



**OFFICIAL REPORT**  
AITHISG OIFIGEIL

# Net Zero, Energy and Transport Committee

**Tuesday 6 September 2022**

**Session 6**



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**NET ZERO, ENERGY AND TRANSPORT COMMITTEE**

**23<sup>rd</sup> Meeting 2022, Session 6**

**DEPUTY CONVENER**

\*Fiona Hyslop (Linlithgow) (SNP)

**COMMITTEE MEMBERS**

\*Natalie Don (Renfrewshire North and West) (SNP)

\*Jackie Dunbar (Aberdeen Donside) (SNP)

\*Liam Kerr (North East Scotland) (Con)

\*Monica Lennon (Central Scotland) (Lab)

\*Mark Ruskell (Mid Scotland and Fife) (Green)

\*attended

**THE FOLLOWING ALSO PARTICIPATED:**

Susan Davies (Scottish Seabird Centre)

Calum Duncan (Marine Conservation Society)

Craig Macadam (Scottish Environment LINK)

Professor Elisa Morgera (University of Strathclyde and One Ocean Hub)

Suzie Saunders (Woodland Trust Scotland)

Dr Paul Walton (RSPB Scotland)

Bruce Wilson (Scottish Wildlife Trust)

**CLERK TO THE COMMITTEE**

Peter McGrath

**LOCATION**

Committee Room 2



## Scottish Parliament

### Net Zero, Energy and Transport Committee

*Tuesday 6 September 2022*

*[The Deputy Convener opened the meeting at 09:30]*

### Decision on Taking Business in Private

**The Deputy Convener (Fiona Hyslop):** Good morning, everyone. I will chair today's meeting following the resignation of Dean Lockhart yesterday. We are sorry to see Dean go, but we wish him well in his new role, and we thank him for his service to the committee and for being a courteous and consensus-seeking convener of it. With the committee's agreement, I would like to write on its behalf to express our thanks to Dean for his work, particularly in seeing us through the energy price inquiry and in our long and continuing investigation into local government and its partners delivering on net zero. Once a motion on the new Conservative member of the committee has been agreed to, the committee will agree to appoint a new convener at the first opportunity.

This is the 23rd meeting of the Net Zero, Energy and Transport Committee in 2022 and our first meeting following the summer recess. It is lovely to see everybody.

Agenda item 1 is to consider whether to take items 3, 4 and 5 in private. Item 3 is consideration of the evidence that we will hear today, and item 4 is consideration of the committee's work programme. Under item 5, we will consider a list of candidates for two adviser posts to support our work. Do members agree to take those items in private?

**Members indicated agreement.**

## Scottish Biodiversity Strategy

09:32

**The Deputy Convener:** Item 2 is our first evidence session in relation to the Scottish biodiversity strategy. I refer members to the papers from the clerk and the Scottish Parliament information centre for this item.

In June, the committee agreed to scrutinise biodiversity policy and the proposals for the Scottish Government's new biodiversity strategy. That will be the first substantive update of Scotland's overarching biodiversity policy since 2013 and the starting point in a process that will lead into the development of rolling delivery plans and statutory nature restoration targets through the introduction of a natural environment bill. The Scottish Government is currently consulting on the strategy. The consultation will end next week, and the strategy should be published later this year.

Today, we will hear from two panels that will focus on land and marine environments. The session will be an opportunity to discuss what is needed to address the biodiversity crisis, reflections on the outcomes that are specified in the consultation, and views on the legislative requirements and what else needs to happen to deliver those outcomes.

We will start with a panel that will focus on land. I welcome our panellists, all of whom are joining us in the room. Professor Elisa Morgera is professor of global environmental law at the University of Strathclyde and director of One Ocean Hub; Suzie Saunders is policy advocate at Woodland Trust Scotland; Dr Paul Walton is head of habitats and species at RSPB Scotland; and Bruce Wilson is public affairs manager at the Scottish Wildlife Trust. I thank the panellists for accepting our invitations; we are delighted to have you here.

We have allocated around 70 minutes for this session. Members will ask questions in turn. As members know, it will help broadcasting if they direct their questions to a specific panellist or set out a running order for answering the question if it is relevant to all the panellists. I would like everyone—members and panellists—to try to be concise in their questions and answers, if they can be.

I will begin with a question for everybody and will go to Professor Morgera first. Scotland has so far struggled to make progress on slowing and reversing biodiversity declines. What are the key challenges for Scotland and the reason why some targets have been missed to date? I will allow everybody to answer that key question.

**Professor Elisa Morgera (University of Strathclyde and One Ocean Hub):** Good morning, everyone. The challenges in Scotland are shared by every other country around the globe. All countries are failing to meet their biodiversity targets. There are common threats and pressures that every country needs to address, but different countries can take more ambitious and creative approaches. Scotland has opportunities to be a leader in certain areas.

It is clear that biodiversity is lost due to large-scale uses of our environment, such as in agriculture and fisheries, and the fact that we do not give enough consideration to the multiple kinds of value of biodiversity in our planning decisions. Those different forms of value are the key consideration. There is value in biodiversity helping us in mitigating and adapting to climate change, but biodiversity also has value in multiple ways in relation to our fundamental human rights to water, food and health. Having a more comprehensive understanding of the benefits for our survival that derive from biodiversity and how those should be weighted in decisions on the use of the environment and natural resources in Scotland is what needs to change in order to reverse the trend.

**Suzie Saunders (Woodland Trust Scotland):** Native woodlands are some of the most biodiverse habitats in Scotland. We cannot address biodiversity loss without first addressing the decline in the condition of our native woodlands, which stems from a lot of issues. Some of the key challenges that we face are overgrazing by deer and invasive non-native species, such as rhododendron ponticum. The native woodlands survey for Scotland showed that 50 per cent of our native woodlands are in decline because of overgrazing by deer and the spread of rhododendron ponticum. We need to address those key issues if we are to reverse our biodiversity loss. The best way to do that would be for the committee to recommend to the Scottish Government to urgently implement the deer working group recommendations and to create a strategy to clear rhododendron ponticum from all of the United Kingdom.

One of the great examples of our native woodland is Scotland's rainforest, which is an incredibly biodiverse habitat that is bursting full of lichens and bryophytes. It is an incredible place to visit. However, it is threatened by rhododendron ponticum—about 40 per cent of Scottish rainforest sites are impacted by rhododendron ponticum. It is a great example of a place where ecosystem restoration needs to happen. If we address those key issues, I hope that we will make some progress in restoring biodiversity in Scotland.

**Dr Paul Walton (RSPB Scotland):** I endorse what Suzie Saunders was saying about the specifics in terms of key ecosystems and habitats in Scotland, of which native and ancient woodlands are a part.

In the wider context of your very good question about why we are failing to halt biodiversity loss, convener, I think that, broadly speaking, we know what to do. The 2004 strategy and its 2020 update were producing quite a collegiate approach—there was big non-governmental organisation input as well as input from NFU Scotland, the Convention of Scottish Local Authorities and so on—and it looked across society. What was in the strategy was pretty good, but the problem was that it was not implemented and it was not funded.

We have seen a big change recently in the way in which biodiversity is funded in Scotland. The nature restoration fund, which is £13.5 million per annum for biodiversity conservation, is unprecedented. However, the scale of the challenge is perhaps better illustrated by the Green Finance Institute, which independently estimated that between £15 billion and £20 billion is required to restore ecosystems, species and habitats—that is, biodiversity—in Scotland.

It is a massive challenge. It is partly about resourcing and partly about having the political will to make things happen. It is critical that we mainstream biodiversity across Government as well as across land use sectors. Very broadly speaking, although our network of protected areas is not complete or sufficiently well managed, the areas within the network are doing quite a lot better than the areas that are outside it. We need to figure out ways in which to integrate biodiversity thinking across the land use, sporting, agriculture and forestry sectors much more effectively and constructively.

Those are the challenges. I am not convinced yet that—we will probably come on to this later—the current draft strategy is sufficient to meet them.

**Bruce Wilson (Scottish Wildlife Trust):** I will do the usual and agree with everything that has been said. However, I will also highlight an issue by directly quoting the consultation. It states:

“What we have come to understand is that key shortcomings relating to governance and accountability structures and mechanisms for mainstreaming biodiversity into all areas of policy, including economic policy making, have undermined our ambitions.”

Too often, we are not seeing the great ambition on biodiversity being mainstreamed into other policy areas. There are lots of opportunities coming up to do that, such as through the delivery of the national performance framework 4, which will have a huge impact on how we can not only

help biodiversity but realise opportunity from biodiversity. There is also the forthcoming agriculture bill. There is huge opportunity to mainstream some of that, and we must do that. However, although the consultation makes the statement that I quoted, it does not then state how we will achieve that with the Scottish biodiversity strategy.

**The Deputy Convener:** The committee is keen to highlight the importance of the nature crisis and the fact that the 15th United Nations biodiversity conference of the parties—COP15—is coming up. In that context, we will broaden out the discussion before we narrow it down again.

What are the current expectations of COP15? Will the direction of travel that is set out in the consultation be sufficient to deliver international obligations? I will stick with Bruce Wilson before putting that question to everyone. I will then ask individual members to direct their questions to the witnesses.

**Bruce Wilson:** Obviously, we have seen delays to COP15 due to Covid. Although that is understandable, it is frustrating, because we are already a significant way into the UN decade of ecosystem restoration. Therefore, we are starting from a point of hindrance and we need to rapidly pick up the pace internationally and in Scotland.

Broadly, we want to ensure that the leaders' pledge for nature, which is to reverse biodiversity loss by 2030, which the First Minister has signed up to, receives wider endorsement through the COP15 process. However, we do not have much time before 2030, so we need to act. Importantly, the high-level targets are also coming out of the COP15 process. I think that all the organisations that are represented at the committee today are agreed on the need to bring biodiversity up to the same level as climate change, so that people are focusing on targets.

Those are probably most of the things that I would want to see come out of the COP15 process at the highest level. Obviously, I would then want to see that being reflected in how we do things in Scotland. Those aspects are very much linked to our aspirations around the sustainable development goals and the wellbeing economy, as well as human rights, so it is very important that we get that right in Scotland.

