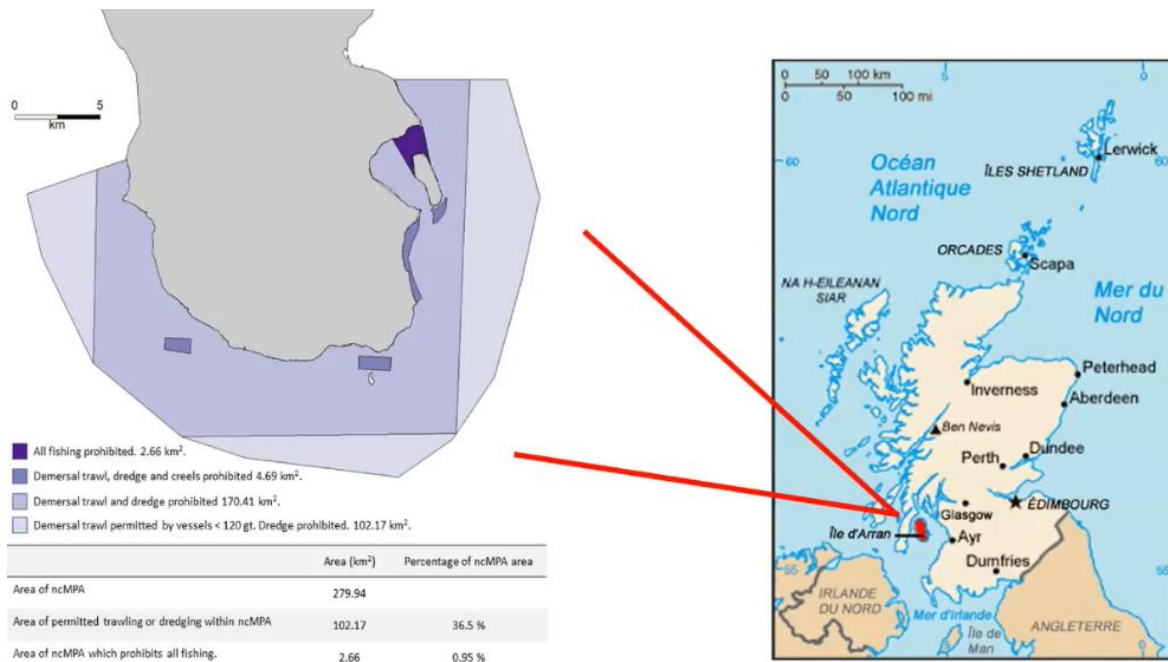
Brian concluded by highlighting that moving forward we need more than just further protection. We need to change attitudes towards the sites.

2. [‘The Scottish Marine Protected Area Network – Uncertainty recovery and success’](#)

Charlotte Hopkins – University of Hull

Key points:

- 37% of Scottish Seas are MPAs
- 225 sites are for nature conservation.
- 8 Historic MPAs
- Feature led, does not cover marine ecosystems or processes as part of the designation.
- They are multi use and fishing still takes place
- The conservation objectives are either conserve or recover. The terms are quite vague and very difficult to measure. Climate change makes the situation even more uncertain.
- No new ‘no take zones’ have been designated recently.
- There are lots of technical uncertainties as there is no baseline. The baseline also shifts.
- No take zones as reference areas, allow for more objective perceptions of species resilience to be made. This also increases resilience in terms of climate change.



Slide from Charlotte's presentation: Dark purple area highlights the 'no take' zone in the Lamlash Bay area, of the South Aaran MPA.

- All fishing is prohibited in this area, across the network we are really limited in terms of 'no take sites'.

Charlotte concluded by explaining what success could look like in the marine environment

- There is no agreed definition in terms of what MPA means.
- To the general public most people think MPA means 'no take'. It can vary depending on management.

There are two general perceptions:

Preservation (protect nature for its intrinsic value) versus sustainable use (protect nature for continued human use).

What has changed? There has been a huge increase in terms of the extent of our MPAs as we are now up to 37%. This does not mean damaging activities have stopped in these areas. Fishing has only been removed from a fraction of the network.

3. 'Protected Areas and their connectivity benefits'

Jane Hill – University of York

Key points:

- Size placement and quality of protected areas is the main focus of Jane's work and she provided a few example case studies in her presentation.

