OFFICIAL REPORT
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Rural Affairs and Islands Committee

Wednesday 11 March 2026

Session 6

The Scottish Parliament
Pàrlamaid na h-Alba

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RURAL AFFAIRS AND ISLANDS COMMITTEE
10th Meeting 2026, Session 6

CONVENER

*Finlay Carson (Galloway and West Dumfries) (Con)

DEPUTY CONVENER

*Beatrice Wishart (Shetland Islands) (LD)

COMMITTEE MEMBERS

*Alasdair Allan (Na h-Eileanan an Iar) (SNP)
*Ariane Burgess (Highlands and Islands) (Green)
*Emma Harper (South Scotland) (SNP)
*Emma Roddick (Highlands and Islands) (SNP)
*Evelyn Tweed (Stirling) (SNP)
*Rhoda Grant (Highlands and Islands) (Lab)
*Tim Eagle (Highlands and Islands) (Con)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Charles Allan (Scottish Government)
Donald Fraser (NatureScot)
Hazel Bartels (Scottish Government)
Jill Barber (Scottish Government)
Sam Turner (Scottish Government)
Mairi Gougeon (Cabinet Secretary for Rural Affairs, Land Reform and Islands)

CLERK TO THE COMMITTEE

Emma Johnston

LOCATION

The Mary Fairfax Somerville Room (CR2)

Scottish Parliament

Rural Affairs and Islands Committee

Wednesday 11 March 2026

[The Convener opened the meeting at 09:13]

Decision on Taking Business in Private

The Convener (Finlay Carson): Good morning and welcome to the 10th meeting in 2026 of the Rural Affairs and Islands Committee. Before we begin, I ask everyone to ensure that all electronic devices are switched to silent.

Our first agenda item is a decision on whether to consider our annual and legacy reports in private at our next meeting. Do members agree to do so?

Members *indicated agreement*.

Salmon Farming in Scotland

09:13

The Convener: Our next agenda item is the conclusion of our work on assessing the progress that has been made since our follow-up inquiry on salmon farming by taking evidence on the subject from the Scottish Government.

I welcome to the meeting Mairi Gougeon, the Cabinet Secretary for Rural Affairs, Land Reform and Islands, and her officials. The cabinet secretary is joined by Jill Barber, who is the head of aquaculture development; Hazel Bartels, who is the senior delivery lead for farmed fish health and innovation; and Charles Allan, who is the senior delivery lead for aquaculture, fish health and biosecurity.

I also welcome Edward Mountain MSP, whom I will bring in to ask his questions at the end. I hand over to Edward to make a declaration of interests.

Edward Mountain (Highlands and Islands) (Con): I remind committee members and members of the public that my entry in the register of members' interests shows that I am a joint owner of a wild salmon fishery on the River Spey. The River Spey is on the east coast of Scotland and is not directly affected by salmon farming on the west coast of Scotland.

The Convener: Thank you, Mr Mountain. I invite the cabinet secretary to make a brief opening statement.

09:15

The Cabinet Secretary for Rural Affairs, Land Reform and Islands (Mairi Gougeon): Good morning. I thank the committee for the opportunity to update it on the progress that we have made just over one year on from its report on salmon farming in Scotland. We took seriously the recommendations in the committee's report, and, following careful consideration, I set out a targeted programme in response, including how best to make progress on the issues that were raised, supported by evidence, and in what order.

I am grateful to the committee for its insights, as well as to stakeholders more broadly for their input, in helping us to make effective prioritisation decisions and in advancing the conversation on a sustainable future for salmon farming in Scotland, to which the Government remains fully committed.

On fish health and welfare—and, in particular, given the concerns that some sites were experiencing persistent high mortality—Scottish Government scientists, fish health experts and policy officials have worked at pace to deliver a robust analytical framework to determine whether

such sites exist, what actions are being taken by producers to tackle such mortality and, ultimately, to evidence whether further Government intervention is required beyond our existing regulation.

The preliminary conclusion is that persistent elevated mortality is not a systemic issue for Scottish marine salmon sites. Only a small fraction of sites were identified as having such mortality, and the work showed that all producers already take a considerable range of responsible and prompt actions to tackle and reduce persistent mortality where it occurs. As a result, I do not believe that further regulatory action is warranted at this time. It is still the Scottish Government's position, which is shared by the industry, that mortality should be managed to the lowest possible levels. We continue to support the sector through different workstreams, including by facilitating the science, innovation and strategic approaches that are necessary to address those challenges.

On fish welfare, I have already committed to progressing welfare standards for farmed fish under the Animal Health and Welfare (Scotland) Act 2006. Delivery will be progressed this year by working with stakeholders in the farmed fish sector, as well as with veterinary experts, regulators and animal welfare organisations, to deliver guidance that is both robust and operationally feasible. We are also strengthening enforcement of farmed fish welfare by working with the Animal and Plant Health Agency to increase the number of trained fish inspectors and the number of inspections that are carried out per year, and to require those inspections to focus on adherence to the relevant welfare standards.

To improve transparency across the sector, the Scottish Environment Protection Agency has updated the Scotland's Aquaculture website to provide better access to important data and information. It has also launched a discovery project to prototype a new digital solution for co-ordinated regulation, with the aim of rolling that out next year. Meanwhile, we have published a mortality data topic sheet to enhance the understanding and use of all the data that is published regarding fish health.

On spatial planning and consenting, we have delivered on a programme for government commitment to confirm that local planning authorities are responsible for fish farm planning controls and to confirm SEPA as the lead regulator for fish farm discharges within the three to 12 nautical mile zone, thereby future-proofing regulation as fish farms look to move into more exposed locations.

We have also adopted Scotland's first regional marine plans: the plan for the Shetland islands region, which we adopted in December last year, and the plan for Orkney, which we adopted in February this year. The adoption of those plans, which marks a significant milestone for marine planning in Scotland, enables a community-led approach to be taken to marine spatial planning, to reflect local circumstances. We have also worked to support more proposals to be made as part of our fish farm consenting pilots, which are operating in the Shetland and Highland local authority areas, and we are addressing the recommendations of an initial evaluation exercise.

The Scottish Government is highly supportive of sector innovation, and work to ensure that the activities of the Sustainable Aquaculture Innovation Centre continue effectively into the future is near completion. We have also continued to work with SEPA to implement a monitoring programme to support the sea lice regulatory framework. The programme, which is examining sea trout on the west coast, the Western Isles and Orkney, was implemented last year, and, this year, it will be enhanced through the support of the Scottish Government. Although there are appeals relating to elements of SEPA's framework, appeal mechanisms are part of a fair consenting system, and due process will be followed. To ensure that Scotland is taking the right approach for the longer term, our chief scientific adviser for marine is working to consider the scientific underpinning of SEPA's sea lice framework.

It is important that I finish by reflecting on the value of salmon farming in Scotland. The latest Scottish fish farm production survey reported that, in 2024, salmon farming achieved a production value of more than £1.3 billion, and His Majesty's Revenue and Customs statistics revealed that salmon exports were worth £828 million in 2025. We know that the wider sector generated £468 million in gross value added in 2023, and that it supports more than 11,000 jobs across the wider supply chain. Beyond those headline statistics, the sector also supports community benefit through its contribution to the Scottish consolidated fund, which is distributed to coastal local authorities.

As ever, there is always more work to do. Although I am pleased to discuss with the committee the progress that has been made over the past 12 months, we will continue to deliver the work programme that we set out in response to the committee's report.

I am happy to take any questions that the committee might have.

The Convener: Thank you, cabinet secretary. We have allocated approximately two hours for this session. As expected, we have quite a few

questions to get through, so succinct questions and answers would be helpful.

I will kick off by asking about mandatory mortality reporting, which is an issue that remains central not only to fish health and environmental protection, but, equally importantly, to confidence in the aquaculture sector and its long-term sustainability.

Back in January 2025, the committee set out clear and practical recommendations that were aimed at reducing persistently high mortality in Scottish salmon farms. One thing that we called for was stronger regulatory powers for the likes of the fish health inspectorate—more specifically, we called for the inspectorate to have the ability to limit or halt production at sites that experience consistently high mortality rates. The committee also recommended the establishment of agreed mortality thresholds that would trigger interventions such as improved environmental risk modelling and so on. We also looked at cleaner fish and freshwater losses.

There were significant concerns about transparency and how the lack of transparency impacted on public confidence. However, we were told that a requirement to be transparent would be a burden on the industry. Why do you consider avoiding an administrative burden to be more important than ensuring transparency and public confidence in the industry?

Mairi Gougeon: You have raised a few issues, which I will try to address. However, it is not a case of our saying that avoiding a burden for the industry is more important than ensuring transparency and public confidence.

In previous committee appearances, as well as in response to the recommendations in the committee's report and the previous inquiry, I have tried to highlight the level of data that is already published. When it comes to mortality data, the salmon farming sector is very transparent with regard to the volume and quantity of information that is published, especially in comparison with other sectors.

Along with the letter that we recently sent to the committee, we sent over a topic sheet. Part of the issue is about how some of that data can be communicated and how easy it is to navigate. We collect data for different purposes, and different organisations collect it, which adds to the wider landscape. A number of different pieces of work have been done. For example, work has been done on the Scotland's Aquaculture website—which the committee previously raised as an issue—to make it a bit more intuitive and user-friendly and to make the information that is there easier to navigate. We continue to collect that information for different purposes, as I set out in my response to the committee's letter.

If we are looking to regulate for more information to be provided, it is important that we ask ourselves, "Why do we need it?" As the committee has heard in previous evidence, particularly from the regulators and other bodies, we collect the information that we need for the purposes of satisfying the regulations that we have at the moment, and we do not feel that there is a need to collect further information beyond what is already there.

You also touched on the comments that were made about data and information on cleaner fish. A lot of work has been undertaken over the past year. We have had the report from the Scottish Animal Welfare Commission, which talks about various pieces of work that need to be done. I also know that Ben Hadfield from Salmon Scotland said in his evidence to the committee on 25 February that it would look to furnish more information. Cleaner fish is one area where it would be helpful to have more information and data.

However, again, I believe that we have the data for the purposes for which we need it. Over and above that, an awful lot of information is already published and available.

The Convener: That is the issue. We know that individual farms collect a lot more data than they are mandated to publish, as part of their good animal husbandry, animal welfare and general management of sites. However, if the publication of that data was mandatory, it would give more confidence that it was accurate.

