OFFICIAL REPORT
AITHISG OIFIGEIL

Environment, Climate Change and Land Reform Committee

Tuesday 1 November 2016

Session 5

The Scottish Parliament
Pàrlamaid na h-Alba

Tuesday 1 November 2016

CONTENTS

ENVIRONMENT, CLIMATE CHANGE AND LAND REFORM COMMITTEE
9th Meeting 2016, Session 5

CONVENER

*Graeme Dey (Angus South) (SNP)

DEPUTY CONVENER

*Maurice Golden (West Scotland) (Con)

COMMITTEE MEMBERS

*Claudia Beamish (South Scotland) (Lab)
*Alexander Burnett (Aberdeenshire West) (Con)
*Finlay Carson (Galloway and West Dumfries) (Con)
*Kate Forbes (Skye, Lochaber and Badenoch) (SNP)
*Jenny Gilruth (Mid Fife and Glenrothes) (SNP)
*Emma Harper (South Scotland) (SNP)
*Angus MacDonald (Falkirk East) (SNP)
*Mark Ruskell (Mid Scotland and Fife) (Green)
*David Stewart (Highlands and Islands) (Lab)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Calum Duncan (Marine Conservation Society)
Chris Ellis (Royal Botanic Garden Edinburgh)
Catherine Lloyd (Tayside Biodiversity Partnership)
William McGhee (Forest Policy Group)
Duncan Orr-Ewing (RSPB Scotland)
Adam Smith (Game and Wildlife Conservation Trust)
Bruce Wilson (Scottish Wildlife Trust)

CLERK TO THE COMMITTEE

Lynn Tullis

LOCATION

The Robert Burns Room (CR1)

Scottish Parliament

Environment, Climate Change and Land Reform Committee

Tuesday 1 November 2016

[The Convener opened the meeting at 10:04]

Decision on Taking Business in Private

The Convener (Graeme Dey): Good morning. Welcome to the ninth meeting in session 5 of the Environment, Climate Change and Land Reform Committee.

Agenda item 1 is consideration of whether to take items 4 and 5 in private. Do members agree to do so?

Members *indicated agreement.*

Biodiversity: Scotland's Progress to 2020

10:05

The Convener: Under agenda item 2, the committee will take evidence on biodiversity: Scotland's progress to 2020. We are joined by a range of stakeholders and academics. I welcome all of you. The committee thought that, because of our numbers and the nature of the discussion, a round-table setting would be best. I think that most of you are used to that approach, so you will be aware of how it works.

I ask the witnesses to bear in mind that they do not have to answer every question if they do not think that they have a contribution to make. I appeal to members to ask sharp questions so that we can cover as much ground as possible. People do not have to press the microphone button—the microphones will go on automatically. I ask everyone to turn off their mobile phones as a matter of good order.

We will go round the table and introduce ourselves.

Jenny Gilruth (Mid Fife and Glenrothes) (SNP): I am the MSP for Mid Fife and Glenrothes.

Calum Duncan (Marine Conservation Society): I am head of conservation in Scotland for the Marine Conservation Society.

Finlay Carson (Galloway and West Dumfries) (Con): I am the MSP for Galloway and West Dumfries.

Chris Ellis (Royal Botanic Garden Edinburgh): I am a research scientist at the Royal Botanic Garden Edinburgh.

Kate Forbes (Skye, Lochaber and Badenoch) (SNP): I am the MSP for Skye, Lochaber and Badenoch.

Mark Ruskell (Mid Scotland and Fife) (Green): I am an MSP for Mid Scotland and Fife.

Bruce Wilson (Scottish Wildlife Trust): I am a senior policy officer at the Scottish Wildlife Trust.

David Stewart (Highlands and Islands) (Lab): I am an MSP for the Highlands and Islands region.

William McGhee (Forest Policy Group): I am a co-ordinator in the Forest Policy Group.

Angus MacDonald (Falkirk East) (SNP): I am the SNP for Falkirk East.

Catherine Lloyd (Tayside Biodiversity Partnership): I am from the Tayside biodiversity partnership.

Emma Harper (South Scotland) (SNP): I am an MSP for the South Scotland region.

Adam Smith (Game and Wildlife Conservation Trust): I am director in Scotland of the Game and Wildlife Conservation Trust.

Alexander Burnett (Aberdeenshire West) (Con): I am the MSP for Aberdeenshire West.

Duncan Orr-Ewing (RSPB Scotland): I am head of species and land management with RSPB Scotland.

Claudia Beamish (South Scotland) (Lab): I am an MSP for South Scotland.

Maurice Golden (West Scotland) (Con): I am a West Scotland MSP.

The Convener: I am the MSP for Angus South.

Let us get started. Is there a contradiction between the findings of "Scotland's Biodiversity: A Route Map to 2020—First Progress Report 2015/16" and those of "State of Nature 2016"? Can the two reports be directly compared? One strikes me as being perhaps overly optimistic and one is quite pessimistic. What is the truth out there? What is actually happening?

Duncan Orr-Ewing: I can comment more on "State of Nature 2016", as we were one of the partners in that.

Obviously, we welcome the efforts that everybody is making to help biodiversity, but our summary would be that that really is not enough. We know that one in 11 species in Scotland is at risk from extinction and 65 species are critically endangered. To give examples, 18 per cent of butterflies and 15 per cent of dragonflies face extinction. It is clear that the Government may present a fairly optimistic view of the situation, but the Scottish biodiversity strategy in itself will not be enough to deliver the Aichi targets.

Bruce Wilson: It might be useful to look at the natural capital asset index, which is another indicator. It broadly shows that, since the 1950s, there has been a severe decline in natural capital. That is slightly picking up in some areas, but basically natural capital is still declining in the uplands and agriculture.

Calum Duncan: There is a contradiction as far as the sea is concerned, because priority project 12 in the 2020 route map, on the environmental status of our seas, looks at a proportion of the seas in marine protected areas alone. It does not consider how they are managed. We welcome the huge strides that have been taken to develop the marine protected areas network, but "Scotland's Marine Atlas: Information for the National Marine Plan" shows us that there are still many concerns and declines in the sea, and the 2020 route map document does not measure the status of the sea; it measures the amount of sea that is in designated sites.

That is why it is important to have adequate resources in place to support a marine monitoring strategy so that we can see what effect the welcome new measures are having on what ultimately matters, which is marine biodiversity.

Adam Smith: I never thought that I would be in the position of defending a Scottish Natural Heritage report, so that is a novelty in itself. There is reason for some happiness and resonance with the first progress report in relation to the progress to date. Particularly close to our heart are the targets on promoting good farming practice for nature and linking nature with business and the economy. It is undoubtedly true that much more needs to be done through the agri-environment climate scheme—AECS—and agri-environment schemes generally. We might touch on that later.

It is true that the schemes are supporting a wide range of biodiversity and we welcome the support in the farming and land management sector. For example, game crops or unharvested crops are a significant contributor of food and cover to wild birds in the countryside. They are planted for many reasons—shooting is one of them, but another reason is that they are supported through the agri-environment scheme.

The section of the SNH progress report that says that

"Ten targets are on-track for 2020"

is probably true as far as it goes. The challenge will be in making sure that that is robust and can be followed through properly.

The Convener: A number of reports have been referred to already. There are a lot of reporting mechanisms out there. Is what we have in front of us delivered in a straightforward, transparent, all-encompassing way, as we would need it to be to get a real handle on the picture for biodiversity?

Bruce Wilson: In order to get a proper handle on these things, we really need the full sweep of ecosystem health indicators to be developed. It goes back to the adage that we cannot manage what we do not measure properly. Without those indicators in place, we would find it quite hard to broadly understand where we are with the Aichi targets and the Scottish biodiversity strategy itself.

Calum Duncan: I would agree with that in the marine context. For example, the 2020 strategy for the marine environment recognises that fisheries management needs to take account of biodiversity but the only reporting in the 2020 route map is against the proportion of the seas in marine protected areas.

It is crucial to have that application of biodiversity thinking in the wider seas and not just in marine protected areas. We do not think that the route map reports against that clearly, although there is some welcome recognition in the actual strategy that recovering biodiversity in the sea is about more than MPAs. Some work is needed there.

Chris Ellis: It is also important to recognise that the route map, the Scottish biodiversity strategy, the targets and the actions do not attempt to prescribe all the activities that will contribute to delivery of the Scottish biodiversity strategy; they attempt to set the tone on the kind of activities that Scotland wants to see and to steer those activities in certain directions to reflect the updated convention on biological diversity. It is like a sampler and it does not necessarily represent all the activity that is contributing to the SBS.

Adam Smith: There is certainly a lot that could be improved. Undoubtedly, the interests of the land managers who are responsible for much of Scotland's land that is not designated for conservation could be tapped into. I draw the committee's attention to the wildlife estates Scotland project, which encourages land managers to audit their own assets in an attempt to improve them downstream.

There are a number of other projects. For example, the GWCT runs a partridge counting scheme. It is clear that, where people are encouraged to join that scheme, they see much greater than average biodiversity gains. On the reporting side of the Scottish biodiversity strategy, things could be done that would probably tap into the enthusiasm of the land management community a bit better, both as a driver and as a reporting mechanism.

10:15

A related topic, which we might discuss more later, is the clarity of purpose of the many strategies that are guiding us. As I said in my written submission, we have the Scottish biodiversity strategy, the national peatland plan, the land use strategy, the forest strategy, national park plans and a possible upland and moorland vision. We are being told clearly that that is a drag on conservation. There are too many strategies and they are not well enough joined up. There is a nice example of that in the SBS, in which we face the challenge that forest expansion, which is a headline aim of the strategy, is in conflict with 40 per cent of the priority species in the strategy, which are open landscape species. Forest expansion would support only three of those species. From a land management perspective, a good deal of work is needed to join up the very necessary Government vision. At the moment, it is not a clear strategy for many people who could help to deliver biodiversity in Scotland.

The Convener: I must ask the other panellists whether they agree with that point.

Duncan Orr-Ewing: Join-up between the various strands of Government is an essential part of the Scottish biodiversity strategy. I am afraid that the overarching group—the high-level strategy group—has not met since the election. One of the comments that I get from members of our team who sit on the various Scottish biodiversity strategy groups is that there is a lack of top-down direction. It would be helpful if that high-level strategy group could meet soon and start communicating with the various Scottish biodiversity strategy groups. That is where the join-up happens. It is critical that parts of Government such as the agriculture and forestry functions and the Scottish Environment Protection Agency engage on the issue, and that group is their point of engagement with the whole process.

The Convener: I see heads nodding in agreement round the table, so I take it that most people agree with that. It is good to get that on the record.