**The Deputy Convener:** Your advice to the Parliament and the committee is very important in that regard.

**Dr Walton:** What I would like to see coming out of COP15 are ambitious SMART targets for nature across the world—by that, I mean targets that are specific, quantifiable and measurable. Frankly, there is no doubt that the prospect of getting hundreds of Governments to agree such things is

massively challenging. My feeling is that, if Scotland waits for those international targets and then entirely judges everything against them, in practical terms, that might not be enough—I hope that this will not be the case—to reverse biodiversity loss in this country. That is because, on several occasions—this has happened consistently—we have seen international targets being drafted, put into treaties and then not being met.

As my colleague on the panel has said, Scotland can be a leader on the issue. I would, of course, like to see us look to those targets—but as a backstop minimum, because Scotland needs to go quite a lot further. For that, we need our own SMART targets for nature. Those need to be signposted in the Scottish biodiversity strategy and put into legislation through the natural environment bill that will be coming in the latter part of this parliamentary session. That is the key route to success.

09:45

**Suzie Saunders:** I completely agree with everything that has just been said—that may be a theme of this evidence session. I agree completely about the SMART targets. We do not necessarily have to wait for those to come out of COP15. This strategy provides a great opportunity for us to set our own SMART targets for halting biodiversity loss and encouraging its recovery. At the moment, the strategy does not do that. It just has broad outcomes that are not super clear. We will probably cover this in a bit more detail later, but this is the perfect opportunity to highlight the fact that we can and should put SMART targets in the strategy. I can expand on that a bit later.

**Professor Morgera:** The main expectation for COP15 is to come up with a global biodiversity framework to pinpoint how we can take transformative action. There is a global understanding that incremental change has not helped us to reverse biodiversity loss and has not helped enough with mitigation of and adaptation to climate change, so the hope is that the global biodiversity framework can give an indication of where transformative action will come from.

There is also scepticism as to whether we will get such an indication in that framework, partly because of the difficulties of getting consensus among 196 parties. However, what is essential for Scotland, even before COP15, is that the process has identified what has not worked in the past. To make progress in Scotland and elsewhere, we at the very least need to build on what we have learned internationally—there have been mistakes in relation to conservation before.

We have already mentioned looking at biodiversity in isolation as opposed to mainstreaming it in other sectors. However, that means that the biodiversity sector needs to indicate to other sectors what it means for biodiversity to be taken up in, for example, climate adaptation, transport or fisheries. We cannot expect other sectors to do that homework on their own.

Secondly—I think that this has been picked up in the consultation paper, but I do not think that there is quite the right understanding of it—we need to take a whole-of-society approach. Yes, we need Government leadership, but that is not enough. We need everybody to work towards understanding the value of biodiversity and contributing to biodiversity conservation. That means that we have to recognise who is already contributing to biodiversity conservation, which is missing from the consultation paper. We know that crofters and other local communities, for instance, are ecosystem stewards, but there is no recognition of that role. Maybe, for Scotland as a whole, starting from the recognition of what is working right now is as important as focusing on what is not working.

We also need to avoid taking a top-down approach, with targets being imposed and implemented from above. We need to take a bottom-up approach that is based on human rights, involving a participatory process that brings people in and makes everyone see why this is essential to their wellbeing, to their health and to our survival on this planet, so that all of them will recognise the role that they can play.

In working on this issue with colleagues across different continents in the world, what we have seen time and again is that every time we set environmental targets without genuine consultation and recognition of the roles that some in society already play, we set ourselves up for failure. We just cannot do that again if we really want that transformative change to happen.

**The Deputy Convener:** That reflects some of the comments that we heard at the Edinburgh international culture summit, when we were discussing climate change and that connection between people and nature, so thank you very much for that.

**Natalie Don (Renfrewshire North and West) (SNP):** Good morning to the panel. It is nice to have you all here.

We have talked about some of your priorities. I know that we will expand a little more on those throughout the session, but I would like to focus on how Scotland's efforts to tackle the biodiversity crisis compare with the efforts of other countries.

What could we learn? Are there examples of best practice?

I would like to hear from each member of the panel on this, because it would be good to hear your various points of view, but I will start off with Bruce Wilson. The Scottish Wildlife Trust's submission notes that

"Scotland should learn from the experience of other countries and draw on the ... Strategies and ... Plans ... elsewhere",

and New Zealand's strategy was mentioned specifically as a good example. Can you elaborate on the strengths of the New Zealand strategy and show how it has proved to be successful?

**Bruce Wilson:** When the consultation came out, we did a literature review to look for examples. We particularly like the work that has been done in New Zealand, because it chimes with the First Minister's wording on the wellbeing economy and the importance of striving towards that. New Zealand has tried to base its biodiversity strategy around the four capitals approach, and to look at things including its natural capital and economic capital. What we really like about the example is that New Zealand has tried to achieve mainstreaming by looking at the four capitals as one.

The Scottish Government committed to taking that approach in the economic response to Covid, but the approach has since dropped down the agenda a little in the national strategy for economic transformation, so we would like it to be brought up again. There are ambitions around the natural environment and natural capital, but given the way in which the environment is contextualised in the economic strategy, we think that the approach needs to be boosted up a level and mainstreamed through the strategy. That approach would also read across into our national performance framework. We think that we need to introduce many more environmental indicators in the national performance framework, as has happened in a few other places.

With regard to implementation, we could probably learn a few things from south of the border. People there have taken a bit of a lead on how to map work on biodiversity on to the landscape. South of the border, there are things called nature recovery networks. Up here, we have nature networks, but we are very much at the discussion stage on those. That is about delivery; we could learn from the experiences of people south of the border.

We were impressed with the way that New Zealand has taken steps to mainstream the biodiversity policy through the rest of the work there.



**Dr Walton:** New Zealand is an interesting example, but I will first talk about progress in the European Union. Some months back, the EU published its biodiversity strategy, which, broadly speaking, was warmly welcomed by the environmental NGO community. The process of arriving at that strategy was quite consultative.

The biodiversity strategy's being launched on the same day as the EU's "Farm to Fork Strategy" really emphasised the links with agriculture. One of the five main drivers of biodiversity loss is habitat change, with agriculture being a vehicle for that. It is, kind of, the biggest driver across the world, in Europe and, probably, in Scotland, as well. That integration was achieved then.

The approach will now be translated into EU legislation via a regulation that all EU member states will have to adopt—what is being termed a nature restoration law. The draft of that has just been published and is going through what is called the co-decision process. It is really ambitious and sets clear and specific quantitative targets for nature restoration. The UK Government has put targets for nature into legislation but, in the RSPB's view, they are simply too weak, and the EU ones look much more encouraging.

In the context of the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021 and Scotland's commitment to keep pace with or exceed environmental standards in the European Union, that issue needs to be looked at carefully. That is my point on the larger view.

I will go back to talking about New Zealand. Another of the five drivers of biodiversity loss is the role of invasive non-native species, and New Zealand has absolutely led the world in legislation and public policy on that issue. In the 20th century and the century before that, the graph of new non-native species arriving in New Zealand rose very steeply, but when the biosecurity legislation was introduced, the graph fell off a cliff. It is the most remarkably successful piece of legislation anywhere on invasive non-native species. Scotland is not directly comparable to New Zealand—for example, we have a land border—but the size of our human population is broadly similar. We need to look carefully at such examples of approaches to the role of invasive non-native species, which is one of the five big drivers of biodiversity loss.

**Natalie Don:** Thank you. I will look into that specifically.

**Suzie Saunders:** There are many really great examples around the world, but within Scotland there are also really great examples of people helping biodiversity. I will highlight a few. As I have said before—I will probably say it many times during this session—our native woodlands, and

especially our ancient woodlands, are among our most biodiverse habitats.

Our woodlands are in really poor condition. At the moment, ancient woodlands cover only 2 per cent of the land in Scotland. I have lots of facts and figures: for example, 43 per cent of those woodlands have been degraded by plantations. One of the best things that we can do to halt and reverse biodiversity loss is restore those woodlands, because they have remnants of ancient woodland within them. One really great example of somewhere that is happening is a site called Loch Arkaig, in the Highlands, which is definitely worth looking into. Non-native conifer species are being sensitively removed to allow the ancient woodland to be restored.

Regarding wider ecosystem restoration, there is a great example of how the efforts in the Scottish biodiversity strategy might look in a number of years at a site called Glen Finglas, which is within the Loch Lomond and the Trossachs national park. The Woodland Trust acquired the site more than 25 years ago and has undertaken wide ecosystem restoration of woodlands and peatlands. It is now a transformed landscape. It is good to look outside our country, but it is also great to look within our country for examples of nature restoration.

**Natalie Don:** There are things that we are doing nationwide that we should promote more. I turn to Professor Morgera.

**Professor Morgera:** I will give an example from South Africa—not of something that the South African Government is doing, but of something that some of my research colleagues are doing there that has already given some indication of transformative change. They have used research funding to create partnerships. Researchers across marine and social sciences and the arts are working with local communities, NGOs and local government to bring their knowledge together. They want to bring together what we know locally about nature, biodiversity and climate change with the knowledge that already exists in Government, in order to co-develop solutions and, through that, to find an approach that addresses local needs and justice issues.

What is incredible is that although that sounds complex—it is—it helps to integrate thinking, which is where we usually fall short in our efforts to effectively conserve our biodiversity or to use it sustainably. We think that joined-up thinking comes from above, but we live and breathe the complexity at the local level. Linking knowledge and asking researchers to help with that process has been transformative in South Africa. There are very complex issues relating to offshore energy, protection of the ocean and distinctive cultural connections to the ocean.

An element of that speaks to funding, but there is also an opportunity for Scotland. There is an incredible and vibrant community of researchers here, who have done a lot of pioneering work on ecosystems services. They could work together to implement the strategy. We could move away from the draft's current understanding of "delivery partners". The strategy is talking about local communities, NGOs and researchers as delivery partners, whereas we should be looking at co-development of solutions, in which we are all partners in understanding what the solutions are and in working out how we can bring them forward. That could include different thinking about who will do the work and how we can do it together, and about funding work that includes research and practice at the same time.

The reality is that transformative change is a learning process. We do not know how it will work; we learn as we go. We need to put in resources and support for all the actors involved for their continuous learning and learning from each other.

**Natalie Don:** Thank you. We could probably spend the whole meeting talking about examples of good practice. It is important to hear about some of the best work that is going on internationally and at home.

I will hand back to the deputy convener.