We asked the industry and regulators to agree mortality thresholds that would trigger intervention, as that is key to ensuring that fish farms that are not performing, or that regularly have high levels of mortality, are dealt with, moved or whatever. Why were mortality thresholds that would trigger intervention not developed as part of the framework?

Mairi Gougeon: I am sorry. Do you mean in relation to the model that was sent to the committee on persistent high mortality?

The Convener: Yes. We can model it, but no mortality thresholds that would trigger Government intervention were identified.

Mairi Gougeon: First, I want to respond to your point about there not being trust in the information that is there. Charles Allan might want to come in on this in a minute, but, under the powers that the FHI has, it has access to that information. We would not publish information that was not accurate or that we had concerns about. Of course, mistakes can occasionally be made, but they would be swiftly corrected. We have trust in

the information that is made publicly available, and more of those records are available for inspection by the FHI.

I will make a few points in relation to the modelling work that was sent to the committee. First, based on the recommendations that the committee made last year, we had to establish what persistent high mortality was, what it looked like and how we could assess it. That is what the model that has been presented to the committee is about. In addition, last year, I provided an update on some of the terms that we were considering, in order to get the committee's thoughts on those. I note that the modelling work that has been presented to the committee has not yet been peer reviewed—it is still going through that process. However, extensive work has gone into that modelling.

I will ask Charles Allan and Hazel Bartels to provide a bit more detail on that, if that would be helpful.

Hazel Bartels (Scottish Government): The recommendation was to regulate in relation to sites that have persistent elevated mortality. We considered that it was not relevant to regulate without understanding what persistent elevated mortality means. The analytical framework was developed in order to explore that concept, work through what that could mean in Scotland and understand the shape of the data with regard to that. That work was done in order to flag, at a statistically significant level, what "persistence" or "elevated" might mean in that context.

That information was set out to the committee in September, and also in the recent update. However, it is challenging to work out what those terms might mean. There is an element of judgment in that level. However, we worked with our analytical and fish health experts to come up with a meaningful number, which is why the level has been set the way it has. It should be said that the 90th percentile set within that analysis is drawn out of the data. There is a number associated with that. That works out to a percentage within the array of information that we are talking about, but it is drawn from the data, looking at relative performance within the sector to understand where the outliers within that are. It is a statistical piece of work, rather than trying to set something from outside on to it.

Do you want to talk about that a bit more, Charles?

The Convener: I will come back in first. I take on board the Government's advanced analytical understanding of mortality. However, that is where the approach falls short and is not adequate or sufficient against the committee's recommendations, because it avoids any regulatory or proactive modelling to deal with it. Is that something that you will develop? Once you understand what persistent high mortality is, and when you can see where it is and it triggers a threshold, do you intend to introduce regulatory proceedings?

09:30

Mairi Gougeon: That is the point that we are trying to make. First, before we determine whether we need to regulate, we need to discover whether there is a problem and how we can define the terms that are used. The model that we have presented is about identifying what persistent high mortality is and whether it exists. We need to consider whether the modelling identifies a problem. If it does, we would then look to take further regulatory action.

Again, the work that has been done is still in the process of peer review but, as the paper sets out, the outcomes of that modelling suggest that there is not a systemic issue with persistent high mortality across salmon farms in Scotland and that, in the few farms where that issue was identified, action had been taken to immediately address it. If there had been evidence of a systemic problem, the next recommendation could have been that we should consider whether we need to regulate and introduce measures. That is why this piece of work was so important.

Hazel Bartels: To add to that, if it was found that there was such a problem, the next question that we would have to ask ourselves as policy makers is whether regulation would change behaviour in such a way that would be beneficial.

The Convener: It is not just about changing behaviour. If we find farms that regularly have high mortality rates, they need to be closed down.

Mairi Gougeon: I am sorry, but it is not as straightforward as that. Again, that is why the modelling work that has been done is so important. If problems were identified, the hope is that the work that had been done would point to recommendations about what the next steps should be. However, again, the modelling has found that persistent high mortality is not a systemic issue because, wherever mortality events were identified, action was taken swiftly by the producers to try to address them. As we know, there are a wide variety of causes that lead to the problem, which, again, is why this piece of work is important. However, as I said, it is still to go through the full process of peer review and so on. There could well be changes on the back of it, and, of course, we will keep the committee updated on that work as it progresses.

The Convener: The committee recommended mandated mortality reporting. We have heard that

the Government is not providing that to the level that we would like. However, your update to the committee of 5 March, which provided the mortality data set explainer, says that

"Understanding the reasons for losses within food production is an important part of responsible farming"

and is important to ensure transparency. It then goes on to say that

"no single dataset provides a complete picture across the entire production cycle".

Do you agree that those two sentences reinforce the committee's recommendation that there should be comprehensive mandatory reporting of mortality, which you have rejected?

Mairi Gougeon: No. I would say that we have rejected the mandating of it, because that information is available and we have it. Before introducing regulation, there are other steps that must be taken—that goes for this area and others. When we are working through our big business and regulatory impact assessments and all the various pieces of work that have to be done when developing regulation, among the first questions that we ask are what other means have we tried and what other options have we considered.

If we had a problem in accessing information from the reporting that is currently there, we would consider regulation. That is what the work on persistent high mortality was about. We needed to see whether there was an issue and whether we needed to consider what the next steps might be. However, again, we feel that we do not need to mandate the collection of that data, because the data is already there. It is published and we do not have a problem with its collection.

Hazel Bartels: On the specific point that has been raised, I would just say that none of the data sets was collected in order to do the piece of analytical work that we have used them for. They are adequate to the purposes that they are created for, but they were not created for this. That is the detail that sits behind that.

A lot of work in the early phases of the analysis was done to stitch that information together, and, actually, those three data sets and our ability to use each of them to sense check and corroborate the others adds to the robustness and the validity of the analysis.

The Convener: I will run through some of our recommendations and compare them with what was delivered.

The committee recommended that the fish health inspectorate should have powers to halt or limit production at high mortality sites, but the Government has suggested that no legislative control is justified. We wanted there to be an agreement between industry and regulators on mortality thresholds, but what we have are internal definitions that are used for analysis and not for the identification of any sort of regulatory thresholds. We do not have Government-led modelling of environmental drivers. We do not have comprehensive publication of mortality data for cleaner fish and so on. We asked for an annual fish health report, but we do not have a commitment from the Government to produce that. Further—I reinforce this—although we have an analytical framework, which identifies nine sites, there is no regulatory follow-through to deal with any situations that arise. Finally, transparency is a big issue, and I note that we do not have a single data set that allows the public to have confidence that the data that is provided shows that there are improvements in the industry. There is a range of reasons why we are not confident that the Government has delivered what the committee recommended a year ago.

Mairi Gougeon: There are many points there that it is important for me to address.

I would not hesitate to come back here to say, depending on the outcome of the modelling, that we are going to look at potentially introducing regulation in this space or implementing other measures to collect information. However, it is important to note that, in our response to the committee last year, we said that we need to do the work to see how we determine whether there is an issue. Again, that is why the modelling work that we have presented to you was done. It is still to be peer reviewed, and we will work through that process. However, the initial outcomes of that model found that there was not a systemic issue that we needed regulation to address.

We have not said that the whole data picture is complete. As I outlined in my previous response, from the work that was commissioned, as well as the work that the committee and the Scottish Animal Welfare Commission have done, we know that there are gaps in relation to the issue of cleaner fish in particular. One focus for the coming year would be to consider what other information we need to publish in that regard.

I understand that, since its appearance before you a couple of weeks ago, Salmon Scotland has written to the committee to outline the information that it would be looking to publish, and we want to enter into further discussions with it, too.

On the recommendation that was made on the fish health report, there is a lot of information out there. Ultimately, some resources would be required to pull that together. I think that a comparison was made with Norway, but we are not comparing like with like in terms of the information that is already published and publicly available. If

we were to compile a fish health report, we would just be reformatting the information that is already publicly available. Again, that information is there, but if the committee recommends that we should think about putting in the resources to reformat that information in a different way, we would consider that. However, I would question the value of doing that, given the pressures that we are under in terms of the resources that we have to ensure that we are delivering on all the commitments that we made to the committee, and how we would prioritise that work.

The Convener: Stakeholders including Animal Equality UK have highlighted record-high mortality rates in 2025. What is your basis for the conclusion that persistent elevated mortality is not systemic? Does that not risk downplaying the issues that the sector and stakeholders continue to raise?

Mairi Gougeon: Not at all. That is a scientific piece of work that we have presented to the committee. I am sure that Charles Allan and Hazel Bartels can talk a bit more about the modelling that is behind that and the information that was interrogated.

There is no question but that mortality levels have been too high. We have talked about that in the committee previously. It is in everyone's interests for them to be driven to the lowest level possible, and that is what I would absolutely expect to happen. High mortality rates are not good for fish health and welfare or for the businesses themselves. However, it is important to remember that a variety of factors and causes can lead to high mortality, not all of which are necessarily always within the control of the fish farmer. We are seeing changing climatic conditions and various other events that can contribute to some of the mortalities that we have seen. That is why the work was important, because it involved looking at the causes and the action that was taken by fish farmers to address the situation.

Of course, the work and investment that we are putting into innovation is about trying to get ahead of those challenges, predict what challenges could be coming further down the line and think about how we can prevent them. That is the key focus of the collaboration between the industry and ourselves on the science around that issue.

Alasdair Allan (Na h-Eileanan an Iar) (SNP): The committee has raised an issue about the accessibility of data, and comparisons have been made with Norway's fish health reports. I appreciate the point that you have made about resources and so on, but could more be done to make data available in a single accessible source?

Mairi Gougeon: The main focus in that regard is Scotland's aquaculture website, which is largely where such information can be found. As I touched on in a previous response, and as we have discussed in previous committee meetings, part of the problem is not being able to access information in an intuitive way. There is a lot of information out there, and work has been done to determine how accessible it is to the public. Improvements to Scotland's aquaculture website have been made so that accessing information is more intuitive.

Jill Barber might want to give some specific details about what has been done to the website. I hope that, if any committee members have used it recently, they will have found it easier to navigate and to reach the information that they have been trying to find.