We will move on. Dave Stewart wants to develop a theme.

David Stewart: Clearly, the issue of Brexit and leaving Europe has dominated political debate in the past few months. Obviously, none of us knows what is going to happen, since no other complete country has ever left the European Union. What assessment have the witnesses made of the effect on the environment and nature generally of our leaving the EU? For example, what will be the effect on designations, which have been important? There is also the involvement with the common agricultural policy and structural funds. There are big issues about what happens when breaches of environmental designations occur. At the moment, we have infraction procedures and enforcement.

This is a general question on the crucial issue of Brexit. Are there any opportunities? Personally, I cannot see any, but some of our witnesses might have another view.

Adam Smith: That is an interesting question. Just last week, I was at a meeting of the British Ecological Society in Inverness. The policy team up there brought together 40 or 50 people to discuss rewilding. One of the phrases that regularly appeared in that discussion was "the dead hand of designation". It is seen as a necessary evil. Under European regulations, we have been required to designate sites, but it is generally recognised that that is another drag on people's incentive to manage for continued conservation.

There might well be merit or benefit in Brexit because of the opportunity to make designations more flexible and to support them better. One of the great challenges is that we designate an area—for example a special protection area, which typically is for birds—but it receives no extra support to encourage that to happen. Therefore, all the responsibility sits with the land management side, but it has very few of the rights that go with that to encourage management.

One thing that would encourage that is continued support for agri-environment schemes. That issue will be a huge challenge for the sector. Typically, farming produces food, fuel or fibre. We need to get our heads round the fact that it will not be paid to do that in future, but it will be paid to provide the public services that make Scotland great—our amazing landscapes and the species that we all enjoy. Some kind of agri-environment support mechanisms will be needed in future.

The only other benefit that I can see from Brexit is that we might get flexibility in some of the agri-environment schemes. Some very strange regulations have come out of Europe in relation to agri-environment schemes. One example relates to game crops, which I mentioned. Land managers are not allowed to use herbicides on game crops, because European regulations suggest that that would mean that those crops would be treated as harvestable and so the managers might be paid twice. If we had flexibility to manage our game crops better, more farmers would undoubtedly take up those beneficial prescriptions.

There are some benefits, although I have to admit that there are not many.

Bruce Wilson: I back up Adam Smith's point. The major opportunity from leaving Europe, if we are thinking about it in those terms, is that of creating an agri-environment agriculture system that does not focus only on the traditional commodity provision and is about providing wider public benefit. The conservation and land management community is pretty unanimous in its opinion that funding needs to go into the agriculture sector; the issue is what we specifically incentivise with that. We should not pay for things that we want to disincentivise; we should pay for the range of benefits that farmers provide from their land.

There are certainly a number of negative points about potentially leaving Europe. We would be very cautious about eroding anything to do with designated sites, although there is perhaps potential to get systems that are more suitable for some cases in Scotland.

The Convener: What about David Stewart's question on who polices delivery? Do you want to come in on that, Bruce?

Bruce Wilson: Yes—very quickly. Not having the higher authority of Europe is a worry for us. If there is potential infringement, it would be worrying if there was not a higher authority with an overseeing role.

Duncan Orr-Ewing: I agree with Adam Smith on one point and disagree with him on another. We see protected areas as a critical bastion of the delivery of nature conservation in Scotland. About 15 per cent of the land area is designated as a special protection area, a special area of conservation or a site of special scientific interest. Those are the jewels in the crown of our natural heritage and we argue they need to be defended. The critical issue is how they are to be funded in future. We look for reassurance from the Scottish Government that, in future, it will underpin the current funding that is delivered largely through agri-environment and European funding.

More widely, there is the issue of funding of agri-environment and other projects. That goes back to the point about what other issues have occurred as a result of the Brexit decision. The other major concern for us is that, to deliver a number of the big projects that are identified in the Scottish biodiversity strategy route map, we would be looking for funding from the likes of the European LIFE pot of money. However, there is uncertainty about the future of that funding. I am involved with the western Atlantic woodland project, which is a large partnership project. We hoped to access £11 million, including £5 million of European funding, but the project is currently in abeyance, largely due to the uncertainty on the future of LIFE funding. If we are to deliver the big projects that are set out in the biodiversity strategy, we need certainty that the Scottish Government will underpin existing and planned LIFE funding agreements.

David Stewart: I wish to raise one additional point before the other witnesses come in. I understand that there might be some repatriation of our structural funds. Funding is crucially important, and both the UK and Scottish Governments have made some commitments on that, but I will raise this technical point with the witnesses, who may be aware of it. Once article 50 is delivered and there is the two-year negotiation, and once the trade deals are sorted out, we revert back to World Trade Organization rules—we are obviously members of the WTO, too.

As members will be aware, the World Trade Organization rules are quite clear that there cannot be "unfair subsidy", in its words, of farming. In effect, schemes that we currently have would not be eligible under WTO rules. Once we are out of the EU, it is crucially important that we are still actively involved with the WTO. We are currently a

member, but the situation has been extremely worrying to farmers and crofters across the UK. I do not know whether any of the witnesses has any specific points on that. It is definitely unknown territory.

The Convener: Does anybody wish to come in on that? No one is disagreeing with you, Mr Stewart.

David Stewart: That would be a first, convener.

The Convener: Let us move on and look at some of the specifics. Let us start with peatland.

Emma Harper: Restoring functioning blanket bog is a long-term process. Results to date are preliminary. I am wondering whether action on peatland is focused largely on one geographic area—the flow country in Caithness and Sutherland. If so, what action is required to restore peatland elsewhere? What are the barriers to doing that, whether to do with funding or with a lack of engagement, for example?

The Convener: Before anybody answers that, it is worth making the point that the evidence that the committee has taken on climate change shows that we are missing a trick with peatlands in that area. Are we in any way missing a trick with peatlands from a biodiversity perspective, too?

Claudia Beamish: Could community involvement in peatland restoration be included while we are on this subject, rather than our coming back to that afterwards?

The Convener: That is fine. That opens it up.

Bruce Wilson: Everyone would agree that there has been some good progress on peatlands in the route map. However, given the targets that there are for 2020, it is certainly not job done. The "Low Carbon Scotland" report suggests that up to 21,000 hectares a year of peatland restoration is technically feasible. We will need greater ambition to reach that target.

The benefits of investing in peatland restoration now are that it is relatively cheap compared with doing it when the peatland asset is eroded. Putting in money now would save us a lot of money, and it would deliver extra benefits including community benefits, if there is proper engagement, carbon sequestration, which we have discussed, and biodiversity, flood prevention and water storage benefits.

Tied to that, we repeatedly hear about short-term funding cycles as a barrier to uptake. I am sure that Adam Smith will back me up on the point that a landowner will certainly not do something on a short-term cycle, especially with peatlands, which take a long time to restore properly. We can realise the full benefits from them.

William McGhee: Peatland does not sit naturally with forests—certainly in the case of the Forest Policy Group. We have taken views on a number of different issues. One of our concerns certainly applies in the uplands, and generally across Scotland. As far as geography is concerned, I do not think that this is confined to the north of Scotland. We have peatlands in the southern uplands, which can be degraded. That can happen through burning for land management or through overstocking of sheep in the southern uplands or of deer in the Highlands.

That interface with sporting interests strays slightly from forestry and peatland, but we view the deer and sporting issues in a climate change light—and by that we link to peatland. They need to be considered in the round. Considering them in isolation is not a great thing.

In response to Claudia Beamish, I note that in the southern uplands the Borders Forest Trust is carrying out a very small peatland restoration effort in the Moffat valley. Given the Government's land reform agenda, peatland management, peatland restoration and peatland conservation are all things that can be within the competence of communities. Communities that get access to land, be it ex-sporting or ex-agricultural land, would be as fit as anyone to manage those areas.

10:30

Adam Smith: I certainly endorse Bruce Wilson's point. A long-term and sustained funding stream is essential for land management opportunities. There are good examples of that in the estate land around the farm that is run by the Game and Wildlife Conservation Trust in Aberdeenshire. However, although there are estates that are enthusiastically keen to close up the bare peat that is exposed in the hag ground at the top, they were able to do only a little bit of that work before the funding fizzled out and was not available for the rest of it. They have found that very frustrating, especially when they are willing participants.

Something else that we find to be a drag on getting peatland restoration into the land management community is that it thinks that there might be biodiversity downsides to it. Rewetted areas might not be so good for some of the breeding birds that we all appreciate, particularly the wading birds, which are already under pressure. Very wet ground is not ideal for species such as golden plover and curlew, and we have to be a little bit cautious about that.

There might also be a farming downside. There is a splendid plant called the bog asphodel which, when browsed by sheep, can cause photosensitivity of the skin to such an extent that it

causes lambs' ears to become damaged and fall off. It thrives in increasingly wet conditions and, for quite a lot of upland farmers, it is a genuine drag on rewetting ground. I do not think that in both cases it is necessarily anything more than a perception, but some low-key facilitation and a little bit of research—he said—might help set some of those fears to rest and encourage peatland restoration more generally.

On the sporting side, you are absolutely right. All these things, including tracking and grazing, impact not only on deer but on sheep and cattle, and all that impact needs to be considered in the round.

On the community front, if certain areas are not being used productively for biodiversity, farming or forestry, the community might well take an interest and do some quite good things with a relatively small amount of money.

Duncan Orr-Ewing: Very briefly, I point out that the Scottish Government's "Low Carbon Scotland" report indicates that about 21,000 hectares of peatland restoration per annum is feasible. The current run rate is between 3,000 and 6,000 hectares per year. We acknowledge the good progress that is being made, but we need to keep it going for the range of reasons—climate change and so on—that were outlined earlier.

Finlay Carson: On the back of that, does anyone think that there is an identifiable conflict of interest between peatland restoration and the Government's planting targets? If so, is it significant?

William McGhee: Good question. There should not be a conflict, given that peatland is excluded from planting. However, on the quite aggressive planting targets, which have already been alluded to, I have to say that we endorse having greater woodland cover, but the route that the Scottish Government is going down in forestry—which, had this been the previous committee, would have been represented here today—is being increasingly pushed towards external, large-scale investment. When you have such investment, you go to the uplands.

A particular move in forestry investment is being dictated by pension and investment companies, which are trying to push the Forestry Commission to move to a 50cm peat layer. Moves are happening behind the scenes in the industry, but that is about the meeting of industrial targets. Our view is that that is entirely unhelpful and should not be countenanced.