**The Deputy Convener:** We will come to Liam Kerr and then Mark Ruskell.

**Liam Kerr (North East Scotland) (Con):** Thank you. My first question is for Professor Morgera and then for Bruce Wilson, who referred specifically in his submission to the limitations of previous strategies in relation to governance and accountability. There is a section in the strategy on conditions for success, one of which is that there be an independent body

"to monitor and report on progress",

alongside

"An improved monitoring framework".

However, the section does not go on to say anything about what those conditions might look like. What are your views on what is currently in place and on what the best solutions for monitoring and reporting might be?

10:00

**Professor Morgera:** Internationally, the question how we can best monitor progress has been on-going. As my colleagues mentioned earlier, there is a precondition to that, which is that we cannot monitor unless we have measurable targets. That is the first issue. At the moment, no measurable target and no baseline have been proposed.

Secondly, we already have a new environmental watchdog, in Environmental Standards Scotland. The first question should be whether that body can do the work, or do we need another one. It is important to look at what we have.

Another important issue is that monitoring should not be just a tick-box or compliance exercise; it should be a learning exercise. The reality is that transformative change is difficult and we will make mistakes along the way. However, as long as monitoring and reporting are opportunities for learning, doing better and increasing our understanding, such change is worth investing in.

I turn to the process for monitoring and sharing our learning, which we have also discussed in the context of Scotland's ambition to be a leader in human rights. That is very much linked to the environment, and what we can do on climate change and biodiversity is a key component of that.

**Liam Kerr:** I am grateful for that answer. I put the same question to Bruce Wilson.

**Bruce Wilson:** For me, the targets that drive the process are essential. At the moment, we do not have any real compulsion for public bodies or others to contribute to it—it is just done out of good will. We already have a requirement on public bodies to report on their biodiversity duties, but it is quite poorly worded and there is no guidance to go along with it to help people to understand what they need to report on. People often submit carbon data or information about programmes for turning off their lights; all of that is laudable and nice, but it does not directly tackle the biodiversity crisis in the way that we would like. We need rapid upskilling of people across sectors—so that they understand their impacts and dependences on biodiversity within organisations and the country—as well as a link to the strong targets that we have already mentioned.

I add that we cannot manage effectively what we do not measure: at the moment we do not measure biodiversity adequately in Scotland. The availability of data is a massive issue that we need to get on top of. In many ways it is more complex than the climate issue. We have a lot of dedicated citizen science projects, but we must also ensure that we are getting the best out of private sector information, and that pathways for such data to get to where it can be useful are properly maintained. The comparison that I have heard from my colleagues is that, at the moment, the process is held together with sticky tape. That situation needs to improve, and we need to implement properly the recommendations of the Scottish biodiversity information forum.

I imagine that Paul Walton will also have something to say on data.

**Liam Kerr:** I will throw the next question to Dr Walton, if you have wrapped up your answer on that question.

I also have a follow-up question. The conditions for success contain a bit about funding, but no real thoughts on the sources of such funding, bar a reference to agricultural subsidies. Bruce Wilson's submission says that funding is not on the scale that is required, and Dr Walton made the same point in his opening remarks. I will come first to Dr Walton and then to Bruce Wilson. Will you give the committee an idea of the scale of funding that is required? Is the consultation realistic on that aspect? What would you expect to see in a delivery plan, as regards funding?

**Dr Walton:** First of all, I will wrap up the previous question, which was on targets. We are as one in saying that the strategy needs to have quantifiable specific targets, otherwise there will be no way of monitoring its success. No one—no matter who they are—can do that.

Potentially, the route to take might be to have ESS as the independent assessment body, but we will need a bit more than that; we need legislation to help to drive the process that Elisa Morgera talked about. For example, we have a biodiversity duty in Scotland that is, arguably, stronger than the biodiversity duty in any other part of the UK, in that the duty on public bodies is to progress the conservation of biodiversity and not just to have regard to it. However, there is a provision at the end of the relevant legislation that talks about the ordinary conduct of its duties, and that has always been used as a means to undermine the main thrust of that bit of legislation, which is to further conservation of biodiversity. It has not worked, obviously, because we are still losing biodiversity. We need those bits of legislation to be tightened up via the proposed natural environment bill, and we need to give ESS something to work with: it needs legislation through which to hold public bodies to account.

Funding is a massive challenge. As I said earlier, the Green Finance Institute's estimate of how much it would cost to restore nature in Scotland is £15 billion to £20 billion, which is an enormous sum of money. I am part of a small group of environment NGOs that includes the Woodland Trust Scotland, and which has been trying to promote conservation and restoration of Scotland's rainforest. We took an estimate based on work on the ground that has been done previously and came up with a figure of £500 million over at least a decade.

Those are massive sums of money that I am bandying about. I am not saying that schools and

hospitals are not important or that there are no other financial imperatives; nobody is saying that, of course. They are considerable sums, but the time over which they can be spent is the entire period of the strategy to 2045 and, I hope, beyond. I want to put that marker down.

We have a brilliant precedent in the peatland action that the Scottish Government has pioneered, which is an example of ecosystem restoration in practice. It involved £250 million of public money across multiple years and has, increasingly, brought in private finance in rather complex and very novel ways. I cannot prescribe how it could work throughout Scotland, but the strategy needs to identify ecosystems such as that; peatlands, Scotland's rainforest and the machair all need to be identified as priority ecosystems.

As Professor Morgera has said, the big central paragraph of the habitats directive definition of machair—which is vastly species-rich grassland in the Western Isles and Hebrides—is about crofting agriculture. There has been a long history through the late 20th century into this century of undersupporting our crofting communities, which already deliver biodiversity and could do much more to prevent losses and to restore ecosystems. The strategy needs a programme of ecosystem restoration, which is what the EU is in the process of putting in place, yet it is not mentioned in the consultation: there is no ecosystem restoration plan in the programme.

On how it should be financed, we NGOs are saying to the Government that about £500 million, which I know is a huge ask, is needed for Scotland's rainforest. Incidentally, the Minister for Environment and Land Reform has committed to the restoration and expansion of Scotland's rainforest. The commitment was made at the 26th United Nations climate change conference of the parties. We are saying that £250 million should come from Government over the course of a decade or more, and that the NGOs will work with external funders to raise the other £250 million. We cannot make a promise, but we believe that that is possible. Scotland's rainforest has incredible resonance with the public and funders. We believe that novel finance mechanisms, such as the peatland code, that are beginning to be explored could, if they are done in a way that is guaranteed to be environmentally responsible, have the potential to open up the finance that will be required to scale things up, as we need.

**Liam Kerr:** I am very grateful for your response. Bruce Wilson, would you like to talk about funding?

**Bruce Wilson:** I will try to add to what Dr Walton has said, which I agree with entirely.

On the massive number of £15 billion to £20 billion, I note that saving the natural environment is not optional if we want a functioning planet. We cannot decide not to do that; it is absolutely essential. Scotland's economic strategies have all identified that we are reliant on our natural world—the previous two strategies certainly have—so it is crucial for our social, economic and environmental futures.

Having said that, there is also massive opportunity—the funding does not simply represent spend that is written off. The return on investment in environmental green and blue infrastructure is known to be huge. NatureScot has worked out the return on investment for specific schemes. For certain things, I have seen a return on investment of 8:1, going up in some cases to 20:1. An example of that might be investing in a woodland over a grey infrastructure culvert or something like that. Such investment is much cheaper, and that natural asset provides benefit not only by reducing the potential flood risk but by providing biodiversity and community benefit, and an alternative income for the land manager—there are all sorts of different benefits. It is not a one-off spend on something like a culvert, which would sit there and would ideally be used once every 10 years for dealing with a one-off problem.

We cannot view the strategy as only presenting a challenge, with no opportunities—we need to think of the opportunities. The strategy creates opportunities for new business and new green-collar economies, and for different jobs, such as engineers and financiers, and things associated with upskilling, and getting people in local authorities to think differently about how we interact with our natural environment.

We also need to look at what Professor Sir Partha Dasgupta highlighted in his report on “The Economics of Biodiversity” following the recent review that he conducted. He identified “perverse subsidies” as something that we really need to tackle. On the one hand, we have a sticking plaster of biodiversity funding going against subsidy—for example, for sustainable agricultural practices. We need to get our policy aligned so that it is delivering for the climate and nature crisis, rather than having one policy going one way and one going the other way. That will help to reduce costs, because we will not be having as big an impact.

There is also the scale element that Paul Walton talked about, and bringing in private sector investment. That absolutely needs to be done, with a lot of scrutiny. We are starting to see private sector investment—it tends to be called natural capital investment. At the moment, it is mainly more of a carbon-offsetting investment. We need to get on top of that properly. The Scottish

Government has put out some good guidance, but that area is going to grow and grow.

In order to have a just transition approach, we need proper community involvement. Regional land use partnerships, which come from the Climate Change (Scotland) Act 2009, are designed to get communities involved in what land use change is going to look like. However, those partnerships are not funded well enough to enable them to properly engage local communities. We need such engagement, because the scale of investment that is needed for the private sector is much bigger than the scale of the biodiversity projects that we are used to working on in Scotland. A big biodiversity project might be £5 million, but we are talking about investment in projects of £1 billion plus. We need to be able to scale up the projects.

The strategy document also mentions nature networks. We think that there is huge potential for that approach, using an opportunity-mapping system to identify the best areas for investment so that we improve ecosystem health rather than taking a scattergun approach.

Sorry—that was a long response.

**Liam Kerr:** It was a long, but very useful, response. If NatureScot is watching this session, and it has data on return on investment, I am sure that the committee would be pleased to see it.

Before I hand back to the convener, Susie Saunders may want to add briefly to what Dr Walton said.

**Suzie Saunders:** Yes, definitely—I will make it brief. I have three points to make. First, I completely support what Bruce Wilson said. Public funding cannot do all of this—we need private investment, but it needs to be carefully regulated. We also need to focus on the upcoming subsidy reviews that are being undertaken. There are a lot of great opportunities for biodiversity within that. In particular, agroforestry—integrating trees with farms—is a really good investment for biodiversity. It is great for regulating soil temperatures and sheltering livestock. However, the current schemes are either oversubscribed or too prescriptive.

We need to make changes to those schemes to encourage people to do things such as agroforestry.

My last point is that, at times, there are opportunities to better use current funding. I have said before that we need to address the issue of managing deer across Scotland because they have an impact on native woodlands as well as on peatland and agricultural land. It is a huge issue. One thing that we could do would be to phase out funding for deer fencing and put it into deer

management. We put a lot of money into deer fencing, but if we directed it better it might have a bigger impact on biodiversity.