Jill Barber (Scottish Government): Work was done to make Scotland's aquaculture website more user friendly, as the cabinet secretary said. There has been on-going work on the availability of information. In 2024, SEPA added to the website information on medicine use, antimicrobials and hydrogen peroxide, and a mortality narrative has now been included to explain the data sets. When SEPA spoke to the committee, it talked about its upcoming environmental performance scheme, which should link into Scotland's aquaculture website. We also have our digital consenting project. We should be able to link everything back to the farm or site. There is an on-going process relating to how the data is displayed and accessed, but we are committed to providing such information.

The Convener: I will bring in Beatrice Wishart.

Beatrice Wishart (Shetland Islands) (LD): I was going to ask about the improvements that the public could see, but I think that that question has been answered.

Emma Roddick (Highlands and Islands) (SNP): Cabinet secretary, I am concerned that the mortality figures that we are scrutinising are still incomplete. We still cannot see mortality figures in freshwater during transport, during the six-week transfer period or, as you mentioned, for cleaner fish during culling. How can we accurately measure how ethical and sustainable the industry is if we are seeing only one small part of the mortality picture?

Mairi Gougeon: First, in relation to what is being published, I disagree that we are seeing only one small part of a bigger picture. The FHI and SEPA collect data in a number of different ways, and Salmon Scotland publishes monthly survival information. A lot of information is published in order to meet our regulatory needs.

In relation to the other areas that you mentioned, as I said in a previous response, we recognise that there is a broader issue relating to cleaner fish. We

want to engage with Salmon Scotland on the commitment that it made in its recent correspondence with the committee on more cleaner fish data. The fish health inspectorate already has access to some of that information, but the Scottish Animal Welfare Commission has highlighted some of the gaps and has recommended that more research needs to be done. Our focus in the coming year will be on making the information more transparent and considering the research areas that the commission has suggested.

In relation to culling, the overall picture is captured in our production survey, which covers survival to harvest. We would have to consider why we should collect that specific information, given that we do not collect it for any other sector.

I do not know whether Charles Allan wants to add anything in relation to data.

Charles Allan (Scottish Government): Emma Roddick referred specifically to culls, transport and freshwater. As the cabinet secretary alluded to, all those figures are provided in the annual production survey, so we get read-across from input to output—the difference between the two is the loss in the production area.

Emma Roddick: Are you confident that those are the total figures and that nothing is missing?

Charles Allan: Absolutely. It is the longest continuous reporting of annual production anywhere in the world. The reporting goes back to the 1970s.

Emma Roddick: And are we able, using that data, to pinpoint whether there are locational, geographical difficulties or difficulties with particular farms or operators?

Charles Allan: Not down to the farm level. Certainly, in seawater production, the data is presented in a lot of different ways and quite a lot of that data is presented regionally.

09:45

Emma Roddick: It still seems, then, that if there were a systemic issue, it would be very hard to spot using that data.

Charles Allan: If there were a systemic issue, it would not be possible to spot using that data. However, I could take you to data that is published by the Fish Health Inspectorate, which covers everything above threshold, and that runs to several thousand data points.

Emma Roddick: Going back to the cabinet secretary's—

Mairi Gougeon: I am sorry to interrupt, but there is another important point to raise in relation to that.

Jill Barber: We have been discussing confidence in the data and confidence that things are being followed up. When APHA and the FHI were here, they were saying, "We have the data we need, we're going out to site, we're inspecting and we can access the data," so they are doing that bit.

There are also the additional tools such as the voluntary mortality reporting that goes to the FHI, which the FHI will follow up on, and there has been all this additional data at site level. The data is transparent and people can see it, but there are different numbers, so people are looking to try and understand what those numbers mean in the context. I think that the persistent mortality tool works. Over and above those inspections, the regulators are quite content that they know what they are seeing. They do not think that it is happening—they do not think that persistent mortality or poor decision making is a problem—but they have used the persistent mortality tool as an additional tool to look through the data and it has broadly come out as would have been expected.

Emma Roddick: In the last session, Professor Dwyer said that having mandatory mortality reporting is important in relation to livestock welfare issues. Given that it is clear that a lot of data on mortalities is collected at the site level and that, in many cases, that data also includes the cause of death, including for cleaner fish, do you agree that that data should be published by the marine directorate?

Mairi Gougeon: There are a few points in there. On the cleaner fish, we want to see what information is there and there is a difference between what is voluntarily published by the sector and information that then becomes a burden on us to collect, validate, and look to publish ourselves.

I would come back to the point that we receive all the data that we need for the purposes that we need it for, and we have absolute confidence in that data. However, we know that there are areas where we need to look at more information and get more transparency, and cleaner fish are identified as one of those areas.

Tim Eagle (Highlands and Islands) (Con): I was going to ask a few of the questions that Emma Roddick has just picked up on, but there is something that I want to be absolutely clear on, given that we must finalise our report at the end of this and identify updates. Is it right that we have data for individual fish farms but we do not publicise that data?

Mairi Gougeon: The sector publishes site-specific information.

Tim Eagle: Do you publish the data that you hold?

Mairi Gougeon: Yes.

Tim Eagle: So, all of that data is out there, but it is not easily comparable.

Mairi Gougeon: It is collected for different reasons, which is why we have that explainer on how the data is collected and published.

Hazel Bartels: There are two major data sets that the marine directorate publishes. One is the production survey, which summarises production on the basis of year class, and the other is the FHI data set, which is related to the inspection regime, so the two data sets have different purposes. One is a kind of stock measure; the other is a flow measure. The data sets are just different: they are done for different reasons, and you learn different things from them. That is what we are looking to set out in the topic sheet that we shared with you. We do not hold back any information when we are publishing those two data sets.

At the farm level, the farmers have tons of information at that local, detailed level that goes way beyond what it would make sense for us to interrogate from the regulatory position that FHI occupies, but it is absolutely available to fish health inspectors on farms when it is requested.

Tim Eagle: I think that this committee is great, but this is not the opening night of a blockbuster and yet we have a packed public gallery today, because public confidence in the sector is at its lowest level and people are genuinely very interested in this issue. What I am trying to get at is whether the data is sufficiently available, in a readily accessible format, such that everybody can access it and get a good picture of what is going on across Scotland. We are not there yet, are we?

Mairi Gougeon: I believe that we are. We publish that information and it is easily accessible. That is what Scotland's aquaculture website is about: it is about pulling that information together and ensuring that it is more accessible to people and that they can navigate it. On transparency, more information is requested about and published by this sector than any other sector. On the broader point about whether people can easily understand and interrogate the data, that is what we are really trying to get at with what we set out in our response to the committee's recommendations. I have said that there are improvements to be made; we know that there are evidence gaps in some areas. Work is also being undertaken by SEPA that will help to complete the overall picture of farm performance. However, I believe that we publish an awful lot of that information, so it is already in the public domain. I put the question back to the committee on that specific recommendation. In essence, some of the recommendations are about repackaging information that already exists, because we publish everything that we need to.

Tim Eagle: You have repeatedly said this morning that you do not think that there is persistent high mortality, yet we do not set a figure for what constitutes high mortality. In the initial evidence session on the matter, you said that you did not think that that was a helpful conversation to have, but our mortality rate is significantly higher than rates in other countries. You would argue that the situations are not directly comparable, but we have a mortality rate that seems to be worse than rates in other countries. Is that in itself not evidence that we have a problem that needs to be addressed?

Mairi Gougeon: Again, I can say only that you are not comparing like with like, because there are very different farming conditions and different salmon farming producers—

Tim Eagle: But we have repeated evidence of significant mortality—even 80 per cent and above in some cases—and a mortality rate of 20 to 30 per cent, whereas Norway is trying to keep the rate between 5 and 15 per cent.

Mairi Gougeon: I have said that we believe that mortality is too high. You could set a threshold, as other countries have done, but what would that be driving at? What change would that effect or what work would that encourage that is not already happening? Mortality needs to be driven to the absolute lowest levels. That is what we expect, and that is what all businesses are working to achieve. The modelling was a really important piece of work. It has not reached its full conclusion, because, as I highlighted in previous responses, it is still being peer reviewed. We were trying to identify whether there is a systemic issue that we need to address on the back of the committee's previous recommendations. The modelling suggests that there is not a systemic issue in Scotland, because, wherever a problem was identified, an attempt was made to address it or to try to fix whatever led to the specific event occurring. However, had the report said something different, we would have taken whatever action was needed on the back of that. The initial work was important, because we needed to identify what persistent high mortality is and whether it is a problem in Scotland that we need to fix.

Hazel Bartels: The report does not say that there was no mortality. It looks at what mortality has occurred and considers whether the levels will continue into the future. The word "persistent" refers to mortality that continues over time due to

a related cause, so there are important nuances with regard to what the report tells us.

Tim Eagle: I am trying to get to the day-to-day practicality. It goes back to Fin Carson asking whether a fish farm would need to be shut down. I wrote down what you said earlier about that, because you said that companies are not in control because of various other factors. My point is that, if there is a fish farm at X location in Scotland where the mortality rate sometimes hits 60 per cent but often hits 20 to 30 per cent, the Government needs to be able to step in to say that it is irrelevant whether the situation is within the company's control: if there are environmental conditions, such as warmer waters or whatever it might be, causing that mortality rate, the farm cannot continue. Despite Edward Mountain's report coming out in 2018—eight years ago—the Government has yet to get to a position where it has any system in place to challenge the situation on the ground.

Mairi Gougeon: There are a few issues there. If there was a significant mortality event over a specific threshold, the fish health inspectorate would interrogate that to identify whether there was an issue. It is not the case that events happen, things are just left and we are satisfied with that.

As I said, we have been undertaking work in an attempt to get to grips with whether there is an issue that we need to fix. However, there are issues, such as algal blooms and micro jellyfish, that are not within the control of the fish farmer. In such circumstances, should we close down the farm simply because it had a significant event that could not have been predicted?

Tim Eagle: Maybe not if it was a one-off event, but if it happens year on year—

Mairi Gougeon: That comes back to the issue of persistence, which involves looking at whether there are related causes and whether there is a systemic problem that we need to fix. The modelling has not found that there is a systemic problem that requires a regulatory fix. All that I can do is present the information that has been gathered.

I will bring in Charles Allan.

Charles Allan: If elevated mortality is what we want to regulate—please do not quote me on this—

Tim Eagle: It is not as though these proceedings are being broadcast. [*Laughter*.]