We are not here to discuss the planting targets, but there are ways of achieving the planting targets that the Scottish Government desires without going down the route of foresting peatland or taking out valuable upland areas. The drivers that we have at the moment are big and they are external investments. That drives forestry in one direction, so we are kind of moving back to the 1970s and 1980s, if anybody can remember what it was like then.

The Convener: Your contribution highlighted how important it is to get a fully functioning land use strategy in Scotland.

Bruce Wilson: You just made my point, convener. A land use strategy is essential, to try to work out what we need and where.

It is important to recognise the progress that we have made on leveraging in private sector financing into peatlands. There is the peatland code, which can help to pay for projects and make the link between the provider—the peatland resource—and someone who might be looking to invest. It is important to note that.

The Convener: We will move on to outdoor learning.

Jenny Gilruth: The progress report states that Scotland is on track to provide 100 schools in the 20 per cent most disadvantaged areas with access to quality green space for outdoor learning, which feeds into the Government's attainment agenda. Do panellists' organisations have a role to play in outdoor learning? What kind of barriers to that—regarding local authority funding, for example—might they have faced? Do panellists have a view on the provision of quality green space in schools? As a former teacher who taught in a school that was surrounded by a sea of concrete, I think that there is a key role for the provision of green space in schools. In addition, can provision of quality green space in a school setting have an impact on mental health in the education environment?

Catherine Lloyd: For quite a long time, we have been writing a teacher's guide to biodiversity. The one thing that is not being engaged with locally is the question of where they can go. There are so many places to go to, but teachers are being prevented from going. We are trying to turn that round. It is a bit old fashioned, but we are getting there. We have not published the document yet, but it will be available nationally.

The Convener: What is stopping them?

Catherine Lloyd: Health and safety has to be the key priority, or they cannot be seen to be doing it. However, by working with local communities that bring their own schools in, we are getting round that. For instance, in East Haven, near Carnoustie, there is an amazing local community. They are not waiting for anything; they are going straight to the local schools and getting heavily involved. I have been going in and saying, "How about championing certain species?" The small blue butterfly is in their area, so I have it in mind to

encourage them to help with our kidney vetch planting. We will get round that.

A one-to-one approach is needed. It is difficult to say, "Let's have a policy," because of considerations of health and safety, or the cost of getting people from school outside. It is just not possible at the moment.

The Convener: If any other witnesses want to give a plug to my constituency, they should feel free.

William McGhee: We have talked about individual organisations. The Forest Policy Group has members such as the Community Woodlands Association, the Association of Scottish Hardwood Sawmillers and others, some of which are active in education. From a forestry perspective, the Forestry Commission has facilitated a lot of the outdoor education that is getting schoolchildren into green spaces, whether they are forests in Craigmillar, which is in Edinburgh, or Dun Coillich, which is in highland Perthshire. You just have to look at forest schools literature to see the impact that that has made.

The impediments, as you would guess, are teachers' time, and resources—less so health and safety, from our perspective. When we have run forest schools, we have not encouraged children to open knives, use saws or leap in fires. However, when consulted, parents are very happy that children are exposed to those things because they do not get that kind of experience anywhere else. Therefore there is huge potential in forestry.

There is one forest that I would like to recommend: Abriachan, which is above Loch Ness. The community there has managed to combine forest schools education, adult learning and support to women who are in the justice system and to branching out, which is a mental health initiative that gets people into green spaces, particularly forests. That is kind of a back hand at Adam Smith, in relation to communities. That community took on what is essentially a commercial forest. The public benefits that have flowed from removing it from a conventional forest owner to a community are staggering.

The Convener: Just picking up on Catherine Lloyd's point: as an MSP I certainly hear stories about some wonderful locations seeing a downturn in the number of schoolchildren who are going there. The reason that I keep hearing about is the cost of hiring transport. Is that something that has been spotted across the country?

Adam Smith: Yes, certainly. You have put your finger on one of the main problems with getting schools out. It is also one of the ones that are relatively easily fixed, in many ways. As we have discovered, there are lots of local businesses that are prepared to sponsor those kinds of transport activities and write that off to their social engagement and things that they think they ought to do. Therefore it is not an insoluble problem. Recently, we managed to get a couple of hundred kids out—that is a plug for Fife, I am afraid, and not for Angus. In Midlothian, too, we managed to get groups of schoolkids to come out and plant hedges on some of our demonstration farms. We are also delighted to work with the Royal Highland Education Trust. In combination with the trust and farmers who are willing, we have not found massive difficulty in getting the countryside-based kids out.

One of the challenges that we have faced is that many teachers do not really have any countryside resonance. They do not see how they can do it, so perhaps there ought to be something in the Scottish biodiversity strategy about looking at teacher training as a key part of breaking down the barrier for them. The countryside is not scary; it is perfectly accessible—exactly the sort of thing that Willie McGhee was saying as well.

The other thing that the GWCT has noticed, and which it is trying to address in partnership with Countryside Learning Scotland, is an absence of residential educational opportunities. Although you can go and stay at wonderful places such as the Field Studies Council's building at Kindrogan, up in Strath Ardle, there is nowhere that you can actually go and stay on a working farm, in a structured environment. Those are becoming more commonplace across the UK, but they are not available in Scotland and we think that they ought to be. That is quite specialised and high end but you can get quite a regular turnover of kids and teachers who go there and spend two or three days learning on the ground how a farm works.

On a personal note, my entire family are teachers and my aunt has just recently retired as a headteacher in Edinburgh. One of the things that she noticed was green space. In her school, that was absolutely vital. Again she enabled that to happen—by local business support. It does not require a huge amount of money; it does require a little capacity to go out and be brass necked in asking for a little bit of cash. These things are achievable and very beneficial.

Chris Ellis: Public engagement with nature and support within the curriculum is a space that the RBG is very familiar with. We have a programme of continuing professional development for teachers. We have seen 2,000 teachers trained on that programme over the past five years. We have schoolchildren participating in projects in which they come to the garden and have a square foot of soil in which they can grow their own food. We can have repeat visits on which they learn about urban gardening, the ecosystem benefits of soil and integrated food production. In the past, much of

that work has been done on site. In a sense, the garden is a safe space; we can bring children out of their communities into this new environment and engage them with nature.

10:45

There are some innovative projects, such as the Cumbernauld living landscape and Edinburgh living landscapes projects, whose aim is to bring together different partners who can benefit from shared access to infrastructure. In Edinburgh, for example, it includes the RBG as well as the council and the parks department. Aside from what is already in the Scottish biodiversity strategy, it is important to recognise some of the other partnership schemes from around Scotland.

Duncan Orr-Ewing: I confirm that our understanding is the same as yours. We run some of the biggest outdoor learning operations in Scotland at our Lochwinnoch nature reserve in Renfrewshire and at Loch Leven in Kinross, close to your constituency, convener. We hear that the cost of the transport to bring kids to those sites is one of the biggest issues.

Bruce Wilson: I am a scout leader, so I spend a lot of my time at weekends taking kids out into the countryside. We notice that costs are a difficult barrier, particularly to getting kids from urban areas to more remote areas. The Scottish Wildlife Trust does several things to address that, including identifying local champions, such as local wildlife watch groups, who can devote time and energy to it. One of the issues is that the kids want the experiences but are prevented by a lack of adult volunteers. It is an important example of why we should get the Scottish biodiversity strategy right. It is not just about biodiversity but about the wider benefit to communities.

Calum Duncan: I want to emphasise the support that some of the local biodiversity partnerships can give. At the MCS we have the sea champions initiative, the cool seas explorers project, which raises awareness of the sea through education work, and many groups doing beach litter surveys, including a lot of school groups. We have worked with Tayside local biodiversity partnership and Fife local biodiversity partnership, which has helped us to get a record number of beaches taking part in our big September beach clean. That contributes to the marine litter strategy, which has links to the biodiversity strategy. Some groups can take the initiative themselves, but the local biodiversity action framework is very helpful in facilitating projects in the community and getting more and more young people and other community members involved.

The Convener: I presume that we all agree that there is a role for MSPs in raising awareness and engaging with schools in their area, perhaps through the species champion programme.

Calum Duncan: Absolutely, we have had several MSP species champions at our beach cleans in September. Thank you.

The Convener: It was more of a challenge to MSPs than opening the door for you to praise them. It strikes me that there is capacity in that programme, when it is properly implemented.

Jenny Gilruth: My second point was about how green space impacts on children's mental health, which is something that we have looked at in Parliament recently. As a former teacher, I know that there is a role for green space to play in children's health and wellbeing, and we can improve that in classrooms. Do you have any evidence on that or opinions that you want to share?

The Convener: If you do not have the evidence just now, you can write back to the committee.

Jenny Gilruth: That is okay.

The Convener: We need to move on. Adam Smith has referred on several occasions to "drags" on progress. To what extent is climate change making it harder to meet the biodiversity challenges that we face?

Chris Ellis: We talked before about designated sites. We can see examples of how the flexibility that we have discussed will become necessary in monitoring our designated sites.

For example, in site condition monitoring in the Cairngorms national park we are finding a decline in populations for which sites are designated. That can lead to sites failing site condition monitoring, which brings into question their designated site status. Decline in populations of snowbed species or arctic-alpine species is a consequence of climate change, so the question is whether it is justifiable for a site to lose its special designation, as those species decline as a consequence of a global challenge like climate change. Do we need to be less prescriptive about the species that we expect to occur in a place as species start to migrate in response to climate change? Is there a set of characteristics around which we can value our designated sites instead of using the species that were there when they were first designated? It will be important to have flexibility about the status of the sites.

Duncan Orr-Ewing: There is no doubt that climate change is a major issue for conservation, so I am pleased that we are discussing it here. My example is Scotland's internationally important seabirds—if Scotland is important for any bit of biodiversity, it is our large seabird colonies. RSPB

Scotland's view is that we should not give up in the face of climate change. Clearly, we have a major issue with our seabird colonies because the seabirds' food supplies are moving as a result of climate change, which is causing starvation in some colonies. We can do things to mitigate the consequences of climate change: for example, we can help to protect seabird colonies by removing non-native species, in particular rodents, from seabird islands, and we can improve biosecurity on islands to give the seabird populations the best chance and make them more robust in the face of the challenges of climate change.

Calum Duncan: A virtuous cycle is created if we get management of marine protected areas right, because we are restoring habitats that can potentially lock up carbon—kelp forests, seagrass beds or oyster reefs—and/or we are protecting against the effects of climate change in terms of coastal erosion. Again, it is about investment. If we invest in protection and monitoring of the sites, they can potentially deliver benefits that can help to make those places, and Scotland's seas more widely, more resilient to climate change.