10:15

**Professor Morgera:** I support what has been said and reiterate the point that biodiversity finance should not be seen as an isolated pot of money that we need to find from somewhere. It is about using the existing public funding, such as climate and other funding, to address biodiversity as a way to achieve multiple public policy objectives.

An essential example is that ecosystem restoration supports public health and the realisation of other social goals. How can we join up thinking in public spending and consider public saving? When we identify all the co-benefits that arise from investment in biodiversity, what will that save us in the long run? It is not so much about finding new money but about rethinking how we can use existing pots of money. That is the biodiversity mainstreaming that needs to happen.

There are two other points that I want to share. First is the importance of legislating on budgeting. We can learn a lot from human rights budgeting; the work on human rights leadership and the human rights bill is a big opportunity to have the necessary joined-up thinking on the budget and all the benefits to public service and the realisation of human rights that is offered by the protection of biodiversity. I am thinking in particular of health equity issues in Scotland. The case studies on ecosystem restoration in Scotland that we discussed have very clear, quantifiable benefits for health and support for people with disabilities and so on. We can use the experience and the human rights expertise in Government to address that.

Finally, we should consider research funding not as something that happens before we make interventions, but rather as another pot of money that can support and make such interventions itself. The suggested partnership between researchers, crofters, NGOs and local communities can be funded through research funding—it is research that supports learning and creates new, transformative ways to support or upscale current good practices and identifies new ways to better care for our biodiversity.

**Liam Kerr:** I am very grateful for those answers.

**The Deputy Convener:** Let us go to questions from Mark Ruskell, to be followed by Monica Lennon. I am conscious of time, so perhaps members can direct their questions to specific witnesses.

**Mark Ruskell (Mid Scotland and Fife) (Green):** We have already had some comment

about alignment and policy coherence. What more should the biodiversity strategy do to direct that, or is that not a matter for the strategy but for another approach in Government? I will start with Professor Morgera.

**Professor Morgera:** That is the crux of the matter. Protecting biodiversity is one of the fundamental ways to achieve policy coherence across so many areas of public policy. The strategy should be explicit about all the ways in which biodiversity supports policy coherence. Homework has to come from the biodiversity policies in order to show other sectors how investing in and supporting biodiversity helps to achieve co-benefits. To my mind, ecosystem restoration and human health is a crucial example, but there may be many others. More specific examples on biodiversity and climate mitigation or climate adaptation are essential in order to make the message clear.

The message should come from the strategy to open up the way for mainstreaming in other sectors.

**Mark Ruskell:** Does anyone have any brief comments to build on their previous points?

**Suzie Saunders:** I completely agree with what has been said and can give a specific example of the need for coherence between biodiversity and planning policy.

One of the biggest things that we deal with is inappropriate development. That impacts on ancient woodlands and native woodlands, which are some of our most biodiverse habitats. We need to ensure that we have policy coherence—for example, we need to make sure that there are provisions in the new draft national planning framework that protect the biodiversity that we have. That is all that I will say.

**Dr Walton:** You could also call policy coherence mainstreaming. It is critical, but it has not been achieved everywhere. Again, I will focus on examples of where it has been achieved in Scotland. We are getting places in climate policy in relation to influencing other policy areas and sectors. I cannot say that policy coherence can be achieved with the single stroke of a pen, but one thing that we could do is call the strategy Scotland's nature emergency strategy.

Biodiversity is too easily siloed and too easily seen as a specialist interest for a bunch of anoraks with beards catching butterflies, whereby people think, "That is biodiversity over there; let us get on with the real business". The world is in a nature crisis, and Scotland is absolutely part of it. The biodiversity intactness index shows that Scotland is 28th from the bottom of the list of countries and territories in terms of our biodiversity intactness, although we are relatively good in

relation to the UK. I wonder what the potential is for restoration, because we still have incredible biodiversity in this country, despite what I have just said.

We need people to understand that there is a nature emergency that affects everybody and has links to health and finance. In relation to avoiding spend in the future, investing in invasive non-native species biosecurity is hundreds of times cheaper than dealing with the issues by doing large-scale eradications or, for example, taking all the action that we have had to take on rhododendron.

You can save money by having appropriate legislation, public policy and funding for biosecurity measures, like what we have for the saving Scotland's red squirrel work, which stops grey squirrels invading the Highlands. That is not about only red squirrels; it is a species initiative that potentially has huge implications for the finance of woodland expansion across the Highlands, because grey squirrels will affect woodland expansion.

That is a long answer, but why do we not just call the strategy Scotland's nature emergency strategy? We have suggested that, but that suggestion has not been accepted.

**Mark Ruskell:** Is there something more fundamental about the way that Government and agencies work within the permanent architecture of civil servants and agencies such as NatureScot? Is the strategy prepared enough to tackle a nature emergency? It is still a biodiversity strategy and does not encompass the entire Government.

**Dr Walton:** I will give an example of what I am referring to. A bit of the agriculture budget might be geared towards specific biodiversity work but the rest of it is for supporting farmers to be farmers. It is about working with agriculture communities across Scotland and saying that perhaps three quarters of that budget needs to be targeted at climate and nature restoration to achieve the kind of things that we want and how that can work in agricultural reality.

RSPB Scotland has a long history—for example, in our corncrake work—of making biodiversity prescriptions work for farmers and crofters within their financial and practical restrictions and according to their working year. Those things can be done and we have examples of them; it is about having the will to expand them. The basic structure of having a public agency with responsibility for nature conservation is probably in net terms a very good thing, but we need to see more ambition, and we need to see the recognition that there is a nature emergency.

**Mark Ruskell:** I will come to Bruce Wilson, but if it is okay, I will roll in my final question. We have spoken a lot about the strategy and the high-level objectives, and delivery plans will come on the back of those. I understand that the first one will come in December. Will you briefly give us your understanding of what the delivery plans should cover? What essentials should come out of that?

Bruce, do you want to go first and wrap up my previous question?

**Bruce Wilson:** On your previous question, I reiterate the vital importance of targets and starting work on getting those targets right now, and getting the relevant knowledgeable stakeholders around the table to try and work out how that will work in a Scottish context.

I will come to delivery strategies in a moment, but on the knowledge and evidence part of the issue that I spoke to earlier, I will say that biodiversity is not well understood at all outwith NatureScot and other parts of the Scottish Government. We often see things described as "green", which can include everything from renewables technologies and insulating homes, all the way through to species programmes. We need to get better at understanding the wildlife and nature elements of that, and that will require upskilling across industry and through Government. That is a big need. There is opportunity there for job creation, but there is certainly also a need for us to work on that understanding.

Delivery strategies need to be SMART. We have covered that area, so I will keep this point quite brief, but they really need to be SMART, and they need to address the point in the quote that I read at the beginning of the meeting around how biodiversity is going to be properly mainstreamed, particularly throughout the relevant parts of Government that have the biggest influence over those different policy areas.

**Professor Morgera:** What I have to say might also speak to the question that you posed about what the fundamental question for Government is. I think that it is about having that understanding of what biodiversity is, of what it does for us and of how it is the basic infrastructure for everything that we want to deliver across Government. There is a fundamental element of knowledge that we need to share across Government.

Some of that could come from the strategy; then Government might be able to head toward very specific targets. Genetic diversity is not mentioned in the strategy, and that diversity is what makes our food security, for instance, very real. There is nothing in the strategy about the importance of bio-innovation and how we learn from nature and how economies become very advanced on the

basis of innovation. There is nothing in it about microbes and how our very health—including our psychological development and our capacity to bounce back from surgical operations—depends on having access not just to green spaces but to biodiverse spaces, where our microbiome is in contact with the microbes that are out there.

Maybe there is a need to tease out some key aspects of how biodiversity is fundamental in ways that we often do not know about, and how that should speak to several parts of Government that we might not think have anything to do with biodiversity, when in fact the very existence of their policy objectives depends on the viability of diversity of life in Scotland.

**Suzie Saunders:** As a very quick point to finish off, I think that we understand, as Mark Ruskell said, that the Scottish Government is proposing these five-year delivery plans, but it is important to note that robust delivery plans are not a substitute for clearer outcomes and high-level targets in the strategy itself. We are proposing targets that match the key 2030 and 2045 milestones. That is also a really useful way of monitoring progress in halting and reversing biodiversity loss.

**Dr Walton:** As Suzie said, what the delivery plans are delivering is strategy. At the moment, the strategy does not specify a programme of species recovery or a programme of ecosystem restoration. Biodiversity comprises species and ecosystems. Without an explicit mention of those programmes in the strategy, to expect it to work across future Administrations up to 2045 is, frankly, whistling in the wind. The strategy must specify what the delivery plans are expected to deliver against, and it must have some broad but specific targets so that progress can be monitored. Without those things in the strategy itself, it is, in my view, almost destined to fail, unfortunately.

**Mark Ruskell:** Thanks.

**Monica Lennon (Central Scotland) (Lab):** Thank you for your very clear evidence today and for your written submissions.

On a positive note, RSPB Scotland says in its written submission that the document does a good job of defining the problem. That is a good place to start—no one is in denial, and the Scottish Government has been very clear about the challenges.

It seems to me that we have a very high-level vision document that is aspirational, which is really good. However, we are hearing today a lot of concerns about a lack of clarity around targets, outcomes and delivery. A moment ago, Dr Paul Walton made a point about reframing this as Scotland's nature emergency strategy rather than a biodiversity strategy. I was going to ask about that, so I am glad that you brought it up. I just want

to go quickly round the other witnesses to find out whether they agree. Is it just about the name, or does it have much more meaning than that, bearing in mind some of the risks of not changing our approach, which we have just heard about?

Perhaps Bruce Wilson can start, and I will then go along the table. Should we rename the strategy?

10:30

**Bruce Wilson:** I definitely agree—100 per cent—with Paul Walton. We really need a paradigm shift, because we are viewing this as a fringe issue when we need to completely mainstream it. The strategy also needs more context about where it sits among other bits of Government policy and its importance in that respect. I very much agree with the suggestion.

**Monica Lennon:** I will come to Suzie Saunders in a moment, but can you say whether thinking about this as a nature emergency would help to reduce the risk of taking a siloed approach?