Charles Allan: If the majority of the sector was performing to a level of 99 per cent survival and a small part of the sector was performing to a level of 98 per cent survival, that would be seen by the model as elevated and persistent. I am not belittling your point about significant mortality occurring, but if we were to use the model's elevated section blindly, we could be considering quite a low level of mortality. It is necessary to be mindful of how the model is set up, the outputs that come from that model and what they tell us. At the end of the day, we are talking about the output from a model, and we need to be able to truth that against real-life data.

Tim Eagle: Thank you for your patience, convener.

Emma Roddick: I am concerned about what is going on. I have just read the Scottish Government's press release on why it is in everybody's best interests to manage mortality in salmon farms. It sounds as though we are saying, "The farmers are experiencing mass mortality events and are trying to do something about them, but it is outwith their control." Surely that does not make it better from an animal welfare point of view. It does not mean that fish have not died or that fish will not die in a few weeks' time when the same uncontrollable event happens, either in the same place or somewhere further up the coast. Surely we need to look at the situation from an ethical standpoint, because fish keep dying and we cannot stop it.

Mairi Gougeon: Of course, we want to stop that happening. From my perspective, it is a question of ensuring that work has been done to try to prevent fish from dying and that action is being taken to try to prevent it from happening again in the future. It is not a case of us saying, "Everything's fine—people are tackling it."

I come back to the evidence and the data that we see. We have interrogated such incidents through the various stages of the model's development, using the publicly available data and the data that the FHI has seen. We have also gone to the site operators to see what action has been taken on the ground. We look at all of that to ensure that everything that can be done is being done. We want to ensure that we address those problems, because mortality levels have been too high.

The point that I am trying to make is that events are not always predictable. I come back to the work that we are doing, through wider innovation and investment, to prevent or address such disease and climate events, where we possibly can.

Hazel Bartels: Progress has been made on that. A good example is the predictive project that has been undertaken by the Sustainable Aquaculture Innovation Centre with regard to harmful algal blooms. That gives a site operator an early warning when harmful algal blooms are likely to strike in their area, which allows them to take

action to mitigate the effect of that on fish. That is an example of an environmental challenge that innovation is looking to address. Mitigations are now in operation with regard to that.

That does not mean that something new will not happen or that things will be completely perfect every time, but it is absolutely a problem that was identified, and a solution around it was put in place. It continues to be the case that new and different problems arise in different places, and, as the cabinet secretary says, it is a question of getting ahead of them by using our innovations, science and research to consider how to address them as they arise.

10:00

Emma Roddick: We are not ahead of the problems. We keep setting new records for mortality rates, and it sounds as though, just because Scottish salmon is internationally renowned and has a high price tag, we are content with that.

Mairi Gougeon: I would not say that that is the case at all, because we are trying to address and challenge the issue. We had very poor survival figures from the 2022 year class, which was a very bad year, but some of the most recent monthly mortality data has shown improvements in mortality figures.

On the innovations that have gone into that, Hazel talked about the work by SAIC on harmful algal blooms, and there are all sorts of different developments—whether that is vaccines to prevent diseases, the use of well boats or the many innovations that are happening at site level—to improve mortality figures. It is important that we highlight that we are taking action. Nobody is satisfied with the mortality figures, because we all recognise that they are high.

The Convener: I am very conscious that we have addressed perhaps a fifth of the questions, yet we are halfway through the session. However, I appreciate that mortality is a key topic. Carrying on with the theme that was just touched on, we will move to questions from Emma Harper on fish health, welfare and cleaner fish.

Emma Harper (South Scotland) (SNP): Some of it has, indeed, been touched on already, convener.

Good morning, cabinet secretary. Has the analytical framework to identify high mortality already been introduced?

Mairi Gougeon: It is a model that we have put forward. We have been trying to work at pace on the definition of "persistently high mortality" to ensure that we could present that to the committee. As I have said, that is still working its way through the peer review process. It is about the modelling to identify what "persistently high mortality" means and whether we have sites that would meet the definition.

Emma Harper: Farms are already measuring mortality every month.

Mairi Gougeon: Yes, monthly figures are published by Salmon Scotland.

Emma Harper: Right. Obviously, as the process is being modelled and looked at, there are actions that can be taken if it is identified that a farm has persistently high mortality.

Mairi Gougeon: From the model, we found that, where there were sites that could be reaching that definition, action was taken in relation to each of the events. The modelling that was done found that there was not a systemic issue and that sites that were identified as having persistently high mortality rates were acting on that information and doing something to tackle mortality where that occurred.

Emma Harper: I know that we will come on to innovation—there has been a lot of innovation—so I will not dwell on it. In the previous parliamentary session, we talked about sea lice a lot; we are now looking at other things such as jellyfish. The situation changes rapidly when there are challenges from climate change and warming waters. Is that all part of the framework to assess what is causing mortality?

Mairi Gougeon: Yes. Sea lice are managed in a couple of different ways in terms of how they relate to the health of farmed fish and the risk that they pose to wild salmon. SEPA developed work on that for the sea lice framework, which has been put in place.

An awful lot of work has taken place in each area to identify what challenges are leading to some of these mortality events and to try to get ahead of them. Work is also going on in various partnerships that we are engaged in, and various scientific bodies are collaborating to try to address and get ahead of some of the challenges that we know fish farms are facing.

Ariane Burgess (Highlands and Islands) (Green): I will continue on the framework that we have been talking about extensively this morning. We have heard concerns from stakeholders that the threshold is set so high that many farms with serious mortality problems might never trigger intervention. I am interested in understanding how confident the Scottish Government is that the threshold in the framework will identify sites where action is needed. The concern is that the threshold that you have identified is so high that farms that

have high mortality might not meet it. How would those farms face scrutiny or intervention?

Mairi Gougeon: It might be helpful to discuss a bit of the background of how the framework was approached and how we have reached those definitions. I will hand over to Charles Allan, who will be able to talk about that in a bit more detail.

Charles Allan: On the sensitivity of the different parameters in the model and how they vary the output of the model, the three parameters are the number of production cycles included, the periodicity of mortality within a production cycle and the percentile rate above which we consider mortality, and the percentile is not the most sensitive of the three. The most sensitive variable in the model is the number of production cycles that you look at. Second is what the models refer to as streak, which is the occurrence of mortality within a production cycle. The parameter that offers least change is the threshold, which might appear to be counterintuitive. It was not exactly what I was expecting to see, but that is the analysis of the model as it is run.

Ariane Burgess: Farms might have problems that persist across several production cycles. Is there a risk that farms with chronically high mortality never trigger regulatory action?

Charles Allan: If I understand your question correctly, those that have a high mortality across cycles will trigger because the model is calling on high mortality. That will be a product of running the model. However, we need to consider whether that information is real by drilling down into available data on the cause of that mortality and whether it is a similar cause within and between production cycles. Where that cause is common—where it has been not only called by the model, but truthed by investigation—that is a meaningful, persistently high mortality cycle.

Ariane Burgess: Can you tell the committee how long a production cycle is?

Charles Allan: It will vary by farm, but in the marine environment it is 18 months, plus or minus. I am sure that you are aware that the sector is working to put larger smolts to sea, in order to reduce the length of time that fish spend at sea in recognition of the fact that the majority of hazard is encountered in the marine environment.

Ariane Burgess: It occurs to me that we are looking at a problem that persists across several production cycles. If a production cycle is 18 months, and that is just in the marine space, we could be looking at serious welfare issues that continue for many years before we see any intervention from the Government.

Charles Allan: As the previous head of the inspectorate, I disagree with you, because there are inspections on site and, if we have significant welfare concerns, we will flag them to the relevant agency. The model is one of a number of tools. You should bear in mind the fact that the model was built to produce a resultant report at pace, specifically for yourselves; it was not necessarily built as part of the regulatory process. A decision has yet to be made on how that might proceed in the future.

Ariane Burgess: On the point about inspections, how can the committee have confidence in the inspections that look at these mortalities? Despite millions of fish deaths across the sector, SEPA has conducted just two unannounced inspections of fish farms in three years. APHA has used remote visits rather than in-person attendance at a number of sites. I would be interested to hear from the cabinet secretary what the justification is for that level of oversight, given the scale of mortality that we have been made aware of and the non-compliance trends that both regulators have identified.

Mairi Gougeon: There are a few points that I would like to pick up there. I feel as though the impression is being given that there is significant non-compliance and that nothing was being done in the background while the model was being developed. That could not be further from the truth and it does not relate to what happens on the ground and the work that the agencies undertake. I will hand over to Charles Allan in a minute, and he can talk a bit more about the FHI and the work that it undertakes as part of its inspections and visits. I believe that it undertakes around 250 inspections each year.

Ariane Burgess: Are those in person or desk based?

Mairi Gougeon: Charles Allan will be able to give more information about that. When there are any significant events, that has to be reported, particularly if they are over a certain threshold, and the FHI will look at that and report on whether any welfare concerns should be highlighted as a result.

On the animal welfare element, I responded to the committee that we would be looking at bringing forward guidance under the Animal Health and Welfare (Scotland) Act 2006, and we have been working with APHA on increasing the number of on-site inspections by 10 per cent and increasing inspections to marine sites, as well as looking at additional training for vets. That work is under way. I will hand over to Charles Allan, who will be able to say a bit more about the work of the FHI, because it is really important to highlight some of that.

Ariane Burgess: Just before Charles comes in, two weeks ago, when we had the regulating bodies in, and even in the work that we did for the report

that has brought this session about, one of the things that really struck the committee—it certainly struck me—is that there does not seem to be a body that is totally responsible for the mortality issue. It seems as though the mortality piece is falling through the cracks. It also seems to me that the APHA process, which was described at length two weeks ago, is quite slow in getting on site. Can you speak to that?

Mairi Gougeon: Yes, absolutely, but I would not say that mortality is falling through the cracks at all. Everybody has a different regulatory role. It is about how bodies work together. As I have said, the FHI could see a welfare issue when it is out on inspections, but it is not responsible for animal welfare. That falls to APHA. It is important that issues are referred to the relevant body that is responsible for the area. The FHI is, of course, responsible for fish health and disease surveillance. It is important to remember the defined regulatory roles of each body and why they are undertaken in that way.

A lot of information about mortality is published and it is published for different regulatory purposes, but nothing is falling through the cracks here. As I have highlighted, the FHI is able to inspect further records at site in detail if it has any significant concerns. Charles Allan can provide more information on the work of the FHI.