Protected Area networks and species range expansion:

- She presented some findings in a recent paper that concluded that protected area networks help species range expansion. Protected Areas also slow species decline. It was effective at conserving species in the context of climate change.

Agri- Environment Schemes and how they might benefit protected areas in relation to connectivity:

- For example grassy field margins improved connectivity for species when compared to areas that didn't have these margins present. The benefits were found to assist some species more than others.
- They don't benefit low dispersal and low density species as they need fully connected land as part of their range.
- They also don't benefit high dispersal and high density species as these are already successful so the field margins were found to have no effect.
- They have the best results with the species that are in that mid range between low and high.

Jane then introduced an international case study working with the Malaysian government to illustrate some concepts and highlight some issues:

- Other countries have had these 30% commitments for a while so we can learn from them.
- Collated various levels of data around the conservation goals and targets.
- Used computer modelling to prioritise attributes
- It was found you can optimise wildlife corridors and this can be incorporated into conservation planning without compromising goals. They are win-win.

Jane concluded with a few thoughts and questions:

- PAs can benefit landscape connectivity, but may not benefit species that need connectivity most;
- Connectivity benefits are improved when PAs contain high quality habitat (because they support larger populations & more dispersers);
- Does PA network design differ according to whether PAs protect static populations versus dynamic/range shifting species?
- Are there trade-offs when prioritising for multiple conservation goals, or are wins-wins common?

4. Conservation Targets

George Holmes - University of Leeds

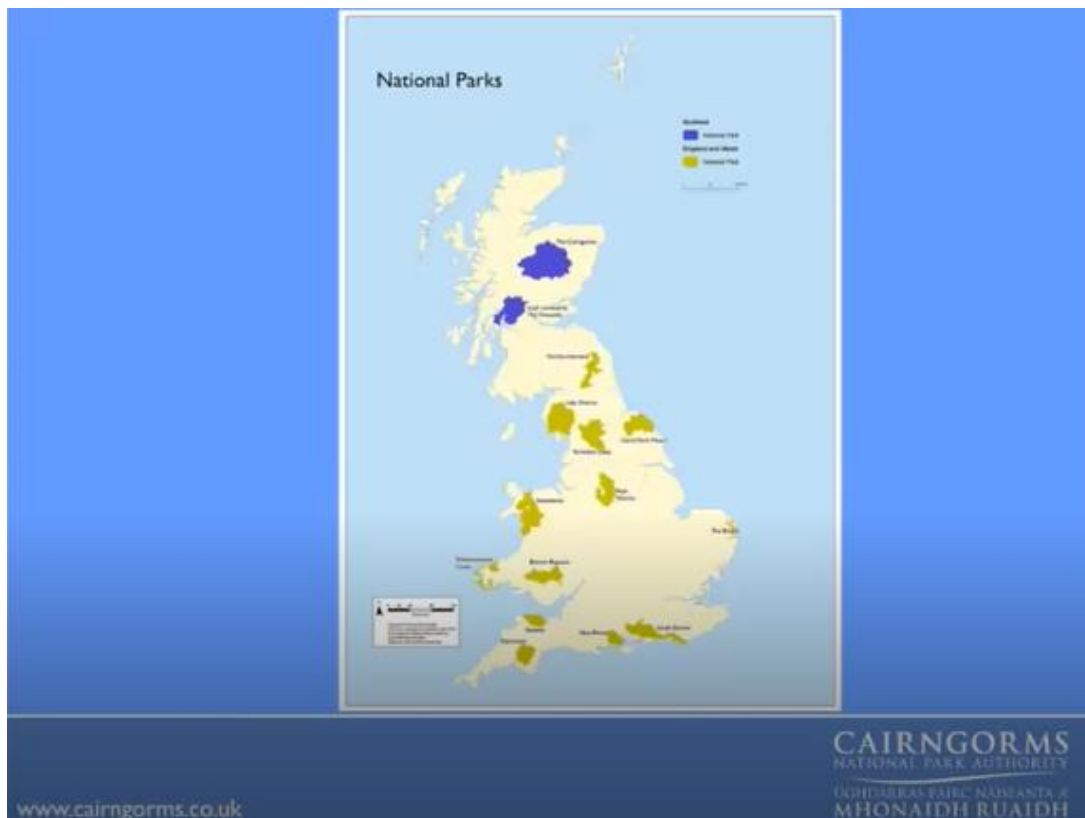
George identified some key questions that we need to further consider:

- Why 30%? We have had targets in the past for example the 17% Aichi Target and the controversial 50% half earth project.
- Why have targets in the first place - do they work?
- Who decides and who doesn't? Should it be more of a consultative process?