**Bruce Wilson:** It could reduce it slightly. I cannot remember the exact wording of the first question in the consultation, but it was along the lines of “Do you agree that there is a nature emergency?” I think that the question was designed to surface anyone who might disagree with it, but it does not let us see the issue in the context of the economic crisis, the climate crisis or lots of other things that we are dealing with. The Scottish Government, the United Nations and everyone in between agree that there is a nature crisis, so starting things off by asking whether we think that there is a problem here is really disheartening for organisations. We really need to get the issue up the agenda. The phrase “paradigm shift” might be a bit overused, but this issue really needs it. Changing the title might not really affect things that much, but it would be a start. However, we need all the other mainstreaming things that we have outlined, too.

**Suzie Saunders:** I completely agree. It would be great if this were named the nature emergency strategy. I would point out that the Scottish biodiversity strategy begins by giving definitions of biodiversity and nature. I think that calling this a nature emergency would probably show how interconnected biodiversity is with all the components of our natural environment, and it would give some gravity to the impact of the crisis on us.

**Professor Morgera:** I, too, think that it is a good suggestion, and it would help to bring biodiversity into line with climate change in Scotland, where we have already declared a climate emergency.

In addition, we should think about this not just as a biodiversity emergency on its own; instead, we should think about the repercussions for sustainable development. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services has indicated that 80 per cent of the sustainable developmental goals targets cannot be realised, because of biodiversity loss. Equally, this is a human rights emergency. It would be a good idea to call this a biodiversity or nature emergency, as long as by doing so we were also showing an understanding of the interconnections with climate change and of implications that go well beyond what people might immediately think of as biodiversity.

Going back to what was said about how the evidence is used in the strategy, I think that the initial section is helpful in showing how much evidence has been gathered, but that evidence is not used in the rest of the document. That is where there is a big gap between what we know and how we can shape targets and make connections on the basis of the evidence that we have. One of the biggest opportunities that we have here is to have a really informed strategy, but it is also important that we highlight that sense of urgency and how crucial this is.

**Monica Lennon:** That was really helpful. I have one final question, but I think that Dr Walton wants to come back briefly.

**Dr Walton:** The chapter on evidence represents progress, because—to be frank—I think that, for decades now, the dominant narrative from successive Administrations in Scotland has been one of “Nature is great in Scotland. Look out your window at the lovely hills, heather and moorland. Everything is fantastic and there isn’t really a problem.” We have had a very welcome shift in that respect. Indeed, we now share things such as the “State of Nature” report, which is an NGO-led effort to get the best understanding of where we are with nature. That evidence base is now being increasingly shared across Government and we are beginning to see some progress in that respect.

The really strange thing about this consultation document is that, as Elisa Morgera has said, the rest of it simply does not reflect the seriousness of the issue as laid out in the first chapter and does not point towards any meaningful solutions. That is going to be a really big problem, particularly given that Government agencies and NGOs need to show a shared collective endeavour when we approach external funders.

For example, the National Lottery Heritage Fund has told us, “You guys really need to get together and decide what your shared priorities are.” I do not see this strategy as deciding those priorities, so it might have implications well beyond

arguments between the Government and NGOs. There might be implications for how much money comes into biodiversity conservation from external sources in the future.

**Monica Lennon:** Again, that is really helpful.

I have a final question for Paul Walton. Other witnesses should indicate if they want to contribute to the answer. While we have you here, I will raise the recent outbreak of avian flu and its impact on Scotland’s wild bird population. Do you believe that it has implications for Scotland’s biodiversity strategy? Do you want to bring anything to our attention?

**Dr Walton:** Absolutely—avian influenza is a massive wake-up call. In global terms, the impact over the past 18 months is completely unprecedented. It has never happened before. It was entirely unexpected that avian influenza would find its way into seabirds. Sixty per cent of the world’s population of the great skua—or bonxie, as they call it in Shetland—breed in Scotland. We cannot yet tell exactly, but we think that our main colonies are down by 70 to 80 per cent. We have most of them in our country, so there is the potential that that species will go globally extinct on our watch.

In discussions with the minister, on several occasions, I have heard, “Aye, well, we are interested in ecosystems, but we are not really interested in single species conservation.” Scotland’s seabirds are internationally important. Before avian influenza hit, their numbers had declined by 49 per cent since 1986, so the numbers were already halved because of pressures such as competition with fisheries for sand eels, climate change, invasive species on islands and being tangled up in fishing gear. Those are major pressures on internationally important species for which we have a global responsibility. That is why we are calling for a programme of species recovery in the Scottish biodiversity strategy.

Avian influenza, which seems to have had a massive impact on our species—some of which are internationally important—needs to be a wake-up call. We need a step change in ambition, and we need to build resilience in our populations to coming pressures. Bird flu is an anthropogenic pressure that originated not in this country but in poultry in eastern Asia and that spread across Eurasia largely because of the movement of poultry and poultry products. It passed secondarily into wild birds and is now moving around and spreading in wild birds. It is a huge wake-up call for us.

Unfortunately, we can expect novel anthropogenic pressures to impact on the natural world. That is why the biodiversity strategy is



critical, and it must be ambitious in order that we maximise resilience to that change. For example, in the initial draft, the visions section talked about reversing biodiversity loss and halting extinctions. Those parts were removed from the current draft, so they are no longer in the strategy. For those of us who have been involved in the process, it is quite strange that we have ended up with a strategy that lacks sufficient ambition to be meaningful.

**Monica Lennon:** Thank you. We are quickly running out of time, so I will hand back to the convener.

**The Deputy Convener:** Thank you for bringing that issue so forcefully to our attention.

**Jackie Dunbar (Aberdeen Donside) (SNP):** I am conscious of the time, so I will get straight to my question.

The UK Levelling-up and Regeneration Bill includes powers to amend environmental assessments, with the potential to affect assessments under the habitats regulations. What implications does that have for Scotland's biodiversity policy? Dr Walton, you have caught my eye, so I will go to you first. If any other witness would like to come in, they should please do so.

**Dr Walton:** I am not a specialist in that area, but, in essence, the UK Government is trying to reform planning legislation in England. As part of that, a curve ball seems to have come in, because, under the habitats regulations, the UK Secretary of State for Environment, Food and Rural Affairs would be given the power to override—in secondary legislation at the UK level—primary legislation that has been put in place by this Parliament in relation to environmental impact assessments, strategic environmental assessments and habitats regulations assessments. We think that that is a risky move. Aside from issues of democratic legitimacy, it brings the basic environmental protection legislation straight into a constitutional debate, which might not be entirely helpful. It also creates a difficulty in relation to the Scottish Government's commitments to track or exceed EU standards. If the UK does not adopt similar environmental protection standards, the will of the Scottish Parliament might also be undermined in that way and we might begin to see environmental impacts.

If the legislation goes ahead, we would urge the Scottish Government to make sure that the standards for planning matters and decisions in Scotland are maintained as a matter of policy. Quite often, planning decisions are made as a matter of policy rather than as a matter of legislation. It is fair to say that Scottish

Environment LINK is concerned about that. We have written to the UK secretary of state and have copied in the relevant ministers in Scotland.

**Jackie Dunbar:** Thank you. Would anyone else like to add anything?

**Bruce Wilson:** No. We have a briefing on that subject that we could circulate to the committee if that would be helpful.

**Jackie Dunbar:** That would be grand.

The natural environment bill is due to be introduced in the third year of this session of the Scottish Parliament. What legislative changes—if any—do you think will be required in order to deliver the changes that are needed for our terrestrial environment?

**Suzie Saunders:** As you have said, we need an environment bill to put statutory nature targets in place. Legislative requirements such as the statutory climate change emissions reduction targets are great because they focus action and help to direct things such as funding. However—I know that we have mentioned this many times—although the legislation is important, having SMART targets within the biodiversity strategy is the most important thing. That is the message that I want to drive home. For native woodlands, in particular, we need to have targets for their expansion, protection and restoration, and we need to make sure that those targets help to tackle the drivers of biodiversity loss. My key message is that we need SMART targets in the strategy.

**Jackie Dunbar:** Would anyone else like to add anything?

**Bruce Wilson:** I agree with that entirely.

To answer your previous question, elements of the UK Withdrawal from the European Union (Legal Continuity) (Scotland) Bill are referenced within the Scottish biodiversity strategy that we are discussing. To properly realise that ambition, we need to have targets in place quickly. The EU nature restoration law has already been mentioned, and it will be important that we strive to match or exceed that. It is important that we look at the issues that were raised by Jackie Dunbar's previous question in relation to that.

**Professor Morgera:** Three things have emerged from the discussion today that it will be important to reflect in legislation. The first is the need to ensure that there is full coverage of all the elements of the international obligations on biodiversity: conservation of ecosystems and species, including action at the genetic level, as well as conservation, restoration and action on invasive alien species. The legislation must be comprehensive in scope and ensure that there are no gaps in the current legal system.

Secondly, we need to build the conditions for applying an ecosystem approach, which means policy coherence, joined-up work across Government and a participatory process in which there can be bottom-up discussion and integration of local knowledge. That needs to be legislated for. Thirdly, in looking at procedures for participation, we are relying on human rights standards, because everyone's basic human rights rely on the protection of biodiversity.

**Dr Walton:** The need to have targets is absolutely the key message that you are getting from us. However, I want the committee to be fully conscious that that will be quite risky. We do not want to end up with targets that are very weak or perhaps too specific because they focus on, let us say, 10 species a year when we have tens of thousands of species out there, a high proportion of which are in conservation need. Exactly what those legally binding targets are in law will be critical to how successful we are in delivering biodiversity.

Politically, that will be really challenging, because the gravity will always be towards making the targets as vague as possible and taking as light a touch as possible. I suspect that we may have seen something like that happening at a UK level. If Scotland wants to lead, the Scottish Parliament will somehow have to develop a shared ambition to have meaningful, ambitious and very specific targets that will challenge us. I think that that will be tough politically, but that is what is required. If we end up with weak targets, that could be worse than having no targets at all. We have repeatedly failed, globally and nationally, to meet our biodiversity requirements because we have not had legally binding targets. Having those targets seems to be the only way forward, but it is politically challenging to make it work.

**The Deputy Convener:** I am afraid that I have to bring the discussion to a close. The session has been extremely helpful. Thank you for your clarity and your challenge.