Charles Allan: The fish health inspectorate's primary role is the prevention and control of listed disease. The FHI carries out a programme of risk-based surveillance. There is a risk-based programme and, as the cabinet secretary alluded to, the FHI completes around 250 inspections every year. Those inspections include the consideration of mortality records and movement records, and a physical examination of the stock to see whether there is any evidence of the presence of listed disease.

As part of its work, the fish health inspectorate must also consider mortalities that occur between inspections. Fish farms are required to report to the inspectorate any mortality that exceeds the threshold. The inspectorate might follow up on those reports in order to rule out the presence of listed diseases as a cause of the mortality.

A third part of inspection is the legal requirement for farmers to report any reasonable grounds for suspecting the presence of a listed disease on site. Those are the three big prongs of inspection.

10:15

Jill Barber: I will come in on the unannounced inspections point. I think that the regimes of SEPA and the FHI have been mentioned. Unannounced inspections are a really useful tool, but they are almost the last resort, because all those organisations have risk-based surveillance regimes in place that inform who they see next. If unannounced inspections pick up lots of problems, those organisations might want to look at increasing the percentage of them that they carry out.

Sometimes, there is a fear that fish farmers are hiding something, but site visits will reveal issues such as seabed non-compliance or a poor-doing fish population—you cannot hide them. If SEPA is taking samples, it means that the seabed issue has been there for a long time. Unannounced inspections are a good additional tool, but a lower proportion of unannounced inspections, such as 10 per cent, is not necessarily bad, because you need to consider the inspection regime in the round.

Ariane Burgess: That is interesting. With regard to things being hidden, the committee went on a site visit to a farm the year before last. The visit was interesting, but video footage later revealed that things had been hidden, which was concerning.

The Convener: I will stop you there. I do not think that that was the view of the committee. That might be your personal view, but that was not what the committee reported.

Ariane Burgess: I found it very shocking to discover that.

The Convener: You need to make it clear that that is your personal opinion.

Ariane Burgess: Thank you.

The Convener: Emma Roddick, did you have a supplementary question?

Emma Roddick: No.

The Convener: I will bring in Alasdair Allan.

Alasdair Allan: Some of my questions have been touched on, so I will not labour the point. The Government committed to introducing statutory guidance under the Animal Health and Welfare (Scotland) Act 2006. What progress has there been on that? What is the timetable? Who is involved?

Mairi Gougeon: I updated the committee on that during my most recent briefing in September. We considered options for the best way to proceed and determined that providing official guidance under the 2006 act was the way to do so. We are at the stage of engaging with stakeholders to discuss how to take that work forward.

As I outlined in my opening remarks, we are looking to engage with a wide range of stakeholders—such as producers, fish vets and animal welfare organisations—who have an interest in that work. Developing that guidance will

be the focus of work in the year ahead. It is important that we get it right and for stakeholders to consider it in detail.

Rhoda Grant (Highlands and Islands) (Lab): Are you taking any other measures off the back of the Scottish Animal Welfare Commission report? Last week, we received evidence about cleaner fish and discussed technologies and innovations that might phase out their use. How do they fit into the measures that you are taking to deal with their welfare?

Mairi Gougeon: First, we welcome the report that was published by the Scottish Animal Welfare Commission. As I have touched on, there is more information, data and transparency in that area to consider. We are looking to engage with Salmon Scotland on some of the recent commitments that it has made to the committee.

The commission's report contained quite a lot of recommendations that largely related to research that it felt needed to be done, and it also mentioned, among a variety of other recommendations, welfare assessment protocols for cleaner fish and research on treatments for disease. We received that report towards the tail end of last year, and we are giving active consideration to how we can progress some of those recommendations.

However, I should also say that the guidance that we are looking to publish, which I have already touched on—that is, the official guidance under the 2006 act—will cover cleaner fish, too. Again, when it comes to cleaner fish, the wider guidance will be a focus of work in the year ahead.

Rhoda Grant: Do you foresee use of cleaner fish being phased out?

Mairi Gougeon: I do not think that every operator is using cleaner fish at the moment. I think that the commission would like it to be phased out, but it did not necessarily recommend any change in practice in the use of cleaner fish, because of the benefits for fish health and salmon farming. Our work on the commission's recommendations will help to inform any next steps that we might take or any further work that we would like to do in that regard.

The Convener: We will now move on to the next section of questions, which are on science and innovation.

Rhoda Grant: The committee has recommended more targeted research into the conditions of micro jellyfish and the different events that cause mass mortality. What research has been commissioned in that respect? Has that work begun? Has it been put out to tender? What are the timescales for research not only on current issues, but on, say, climate change issues that might arise again in the future?

Mairi Gougeon: There has been an awful lot of work on that. The committee initially recommended that the Scottish Government almost carry out its own specific research project, but we see our role more as providing strategic direction and enabling that sort of collaboration to take place.

To that end, a wide range of research is under way. We do a lot of work with the Marine Alliance for Science and Technology in Scotland, or MASTS, and work has been undertaken through the farmed fish health framework as well as the Sustainable Aquaculture Innovation Centre. I should say that the Scottish Funding Council's funding for the centre was coming to an end; £1.5 million was made available for the transition to new arrangements, and we hope to be in a position—over the coming weeks, actually—to announce what that new vehicle will look like and some of the work that it will engage in.

We have also been involved in an awful lot of work and partnerships in relation to the climate challenges that you have mentioned. For example, we have been working with the Marine Climate Change Impact Partnership to understand the impacts of climate on aquaculture. A number of pieces of work are going on in that respect, but I do not know whether there are any particular projects that Jill Barber or Hazel Bartels would want to focus on or highlight.

Hazel Bartels: The sheer range is the main thing that I would highlight. Some of the pieces of work that we have done this year have been about co-ordinating all of these things to ensure that we—in the broadest possible sense—understand where the gaps are, with a view to supporting academic research in those spaces. That work has been really interesting; indeed, a specific workshop involving MASTS and SAIC was held in, I think, November to consider the issue in a bit more detail. I just wanted to highlight that additional point.

Rhoda Grant: Do you encourage industry to share research? Obviously, different companies will be looking at those pressures and how to deal with them, but do they share that research to ensure that everyone can learn from it?

Mairi Gougeon: Yes, absolutely. We are engaging in specific pieces of work, and we are funding innovation, too. I am thinking of specific projects that we have funded through the likes of marine fund Scotland, for example, although that is more for industry bids.

Ultimately, this is all about identifying with industry what some of the challenges are and what

we need to address. Some of that was highlighted in the key areas of focus in the "Areas of Research Interest: Marine and Freshwater" paper that was published on the back of the marine directorate's science and innovation strategy, which sets out the key areas and questions that we will need to address in the years ahead and which, in turn, forms the background to the wider collaboration and the specific projects that are taken forward. That work is done within that framework.

Hazel Bartels: We encourage collaboration with industry in a number of ways on problems that affect everybody. In fact, that is explicitly part of SAIC's work. Industry is involved in identifying the issues that need to be solved—and not alone, obviously. It will be part of that conversation, because it has that intelligence. I should also point out that, with regard to SAIC and MFS, if public money is going into a project, that project will, by definition, be shared widely.

An awful lot of partnership working is being carried out on those shared problems with industry, with the supply chain and with academia, too. It is quite a complicated picture, as I think that you are hearing, but that is because so much is happening and so much detailed work is going on out there.

Rhoda Grant: Thank you.

The Convener: The committee requested a Government-led research programme, particularly on environmental modelling, and the fish health inspectorate referred to the Scottish Government's "Areas of Research Interest" document, which was intended to co-ordinate research on issues such as animal health, jellyfish, algal blooms and whatever. In your last response to the committee, you referred to industry-level monitoring, but you did not say anything about any Government-co-ordinated research initiatives. Given the response that we just heard from Hazel Bartels, and given the value of this industry to the Scottish economy—over £1 billion—why has there been no effort to look at what the Government can do to build consumer confidence and address the issues that are coming down the road through some Government-co-ordinated initiative?

Mairi Gougeon: I think that we are doing that work. We are facilitating that collaboration; that is what the Sustainable Aquaculture Innovation Centre does, and I would just mention again the investment that we have been looking to make in that respect.

This is a very collaborative space, and we are working with a number of different organisations. It is all about providing, through the areas of research, an overall framework in which we look at the key questions that we need to answer and the partners who are best placed to collaborate with us and deliver on that research. That is, I think, what we have been alluding to in our previous responses.

Emma Harper: I think that Rhoda Grant has touched on this already, but you talked earlier about innovation in vaccines, treatments and other things. In previous committee evidence-taking sessions, I asked about collaboration in research and development with, say, Canada, which also has a salmon farming industry. Is that something that we need to continue to support and engage with? Should we be using Scottish Government funding to work collaboratively with other salmon farming countries?

Mairi Gougeon: More broadly, we need to recognise that that kind of international collaboration is a really important part of our science and innovation strategy. As I have outlined in previous responses, we are not necessarily comparing like with like when we look at other salmon producing nations, but there are similar things that we can look to address, such as changing sea temperatures and different climatic conditions. That collaboration is an important element of our work.

Jill Barber: A significant level of collaborative engagement is going on across the jurisdictions. For example, we are working particularly with Norway on sea lice monitoring and developing sea lice standards. There are gill disease groups, and the innovation centres speak to each other, too. The context and the environment might be different, but some of the challenges are shared, and we are very much trying to work together to tackle the big issues.

Emma Harper: That was pretty much all that I had to ask. Thank you.

Beatrice Wishart: You have already touched on the collaborative space and the interaction between Government, industry, academia and regulators. In order to understand the progress being made, the committee recommended in its report the establishment of dedicated research pens. What role would the Government expect industry to play in funding and governance in that respect?

Mairi Gougeon: That is an idea that we have been interested to tease out and look at. First, though, we are keen for the latest iteration of the Sustainable Aquaculture Innovation Centre to be in place, because it will be best placed to lead on that work and engage with the sector on what the expectations are and how we can look to move things forward. Therefore, our focus has been on establishing the new body and getting it up and running, and I hope in a few weeks' time to be in a position to provide more of an update and an announcement on that. We think that that will be

the best vehicle for taking that forward—we have just been waiting for it to happen.

Hazel, is there anything else that you want to add?