We have talked about peatland restoration for locking up carbon. The Marine Conservation Society is a keen partner in a project in the Dornoch Firth with Heriot-Watt University and Glenmorangie. The project is scoping native oyster-reef restoration for that purpose. There used, for example, to be an oyster reef in the Firth of Forth that was the size of Edinburgh, which would have done a lot of seawater filtering, locking up carbon and providing food. It is about investing in protection and monitoring in order to demonstrate potential benefits, and learning as we go forward.

Adam Smith: I endorse Duncan Orr-Ewing's position. Climate change is a potential challenge to SBS delivery and it will be a challenge in respect of the alpine species, as Chris Ellis pointed out. It is also a challenge to delivering in respect of the curlew, and probably the corn bunting and corncrake. When those species are challenged by declining weather—in Scotland that means increasing rainfall—we need to ensure that the rest of their population dynamics are relatively unchallenged.

Duncan Orr-Ewing is right that mitigation is critical. That is clearly demonstrated in the case of the capercaillie, which is, sadly, not a priority species in the Scottish biodiversity strategy, although we think that it ought to be. The capercaillie is clearly affected by increasingly wet conditions in its core range. Where that is happening, the species needs all the other parts of its population dynamics to be absolutely squeaky clean so that it can survive those vicissitudes and stochastic events.

The Convener: Thank you. We will move on to look at forestry and native woodland.

Alexander Burnett: I have declared my relevant interests in forestry in my register of interests.

We have touched on planting targets, and I am sure that we are all well aware that the target of planting 10,000 hectares a year has not been met for the past six years. However, there has been discussion previously in the committee of the view that there should be a climate change target to plant nearer 20,000 hectares.

I have questions for William McGhee in particular. What has gone wrong in trying to reach the target? What needs to change, in particular in relation to the focus on restoring native woodland? I know that we have, in relation to soil depth, touched on the forestry investment vehicles that are looking to expand the available area for planting, but the target was set based on the existing available land. Why has it not been met and what needs to change?

William McGhee: As with climate change, planting is not straightforward. In essence, we have quite a blunt instrument to engage landowners and communities across Scotland and to encourage them to plant trees. As some of you will have detected, in the past few years we have had a swing away from large-scale native schemes—what they used to refer to as the pinewood schemes in the Highlands, where considerable areas were coming under native woodland. With the advent of the slipper farmer and the retreat from the hills in the north-west, we had a lot of regeneration of native woodland.

However, the concentration is on large areas of monoculture—essentially Sitka spruce, which is what we are told the industry desires, although if we were having a technical-industrial forestry conversation, I would say that that is not specifically what the industry requires. That is where the focus has gone.

If you are going to persuade hill farmers who own 300, 400 or 500 hectares of land that there is a good reason to take a proportion of their land out of sheep farming or whatever, that needs first to be attractive to them, and secondly it needs to be non-threatening.

At the moment, the focus is on purchase—on large blocks of land. We in the Forest Policy Group believe that the targets could be met—not easily, but they could be met, and more—if we were to concentrate on the Forestry Commission persuading landowners to plant modest amounts of trees. It would not be a threat to plant 50 to 100 hectares as windbreaks, as shelter, and as native woodland.

Landowners can see returns from native woodland now. Biomass and the advent of wood-fired heating have changed the dynamic of the forest sector and the industry, so native woodlands are no longer not paying. They can pay and there are good prices. However, the current fixation is on very large areas and there is not much incentive for the bulk of landowners in the uplands—farmers and the estate owners—to plant more modest and more diverse woodlands. It is partly about education, partly about outreach and partly about a shift in emphasis.

From the statistics, the Highlands are most conspicuous by their absence from large-scale planting. For some reason that the forestry industry cannot explain, estate owners there like planting large-scale Scots pine plantations and restoring Caledonian pinewood but are not so keen on putting in 500 hectares of Sitka spruce. If there was more incentive weighted towards such schemes, more areas would contribute to the targets.

Alexander Burnett: Is the forestry grant scheme adequately funded? I know that there are additional payments for small blocks of mixed broadleaf—

William McGhee: And for diverse conifer and native woodlands.

Alexander Burnett: Speaking from experience, there is a higher cost of planting smaller blocks—with fencing, establishment, and management—than of planting larger blocks.

William McGhee: Yes. The previous scheme was very encouraging, but we have had a shift in emphasis. When you plant Sitka spruce, it does not matter whether it is a small or large area—you do not need fencing. Deer are not in any way interested in Sitka spruce, which it is why it is a default for the industry. Higher costs go with planting the more interesting and more biodiverse woodlands, but the funding is not being targeted at them.

The Convener: You have mentioned the D-word—deer. Does anybody want to feed in on the deer issue at this stage? Clearly, deer are major players in biodiversity.

11:00

Duncan Orr-Ewing: At present, an SNH review of deer management is under way. We look forward to that coming to the committee for scrutiny, and we certainly encourage the committee to take a keen interest in deer management matters. Deer management is a key issue in addressing the condition of some of our designated sites and the expansion of native woodland: 18 per cent of protected areas—mostly in upland areas—in Scotland are in unfavourable condition because of the impact of deer browsing.

I add that the Forestry Commission Scotland has carried out a review of our native woodland resource, and there is significant opportunity both to improve the condition of that native woodland and to expand the resource. At the moment, 70 per cent of our special areas of conservation—of western Atlantic woodland, for example, which is another of the jewels in the crown of Scotland's natural heritage and is important for mosses, liverwort and other biodiversity—are in unfavourable condition, and the primary cause of that is rhododendron infestation. We encourage the committee to ask for the national rhododendron strategy to be published.

The Convener: Yet another strategy.

Duncan Orr-Ewing: Yes, but it is important that it will set out the programme for restoration of the native woodland resource.

William McGhee: Deer. Yes. Where do we start?

The then Rural Affairs, Climate Change and Environment Committee heard quite a lot about deer; I am sure that this committee will, too, over its lifetime. Deer are an enormous problem for forestry. We spend tens of millions of pounds not only on deer control but on deer fencing. After today's meeting, I will drive to the Scottish Borders, where I and a syndicate have bought a tiny piece of land outside Walkerburn. We are going to order 3km of deer fence for an area that we are planting with native broadleaf trees, which cannot be left as Sitka spruce can be left. That is a cost that the taxpayer is contributing to, although only a percentage. All over Scotland, any scheme that obliges people to plant native broadleaf trees, or any conifer other than Sitka spruce, will feel the impact of deer, so I endorse what Duncan Orr-Ewing said.

The Convener: Could you quantify the cost? It would be useful to get a feel for how much it costs not just the taxpayer but yourselves.

William McGhee: The Forestry Commission uses a way of assessing grants and how much it will award called standard costs. It has a mean cost for deer fencing in Scotland, and it will give up to 80 per cent of that. At the moment, a functioning roe-deer fence is £6 per metre. Roe-deer fences are different to red-deer fences in that the mesh is smaller at the bottom. We pay £10 a metre in the Scottish Borders for fencing on ground that is not that difficult. The group in Perthshire for which I am forest manager is paying £15 a metre for deer fencing. The cost differs depending on where you are. The Carrifran wildwood project had 8km of deer fence. A big landowner in the Highlands may

have tens of kilometres of deer fence. That will give you an idea of the cost.

The Convener: Thank you. That is very useful.

Adam Smith: I was just going to chip in and try to join up two things that we have been discussing. We talked about Brexit earlier. We are in the fortunate position of having just got a LIFE+ grant from the European Union to study the usability of lasers as a fencing tool in agricultural and conservation contexts.

William McGhee: Do they kill the deer dead? [*Laughter*.]

Adam Smith: I can absolutely assure you that they do not. They are low-powered lasers that have been commonplace in the Netherlands for goose control for many years.

My point is that deer management is important and we need continually to be looking for the right balance of density and numbers of deer and incentivising people to control deer as part of a well-managed game management programme, so that they actually get value from controlling deer and the deer are not just a pest. We are looking for new solutions, among which might well be some technological fixes. Instead of having to put hard forestry fencing in, maybe we could discourage deer with low-wattage laser systems, which apparently animals thoroughly detest. We will be trialling that over the next few years.

The Convener: How do they work in practice?

Adam Smith: I will not go into too much detail, but the laser produces a spot of light. The wattage is lower than that of a typical laser pointer that I would use on a screen—very low power. You will all have seen a laser when it is projected on to a surface—it has a curious moving quality. Apparently, animals find that exceptionally disturbing. They treat it as a predator and exhibit typical anti-predator responses. The laser is not shone at the animal, but is projected on to a surface, and animals stay well away from it.

The LIFE+ grant project is a business development grant rather than anything else. In particular, it is looking at whether we can use lasers to reduce rodenticides in the countryside by keeping rats and things away from feed stores and other food supply systems, thereby benefiting barn owls and so on. That will not be a fix for everything. There may be technological fixes, and we should certainly be looking for them.

David Stewart: That is an interesting point. I have seen some scientific work on high-frequency noise, which also has some effect.

I return to the point that I made about Brexit. We want to ensure that there is more research and development and that the academic community is better funded to look into things. The great worry about Brexit is that we will lose a lot of the academic funding. Many academic institutions, not least the University of Edinburgh and the University of the Highlands and Islands, which I have close relationships with, have said that they are concerned. The Scottish Association for Marine Science in Oban is also very concerned about the effect on academic research of the lack of EU funding.

Adam Smith: The situation is certainly far from ideal. The information that we are getting from the research side is that we would still be warmly welcomed on European projects. Our European partners have said clearly that they would be cutting off their noses to spite their faces if they did not have Scottish and UK partners involved in the future, but it is pretty clear that we will not be able to lead such projects.

At present, we lead one of the North Sea regional projects, which has the tremendous name—for my organisation—of Partridge, but we will not be able to do that in the future. The LIFE project is run by Liverpool John Moores University. Again, we would have to go and find an EU project leader for that. That is a downside, but we would still take part.

Duncan Orr-Ewing: Going back to deer, I remind you that the land reform review group report recommended that we move to a system of socially and environmentally responsible deer management. That has to be the objective. The progress on deer management planning and the work that your colleague Mike Russell did to improve legislation on deer in the Land Reform (Scotland) Act 2016 are very welcome, but we really need the deer management plans to be implemented to see whether we can hit that objective.

The Convener: The SNH report should shed some light on that.

Finlay Carson: What work is being done to identify and understand climate change impacts on freshwater habits and associated biodiversity? My interest is particularly in whether we have enough scientific information and baselines regarding mixed fisheries, migratory fish and potential cyclical patterns.

The Convener: Who wants to answer that?

Oh, dear! No one does. [*Laughter*.]

Adam Smith: I am always willing to fill a space.

The Convener: I will let Bruce Wilson in first—he beat you to it.