10:45

*Meeting suspended.*

10:50

*On resuming—*

**The Deputy Convener:** We resume the meeting with our second panel on the Scottish biodiversity strategy. We will now focus on the marine environment. I welcome our panellists Calum Duncan, who is the head of conservation Scotland at the Marine Conservation Society, and Craig Macadam, who is the convener of Scottish Environment LINK's freshwater group. I also welcome Susan Davies, chief executive of the

Scottish Seabird Centre, who is joining us remotely—I hope that she can hear us loud and clear.

I thank you all for joining us. I want to kick off the questions with why Scotland has struggled to make progress in slowing and reversing biodiversity declines. What are the key challenges for Scotland and what are the reasons why some targets have been missed to date? I come to Craig Macadam first, and I will then move to Calum Duncan and Susan Davies.

**Craig Macadam (Scottish Environment LINK):** Thank you for inviting us to give evidence to the committee.

The previous strategies have lacked ambition. Progressive restoration programmes have not come to fruition, and there has been a lack of joined-up thinking across Government and society. The previous strategy was all about mainstreaming, but that has not happened. If we want biodiversity to be restored, we really need to mainstream and we need everybody to do their bit to help biodiversity.

You mentioned that this is a marine environment session, but I am a freshwater specialist from the freshwater group, so my take is from the watery bits on land.

**The Deputy Convener:** Yes.

**Craig Macadam:** The current draft of the biodiversity strategy does not mention a lot about fresh water. It does not mention that Scotland has a river basin management plan, "The River Basin Management Plan for Scotland 2021-2027", which is a key way of delivering action for fresh waters. That said, the river basin management plan is not particularly ambitious, either; when one considers the aspect of impoundments and barriers on rivers that stop natural flow processes, it would take us 100 years at the rate that is in the plan to rid our rivers of derelict and disused barriers. We need a lot more ambition, leadership and direction for restoration, and more action.

**The Deputy Convener:** Thank you, and sorry about the mistitling. We really want to hear your advice about the freshwater side, in particular.

I move to Calum Duncan.

**Calum Duncan (Marine Conservation Society):** Thank you for inviting me here.

Having been involved with the drafting of previous strategies, I have a recollection of much onus being put on the legislation that was needed, and we are glad that we helped to secure that through the Marine (Scotland) Act 2010, for example. Previously, the experience with biodiversity strategies was very much about documents that drove welcome awareness raising

and local activity but did not really drive systemic change or consider the transformative change that was needed. Before 2010, those strategies were right to recognise that we needed new legislation to drive enhancement of the sea and to set up a planning system and a network of marine protected areas. We were obviously very pleased when that was secured.

On why we are where we are now, the roll-out of the system has not been quick or robust enough. At the same time, mainstreaming has not happened in other parts of civic society. There may have been a bit of silo mentality.

As the international reports—from the United Nations and so on—that were cited earlier said, we need transformative change across all sectors. We all rely on biodiversity for our very survival, so every part of society and every sector of our economic activity has to think about what it does for nature.

I should be clear that I very much welcome the progress that has been made, although it has been slow. There has been some good progress in isolated areas in some MPAs. For example, in 2016, we got management measures in place for some of the most vulnerable inshore sites. However, progress has not been fast or ambitious enough and we have not looked at what the other pillars of the marine nature conservation strategy are doing. We have to look at wider seas measures such as fisheries management and marine planning to deliver for nature. There have been delays in all those things.

The lack of pace and achievement were clear in relation to the issue of good environmental status. Two years ago, my organisation and other NGOs concluded that there was a “spectacular failure” to achieve the aim of having our seas in good environmental status by 2020. That aim required biodiversity to be maintained, never mind recovered, but we have failed to maintain it. Having good environmental status requires populations of commercial fish species to be healthy; it requires elements of food webs to ensure long-term abundance and reproduction; and it requires sea-floor integrity—that is, the health and status of the sea bed—so that it can keep doing what it does to ensure the functioning of the ecosystem. We have failed to achieve fundamental aspects of what we were supposed to achieve.

I therefore echo everything that the committee heard in the earlier session. All those points apply at sea. The biodiversity strategy is a tale of two halves. The first half is a great set-up of the evidence of decline and concern but, in the second half, when you come to the marine section, you find that it is very vague and not SMART or targeted enough, and that it does not

acknowledge the sectoral actions that are needed across fisheries, aquaculture and offshore energy.

We have eight years to turn the situation around, so the strategy needs to be visionary and SMART.

**Susan Davies (Scottish Seabird Centre):** I apologise for not being able to be with you in person. One key thing that we need to stress as we move forward with the biodiversity strategy is leadership and the primacy of the strategy. It has been shown from the prominence of climate change that, when something is recognised as a fundamental issue and a crisis, progress is made. Certainly, the nature and biodiversity strategy needs to be given primacy and needs to be the lead strategy so that other sectoral policies are required to demonstrate how they will contribute to it.

**The Deputy Convener:** Thank you. Your sound is fine, but your visual is not as secure, although we can see you. The broadcasting staff can indicate if they want to do something about that. However, we definitely heard what you said there.

I will ask the same question that I asked the previous panel. Looking at the international picture, and with COP15 coming, what expectations do you have and what is the interaction between the current consultation on Scotland’s strategy and COP15?

I will go first to Calum Duncan, and then to Craig Macadam and finally to Susan Davies, so that broadcasting can help us with any issues with Susan’s connection.

**Calum Duncan:** We welcome the ambition that the European Union has shown ahead of COP15. Dr Walton referred to that earlier, in talking about the importance of the nature restoration law. The EU has shown leadership and has gone ahead of global thinking by looking to enshrine in law nature restoration targets. It is maybe not helpful to get into big discussions about percentages, but one of the welcome things in that proposed law is the requirement for at least 20 per cent of all habitats to be under active restoration. That is one example of the sort of targets and ambition that we would like to be in the biodiversity strategy. We need to look actively at every component of the ecosystem.

11:00

The strategy covers marine and coastal environments, but how does that break down? When we go from the coastal to the marine system, we are talking about sand dunes, salt marshes and reed beds; the intertidal area includes seagrass beds and blue mussel beds; when we go deeper, there are muds, living reefs,

flamshell beds and horse mussel beds, through to cold-water corals and deepwater sponge communities. From the marine perspective, we would like a lot more recognition on a habitat-by-habitat basis and an ambition for such habitats to be restored and recovered to meet some of the good environmental status requirements that I have mentioned. We need to build on them and look at how to take them forward and enshrine them in law.

We need an ecosystem-scale approach that is broken down into the component habitats and really thinks about what proportion of those habitats we need to recover and how we recover them. That is not just about MPAs—we need to get them right and protect them properly, but we need the wider seas work as well. Outside MPAs, what can fishing do to further biodiversity? How can the planning system drive ecosystem restoration? How can our aquaculture industry reverse its impacts on wild biodiversity and so on?

**The Deputy Convener:** I ask Craig Macadam to talk about how COP15 can impact on how Scotland delivers on its international obligations.

**Craig Macadam:** Like Calum Duncan, I would like strong leadership from leaders at COP and I would like good targets to come out of it that can be taken down to regions and countries. As he said, under the EU biodiversity strategy, the restoration law now has good and ambitious targets. The freshwater section says that 25,000km of free-flowing rivers will be restored across Europe, which is a fantastic, ambitious target. It would be good to see that being transferred into countries and to see Scotland taking on such a target. What is decided at COP should come through and be delivered by us here.

**The Deputy Convener:** We will put Susan Davies on audio only so that we can hear her loud and clear. What is her view on the interaction of COP15 with our consultation and subsequent strategy?

**Susan Davies:** At COP15, the need for pace must be recognised, because we are dealing with an emergency. If Scotland really wishes to show leadership and to drive the conversation and the targets that might come from COP15, we need to take steps to articulate clearly at the Scottish level what our restoration and recovery goals will be for ecosystems and species.

We must recognise the importance of public engagement and the education process as part of the exercise. The draft strategy is particularly weak on the expectation, outcomes and targets for public engagement and education. We need whole-society buy-in for the change that will be required.

**Natalie Don:** Good morning, panel—it is nice to see you. I will stick with the same theme that I covered with the previous panel. How do Scotland's efforts to tackle the biodiversity crisis in marine and freshwater environments compare with those of other countries? Are there instances of best practice that we can learn from? I will go to Craig Macadam first.

**Craig Macadam:** Thank you for your questions. We have had good successes in freshwater; we have done good work on freshwater pearl mussels through the pearls in peril project. We have introduced schemes such as Riverwoods; riparian woodland creation will help to tackle the biodiversity crisis and the climate crisis by keeping rivers cool.

There is good stuff happening. It is happening in a piecemeal way—it is very funding dependent and not really mainstreamed. The pearls in peril project finished four or five years ago and there has not been a concerted programme to keep that work going. Freshwater pearl mussels live for more than 100 years, so a five-year project will not be enough to see them through their life cycle.

We need more secure or targeted funding. We can see what has happened with the peatland action project, which is a programme of peatland restoration across Scotland. The nature restoration fund is now doing bits across Scotland. We really need each ecosystem to have a dedicated fund that can do such work.

Across the border, an announcement was made yesterday, I think, of big, landscape-scale programmes of work for biodiversity, nature and the climate. That is the sort of ambition that we need to have. We need to look across a whole landscape, not just a particular river or a certain hill. Let us try to get the approach across Scotland.

**Natalie Don:** You mentioned positive things that are happening in Scotland that we could, perhaps, expand on or roll out nationally. I ask Calum Duncan to expand on what other countries are doing and on anything positive that is happening in Scotland that could be expanded on.

**Calum Duncan:** The Marine (Scotland) Act 2010 is world-leading legislation because of what it requires the planning system to do and because it established the MPA network, the sustainable development enhancement duty and the duty to mitigate the impacts of climate change. It is visionary, world-class legislation, but then there is delivery.

The MPA designation process in Scotland was good. It was scientifically founded, stood up to scrutiny and independent challenge, engaged all the stakeholders and delivered the bulk of a network of sites that has since been added to in a welcome manner. Other sites have come along,

such as the west of Scotland MPA, the emergency MPA for Loch Carron and the new emergency MPA for Red Rocks and Longay for skate eggs. However, without management in place, they are paper parks.

Good management was introduced in 2016 to protect the most vulnerable inshore sites from the most damaging forms of fishing for the habitats in the sites that are particularly vulnerable to bottom-towed fishing gear. That was a welcome suite of fisheries management measures that protected more than 2,000km<sup>2</sup> of inshore sites, vital ecosystem engineers such as maerl beds and flameshell beds, and other habitats.