Hazel Bartels: A very early-stage conversation has been taking place, looking at innovation sites in more detail, because there is a lot of interest in this in the sector—and I am talking not just about salmon farming, but about shellfish, seaweed and other sectors, here and across the UK. A conversation is taking place, and the fact that it has not reached a point of conclusion does not indicate any lack of commitment. The issue is just the phasing and the need to get it right for the various sectors that are interested.

Beatrice Wishart: Thank you.

The Convener: I will suspend the meeting for five minutes for a comfort break.

10:30

Meeting suspended.

10:37

On resuming—

The Convener: We will continue our questions as part of our aquaculture inquiry.

Tim Eagle: I understand that the implementation of several key recommendations on sea lice escapes and wild salmon interactions is being delayed because of on-going legal proceedings, with the timetables not going forward. Fisheries Management Scotland has raised concerns that the absence of environmental management plans and contingency measures during on-going legal proceedings creates a regulatory gap. How do you respond to that concern?

Mairi Gougeon: I heard the evidence from Fisheries Management Scotland a couple of weeks ago. SEPA, which is the lead regulator in relation to sea lice and interactions with wild fish, is now responsible for providing local authorities with advice, as a statutory consultee in the planning system.

You are absolutely right about the implementation of the sea lice risk assessment framework. Implementing that framework has been a key focus over the past few years, but there have been a number of appeals relating to that process, and we are waiting for those appeals to be determined before we move forward. That is standard in any process, and it is right that there is a right of appeal.

The first communication on that process is due to be published in April, and it will focus on the policy and legal elements. I am limited in what I can say about the overall framework, because it is subject to legal proceedings at the moment. However, the framework has been a key focus of our work and we hope to implement it.

Tim Eagle: Are you putting in place any interim measures relating to environmental harm while all of that is going on in the background?

Mairi Gougeon: Do you mean in relation to sea lice specifically?

Tim Eagle: I mean in relation to sea lice and the wider points relating to escapes, wild salmon interactions and so on.

Mairi Gougeon: Quite a lot of work is going on in that regard. In my previous response to the committee, I said that we were trying to prioritise that work. The issue of escapes was identified as a priority, and we said that we would work on it this year. However, we started that work earlier, when some resources became available at an earlier point. The initial engagement has started, and we are looking to progress the escapes work and consider penalties over the course of this year. I am keen for the collaboration with Fisheries Management Scotland and the sector to continue, in the hope that we can move the work forward. We prioritised the work on the technical standard for next year.

I think that Jill Barber wants to add to what I have said.

Jill Barber: I think that Tim Eagle was asking about the environmental monitoring programmes. I am thinking back to what Alan Wells said to the committee. We are no longer advising new EMPs for new fish farms, because they were introduced as an interim measure for monitoring and reporting to support a future adaptive approach under SEPA's framework. As the cabinet secretary said, SEPA is determining new licences under that approach. There will be no new EMPs, but SEPA has commenced a monitoring programme, and this is the second year of it. We do not want duplication in regulation, so we are implementing the policy as it stands. Appeals processes are going on in relation to variation of licences, but those relate to licence limits, so the monitoring sits outwith that.

We had planned to transition from existing EMPs—where they exist, because they do not exist everywhere—to SEPA's national monitoring programme. However, that has been delayed, and we are building it into our work next year. I hope that that answers the question.

Ariane Burgess: This issue has been touched on, but I want to get clarity. If the implementation of the regulatory framework has been suspended, what is protecting wild salmon in the meantime?

Mairi Gougeon: As Jill Barber outlined, monitoring of existing sites is still taking place through the EMP process. As has been said, EMPs were meant to be an interim measure while the new sea lice framework was implemented. SEPA is undertaking monitoring at the new sites, too. Our key focus had been on delivering the sea lice framework as it was, but it cannot be implemented while appeals are under way. If any issues were raised or highlighted during this period, we would try to address them. That is the position as it stands.

The Convener: I have a question on enhanced seabed monitoring. What was described to us as environmental DNA testing will improve the quality standards for planned investigations and so on. That process will kick in from now over the next decade. Information on seabed monitoring and environmental quality is really important to stakeholders, but how can communities and stakeholders access that data? Such access could lead to more transparency and result in stakeholders having a better understanding, so they would be in a better place to scrutinise whether there had been improvements at the sites. How will that be rolled out?

Mairi Gougeon: We are looking to have the digital platform for the environmental performance assessment scheme up and running next year, and it will pull together all the information. In the meantime, information on the environmental monitoring surveys is still published on the Scotland's aquaculture website. That information outlines the monitoring method, the survey type and the classification. However, the new system that we are looking to implement will provide more comprehensive information.

The Convener: That is helpful.

I have another question before we move on to spatial planning. Sorry—I am jumping all over the place. Emma Roddick wanted to ask a question before I jumped in. I apologise, Emma.

Emma Roddick: Thanks, convener. Fisheries Management Scotland commented that work on progressing the recommendations of the salmon interactions working group has stalled because staff have moved on. What is being done to ensure that momentum is not lost as a result?

Mairi Gougeon: That specific work relates to what I touched on regarding escapes. That work had been our priority for the coming year. We did not expect to have resource available earlier last year, which is why that work commenced earlier. We started it as soon as that resource became available, which was earlier than planned. We do not have that resource in place at the moment, but that work will be a priority for the coming year, as I set out in my initial response to the committee.

The focus will then be on the technical standard. We have discussed that prioritisation with stakeholders as well, because we know how important those pieces of work are. The wider collaborative work on escapes is important, too. I hope that the sector and Fisheries Management Scotland are engaging in that work and are continuing those discussions, so that we can make progress and drive that work forward.

10:45

Emma Roddick: I understand why it would need to be done in collaboration with the industry, but I was quite concerned by the responses on escapes in the previous evidence session on salmon farming. A couple of quite large escapes had been discussed in a bit of detail, and regulators were asked questions on whether particular changes were needed, whether there were systemic issues and how that related to potential interaction with wild salmon. It seemed that they were relying on industry monitoring and industry opinion on what needed to happen next. Is that enough? When so many regulators are involved in a particular policy area, should one of them not be taking the lead, rather than the industry, on checking whether interactions have occurred and what the industry should do to prevent them?

Mairi Gougeon: I will make a few points in response to that. Escapes must be reported, and the FHI would then investigate and consider whether any containment measures or other actions were needed as a result. Obviously, we do not want there to be any escapes. I know that some of the incidents were mentioned in the previous session, and work to tackle escapes was committed to. One of the significant incidents was at a Mowi farm, and the company subsequently funded work to examine the wider impact of that escape.

We want to address that by looking at the penalties and how we can utilise any funding from those for the benefit of wild salmon conservation. After that piece of work is completed, we will look at the technical standard. We are also conscious that things can change quite quickly, and that will feed into that broader bit of work on how we can build a technical standard that can be adapted for the future.

Jill Barber: It is really important to monitor what is going on at a national level in relation to introgression. We had our first introgression report in 2021, and the scientists are working on the second one. We are considering how we might fund and deliver the next one, because each report gives you a snapshot in time. Over time, we need to understand what is happening in individual rivers, so that we can start to build up the evidence

base, in addition to following up on the escape incidents and trying to manage them so that their number is as low as possible.

Emma Roddick: It would be really good to see progress made on that.

The other point that Fisheries Management Scotland raised in that session was about the apparent gap in reporting escapes. There was a reference to a wellboat escape that was not captured in the aquaculture database. It seems that some interactions are still not being monitored or that fisheries boards are not aware of them, because there is a gap.

Mairi Gougeon: In that specific instance, the escape was reported—the problem related to the publishing of the information, which was highlighted to us. I want to reassure the committee that we had picked up the issue. We know how to prevent that from happening in the future and what to look out for. Such escapes are rare. We know what the problem was in that case, and we will be able to fix that for the future, so that it does not happen again and the information is transparent.

Emma Roddick: Do we know the extent of any environmental and interactions impacts?

Mairi Gougeon: In relation to that specific incident, I would have to ask my officials whether there is more information.

Jill Barber: No. The fish were small—they were smolts, I believe. The risk from that sort of escape event is relatively low, because smolts do not often return to rivers. That is why we are monitoring introgression nationally. It is sometimes very difficult to link things back to a single escape event unless you have information about the area. That incident took place in a harbour, I think. It is probably more important to understand the national picture of what is happening in rivers over time while ensuring that escapes like that do not happen.

Tim Eagle: Some of this has been touched on, but the committee recommended an immediate end to the siting of salmon farms in the close vicinity of known migratory routes for wild salmon. There is a massive on-going discussion about the interaction between salmon farming and wild salmon and what that means for some of our iconic rivers across Scotland and the wild salmon industry. Do you have an update on that recommendation? More broadly, is any significant work being done on new migratory routes, what is happening with wild salmon, what the interactions are and how things are going to move forward? It is important for the committee to know about that.

Mairi Gougeon: Yes, absolutely. I can touch on a number of pieces of work, and I might bring in Jill Barber to provide more detail.

We have touched on the sea lice risk assessment framework. We are waiting for the outcomes of the appeals before we can fully implement the new framework, although that relates more to existing developments. The framework is working for new developments right now, and it is about guiding them to the right places or to more suitable conditions in the first place. I recognise the recommendations that came about from the previous committee's inquiry and the reiterated call in this committee's recommendations. A number of factors are taken into consideration when businesses are establishing sites, but part of that is work that we want to explore through our consenting task group. So far, that has been focused on the pre-application phase, and a number of pilot projects have been working their way through that aspect of the process.

It is about having a discussion with businesses to look at where there is potential to relocate, because, even if a farm wants to relocate, it is still subject to all the same regulatory processes. We are looking at whether we can consider some of those projects and have engagement through the consenting work to deal with that effectively.

Tim Eagle: On the wider point about what is going on in the background, not directly related to this matter, there is a lot of private work going on to restore salmon populations in rivers. I do not want to get too distracted by that, because we are talking about salmon farming, but it is relevant, because people bring that into the conversation about salmon farming. Is wider work being done to look at the interactions between wild and farmed salmon?

Mairi Gougeon: There is broader work being done in relation to wild salmon. We were focusing on the key priority areas that came out of the salmon interactions working group, which was about establishing the sea lice risk assessment framework as well as focusing on penalties, escapes and technical standards. On wild salmon, the key focus has been the implementation of the strategy. We published the strategy in 2022 and the implementation plan in 2023, focusing on the broad range of pressures that are impacting wild salmon populations. An awful lot of work has been developed on that, and I am happy to write to the committee with more information about the specifics of the work, if that would be helpful.