- It can be an issue when an algorithm decides what conservation targets, we should aim for without involving the local people. It can sometimes exclude important values that should be incorporated. So who is affected and how?
- What are the criteria? Should it be connectivity - they are political choices.
- What does protected mean? What goals are trying to achieve?
- How does morality come into it?

5. Protected Areas within a Protected Area – do they work?

Peter Mayhew – Cairngorms National Park



Slide from Pete's presentation: Map of the National Parks in the UK

- In terms of land cover in the UK National Parks cover 8% in Scotland , 9% in England and 20% wales. They count as protected areas in the 30% target.
- The make-up of Park Boards (with a high proportion of locally elected members) is arguably the most democratic system of Protected Area governance in the UK
- The Cairngorms is considered a biodiversity hotspot, there is a lot of work happening in this area, for example peatland restoration and woodland expansion.
- 50% of the Cairngorms National Park area has a Natura designation
- Designation of protected areas is a good thing but the principal determinant of management for nature (or not) is land ownership'

- What the landowner wishes to do with the land is a huge factor in success for biodiversity.

Pete concluded it is less about designations and more about

- How do we balance landownership with the biodiversity and climate crisis?
- Should the 30% target be more about management for nature rather than designation for nature?

Q&A SESSION

We then moved on to take questions from our audience. Co-host and SPG Committee Member Jessica Hogan only had time for one question for our guest speakers. Please see below the speakers answers to questions we couldn't get to during the event:

Are all baselines arbitrary, and how do we conserve the past given changes in environment, society, economy, technology etc?

Brian - yes, baselines are arbitrary to an extent as past populations, species distributions and relative species competition within habitats can give an insight in to how nature might evolve as climate warms. In looking back, I would suggest we are not just talking the period where sites have been protected, but would look to past extinction events to get insights into what we can expect from 'winners and losers' as we move to the new climate scenario. I would however, challenge that we should be looking to conserve the past - that is not going to be realistic.

Jane - yes, baselines are arbitrary, but provide an opportunity to assess success of conservation interventions and measure change overtime. They also give an opportunity for people to consider what they wish landscapes to look like. I think it's more important to set targets, deciding how to boost biodiversity, which species, and where. Our current landscapes have been modified by people over thousands of years of post-glacial changes.

George - yes. And they are also 'political', in the broadest sense of the word. When we choose one baseline over another, we are making a statement about what matters, and what doesn't. Which bits of nature and history we are prioritising. We can draw inspiration from multiple baselines. And conservation, including rewilding, is quite forwards-looking and sometimes I think that the baselines don't matter to conservationists as much as people think they do. The 're' in rewilding is rather misleading.

Given observed shifting species movement and probably also unpredictable effects, isn't making space for nature in a dynamic flexible framework of shifting protections including across marine and terrestrial areas more ideal?

Brian - In an ideal system, yes, we would look to develop a system whereby protected areas could be flexibly applied and more 'fleet of foot' to react to the increased dynamism which we are already seeing. However, the reality is that for the foreseeable future we will have the current legislative framework, so we need to build the flexibility in to how we utilise these sites. 30x30 is likely to be where greater flexibility can come in through the use of 'Other

Effective [Areas Based] Conservation Measures' (OECM), which we are looking to improve connectivity between biodiversity hot-spots, including protected areas. The flexibility will of course depend on the rules for what constitutes OECMs. The ultimate aim is of course for the boundary of the protected area to be irrelevant as nature rich landscapes develop.

Jane - many habitats may not be as dynamic (e.g. ancient woodland, peatlands) as species range shifts. So the issue is about making landscapes permeable for species to move through to reach new areas of habitat, and for that habitat to be high quality to support long-term breeding. It depends which habitats and species we wish to conserve, and where.