The enforcement of such measures is another matter. There are still concerns about how that is done. There are several instances of concern about conservation orders being breached. It is a bit of a mixed picture, which is why we are calling for remote electronic monitoring on all vessels. We welcome the commitment to that for the scallop fleet to start with, but it is not happening quickly enough.

It is a mixed bag. The situation is better on paper, and it is important that we get on with delivery, which includes the new and welcome commitments in the Bute house agreement on highly protected marine areas. I am jumping to the future with that.

On other good examples in Scotland, I never tire of citing the inspiring work of the Community of Arran Seabed Trust, which pioneered a small no-take zone in north Lamlash Bay that became the core of a wider MPA in south Arran. That is a beacon of hope and recovery, where we see richer sea-bed habitats and more and larger scallops and lobsters, for example. There are signs of what is possible if we can get it right.

Internationally, Canada has led the way on holistic ocean policies and marine ecosystem objectives. It has been talking about that for decades and has been considering what it wants its seas to look like. It has set up networks and a commission to look at whether the networks are working, so I would look to Canada.

There are good examples from New Zealand of the pioneering of simple protection measures. The world's first no-take zone was in Cape Rodney to Okakari Point marine reserve in the North Island, and it involved the University of Auckland. That showed what can be done if a bit of sea bed is left alone. Spiny lobsters were spilling out from the reserve, and local fishermen went from being opponents and critics to being supporters of it.

My last example is from the United States of America, which is, globally, progressive on fisheries management, including the spatial management of fishing—I believe that the

management of the scallop fishery on the east coast is worth looking at as an example of spatially managing fishing. Doing that is important to Scotland. New Zealand and the USA are also pioneering remote electronic monitoring with cameras.

Biodiversity recovery and ocean recovery are not only about fisheries management, but such pressure is so widespread—as Scotland's marine assessment recognises—that good examples of fisheries management are also good for biodiversity.

**Natalie Don:** Thanks very much. We discussed New Zealand at length with the previous panel of witnesses. There are definitely things to learn from there, and it is useful to have the other examples.

Does Susan Davies have anything to add on my question about Scotland's efforts to tackle the biodiversity crisis in marine and freshwater environments and how those efforts compare with those of other countries?

**Susan Davies:** I echo much of what Calum Duncan outlined by saying that we have some world-leading legislation and policies, but their translation into implementation and the resource to do that let us down. That is where the effort should be focused, and it is why it is important for the new biodiversity strategy to be clear on what delivery mechanisms and resources will be required.

The New Zealand biodiversity strategy has been highlighted. New Zealand's whole biosecurity approach is an exceptional example to look at, but we can access other examples through the International Union for Conservation of Nature, such as the Kiwa Initiative, which helped to build capacity at community level to respond to climate resilience and nature loss through nature-based solutions.

Globally, no one country has a solution that is totally right. However, we can find examples to address particular issues from a range of countries, and we can draw on them to ensure that the approach that we take brings people together, is community led when it comes to restoration and helps to build capacity for the future.

**Liam Kerr:** Good morning, panel. My first question is for Craig Macadam. One of the conditions for success is to have an independent monitoring and reporting body alongside an improved framework—I am sure that you will have heard me ask about that earlier. The consultation does not say what either of those things should look like. Do you take a view on that?

**Craig Macadam:** The consultation does not say what success should look like either. We lack targets in the consultation and we do not know where we are aiming or how ambitious that will be.

It is almost a chicken-and-egg situation, in that we need to know what the targets are to know what the body that will police them will look like.

11:15

**Liam Kerr:** That was helpful—thank you. If Susan Davies wants to pick up on the point about conditions for success and monitoring, she can by all means do so, but I am moving on to a slightly different topic.

You heard me ask about funding sources. We got some pretty big numbers from the previous panel. Do you have views on whether the consultation deals with funding realistically and on the sources from which we can get funding?

**Susan Davies:** We have funding challenges in a number of ways. We have been reliant largely on public funds and/or charitable fundraising in taking forward our response to the loss of biodiversity. Such funding mechanisms are often annual, but we need commitments over the long term. We need to know what resources will be available over the long term for different ecosystems.

Funding streams are often for capital infrastructure rather than natural-capital building. We need to look at the definition of what can be funded and at having revenue funding. Although some capital works are required for nature restoration and recovery, a lot of that work is about on-going management and revenue funding.

As people on the previous panel said, the Green Finance Institute has highlighted a requirement of £15 billion to £20 billion. It is clear that we need to think carefully about, for example, the Scotland legacy fund, the infrastructure levy and opportunities for climate bonds to bring in private finance.

Things are starting to develop—for example, the Scottish marine environmental enhancement fund is a welcome step for the marine environment. However, the approach suffers from issues such as annuality and when capital spend has to take place. We need to look at the mechanisms and longevity of such funding instruments.

On conditions for success, we absolutely need clear targets—I echo that point. Environmental Standards Scotland has a remit and could monitor progress. It has the statutory powers to take forward some of the regulation and enforcement work—for example through compliance notes, improvement notes and judicial review. It should certainly be considered as a monitoring body, with adequate resources to be able to monitor progress. First, we need clear targets to aim for.

**Liam Kerr:** That was interesting—thank you. Let me move on to Calum Duncan—finally. If you

want to contribute to the conversation that we have just had, by all means do so, but my question is on a slightly different matter. The national marine plan was reviewed in spring 2021, as was required. Ministers are now required to decide whether to amend or replace the current plan, which I understand has not been amended or updated since 2015. Do you take a view on what should be done? In its submission, the Marine Conservation Society said that the biodiversity strategy should be aligned with the marine plan and other such policies.

**Calum Duncan:** We think that the national marine plan should be amended. We welcomed the first plan, with concerns that the chapter on oil and gas did not properly recognise or address what became the climate emergency. In the plan, the climate change objective for the sector talked about emissions from the extraction of oil and gas but did not look at the impacts of burning the oil and gas that is extracted. That was a big contradiction in that part of the plan.

The other area about which we raised concerns—I will come on to a positive in a minute—was the aquaculture sector. We were concerned that the plan just lifted what we viewed as an unsustainable aquaculture industry growth target and put it into planning policy. We did not think that that was good policy.

I should make it clear that we support sustainable activity, in any sector. It is not just about a just transition from oil and gas; we also need a transition to a more sustainable aquaculture sector. The same goes for the fishing sector.

The national marine plan should therefore be amended and look at how the different sectors deliver in relation to the climate targets—as they are required to—but also in relation to nature, which is why we would also like there to be targets in law for nature.

A positive element of the national marine plan was general policy 9(b). It required that there should be no

“significant impact on the national status of Priority Marine Features”,

which cover a range of important species and habitats at sea. That policy triggered the main meaningful application of the plan from our perspective. Following scallop dredger damaging of flameshell beds in outer Loch Carron, there was a policy commitment—five or more years ago—to improve protection of priority marine features outside the MPA network. Forgive me—I just segued into another policy ask that we have that is delayed.

**Mark Ruskell:** I will go back to the point about delivery plans that we discussed with the first panel. The message that I got from the first panellists was that they would like the delivery plans to be effectively embedded in the strategy. Is that your position? Are you looking for more specificity in the strategy?

**Craig Macadam:** Yes—I would like to see more detail in there. For example, the freshwater section picks out beavers, salmon and riparian woodland, but what about all the other stuff that lives in freshwater? The document has picked out three species, but is that all that it is going to cover? Will there be a wider programme for species restoration in freshwater? The detail is simply not there.

The document refers to significant improvements or restoration—I do not remember what term it uses—but what does “significant” mean? Does it mean that we will have another couple of salmon or salmon across their expected range in Scotland? We need more detail in there and for the strategy to be a little less vague. There are a lot of vague words that need a bit of definition so that we can see what the level of ambition is.

**Mark Ruskell:** Are you arguing for first setting the delivery plan—for, say, freshwater or marine—and building that up into a strategy? It feels quite chicken and egg.

**Craig Macadam:** It does.

**Mark Ruskell:** What would you like to see in a freshwater delivery plan?

**Craig Macadam:** What is missing from the document is targets. If we knew what the targets were, we would know that the delivery plan had to meet those targets. At the moment, it is really quite vague. It refers to helping species to naturally return to rivers, but not all species can naturally return. Is that therefore all that we are going to do, or are we also going to do the extra bits that are needed to help the species that cannot naturally return?

The document also does not cover some of our really important wildlife. Freshwater pearl mussels are not mentioned at all, although we have half the world’s population in Scotland and they are in decline—what are we going to do about that? The detail is not there and, without the targets, we do not know where it is aiming for and therefore where the delivery plans should be.

**Mark Ruskell:** What key things would you wish to see in a delivery plan for freshwater? I will put the same question to Calum Duncan.

**Craig Macadam:** I would like to see a target and a plan for delivering natural flow processes in rivers—that is, for removing the barriers to gravel

movement and upstream movement of fish and allowing rivers to use their flood plain. I would also like to see targets for tackling the huge number of non-native species, many of which are in freshwater or along the banks of rivers. There is a real issue to tackle there.

I would also like to see the phasing out of peat use in horticulture. The document talks about restoring peat bogs, but it does not talk about sorting the problem, which is that we are destroying peat bogs. I would like to see those sorts of things and I would like to see action for species as well.

**Calum Duncan:** It is a matter of breaking things down into a bit more detail on targets. What does “healthy” mean for populations of whales, dolphins or sharks? As I said in my submission, we should also be considering other parts of the ecosystem, including invertebrates, which we need.

I reiterate what I said about targets for the sea bed and the pelagic habitat—we need to consider what it means to be healthy. What proportion of extant habitat does there need to be? To understand that, we need a collective recognition of the very diminished condition that habitats are already in. That is accepted evidence—it is in Scotland’s marine assessment 2020 and it is in equivalent UK assessments. From my experience, that has been a big part of what has been a rather contested space over the past few years.

It is a matter of accepting the already diminished evidence base and then collectively considering that, deciding where we want to get to and establishing whether the sea floor is in a condition to support other animals and plants and all the things that we enjoy from the sea, including food and blue carbon, which I have not mentioned yet—indeed, carbon sequestration and storage is on the other side of the nature emergency.

We need a bit more specificity so that we can have more meaningful discussions about percentages. Although 37 per cent of our sea is currently designated, it is not necessarily protected from everything that it needs to be protected from in the MPA network.