There have also been projects—whether supported through the marine fund Scotland, the nature restoration fund or the water environment fund—all of which have been looking at addressing the challenges that wild salmon face.

Jill Barber: As the cabinet secretary said, the SEPA sea lice framework is designed to guide

farms away from sensitive locations. Beneath that, a monitoring programme has started, but there is an underpinning monitoring and research programme. It is a really complicated risk to manage, which is why we have the modelling and the sea lice framework. There are lots of inputs to that, one of which is the migratory routes, so there are collaborative projects. One is led by the Atlantic Salmon Trust, and the Scottish Government and Salmon Scotland have contributed to that. It is helping us to understand whether the tracks that we have for fish are right. There is collaboration: our scientists input to the North Atlantic Salmon Conservation Organization state of knowledge papers, and we also have the national introgression reports that I mentioned. We need the monitoring behind the policy decisions.

Tim Eagle: Convener, my earlier question might fit into this aspect. Should I ask it now or leave it to the end?

The Convener: It depends what your question is, but it might be more appropriate after the next set of questions.

I am very aware that there are many stakeholders in the public gallery who are interested in the interaction between farmed salmon and Scotland's wild salmon population. That issue has been raised continually over the past eight years, since the initial report on salmon farming. We have heard about progress on sea lice transfer, and we are looking at issues to do with disease transmission and the wider ecological impact that aquaculture might have on wild salmon stocks.

In your response, you outlined some general areas of progress, but we continually hear from stakeholders that the risk to wild salmon remains largely unchanged in practice. Given those concerns, can you give us any evidence that there has been a meaningful reduction in the impact of farmed salmon on wild salmon? Whether or not that evidence exists, why is it that, after almost a decade of those concerns being raised, we are still not seeing measurable improvements in the safeguarding of wild salmon?

Mairi Gougeon: There are several points in that. One step in what has been a significant piece of development work is the sea lice risk assessment framework that we are looking to implement. As I have said and as Jill Barber has outlined, that has been about guiding the developments to the right place initially—we need to wait for the outcome of the appeals. It is a risk-based, adaptive framework that, we hope, will be able to address some of the risks that have been identified. That work has been a key focus and has involved a lot of intensive engagement with the sector and with wild fisheries interests. Ultimately, we want to be able to address and deal with those overall issues.

As I set out, in our prioritisation we have also done work on a new technical standard for finfish and have dealt with penalties for escapes. We are taking action on all those fronts.

Jill Barber: SEPA's sea lice risk assessment framework is a significant step forward and a science and evidence-led management tool. Although concerns have been raised about the appeals process and about the limits not applying until the appeals are determined, the framework is being applied to new farms, and only one new farm that SEPA has processed has had to accept the conditions in order to proceed. The framework applies to existing and new farms, and we will work through the appeals process as quickly as we can.

In addition, we have brought in new monitoring. The average number of escapes has come down over time, but it is still maybe a bit too high. We want to progress the work on the technical standard and the penalties, and we will have a greater look at what is happening and share information on why escapes are happening. It is a challenging area to talk about: we talk about managing risk, but risk does not always equate to impact. It is complicated, but we are making good progress on sea lice. We hope to do further introgression assessments and to take that next step on escapes.

The Convener: Cabinet secretary, do you believe that the framework is finally robust enough to protect wild salmon stocks?

Mairi Gougeon: It has been subject to development over years to ensure that it addresses the risks and challenges and that it can adapt over time. That is the model that is being appealed at the moment. It has been a significant undertaking and we hope that it can be implemented. The focus of the work has been on tackling the interactions between sea lice and wild fish.

The Convener: But do you believe that that framework is now robust enough to protect wild salmon?

Mairi Gougeon: Again, we will need to wait for the outcome of the appeals. We worked with SEPA, the industry and Fisheries Management Scotland to develop a framework that we believed would address the interactions. We are still looking to implement that, but we have to wait for the outcome of the appeals and for whatever recommendations arise as a result.

Ariane Burgess: I will follow up on the convener's and Tim Eagle's questions about migratory routes. We seem to be leaning quite heavily into the sea lice risk assessment

framework, which is on pause. In the meantime, other jurisdictions that face similar concerns about wild salmon are beginning to take a precautionary approach. For example, in British Columbia, the Canadian Government is removing open net salmon farms from key wild salmon migration routes, and in Washington state, marine salmon farming is being phased out following concerns about the impact of escapes on wild fish.

Has the Scottish Government undertaken any comparable assessment of salmon farm locations? I recognise that the Government is leaning into that assessment framework, which is on pause, but perhaps we need to move to another approach, which involves making an assessment of salmon farm locations in relation to wild salmon migration routes in Scotland and taking rapid action. Two weeks ago, we heard from Alan Wells that wild salmon are in crisis and that they are now on the endangered species list.

11:00

Mairi Gougeon: We have talked at length about the sea lice risk assessment framework. Our key focus is on ensuring that we guide development to the right places, and the risk assessment framework has been doing that, notwithstanding the appeals that are on-going for the existing sites. As I touched on in my response to Tim Eagle, if farms want to move, they still have to go through the regulatory consenting process. We are considering that through the framework.

There is also the broader presumption against development in the north-east. It is set out in our national planning framework that development is not permitted there. There are measures to prevent that.

It is not as straightforward as looking at a site and dictating that it should move. A number of considerations need to be taken into account, not least environmental conditions. Consideration needs to be given to the wider impact of such a move and the wider regulation that is needed to get all of that in place.

We recognise that people will want to consider moving their sites, and we are trying to help to make that happen.

Ariane Burgess: Do you acknowledge that Scotland has a responsibility in an international context, given that salmon move internationally? From what we have heard, it does not seem that progress has been made on the recommendations that we made more than a year ago. Meanwhile, other jurisdictions are taking strong, robust and proactive action in response to wild salmon being in crisis.

Mairi Gougeon: I do not think that that is necessarily a fair assessment. We have been developing that work through the processes that we have set out. We are looking to implement the new framework, but there have been appeals. People are perfectly entitled to make such appeals. We are waiting for the outcome of that process.

Action is being taken on a number of fronts. The consenting task group is looking to streamline the process so that cases are dealt with more effectively by the different regulatory bodies. It will also have an important role to play in relation to some of the work that we are talking about here.

It is not fair to say that no progress has been made. We have had to prioritise what work to progress. We are talking about significant pieces of work that have been a massive undertaking, not least because of all the engagement that we have needed to do and the number of considerations that we have had to factor in. Progress has been made. I appreciate that we will never be able to go as fast as people would like us to, but we are taking action in relation to a number of the other pressures that we know wild salmon are facing, which are identified in our wild salmon strategy.

The Convener: We move to questions from Rhoda Grant.

Rhoda Grant: The committee asked for strategic spatial planning to be put in place to guide where salmon farming should be consented and where it is not appropriate. The national marine plan 2 has been delayed and, as you said in your opening statement, regional plans are appearing only on an ad hoc basis. What are you doing to ensure that decisions are taken properly, in a national strategic context and in a regional context, so that fish farms are not sited in the wrong places?

Mairi Gougeon: You touched on the development of the new national marine plan. The next phase of that has been delayed because we have been considering the outcome of the consultation on the planning position statement. As part of the national marine planning process, the question has been asked whether the plan should include a spatial planning element. That is being considered for the next iteration of the plan. It has been a significant piece of work. A lot came out of the consultation, and that is being considered at the moment.

Notwithstanding the development of the national marine plan 2, which the further consultation has slightly delayed, we are still operating within the existing wider planning system. As well as the existing national marine plan, we have the Orkney and Shetland plans, which have been adopted

since I last appeared before the committee, and work is still going on in relation to the Clyde.

It makes sense for us to look at further developing regional marine plans when we have the new national marine plan in place, rather than during this interim period. However, even for those areas that do not have a regional marine plan, there are still the local development plans. Spatial considerations are part of the regional marine plans that are in place in Shetland and Orkney. I emphasise that consideration of the spatial element is being factored into the future development of national marine plan 2, which, of course, will be subject to further consultation.

Rhoda Grant: Sorry—I may have picked you up wrong, but are you saying that no further regional plans will be produced until the national plan is adopted?

Mairi Gougeon: Work is on-going in relation to the Clyde. My colleague Gillian Martin has been leading on the marine planning process, but what has been set out is that we need to wait until we have a new national marine plan in place before looking to the further development of regional marine plans in this interim period, given that it looks as though the new plan will be adopted within the next couple of years. However, Shetland, Orkney and the Clyde area have been at the forefront of developing the regional marine planning work.

Rhoda Grant: Given that, even without the plans, some people are talking about moving fish farms further offshore—we recommended the approval of a statutory instrument on the management of that on 25 February—we have the renewables issue to consider and there is a lot pressure on the marine environment, with the committee hearing from the fishing community that sometimes their needs are being overlooked with everything that is going on, when can we expect the national marine plan to be in place, because people are crying out for it?

Mairi Gougeon: I would not want it to come across that there is almost an absence of any sort of framework for such developments at the moment, because the framework is very much in place. We have been clarifying that over the past year. On offshore development, for example, we have clarified that local authorities are responsible in the 3 to 12-nautical-mile zone and that SEPA would be the lead regulator in that space, as well as removing any potential duplication with the marine licence. We have been trying to clarify what that element looks like. We do not need a regional marine plan to be in place for such developments to be determined, because local authorities have the planning powers to be able to look at them anyway, and they would be doing that in accordance with their own local development plans.

We also have the overarching national planning framework 4, as well as the overarching existing national marine plan, which remains in place until such time as a new national marine plan is introduced. Any developments coming forward at the moment would still be considered within that existing wider planning framework—they do not need that regional marine plan focus. However, where areas want to take forward regional marine plans, that has happened. Shetland, Orkney and the Clyde have been at the forefront of that and have been developing their own.

Rhoda Grant: You said earlier that fish farms could move if there was an issue, but you also said that they would need to be consented as normal, and we know that that takes a long time. Without a plan to guide that, it is possible that fish farms will just have to close, rather than move away from threats.

Mairi Gougeon: Again, you would not need a regional marine plan to be in place to enable that to happen. What I was talking about—

Rhoda Grant: But it is about enabling it to happen quickly—with the delay around getting all those consents in place, the threat would be gone by the time the fish farms could move.