Bruce Wilson: Establishment of a baseline is key. In order to do that, we need to put a bit more

work into the ecosystem health indicators that we discussed earlier to bring them back on track.

Adam Smith: We are eagerly looking forward to seeing what the wild fisheries review brings into focus. Integration of the Association of Salmon Fishery Boards and the Rivers and Fisheries Trusts of Scotland integration, which we hope will happen, could easily provide some really useful opportunities to improve data collection in freshwater systems, particularly—for our interests—in relation to salmonids. The Game and Wildlife Conservation Trust runs a fisheries research centre down in Dorset, on a chalk stream salmon river. It is slightly different, but the techniques that we have learned down there could give us consistency, which would be extremely useful for Scotland. We applaud the opportunity that the fisheries review and restructuring could provide to Scotland.

The Convener: Thank you for that.

Kate Forbes: The progress report shows that Scotland is on track to ensure that businesses are more aware of their reliance on natural capital. However, there is limited evidence to suggest that business investment in natural capital assets has increased. How do we solve that, and how can we develop better metrics?

Bruce Wilson: What you say is broadly accurate. Given the amount of resource that is devoted to the area, we are doing a fairly good job of making Scotland's businesses aware of their impact and dependence on natural capital. That is done through such things as the world forum on natural capital bringing attention to Scotland on a global scale, and the Scottish forum on natural capital. The Scottish forum recently organised a business breakfast on the theme of resilience, bringing in natural capital to highlight the impact and dependence of business.

Work is at the education stage at the moment, and probably will be for quite a while. The depth of understanding is not there in Scottish business yet, apart from in some obvious sectors. The agriculture sector obviously understands that it has a dependence on a healthy natural environment; we just need to get the funding right so that it can help to build that natural capital, rather than depleting it.

Funding will be an issue in the future for the Scottish forum on natural capital, which has been charged with taking the work forward. At the moment, the forum relies on small contributions. If it is to highlight investment opportunities for business, there will have to be greater investment in the forum.

I mentioned the peatland code, which is quite important as a first example of business being able to invest in natural capital assets. We also have the natural capital protocol, which is being developed by the natural capital coalition. That is essentially a step-by-step guide for business on how to implement an approach to natural capital. It has taken a long time to develop, and it has been implemented by a lot of people from the world of business, non-governmental organisations and academia. We hope that the Scottish forum on natural capital, Scottish Land & Estates and the Crown Estate will do a pilot study on use of the protocol on a working land business so that we can share some of the learning and disseminate it across businesses in Scotland.

The Convener: We have covered the issue of youngsters experiencing nature quite extensively. What about older people? Emma Harper has a question.

Emma Harper: I am curious about the benefits for the wider environment of people experiencing biodiversity. Why is it that some people across society are not accessing the outdoors? Another wee thought I had is whether it is really necessary to have outdoor spaces labelled as national parks. Can we not just say to people, "Get out there"?

The Convener: Willie McGhee wants to answer that.

William McGhee: I will not answer all of it—just part of it. [*Laughter*.] I will leave the national parks question to others.

Why are more older people not getting out there? I hesitate to suggest that it is to do with resources—with finance—and where a person is. When I was at the Borders Forest Trust, we ran volunteering for older people—retirees and people who were on their own—who found it valuable to go out in groups and participate, whether in tree planting, going for a walk or working on a woodland management task. We came up against something that was similar to the difficulty in getting young people out. A lot of those people, who were in Galashiels or Hawick, were not in great housing and did not have much in the way of resources or public transport, so we needed to get minibuses to pick them up and to make them aware of where the activity would take place.

11:15

Your question covers a societal issue about encouraging people into the outdoors. Going into the outdoors has tended to be something that those with resources and money—the middle classes and others—can do very easily, but it is harder for those in urban situations. That is why the Forestry Commission has its woods in and around towns project.

We have had a discussion about the value of green spaces. We need to introduce people to the

outdoors in places where they do not feel uncomfortable. As with mental health issues, we need to bring people together and take them out as a group. That needs resources, because we need people who are properly trained to do that, but it is possible and it should be encouraged.

In Perthshire, we take people from Aberfeldy, Pitlochry and Dunkeld to a site one day a week, where they do relatively light tasks. They feel that they are making a contribution and are getting something out of it. However, that is not straightforward or easy.

The Convener: I have a question for Catherine Lloyd. I recently visited the Murton Trust in her patch, and one thing that came out of that visit is that, when youngsters are involved in activities there, they often come back and bring their mum and dad or aunt and uncle or whoever with them. That is probably repeated across the board. Therefore, if youngsters are not going out as much, the opportunity to encourage adults to follow is being lost. Is that a fair observation?

Catherine Lloyd: Very much so. In a lot of our projects, we start with the children or young people and then encourage them to have family days. If we have something happening on a Friday, we suggest that they bring their parents back and do something on the Saturday. That is happening more and more across the board. For example, it happens with our swift and amphibian projects.

Our bee wild project, which we have been trialling in Angus and which we very much hope we can get funding to widen, involves working with care homes. Rather than expect people in care homes to come out and explore areas—they can if they wish, but many such people are too ill or elderly for that—we are taking in wildlife kits. People can choose whether to have a pond, a patio planting for pollinators or an orchard in their area, and then we make sure that they get it. We also provide an enormous amount of information so that they can take that forward. That is exciting. Care homes are coming to us—we might have done 30 but we were able to do only 11.

The Convener: That is interesting.

Emma Harper made a point about national parks and the awareness that they create. However, two organisations that are represented here—the SWT and the RSPB—own a great many wonderful sites across Scotland. My question is for both of those organisations. Do you do enough to raise awareness of what you have to offer outwith your membership?

Bruce Wilson: We certainly try our hardest to do that. The two best examples of that are the Cumbernauld living landscape and the Edinburgh living landscape, which Chris Ellis mentioned.

To refer to another point that has been made, we need to stop thinking about nature and biodiversity as things that we get in a bus or car and drive to; we need to integrate them into our towns and cities. That is not just so that stakeholders can enjoy that and feel all the additional benefits; it is so that our towns are more resilient—so they are not as hot, for example. We can get a whole host of things from that.

Our wild ways well programme in Cumbernauld addresses mental health issues among people of all ages. There are numerous examples of projects that use green space immediately adjacent to where people live and work. That is important, especially for those in the older generations who possibly cannot move far from where they stay. It also addresses a lot of social justice issues. Increasingly, the poorest members of society have the least access to green space, while the richest have the greatest access. We need to redress that balance.

The Convener: We are straying into territory that Angus MacDonald wants to explore. Do you want to come in now, Mr MacDonald, before I bring in Duncan Orr-Ewing?

Angus MacDonald: Yes.

We have discussed green space for outdoor learning and education and the benefits for older people, but our health service can benefit from it, too. The progress report considers that Scotland is on track to

"Improve greenspace quality and use on at least one hospital or health care facility in each NHS health board in mainland Scotland".

That includes

"Developing and promoting a green exercise tool-kit for use by the health and environment sectors"

and

"Delivering a NHS Greenspace Demonstration Project".

We have a prime example of that at Forth Valley royal hospital in Larbert, where a tremendous facility has been delivered through an exciting partnership with the Forestry Commission Scotland and the Central Scotland Forest Trust. Studies show that having a good view from a hospital window can help a patient with recovery and, apparently, it also helps to reduce the use of painkillers, which I was not aware of until I did a wee bit of research two seconds ago.

Clearly there are other benefits. Even five minutes of green exercise can have a positive impact on mental health. We have heard examples of projects from panel members, but have any of you been involved in any of those national health service projects? Have there been any barriers to delivering through the NHS?

The Convener: Hold that thought.

I asked Duncan Orr-Ewing whether the SWT and the RSPB reach out beyond their membership. In doing that, do you actively cross-promote? Does the SWT mention the RSPB? It would be good to get the answer on the record.

Duncan Orr-Ewing: I have a few responses.

First, we have increased our family offer on reserves. As was suggested, if we get kids engaged, we can often get the adults engaged as well. Volunteering is the other tool that we use. Across our reserves, we have a network of residential and day volunteering offers.

Mr MacDonald mentioned Larbert hospital, which is actually my local hospital. I will check after the meeting whether contact is being made. We are involved with a major project called the inner Forth landscape partnership, which ties in local communities and the natural heritage of the inner Forth area around Falkirk, Stirling and Clackmannan. I accept that contact could be made with the likes of Larbert hospital to join things up better, so please take that as an offer.

Like the SWT, we are working in partnership at landscape scale in a number of places across Scotland. That means working in partnership with other environmental NGOs, private landowners and others, because we realise that delivering our objectives for biodiversity and people cannot be done simply on nature reserves; it has to be done in the landscape more widely.

I do not know whether that answers your question, convener.

The Convener: It does.

Adam Smith: I will refer back to another point—it is not so much about the NHS. There might be merit in taking the countryside to people, but if there is one point that I wanted to make, it is that it is a great shame that SNH budget cuts mean that it can no longer attend at anything like the level that it used to things such as the Dundee flower and food festival, the Royal Highland Show, the Scottish game fair, which we run, and the Perth show. Those are superb points of engagement with the adult population, so it is a great shame that SNH cannot take part in them more fully. If non-specialist people from the countryside are willing to attend those, we ought to have people there who can support them.

The Convener: Just to clarify, SNH was at the game fair this year.

Adam Smith: It was, but a discussion that I had with it last week revealed that it is seriously considering its public-facing offering at such shows. For example, it recently pulled out of the Moy game fair, and I believe that even the investment in the Royal Highland Show is under consideration.

The Convener: We will have the opportunity to explore that matter in a few weeks' time with SNH, so we will bear that in mind.

Chris Ellis: On the point about access to green space for elderly people, I emphasise that one of the key issues is a blurring of the boundary between the countryside and the urban landscape. We need to make people aware of what is around them and the benefits to them as the urban landscape changes.

There was an interesting study in Sheffield a few years ago that polled people's sense of wellbeing in different environments. People felt at their best in areas that they perceived as containing the most biodiversity, although those sites did not actually contain the most biodiversity. It seems that there is a disconnect between people's perception that a landscape contains biodiversity and a landscape that actually contains biodiversity and performs important ecosystem functions.

That relates to the point about what drives people's sense of wellbeing and the need to understand the relationship between the parkland-type landscapes that people enjoy and the diverse landscapes such as native woodland that might feel slightly more threatening.

Claudia Beamish: Do the witnesses have any observations on or issues to raise regarding the contribution of their organisations to connections between biodiversity and people with disabilities? The national performance framework highlighted that people with disabilities had less access to such areas, and I am interested to know whether any groups are doing something proactive about that.