30% of land or sea is a lot. If we protect this amount of area, with high level protection, and consider different habitats in this designation, then does it matter if species move? If we protect enough high quality habitat, won't this benefit biodiversity anyway?

Brian - I would agree that if we can safeguard 30% or more of biodiversity-rich habitats, then we will go a long way to doing the best we can for species which are reliant on these habitats. However, even at 30%, this is unlikely to be sufficient to make a meaningful contribution to climate change mitigation/adaptation (including a move to net Carbon Zero) and biodiversity loss in general. There are several challenges in here, including the evidence we are getting that habitats are changing - e.g. at Black wood of Rannoch where pine is wanting to move up the hill to cooler areas to be replaced by oak, so what might this mean for ancient pinewood specialist, who could be left homeless as establishment of ancient woodland up the hill lags the move to oak woodland. There are also issues of habitats and species populations whose climate envelope might change where Scotland has particular global responsibilities (endemics?) - should we be modelling what we expect the new strongholds to be to start management now to allow later colonisation or future translocations.

Jane - I think this question feeds really well into the discussion about what we mean by 'protected' e.g. ~26% of the UK is already protected but <10% is Nature 2000 sites.

Will it entrench land sparing and shift effort away from land sharing?

Brian - There is a danger that a focus on 30x30 will give the impression that if we achieve the target that this will be sufficient from a Net Carbon Zero or biodiversity loss perspective. The messaging around 30x30 has to be about integrating land uses, both urban and rural, rather than continuing the current, somewhat siloed landscape where protected areas are perceived as separate to wider land use.

Jane – COVID has raised huge inequalities in terms of access to green space and recognising its people *and* nature. Landscapes are likely to comprise a mix of sparing & sharing depending on amount/quality of habitats required to conserve threatened species.

George - maybe. But I would say that there is no real policy agenda explicitly trying to make a decision on land sparing/sharing. It remains a rather theoretical concept, in terms of deciding what land should be managed how, and where.

What are the principles you would like to see underlying reaching 30x30, not just bigger, better or more connected - integrated with other uses? equitable? flexible? biodiversity potential?

Brian - to me all the additional elements highlighted in the question are important considerations. If I was to rank any of the suggestions higher, it would be integrating with other uses to provide the nature rich landscapes we need. That way the site boundary becomes less relevant, equitable access and use increases and there is flexibility in the nature rich system for nature to do its thing.

Jane - this is a great question about how to achieve multiple conservation goals, and what those goals are. There are existing methods to prioritise areas based on conservation goals, but we might choose to include other goals, such as equitable access as Brian suggests.

George - all the ones you mention.

What can be done to change people's perception of what is "beneficial for people" to bring it closer to what is beneficial for wildlife and biodiversity?

Brian - to my mind, I think we need to work harder to increase the understanding of natural capital amongst land managers, communities, the general public - how this translates to management and the benefits which arise. There is widespread understanding that from a financial perspective as an individual or country that you have a certain reserve of funds that if you spend more than you have you have to 'borrow' and that can't go on forever before the 'heavies are sent round or things start to break down. To do this effectively we need to have a number of compelling case studies to illustrate how management for natural capital benefits not only individuals but wider society.

Jane - there are questions here too about which types of biodiversity/species people value and accepting that local biodiversity will change as the climate changes. Discussions seem quite polarised in terms of introduction & translocations

George - people (all humans, really) will respond based on their experiences. It is difficult to get people to think about alternatives that haven't been in the recent human memory. For example, humans in Scotland won't instinctively think about whether bears should be part of the Scottish landscape, because it is outside of our experience and our framing of what is possible. One way round this is to present ideas from analogous areas in terms of terrain and climate, such as Norway, and asking whether this could work in Scotland. E.g. their much higher tree cover, their presence of species that have been extinct locally in Scotland for some centuries, such as lynx.

Given that protected areas around the world are predominantly low or no use, do you feel Scotland having a large area protected but with relatively high use, both in the terrestrial and marine areas, is a good example to other countries, especially those with a far lower economic capability?

Brian - absolutely, and approaches we take are regularly discussed in international fora such as Eurosite and Europarc, which are pan-European organisations which bring together land managers from across the continent to discuss management for nature and issues arising.