We also need protection outside the MPA network. If we do not have meaningful targets for where we want to go to, we cannot have a discussion. Forgive me for saying this, but it is a motherhood-and-apple-pie thing, in that nobody can disagree. All the challenging discussions come about when we have a proposal in front of us—we have seen that for bits of the sea by way of MPA management measures, for example.

We need to have discussions at a regional sea scale, with an understanding of where we want to get to, and the action plan must be clear about how all sectors have a role to play in wider society

in order to get there across the sectors that I have mentioned. That includes pollution—I have been focusing on extractive activities and activities that involve growing species, but pollution is a huge concern. Plankton numbers are plummeting, and plankton is the fundamental base of the food web. Plankton provides half the air that we breathe. There is a lot to do.

**Mark Ruskell:** Indeed. Thinking back to what the witnesses on the first panel said, it is a concern that, although a biodiversity strategy was established previously, the delivery plans did not flow from it so that we could act. Has that been the issue up until now? Is there concern that, although a strategy may be set up that looks great, with some specific points within it, the meat of the delivery can then drift?

**Calum Duncan:** Yes—and I touched on that in my initial answer. That was my experience with earlier strategies, certainly at sea. To be fair, that is because the drafting of them happened in parallel with a recognition of the need for new legislation. There was an idea of being able to deliver the aims through the new legislation being enacted, but we are now in a post-climate emergency situation. I would agree that we have a nature emergency—which, at sea, is an ocean emergency—so we cannot have that drift.

It is important to emphasise the win-wins. It is not a matter of pointing the finger. If we all want the services that nature provides, we can get clean air, clean water, sustainable food, local jobs and a resilient economy, but it must be recognised that the state of the foundation of that has been diminished. We then have to build on it.

**Mark Ruskell:** This is my final question. Is there policy coherence within Government organisations such as Marine Scotland?

11:30

**Calum Duncan:** It is getting a lot better. At the minute, the blue economy vision, the future fisheries management strategy and the future catching policy are not quite joined up enough for us, but policy is a lot less siloed than it was.

It is now a case of getting on and delivering, and we look forward to that—for example, to delivery of the inshore fishing cap. The process will be challenging, but we need to look at how we use our sea space and whether we are using it sustainably.

The situation with policy coherence is getting better, but I would want to wait to see the outcome of the future catching policy consultation before I gave a view. As part of that, the Marine Conservation Society has said that we should review all the fishing efforts in the round and see

what is a sustainable fit. That principle should also apply to aquaculture, offshore renewables and any other sector.

**Mark Ruskell:** Before I hand back to the convener, does Craig Macadam have any reflections on coherence in freshwater policy?

**Craig Macadam:** It is interesting that “The River Basin Management Plan for Scotland 2021-2027” is not mentioned in the biodiversity strategy, as it should be one of the mechanisms for delivering some changes to freshwater policy.

The river basin plan has just been published; it runs for another five years. Within the time period of the first biodiversity strategy, up to 2030, we will therefore have to produce another river basin management plan. That plan really needs to be tied in with the strategy and with looking at what we need to do for rivers to address the nature emergency, the climate crisis and everything else.

Some of the problems in the marine environment start at the top of a hill; what happens in a river on its way to the sea can influence conditions in the marine and coastal environments. Therefore, there needs to be a better link between what is happening on land and what is happening in the sea.

**The Deputy Convener:** I will bring in Monica Lennon, to be followed by Jackie Dunbar.

**Monica Lennon:** My questions were about marine planning, but they were mostly covered in the previous session, unless anyone wants to add anything now.

I will come to Susan Davies with a question—I cannot see her online, but I believe that she is still with us. Susan, I do not know whether you heard the discussion in the previous session in which I asked about the recent outbreak of avian flu and the significant impact that it has had on Scotland’s wild bird population. In your view, what implications does that have for Scotland’s biodiversity strategy? You can start. I will then come to Calum Duncan and Craig Macadam, if they have anything to add.

**Susan Davies:** Avian flu has sent an absolute shock wave through the conservation movement. Globally, seabirds were already considered to be the most vulnerable group of birds. Avian flu has shown just how susceptible they are to disease and other pressures.

That demonstrates to us the importance of putting in place actions and measures at the regional level, as well as nationally, to help to build the resilience of our internationally important breeding seabirds. If we do that, they will be better able to withstand some of the things that we are less able to control directly.



With regard to improving the strategy and making the targets that we are trying to achieve more visible, giving a clear sense of the measures that might be required and the levers that are required to implement them will be critical in taking us on the journey to get change, and to get it quickly.

**Monica Lennon:** Would you like to give any examples of the actions or measures that you have in mind?

**Susan Davies:** One of the critical things is the draft seabird conservation strategy and the stakeholder engagement that has taken place on it, although the document has not gone out to consultation yet. It goes through a very thorough process of identifying individual pressures on the breeding seabirds that we have in Scotland, and it sets out some of the measures that will be needed to address those pressures.

There is a range of things. One of the critical pressures is around unsustainable fishery practices and the need for biosecurity responses. It is about making sure that we have mechanisms in place and that they are properly funded when it comes to things such as biosecurity responses for the control of invasive species, which I think will be critical.

**Monica Lennon:** That is helpful. Thank you, Susan.

**Calum Duncan:** On planning, we have even more delayed regional marine planning. Shetland is probably ahead of the curve on that, and we responded to the committee inquiry on it, so we look forward to the result of that inquiry. However, regional marine planning needs to be resourced to deliver integration and recovery.

On the avian flu crisis, I bow to Susan Davies and other seabird experts, but I fully support the importance of delivering the seabird strategy and the need for recognition in that strategy of the vicious circle of climate change, overexploitation and pollution; there is an antagonistic effect. Unless we break that cycle, things will go down the plug hole. We need to have sustainable fishing practices, we need to stop microplastics getting from the land, and we need to stop the damaging forever chemicals. That issue might already be in front of the committee. There are non-stick chemicals that do not go away and which can affect the entire food chain and the wider driver of climate change.

The best that we can do is give those populations as much safe ground to nest on and as much food to go and feed on as possible. That means doing things such as phasing out forage fisheries for sand eel and sprat, which the Scottish Government has made a welcome commitment to doing. There is a lot to do.

**Monica Lennon:** Thank you.

You mentioned resourcing in the context of marine planning. In terms of resourcing, do you also have in mind skills and workforce? Does more need to be done in that area to make sure that we have the right people, the right training and the right skills for those important jobs?

**Calum Duncan:** Absolutely. I do not have the figures here, but there are some excellent marine and governance and planning courses in Scotland at our various universities. The Marine Alliance for Science and Technology for Scotland does a great job of co-ordinating that. However, there might be a gap between those courses and getting enough skilled marine planners and people with an understanding of that within the regional marine planning systems, the local authorities and so on. That is definitely an issue that we need to look at.

**Monica Lennon:** Okay. That is helpful. Craig, do you want to add anything?

**Craig Macadam:** I will just echo what Calum Duncan and Susan Davies have said about resilience. It is about building resilience. I remember disease in salmon when I was younger. Salmon that were diseased went into rivers. Thankfully, that is not the case now, but that could be around the corner. Non-native species are going into rivers—pink salmon in some of the rivers in the north, for example. We need to make sure that our biodiversity is as resilient as possible to all those things that are getting chucked at it.

**Jackie Dunbar:** I thank the panel members for coming along today. I think that you have covered most of what I was wanting to ask about, so I will go back to what I asked the first panel about. The natural environment bill is due to be introduced in year 3 of this session of Parliament. What legislative changes do you think are required to deliver the necessary changes for our marine environment? Maybe Calum can start, to be followed by Craig and then Sarah—I beg your pardon; I meant Susan.

**Calum Duncan:** As I said in my written submission, and as you have heard from all of us, the new legislation needs to have

“nature recovery targets across land and sea”.

As I said earlier, we would look closely at the sea element of that, in relation to how much of those habitats we need and should have.

The bill can also deliver the powers to establish the committed-to highly protected marine areas. There is a welcome commitment in the Bute house agreement for at least 10 per cent of Scotland's seas to be highly protected—that is, protected from “all extractive and damaging activity”. I understand that that would require new primary

legislation. That is a key thing that the natural environment bill should have in it.

I think that I said in my written submission that there is other secondary legislation that we would need to address some of the issues that I am raising in relation to fisheries instruments for the MPAs and so on, but that is not a requirement for the natural environment bill.

**Craig Macadam:** I echo again the need for legally binding targets in the legislation so that we can make sure that we are actually doing that. We should probably also have a look at our non-native species legislation to see whether there is more to be added to that. In particular, there is an EU regulation on invasive alien species. We should make sure that we are keeping pace with that.

**Jackie Dunbar:** You mentioned legally binding targets. Do you have one in mind about which you are thinking, “If you don’t do anything else, please make this one legally binding,” or is that an unfair question?

**Craig Macadam:** I mentioned one at the very start. The EU biodiversity strategy has a target for restoring free-flowing rivers. We could look at putting into legislation that we have to do that. Just as we have climate targets, we could put targets for rivers into legislation as well.

**Jackie Dunbar:** Finally, I turn to Susan Davies. I apologise for getting your name wrong earlier. Can you hear me?

**Susan Davies:** Yes—thank you. I echo the point about having very clear targets. We should also have a clear sense of when we will report on the targets and the milestones towards them and a clear sense of what activities and mechanisms need to be in place for there to be progress towards those.

Calum Duncan has already highlighted the lack of progress in relation to the development of marine regional plans. I think that, when we look at targets, we should set some clear expectations on progress around the mechanisms that will help us to make the change that is required, and we should hold organisations accountable for those as well.

**Jackie Dunbar:** Thank you.

**The Deputy Convener:** We will have to bring the session to a close. I thank the witnesses very much for sharing with us their expertise on, and knowledge of, what is obviously a very complex and challenging area. In particular, I thank Susan Davies for persevering with us—we heard you loud and clear.

Once the committee has decided how we should best approach the biodiversity and nature emergency issue in relation to what we have

heard, we will decide what we will do to relay that to the Scottish Government in our considerations and planning.

That concludes the public part of the meeting. We will now move into private session.

11:43

*Meeting continued in private until 12:37.*

This is the final edition of the *Official Report* of this meeting. It is part of the Scottish Parliament *Official Report* archive and has been sent for legal deposit.

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