Bruce Wilson: On a number of our reserves we have specific access plans for people with disabilities—as other groups represented here will have—but it comes back to the point about not making a distinction between nature in the countryside and nature in towns and cities. If nature is available for people to enjoy and experience, and that is woven through urban and rural settings, there are more opportunities in general.

Calum Duncan: We respond to groups that want to do beach cleans, some of whom have different abilities. We take it case by case, depending on access to the particular beach, to help to deliver a clean that suits the group.

The Convener: To follow up on Claudia Beamish's point, how do you go about spreading the word about that? People with disabilities may

perceive that they are not able to access such an opportunity. How do you get the message out?

Bruce Wilson: We work with a lot of "friends of" groups and local partnerships. In Cumbernauld, for example, we have an education officer whose remit is not just to work with schools—they go around a variety of groups to try to get the word out.

The Convener: Thank you for that. We will move on and look at improving ecological connection. Maurice Golden has a question.

Maurice Golden: Improving ecological connection is a key goal for the Parliament and this committee. There are some examples of work in that area in Scotland, such as the central Scotland green network and the Irvine to Girvan nectar network. Have any lessons been learned from those two initiatives? How can they be expanded? How could a national ecological network be brought about? What would be your assumed definition of such a network?

Bruce Wilson: We want to see a lot more progress on the national ecological network in the SBS route map, as it will enable us to meet a lot of the targets. As Adam Smith said, there is some confusion around the number of plans, objectives and other things that are out there.

We see the NEN as a way of threading biodiversity through almost everything that we do. We would like it to be linked to the land use strategy, the marine plan, the route map and the national planning framework. It will help to address issues such as access to wildlife in our towns and cities, which we would like to see become a material consideration in planning applications and strategies. We would also like it to be taken into account in relation to licensing regimes and the allocation of forestry and agri-environment spend.

There have been some notable successes with the central Scotland green network and the Glasgow and Clyde valley green network. We need to expand on that work so that it does not concentrate only on our main central Scotland corridor, thereby missing out vast swathes of the rest of Scotland where we could be doing a lot more.

Claudia Beamish: Is there consensus on what a national ecological network would mean in practice? A number of people have highlighted that issue.

Duncan Orr-Ewing: I do not have an immediate answer to Claudia Beamish's question, but perhaps Bruce Wilson does.

Bruce Wilson: I assume that everyone is familiar with Scottish Environment LINK, which has been tasked with coming up with a more succinct definition than the one that we proposed in 2013. Essentially, a national ecological network is about providing strategic direction on where our green space goes. It is not necessarily always about physical networks; it is about providing that coherence through policy, so that everything is working towards better ecological outcomes and the benefits that come from that. We need that because the Scottish biodiversity strategy alone will not do enough for us to meet the Aichi targets.

Duncan Orr-Ewing: We welcome the fact that the national ecological network is included in the national planning framework. It now needs to read across to all the other significant Scottish Government strategies, such as the land use strategy and the marine strategy. That is where the three important pillars of the Scottish biodiversity strategy—sites, species and wider countryside conservation—join up. If you get all that right, it will deliver the six big steps that are identified in the Scottish biodiversity strategy route map. If you are going to help save nature in our countryside, we are looking for about 20 per cent of the land area of Scotland to be managed benevolently for nature, through a combination of protected areas and agri-environment schemes, working with private landowners, communities and so on.

The Convener: Given that you have mentioned sites, let us move on to an area that Mark Ruskell wants to explore.

Mark Ruskell: I was just going to reflect on that last comment. It would be interesting to see how the ecological networks are embedding into local development plans and whether cognisance is being taken of those networks in planning decisions on the ground.

We have had some discussion of protected areas this morning. Adam Smith described them as a "drag" and Duncan Orr-Ewing described them as a "jewel". The SNH progress report says that about 80 per cent of our designated features were in favourable condition at the completion of this project in 2016. There are issues around the definition of "favourable", but is that 80 per cent figure giving us the full picture of what is happening in our important features, species and habitats in Scotland or is there a wider picture to be seen?

Duncan Orr-Ewing: There is a wider picture. SNH has a major landowners group partnership, which is tasked with tackling favourable condition issues. The group includes the major NGOs, the Forestry Commission, the Ministry of Defence and other significant landowners in Scotland. If you start drilling down into the figures, you will see that the ENGO favourable condition figures and the Forestry Commission figures are significantly higher than that. You also have to take out of those figures some sites where no remedial action

has been taken. We talked earlier about climate-induced changes in the food supply for seabirds. It is very difficult to see how you can sort out some of those problems, because they are beyond control. Where there are remedies, we could be doing a lot better, particularly on private land, through agreements with SNH and so forth.

William McGhee: The forestry world would take issue with a figure of 80 per cent in respect of native woodlands. We believe that the favourable condition indicators did not pick up on some of the basic things that we would have looked for, such as the presence of diverse structure in woodlands, regeneration and—well, I do not want to use the D-word, but you can guess where it is all going.

The Convener: Yes.

William McGhee: I would say that the figure of 80 per cent is explained in part by what Duncan Orr-Ewing has said with regard to different sites. However, the bulk of ancient and native woodlands in Scotland suffer from a certain impact.

The Convener: What opportunity do you have to make such points and influence the figures?

William McGhee: We get an opportunity to chew SNH's ear and I sit on a round table on deer with Duncan Orr-Ewing, although, as I think Duncan will agree, it is fair to say that there has been a robust push back. I suppose that that is it as far as opportunity is concerned. We are therefore very grateful for the opportunity provided by this meeting, and I thank the committee for it.

Mark Ruskell: Is that issue raised at the Scottish biodiversity committee, at which all the stakeholders and the minister get round the table? As you have said, it has not met for a year, but could it be the forum for resolving some of the issues that have been raised? We are talking about quite a high-level target, and the Scottish Government could say, "It's great—we're meeting this." However, there might be a wider and more detailed issue under all of that, and we need to understand the reality of the situation on the ground.

The Convener: Before anyone responds, I note Mark Ruskell's comment that the biodiversity committee has not met for a year, but someone said earlier that it has not met since the election. Can somebody clarify when it last met?

Duncan Orr-Ewing: I do not know, but I know for definite that it has not met since the election.

The Convener: Okay. The committee can look into that. Does anybody want to respond to Mark Ruskell's points?

Adam Smith: He has asked a very good question. The 80 per cent figure is encouraging, but we have an issue around the resilience of that 80 per cent. If there is something behind that figure that we are aware of, it is, as we know from one of our projects—the Langholm moor demonstration project, in which we are engaged with the RSPB, SNH and others—the issue of resilience with regard to ensuring that that gain is kept good, and we need to focus on the motivation and incentive to keep that going. It is all very well and good getting to the apparently positive position that we are in now, but we need to be aware of how resilient things are in the background. It is not at all clear at this stage just what will keep the sites in good condition.

Mark Ruskell: Does anyone have further points about funding? We already talked about the potential withdrawal of EU funding such as LIFE+. Are there any other financial challenges around actions that we can take to ensure that the sites are in favourable condition?

Duncan Orr-Ewing: Progress in this area was previously driven by a hard-and-fast target set by SNH but, more recently, things have become a bit more flexible and nebulous. It would be useful to have that target reinstated to concentrate people's minds on what needs to be achieved.

There are other areas to look at, particularly around agriculture and forestry. Rhododendron removal, which I mentioned earlier, could be a major area for making progress to improve the target. There is also the fact that 18 per cent of sites are in unfavourable condition because of overgrazing issues to do with deer management or agricultural overgrazing. Addressing all those issues would be feasible.

Funding is also an issue. As I have mentioned, we have been involved with the LIFE bid for the western Atlantic woodland project, which aims to address unfavourable conditions in a number of western Atlantic special areas of conservation from Morvern down to Loch Lomond. Unfortunately, because of the uncertainty created by Brexit with regard to the future of LIFE funding and concerns that the RSPB will be left with a £5 million black hole that we will have to support and that we might let down the more than 300 landowners involved in that project, we have had to pause and rethink with our partners. As I have said, a number of the major projects on the Scottish biodiversity strategy route map that, like the western Atlantic woodland project, helped deliver favourable conditions on sites are at risk because of current funding concerns.

Chris Ellis: The favourable condition percentages for species might present an opportunity, given that populations in designated sites do not exist in isolation. Their size and genetic diversity depend on linkages to other populations in the wider landscape. Long-lived

species may persist for a long time in a protected site, but in a process of decline that could take decades or centuries. As a result, we should see those percentages not as the end point of success but as an opportunity, through greater ecological connectivity, to protect those species in the future.

The Convener: We have been told that considerable investment is being made and that good progress is being made with some high-profile species, but there is also evidence that other species and habitats are not faring as well. Why is that the case? What more do we need to do? Do we need to change the focus or emphasis?

Duncan Orr-Ewing: The key tool for dealing with the wider and more dispersed species in our landscape are the three pillars for delivery—site, species and wider countryside. As wider countryside measures are often driven by or delivered through agri-environment schemes or forestry schemes, it would, given the Brexit situation, be very helpful to have some certainty about the future of such schemes. That would allow people—private landowners, ENGOs and others—to invest and to help improve the prospects of those species.

Adam Smith: I make a special plea for the land management side to be given its head on this, because these special species are an absolutely fantastic hook for land managers. Some of us—perhaps all of us—struggle with the idea of ecosystem services, but if you are working to support a species, that is a clear management target.

The Scottish biodiversity strategy could be usefully developed in three ways. First, you could build on its capacity to adapt to changes in the current landscape, both in relation to predation pressure and climate control. Such an adaptive management approach does not necessarily need money; it might need a policy support mechanism.

Secondly, you could facilitate land managers to help themselves. There is a lot of interest in farmers and moor owners coming together. Recently, the environmental co-operation action fund brought together a group of moorland owners in the Cairngorms, and we are forming farmer clusters in Fife and Midlothian. Those guys are self-motivated to do conservation, but they need some help and facilitation to do that.

Finally, there is, again, the issue of co-ordination and clarity of purpose in our biodiversity requirements. That would be enormously helpful for people who are being challenged to produce certain species.

Overall, this section could very easily be ramped up with the active support of and engagement with the land management community. Having enough capacity for that bit is probably what is missing in the SBS at the moment.

Calum Duncan: All those points can be extended to the sea, because there is a need for a three-pillar approach to biodiversity at sea, too. The marine nature conservation strategy, which the 2020 strategy recognises is important to delivering for biodiversity, includes the first statement that a three-pillar approach is needed. It is not just about MPAs; it is about marine planning and fisheries management delivering for biodiversity and species protection at sea.