George - each country has its own culture and experience of protected areas, and why it has that type of protected areas. The UK national parks, for example, were set up, in broad brush terms, to provide recreation for urban working classes whilst not challenging ideas of land ownership or land use. We perhaps need an honest conversation about what kind of protected area we want, rather than being stuck with the 1950s particular model.

Brian, could you expand a bit on "redefining what good looks like"? Thanks.

As I outlined in my talk, the focus of monitoring and evaluation of the nature on protected areas is the condition of individual notified features. This assessment is carried out largely independently of each other and there is little, or no evaluation of how notified features interact with each other or other habitats or species populations on the site. The focus of the assessment is also within the site boundary so there is limited recognition interaction with surrounding areas. I would suggest that, given the changes which we anticipate, we need to move an evaluation of ecosystem health, which recognises the key components of the notified features but considers the functioning of the ecosystem both on and off the site. This sounds easy, but my research to date has not found any examples globally of this approach being taken across a range of habitat and species types, so if we can pull it off we in Scotland will be at the cutting edge of monitoring for ecosystem health.

Brian, should we ever declassify protected areas as species move/lost due to climate change?

To me complete denotification/declassification of protected areas is going to be a last resort, because the fact that a notified species has moved away or been lost from the site does not mean that the site has lost biodiversity more generally. There is also the issue of being clear that a short term abandonment of a site isn't taken as permanent if there is a chance that the species will return. So, in my view it is right that we should be removing as notified features species which have gone and are not recoverable so that we are not committing resources and management to achieve the unachievable. For the reasons I have outlined it is unusual for whole sites to be denotified, but what do on an infrequent basis is denotify parts of sites where habitat has been destroyed and is unrecoverable (due to development or other damage).

Is 30% of marine really protected if such a small area actually has no fishing and protection of the seabed floor?

Charlotte - "Marine Protected Area" (MPA) has become an umbrella term for lots of different management measures applied to the ocean. MPA can mean different things to different people, for example, a strictly protected area in which most human activity is prohibited to areas that allow commercial fishing. So the 30% target or MPA area coverage number can actually be quite misleading. A more accurate measure is to provide the % coverage of the ocean where different activities have been limited or managed. According to the MPA Atlas, globally only 2.7% of the ocean is protected in strictly protected MPAs. In my view, we therefore need to be much more specific when we state what we have achieved, just because we have implemented 30% coverage of MPAs, does not necessarily mean we have protected 30% of our seabed.

The recovery of both seabed and species, and the subsequent spill-over effect of commercial species, in the Lamlash Bay No-Take Zone is a clear indication of the benefit of increased protection in Scottish MPAs, so why is this not implemented in more/all MPAs?

Charlotte - The scientific literature broadly agrees that No Take marine reserves - the MPAs with the strongest protection are the most effective protected areas. No take marine reserves have been shown to be very effective in restoring and preserving biodiversity and enhance ecosystem resilience. Partially protected areas do provide some biodiversity benefit, but not to the same degree as strictly protected areas. However, MPAs are implemented, policy makers also take into other considerations e.g. socio-economic arguments.

Scottish MPAs are also specifically designed to conserve “features” rather than taking a whole ecosystem approach which would potentially require stronger protection. Management measures are decided on a case by case basis for the individual feature, and are tied closely to the distribution of the feature. So you can end up with a patchwork of management measures within an MPA, where activity is allowed in some areas where the feature is not present/ the activity would not damage the feature. As this is the way the Scottish MPAs have been designed, No Take zones are rare across the network, because to implement a blanket No Take area would be considered disproportionate under this management structure.

Are population controls (i.e. culling for ecological maintenance rather than sport fishing) ever required in marine no-take zones should species become overabundant where natural predators are absent species become overabundant? Is it ever necessary for no-take zones to become 'take zones'?

Charlotte: There are some examples of culling in marine systems as a form of active management to restore degraded ecosystems or reduce the presence of invasive species. In the Mediterranean, culling of sea urchins has taken place within an MPA and resulted in a progressive reduction in the extent of barren grounds (caused by the large sea urchin populations) in the fully protected area after the culling (Guarnieri et al. 2020 - Frontiers in Marine Science). Invasive lionfish have also long been targeted in culling programmes in the Caribbean. There are increasing questions surrounding the need for more active species specific management to restore degraded marine ecosystems. However, there are also concerns that increasing numbers of apex predators, recovering after historical exploitation (e.g. orcas, seals), will prompt calls for culling as these species come into conflict with commercial fisheries.