The marine nature conservation strategy also recognises the importance of taking an adaptive approach to network development and management. SNH's 2020 route map recognises that 16 per cent of the sea is now in MPAs but that future challenges include developing the evidence base on MPAs. We need that evidence base to identify not only other potential places for protection but how those sites are doing in order to try to demonstrate the benefits. We have seen that happening at Lamlash bay recently, with the University of York and University of Bangor study showing that the catch per unit of effort for the lobsters there has more than doubled.

The other challenge is to deliver measures to manage MPAs effectively. We hope that, if we can get more evidence of the benefits, more and more stakeholders will be supportive. As Duncan Orr-Ewing says, we very much view them as jewels, not as a drag.

I also support what SNH has said about meeting those challenges for effective management, which is what we need for the Aichi targets. We need to collaborate, and I put on record our commitment to continuing to do that. There has been a lot of work, including that overseen by this committee's predecessor, and a lot of progress has been made. We are committed to helping that progress continue with forthcoming sites and management measures.

11:45

William McGhee: Forestry is a double-edged sword in that respect. On the one hand, it can play a very beneficial role and provide habitat for species that are not doing so well; on the other, it can be viewed as a threat, depending on the type of forestry that is being pursued.

From our perspective, the joined-up thinking bit would be for this committee—and grouping, if you like—to be in dialogue with the Rural Economy and Connectivity Committee about the nature of forestry expansion and what is happening on the hillsides and to make a plea for having a more diverse and sympathetic approach to forestry that landowners, communities and environmental

NGOs can all sign up to. I think that that would be a positive move. Forestry expansion is going to happen, so let us have it where it benefits biodiversity and communities.

The Convener: Picking up on the marine point, I believe that Claudia Beamish has a question.

Claudia Beamish: I have been very pleased this morning to hear marine and coastal issues being threaded through the whole biodiversity discussion. That has not always been the case; in the past, such issues have been seen as a bit separate—and obviously they are not.

A lot has already been highlighted, but perhaps the panel have other comments to build on Calum Duncan's remarks about gaps in coverage, on the marine ecological network and also on the actions that can be taken to ensure the success of the MPAs. I know that Calum has touched on those, but are there other views on the key barriers in that respect?

We have also talked about having so many strategies, but I want to ask about the relevance of the national and regional marine plans in relation to biodiversity, too. Any observations that anyone has on such questions—or more broadly on marine biodiversity—would be very welcome at this stage.

The Convener: Calum Duncan—thankfully. [*Laughter*.]

Calum Duncan: I mentioned the three-pillar approach. The wider seas pillar is all about delivering for biodiversity in marine nature conservation through wider seas measures such as inshore fisheries management but also—crucially—through regional marine planning. I am glad that you have asked the question, because it allows me to recognise that sustainable management of the sea and delivery for biodiversity are about managing all activities, including aquaculture, oil and gas development, renewables, recreational activity and so on.

Regional marine planning is the excellent opportunity that we have to do that. Obviously, we are in its early stages. We hope that it will be effectively resourced and appropriate stakeholders involved; we also hope that it is integrated with the aims of the nature conservation strategy and the biodiversity strategy to ensure that it looks practically at biodiversity protection and enhancement, too. There are lots of opportunities there. It is an important space for the kind of stakeholder collaboration that, for example, is live at the minute in the Clyde. We are committed to constructive engagement with that.

As for gaps, I have quite consciously mentioned that issue. Great bounds have been made over the past few years including 30 new nature conservation MPAs, Europe's largest harbour porpoise SAC and consultations on 10 seabird and five offshore special protection areas. We very much welcome Roseanna Cunningham's announcement of the historic MPA for the Iona I last week and of the demonstration and research MPA for Fair Isle at our annual conference in Edinburgh.

That brings me to Ms Beamish's point about barriers and about being progressive and constructive. Fair Isle is an excellent example of that approach, because the proposal was supported by a whole range of stakeholders. We wish it well. We know that, among others, the Shetland Fishermen's Association, the Fair Isle marine environment and tourism initiative—or FIMETI—and the National Trust for Scotland were involved in that.

There are different examples that I can highlight. I touched on Lamlash bay, and there has been a lot of discussion about south Arran. We think that the outcome for that site was appropriate, but the important thing is that, no matter where you are on the scale of approach or stakeholder perspective, MPA co-management is really important on the Sound of Barra, Arran, Fair Isle and wherever else. We like to see that sort of collaborative approach, and we like to be involved.

We lead on a citizens science project called seasearch, in which we have citizen scientist divers under the water finding new places. We had them in Scapa Flow, finding new records of flame shell beds, fan mussels and horse mussel beds, but they are also finding evidence of damage or decline in places. We are committed to contributing to the evidence base as well as contributing constructively and transparently to policy management discussions.

Mark Ruskell: What is the most important change that the inshore fisheries bill could make?

Calum Duncan: This is the first programme for government that has included a commitment to inshore fishing legislation. It is a big, complex topic, but we hope that the inshore fishing bill will help deliver an ecosystem-based approach to managing inshore fishing. That approach will need to consider spatial management in relation to using different gear and address the issue of gear conflict and how wider management of inshore fishing outside of MPAs can deliver biodiversity benefits as set out in the biodiversity strategy. Conversely, the biodiversity strategy also sets out that MPAs can aid the recovery of commercial fish and shellfish. We hope that all of those things can be looked at in an integrated way to get the sustainable outcome that all coastal communities want.

The Convener: I am going to move on to agriculture in a moment.

Comment has been made about the opportunity to influence policy that impacts on biodiversity. The muirburn code is currently being reviewed and we are all aware of the competing views on the benefits or otherwise of muirburn. What opportunity have you had to feed into that process, particularly from a biodiversity standpoint?

Adam Smith: We have had an absolutely first-class opportunity to do so. We warmly welcome the fact that the code is being restructured by Scotland's moorland forum, which is a very inclusive body with a large range of representation. The organisations that are represented on the muirburn code restructuring group are well balanced and will bring a good depth of experience. I have confidence that it will represent the correct balance of peatland—soil—vegetation and aerial biodiversity.

Duncan Orr-Ewing: Like Adam Smith, I am involved in Scotland's moorland forum and we have had input to the development of the new muirburn code. We have not yet seen a draft document that pulls all the various group work together. As Adam Smith said, it is important that peatland conservation has a central role in the new guidance. It is critical that the code also covers grass burning in parts of the west coast in particular, where grass fires form part of agricultural management. In recent years, there have been some very serious and out-of-control grass fires, which have caused significant damage to natural habitats in the west coast of Scotland.

The Convener: Okay. Let us move on and look at agriculture and the CAP. Alexander Burnett will lead on that.

Alexander Burnett: Duncan Orr-Ewing mentioned the percentage of Scotland that needs to be managed for conservation, and the role of the private sector. How can schemes such as the wildlife estates Scotland scheme, of which I am a member, be encouraged? What role can they play? We have heard a bit about agri-environment schemes and CAP reform. How will they play a role, given the current Brexit issues?

The Convener: I have an additional question. What are the demonstration farms that are being run by the Game and Wildlife Conservation Trust and the James Hutton Institute telling us?

Adam Smith: I will try to fit those various elements together. The demonstration farms are there to shine a spotlight on some of the issues that Mr Burnett raised. The purpose of the farm that we run up in Aberdeenshire is to demonstrate a real-world farm, so it has to turn an honest buck on the bottom line and show how that can be compatible with wildlife. One of the priority species in the document, the curlew, is one of the focal species for our farm.

We are trying to achieve a network of demonstration farms by working with the James Hutton Institute, which has the splendid facility at Glensaugh, and Scotland's Rural College, which has an excellent facility at Kirkton near Crianlarich. If we can build those three farms into a network—we already have a joint monitoring proposition in place—and then build further farms on to that, Scotland's land management and farming community will have a series of places that they can come and peer into and have a look at the mistakes that we are making and some of the successes that we are achieving, and they can go away reasonably reassured that these are real-world propositions.

It is quite difficult in the cases of Kirkton and Glensaugh, because they have clearly defined manipulative and experimental roles, but that brings its own value. It is easier to look inside what we are doing and see the incredible importance of subsidy in its current format and in whatever new format we will have to deal with after 2019. We are tenant hill-edge farmers, and it is really driving home to me, as a trained ecologist, how difficult that life is, and especially how difficult it is to put a farming system in place at the same time as having an awareness of what agri-environment is needed to bring up families of curlews, lapwings and other things.

Earlier, I praised the agri-environment scheme as a success. It is very important that it exists, but it could be improved enormously. This committee and the Rural Economy and Connectivity Committee are well aware of the challenges in the delivery of the agri-environment climate scheme. There is enormous room for improvement in the delivery and focus of that. Like William McGhee, I hope that this committee will liaise strongly with the Rural Economy and Connectivity Committee and ensure that the evidence that you receive is translated across into the future support structures. That is vital.

Duncan Orr-Ewing: The RSPB is also a member of the wildlife estates Scotland scheme. Our Abernethy reserve in Strathspey was one of the first sites to gain level 2 accreditation and we were involved in the steering group that set up the scheme and designed the criteria. We are heavily involved in that, and it has a demonstration role to play—

Alexander Burnett: I know about your involvement in that, which is excellent. My question was about how we can promote the scheme more in order to get more people involved.

Duncan Orr-Ewing: That is a challenge. The scheme is funded by Scottish Land & Estates internally; it has a project manager whose job it is to work on that. I understand that progress on getting people from stage 1 to stage 2 has been quite slow, but SLE is looking at ways to improve that.

In addition, as Adam Smith is, we are involved in discussions with SRUC and JHI about demonstration farms, which we think have an important role to play. We are particularly involved with SRUC at its Crighton site, where we have a partnership project.

12:00

I also highlight that our nature reserves play a critical role. On the Western Isles at Balranald, we manage a site that belongs to the local crofters in partnership with them; we have done that for many years. It is a successful project that demonstrates best practice in agri-environment and management for corncrakes.

My final point is about the rural payments and inspections division suite of monitor farms. There is a case that more could be done on those sites to demonstrate best practice for biodiversity. They do great things for water quality, environmental management and so on, but they could do more for biodiversity.

The Convener: That leads me on to my next question. How effective are the current greening measures within the CAP for maintaining and enhancing biodiversity? Adam Smith is laughing; I should have let him in first, I suspect.

Adam Smith: I am laughing only because it is such a horribly difficult question to answer. When greening is done well and the spirit of greening is entered into fully, it can make a useful contribution. There is no question about that. Unfortunately, many farmers are very creative people and they will see ways round it. For example, we see the return of what is, in effect, the set-aside area—farmers choosing to fulfil their greening requirements simply by setting aside a great big lump of a field and not doing anything with it. That is not helpful for soils or water or birds, bugs, bees or anything else.

Greening needs to be suitably improved. Arguably, Brexit provides an opportunity to do that, but the structure of greening, as it was handed down from the European Union, was not too bad. It is a matter of debate that the way in which it has been implemented in Scotland could certainly be improved.

The Convener: To be fair to farmers, you would find agreement from them on that.

Adam Smith: That is absolutely true.

Bruce Wilson: Whether we stay in the EU or leave it, there is going to be a lot less money floating around for such schemes, so it is vital that we get whatever comes next in terms of CAP right. That might mean not thinking about it as we do in the pillar system, where we have the single farm payment idea and agri-environment on the side. It might be more about paying for what is provided in general.

With reference to David Stewart's point about the WTO rules, we will have to be mindful of what we can provide for. That is where I start to favour the idea of a range of land managers being paid for the environmental services that they provide. Food provision could be one of those services, but there has to be a balance between the other things that we now seek from our land.

William McGhee: I endorse what Adam Smith has said. In the forestry and the woodland sector, we have not been that impressed by what has come out for a considerable period of time, ever since environmentally sensitive areas were introduced. Engagement with farmers and landowners is necessary to get them to recognise what they are doing. Usually, that will come down to money.

Somebody asked about the take-up of the forestry scheme. One of the things that happened was that we shifted the farm woodland premium scheme, in which, if you put a certain number of hectares on your piece of farm in the uplands, you would receive something like £60 per hectare per annum every year for 15 years. At a stroke, last year, we disappeared it, and people now get the single farm payment equivalent, which might be a tenner, or 20 quid. Now Confor and others in the forest industry wander around asking themselves why farmers are not keen to take up those schemes. That is a very simplistic and quite a blunt view.

The Convener: Nevertheless, it is interesting. Adam Smith will wrap up the discussion on this topic.

Adam Smith: Money is an important incentive, but so is a wide range of other things. One issue that we have consistently come across is the availability of information about what the change might do for people—and not just financially. I am quite sure that in a silvopastoral system—in which animals are grazed in among trees—there could be a much better tie-up between various bits of farming and forestry, for example. The same could be true for forestry and sporting interests. It comes down not to throwing money at people to do something, but to giving them more information about and knowledge of what such approaches could do for their businesses. That is the facilitation bit that I was talking about.

The Convener: Mark Ruskell wants to come in with a supplementary.

Mark Ruskell: My point is directly related to that issue. We have seen the letting of the contract for the farm advisory service. To what extent is that building in those approaches to biodiversity?

Adam Smith: We hope that such approaches will be at the forefront of that. If SRUC gets a big bite of that, it has a reasonably good track record. Catherine Lloyd might want to reflect on the fact that the Farming and Wildlife Advisory Group and, indeed, our advisory services can, with a bit of advice, make a very strong difference to how farmers do something.

Most agri-environment schemes can be made to work very effectively. It depends on the level of commitment and the information and advice that the people on the ground get. That is critically important. The committee might want to press to make sure that that happens well.

The Convener: Thank you for that. We will wrap up the session by looking at the Aichi interim report. It indicates that the evidence base is incomplete and that

"The collation of data and information across such a wide range of areas from financial resource allocation to knowledge transfer and conserved genetic resources has presented considerable challenges."

What challenges have there been in developing the evidence base? How are those being overcome? How might they be overcome? That is a nice, easy question to finish on. Who wants to go first?

William McGhee: Woodlands. If we have a commonly recognised baseline for woodlands of any description in a good—favourable—condition for biodiversity, that would be a great starting point. SNH consulted widely before it developed what it has been using in that regard. The Forestry Commission uses something subtly different. As in all sectors, it is possible to find half a dozen different systems. It would be good to have common agreement about what biodiverse woodland should look like before we send people out to go and measure it and then report back on it.

The Convener: That is a very fair point.

Bruce Wilson: I again highlight the vital nature of the ecosystem health indicators in that regard. SNH has said:

"Ecosystem Health Indicators will help monitor progress towards the 2020 Convention on Biological Diversity"

Aichi targets. They need to be in place in order for us to track progress.

The Convener: Alexander Burnett wants to come in.

Alexander Burnett: On forestry, is William McGhee talking about a scheme separate to forest certification under the forest management plan or another scheme on top to try and quantify biodiversity in forestry or well-managed forestry?

William McGhee: You have got two or three things going on in your question. Certification is—

Alexander Burnett: You talked about having different criteria for measuring forests.

William McGhee: Yes, in terms of biodiversity by itself. If we are looking just at biodiversity, SNH has a system, with a set of scoring sheets and whatever else, and it will send people out to survey and they will go and do that work. Whether those woodlands have anything to do with the UK woodland assurance standard or FSC is, from their perspective, neither here nor there. I made the point about the 80 per cent because we commonly find that the bar is not set sufficiently high to be able to come back and say that the woodland was in good condition. That is either because SNH has not consulted widely enough or there has not been enough round-table input into the condition itself.

Alexander Burnett: Does the forest certification scheme not set the bar high enough? Should we not be encouraging people to go down that route?

William McGhee: It sets the bar—that is another discussion—but it does not necessarily look only at biodiversity. It looks at a range of things.

Calum Duncan: I will respond directly to that point. It underlines the importance of a well-resourced marine monitoring strategy. NGOs can help there. I have mentioned Seasearch. We have also been doing tagging work with the University of Exeter on basking sharks, for example.

That comment enables me to re-respond to Claudia Beamish, because I forgot to mention something. Next year, we are looking forward to four further nature conservation marine protection areas, including for basking shark, Risso's dolphins, minke whale and northern sea fan communities. Investment to get the evidence, given the challenges of marine monitoring and conservation, particularly with it being underwater, is really important.

Chris Ellis: This might be a fairly simplistic view, but the challenge is that Scotland's biodiversity route map has a very atomised structure. There are targets and actions and it is relatively easy to say whether an action has been delivered. However, the progress towards the Aichi targets broadens that out again and takes a much more global perspective on Scotland's biodiversity progress and, by its nature, it is going

to be more challenging to gather data at that scale.

The Convener: Thank you. Finally, I think, we have Adam Smith.

Adam Smith: I have a short point. We are not specialists in this area at all, but colleagues from the JHI have reflected that it has been very difficult to complete a very simple thing—the habitat map of Scotland—which would have helped enormously. We seem to have been waiting for that extremely important inventory document for a very long time. I was distressed to hear that we might have to wait even longer for it. The committee might want to be aware of the B5 Aichi target on habitat loss halved or reduced. It says:

"By 2019 the Habitat Map of Scotland will provide a comprehensive baseline".

Will you all make sure that that really happens? Without knowing what we have, it is pretty hard to conserve it.

The Convener: On that note, I thank all the witnesses for their contribution this morning. I think that I can speak on behalf of the entire committee and say that their evidence has been incredibly thought-provoking and helpful. We will take away your evidence and deliberate on it.

I suspend the meeting briefly to allow the witnesses to leave. We will reconvene in a few minutes.

12:12

Meeting suspended.

12:17

On resuming—

Petition

Control of Wild Geese (PE1490)

The Convener: The third item on the agenda is consideration of petition PE1490, by Patrick Krause, on the control of wild geese numbers. Our consideration follows a response from the Cabinet Secretary for Environment, Climate Change and Land Reform.

A number of suggested approaches are in front of us. Does anybody wish to comment on them?

Angus MacDonald: The petition was with the previous Rural Affairs, Climate Change and Environment Committee for some time. It is clear that there is still an issue, particularly on the islands. However, the problem is now spreading over to the mainland as well.

There is certainly an argument for awaiting the publication of SNH's review of geese management and approaching the petitioner, Patrick Krause, to get some feedback from him on how he thinks progress has been made. Perhaps we can also get some detail from the crofters' point of view on whether progress is being made.

The Convener: Absolutely.

Claudia Beamish: I very much support what Angus MacDonald has said. It is important to get that information at this stage so that it is ready when we see the SNH review.

Like the convener, I was a member of the Rural Affairs, Climate Change and Environment Committee, and I know that the problem is, if not intractable—I will be careful about what I say—a real challenge and that it needs to be addressed from the points of view of biodiversity and the economy of our Highlands and Islands.

The Convener: The message has come out loud and clear from the committee that we take the matter very seriously, and it is clear that we will pay a lot of attention to the content of the SNH review of geese management.

Are we happy to proceed on the basis that has been suggested of awaiting the publication of SNH's review of geese management policy, which we will consider in due course, and in the meantime writing to the petitioner to ask for his input on where he thinks we are at with the issue, with some specific points worked into that? We could take the matter from there.

Finlay Carson: I want to ask a daft laddie question. Is the problem restricted to the west

coast islands? Could issues potentially arise in other areas in which there are migratory geese?

The Convener: We also have problems on the mainland—Angus MacDonald touched on that. If I remember correctly, there have been issues in Aberdeenshire. The problem is in more places than the Western Isles.

Finlay Carson: Can we ensure that the matter is opened right out and that not only the petition is considered?

Angus MacDonald: On the previous committee, the former member Alex Fergusson highlighted that a problem was starting in the Solway as well.

The Convener: Yes. There is also an issue in Orkney, which the previous committee witnessed for itself. There is sightedness here that the issue is Scotland wide.

Emma Harper: On Monday, I spoke to Chris Rollie from the RSPB at Mersehead, who said that the issue in the Solway is that people do not want to go down the road of lethal scaring. They seem to be quite okay with the management and the numbers at the moment, especially for barnacle geese, although they have issues with greylag geese.

The Convener: Right. To revert to the original point, are members happy to take the approach that was mentioned? We have clearly indicated that we have considerable interest in the issue and we will continue to have an interest in it. Are members happy to proceed on that basis?

Members *indicated agreement.*

The Convener: At the committee's next meeting, on 8 November, we will take evidence for our budget scrutiny from Marine Scotland and SNH. As agreed earlier, we will now move into private session.

12:22

Meeting continued in private until 12:49.

Published in Edinburgh by the Scottish Parliamentary Corporate Body, the Scottish Parliament, Edinburgh, EH99 1SP

All documents are available on
the Scottish Parliament website at:

www.parliament.scot

Information on non-endorsed print suppliers
is available here:

www.parliament.scot/documents

For information on the Scottish Parliament contact
Public Information on:

Telephone: 0131 348 5000
Textphone: 0800 092 7100
Email: sp.info@parliament.scot

The Scottish Parliament
Pàrlamaid na h-Alba