What activities could be undertaken to ensure that the process of working towards 30x30 is equitable and of benefit to both people and biodiversity? (And avoiding / mitigating against potential conflicts...)

George - it would need a consultative process, particularly with people living nearby, and with a full assessment of likely social and environmental impacts. There are various tools that could be used (scenario planning, participatory methods). This would need to consider big questions about how protected areas should be used, what they are for, how people should use or relate to the nature inside them.

BREAKOUT SESSIONS

This section will provide a summary of some of the key points that were noted down during the discussion in the breakout groups.

Why 30%?

Key points:

- It is highly dependent on *what* the goal of protection is.
- Appears to be an arbitrary political decision. What about the other 70%? We need to *manage* all land and sea in a better way
- Dependent on what 'protected' actually means. For example in MPAs we have designated protected areas that still allow trawling. Also considering AONBs and National Parks as protected when they are heavily used by people and may not be managed specifically to benefit biodiversity. There is a need to clarify and set a minimum standard as to what should count as a 'protected designation'.
- The health and connectivity of the ecosystem is more important than the target in relation to conservation.
- There is a need for better public perception on what a protected area is.
- A more dynamic target focused on ecosystem health and genetic diversity would be more helpful
- Shouldn't be based around public or private land needs to be based on ecological need in terms of habitat conservation. It should be a collaborative stakeholder process.

What are Protected Areas for?

Key points:

- Protected areas are seen as 'people free' zones. This isn't the right approach as stakeholders need to be involved in the process.
- There is a need to consider the conservation objectives that include human use – we need to better connect people to nature.
- There is a need for flexibility – goal dependant moving boundaries that consider factors like climate change.
- There is a need for a better dialogue with the public to increase understanding.
- Size, location, connectivity and management are key.
- There is a need to minimize conflict with Protected Areas and people.
- Protected Areas should form part of a multidimensional approach.
- The terminology is misleading.

How do we get to 30% Protected Areas?

Key points:

- It is more important to change the consciousness of people in regards to protection and the responsible use of resources.
- Engaging stakeholders and the public.
- Co-design of protected areas with people.
- There are financial constraints and constraints in terms of ownership.
- Locally protected areas need to have a higher value, there is a need to connect people to nature. People tend to value what they can see around them better COVID-19 in some cases has helped better connect people to nature. Connecting people to nature reduces conflict.
- Protected areas need to have varying levels of protection dependant on the goals and outcomes that are trying to be achieved.
- A revaluation of what protected areas are needs to be done more often.
- There is a need to open up thinking about what we consider a 'Protected Area' thinking in the context of connectivity.
- Multiple functions helps in terms of land use e.g. agroforestry.
- How to reach effective protection is more valuable than the target.
- Need for inclusive views engaging multiple stakeholders.
- Planning is an important management tool to consider.

How are protected areas working?

Key points:

- There is a need for better enforcement and management
- Need to involve more people in the process. This is key to success.
- Protected areas need to be more flexible.
- There is a need for multiple goals for protected areas and multiple metrics.
- Comes back to the question 'what are we protecting the areas for' and 'what does protected mean'.
- PA's should connect people to nature.
- They preserve the past be need to create the potential for the future Protected areas need to managed and designated for processes and functions.
- Can we protected areas be policed?

MAIN TAKE-AWAY POINTS

- The main points to pull from the responses gathered is that overall 30% seems arbitrary when a minimum standard of protection and what it means hasn't been established.
- The rhetoric around 'Protected Areas' and what they mean is misleading because of this lack of clarity especially in terms of public perception. This is important to rectify.
- There is a need to involve local people in decision making.
- There is also the need to further define goals and flexibility of protected areas
- There is the need to provide a better understanding to the public about protected areas.

The event provided an opportunity to various stakeholders to discuss ideas regarding the opportunities, and challenges we face when we try to engage with the concept of protected areas. There will be a follow up online seminar on “Protected Areas for nature – where will the extra 10% be?”. This is scheduled to be held online on the 30th June 5-6.30 pm.

The BES/SPG and ECoS would like to thank all the speakers and participants for contributing to the success of this event and providing such a stimulating debate and interesting session.