Mairi Gougeon: That is what we hope to do with the consenting task group work. Through the pilots, there have been a number of projects that have worked through the consenting process. We need to have that discussion to see how we can streamline the process and have the engagement with industry to assist in that regard. We are looking at how we can use the mechanism of the consenting work that we are taking forward to do that.

Jill Barber: Just to provide reassurance, consenting decisions all involve thinking carefully about the site's location, its design and whether it meets environmental regulations. Community consultation is embedded throughout that process, with the ultimate democratic control resting with local authorities.

When Ben Hadfield was at the committee, he supported the provision of more upfront information on where sensitive species are and the overlayering of management maps, which we committed to do beyond national marine plan 2.

There is more to do in this space. It builds on the consenting task group's work, which is about what is in an area and the local knowledge that we hold. Having such an additional tool could be quite helpful for developers, enabling them to easily see risks and constraints. It is a work in progress.

Emma Roddick: One of the biggest concerns that is raised with us about the placement of farms is their potential interaction with wild salmon, and I note that the Nature Conservation (Scotland) Act 2004 places a duty on

"every public body and office-holder, in exercising any functions, to further the conservation of biodiversity".

Dr Alan Wells raised concerns about the lack of proper oversight of salmon farm proposals in terms of their potential impact on wild stocks. Environmental management plans are no longer imposed on consented farms, and SEPA's national monitoring framework is not yet operational.

In the light of all of that—in particular, the 2004 act duty—do we know enough about interactions with wild salmon? Are we taking enough action when it comes to the placement of salmon farms, and are we doing enough to mitigate the potential impacts?

Mairi Gougeon: Ultimately, the regulatory processes that we have in place, including the sea lice risk assessment framework, are about ensuring that we guide development to the right places.

We have touched on the environmental management plans. They are not being imposed on new developments because they were an interim measure. New developments are part of the sea lice risk assessment framework, and, as Jill Barber has outlined, the new farm that has come forward is part of the new framework. SEPA would undertake the monitoring for that, whereas existing monitoring would take place under the existing EMPs while the appeals are worked out.

We have robust regulation in place that is about addressing the issues before determining whether an application can go forward in the first place, and a number of considerations are factored into that.

Emma Roddick: There has been a lot of discussion about research, counting fish and understanding more about what is impacting on wild stocks. Are we at the point at which we can be confident about whether a proposed or new farm will have an impact?

Mairi Gougeon: You have touched on a number of points there, and we have made a number of different investments to try to get more of that information. Ultimately, we want to ensure that development happens in the right places. We are seeing a trend of people wanting to move further offshore where there are better environmental conditions, and they are seeing improvements in fish health and welfare.

To go back to Rhoda Grant's questions, it is about how we can facilitate the consenting regime process. It is not about removing any of that process; it is just about making it a bit more streamlined. That is largely what the consenting work has been dealing with. It is about making sure that we have development in the right place from the start.

Jill Barber: I can come in on the sea lice risk assessment framework. I can probably speak about it more freely than SEPA could.

The answer to whether we know enough is no, not yet—we need to keep investing in research. The SEPA framework used the best available international evidence. It included looking at sea lice emissions and establishing the thresholds above which you might expect wild salmon to occur. Some of the stakeholders spoke about the tool at the committee's meeting on 25 February. It is designed to be precautionary in nature. It has helped to identify higher-risk areas, which is where the licence variations and limits come in. If any new farms want to go into those areas, they cannot increase the lice load. Alternatively, they can be guided to somewhere else that is low risk. The tool is managing risk, and it has moved us on.

Emma Roddick: However, if we still do not know enough, should the research piece not come before the development of new farms?

Jill Barber: As I say, the framework is designed to be precautionary, so it can say that certain areas require an additional level of caution and more monitoring because that is where the risk is, whereas farms in other areas are okay and low risk. It does both. Although we have the monitoring and research strategy that sits behind the framework, we always try to put an adaptive approach into regulation along with the monitoring, so that, if something is flagged up that means that we need to either loosen or tighten control, the adaptive framework can achieve that.

11:15

Alasdair Allan: One of the pilot evaluations was on consenting. What specific changes have been made as a result of that? How will you measure success from a community perspective—that is, how communities benefit—and not just from the perspective of applicants?

Mairi Gougeon: It has been an iterative process, and we have been looking to make improvements as it has been developing. An evaluation of the consenting work was published last year. It highlighted that there were some benefits to the approach, but there were also 10 recommendations on the back of that about what other improvements could be made. I ask Jill Barber to speak in a bit more detail about some of the changes that have been implemented as a result.

Jill Barber: The pre-application pilots are about putting more formal procedures around the pre-application phase and joint multilateral advice, while also having transparency around that. There are three stages and each stage is published. That feeds into the already statutory consultation processes, so people should be able to see and feel the standardisation of process and expectations.

We have a specific outcome on community engagement to make sure that those processes are transparent and that community engagement is being undertaken. The evaluation report recommended further guidance around that, and there are a couple of interacting points there. There are expectations of community engagement in the consenting process and of engagement with other users of the seabed. There is also the sector's engagement, which starts before it enters that process and continues throughout. It has its engagement charter. There is also our commitment on community benefit best practice principles, which is not the exact same but which feeds into the picture, in the round, of the work that we are doing on community benefit.

Ariane Burgess: The committee recommended clear good practice principles for community benefit. I would be interested to hear what progress has been made on that work and when the committee will see a clear proposal for how community benefit from salmon farming will operate in practice.

Mairi Gougeon: First, I point to the increase of 1.5 per cent in rents that has been implemented this year. That goes to Crown Estate Scotland and then, ultimately, to coastal local authorities, so it is about that coastal community benefit. That point—that perspective—is, of course, a bit more general. However, as Jill touched on, we made a commitment to scope out work on a community benefit package. That work has been progressing; we have been looking at a wide range of evidence, including international comparators and academic papers, as well as doing our own research. The wider engagement in relation to that work that we are looking to have is still to commence. We will then look to deliver some of that new package into next year; again, there will be wider consultation with stakeholders on that.

Ariane Burgess: I asked when we would see it.

Mairi Gougeon: It will be delivered next year. The rest of the engagement work will take place throughout this year.

Ariane Burgess: It will be delivered in 2027.

Mairi Gougeon: Yes.

Ariane Burgess: I am interested in the process that you are working on. When the Government talks about community benefit, is it looking only at jobs and financial contribution, or does it also consider the wider economic impact? For example, some in Scotland's hospitality sector are choosing not to serve farmed salmon because they are concerned about the production practices and the reputational implications for Scotland's food brand. Has the Scottish Government assessed whether salmon farming could be creating reputational risks for brand Scotland and other parts of Scotland's food and tourism economy?

Mairi Gougeon: When I am talking about our community benefit package, I am talking specifically about the communities that host aquaculture and, for example, the funding that flows from Crown Estate Scotland to local authorities for coastal community benefit. It is about the wider benefit that we have seen provision of. As an example, I have talked previously at committee about visiting Colonsay, where Mowi invested, together with our rural and islands housing fund, in building six houses for the local community, which has been transformative. It is about the wider benefits that we hope and expect to see. Again, we are engaging on that wider work.

We talked a lot about the issue at the start of the meeting, so I hope that I have been able to outline this point, but I must emphasise the robust regulation that is in place for our salmon farms across Scotland as well as the transparency of the sector. It is more transparent than any other sector, in terms of the volume of information that is published, whether that is on mortality or environmental impact. It is important to get that on the record and to recognise that. The product is our number 1 food export, but that is on the back of the strict environmental conditions and regulation that we have in place.

Ariane Burgess: Are you aware that some people in the hospitality sector in Scotland are choosing not to serve farmed salmon because of the concern about mortalities and the other things that we have been talking about, such as the impact on wild salmon? People are concerned that the situation is having a knock-on effect on brand Scotland.

Mairi Gougeon: I have not captured that information, so I do not know what the extent of the issue would be. I am just trying to counter the point that you raised. Given everything that we have outlined today and the discussions that we have had, I hope that people will continue to support our Scottish farmed salmon.

Ariane Burgess: Are you willing to take on board the issue that is being raised by the

hospitality sector and factor it into the work that you are doing?

Mairi Gougeon: I am, of course, happy to engage, but it is about prioritising and the committee's ask in relation to that. I have set out the list of commitments that we were looking to implement and the prioritisation of that work. Doing such work would only detract from other important pieces of work that we are set to do. However, if the committee has specific recommendations that it would like the Government to consider, we will, of course, consider those.

Tim Eagle: It is a difficult situation, is it not? I found that when we discussed our report previously. We all want to tackle rural depopulation and support an industry that is valuable to Scotland, but, at the same time, we want to ensure that the industry works for communities and the various sectors. That is why what we wrote at the end of our report had a bit of urgency about it—we need to do something here. We need to keep the industry, but that means that we need to show the public that legislation and practices are in place that make the industry the best that it can be, just as we are doing with our wider farm sector.

I want to come back to you on one point. My question slightly covers all the themes that we have gone over. The committee recommended that the Scottish Government

"provide powers to the Fish Health Inspectorate … to limit or halt production at sites which record persistent high mortality rates."

This is going back slightly, but, in a letter to us, you said that you were going to create a "robust analytical framework". You then said that upon completion of model validation, outputs would be generated and sites screened as potentially exhibiting persistent elevated mortality would be taken forward for "ground truthing"—I love the term "ground truthing".

I think that all of that is just related to mortality—that is all that you are looking at. Norway has a traffic light system, which seems easier. That takes into consideration wild salmon populations, disease risk, migration routes, environmental factors and mortality, and then a green, red or amber rating is given. That might mean that a producer might have to halt production, reduce the number of fish in pens or find other approaches. All of that information changes, and it is a very simple approach. I have been reading up on that over the past few days. It seems very publicly accessible, and it would be possible to put it in place in Scotland.

Am I right in saying that your "robust analytical framework" takes into account only mortality? Have you considered adopting a system that is similar to the one in Norway, which would make it easier to stop production, move production and so on?

Mairi Gougeon: I would just say that nothing is ever that straightforward—

Tim Eagle: Oh, but can it be?

Mairi Gougeon: I wish that it could be.

Tim Eagle: I think that it can be.

Mairi Gougeon: It cannot. As I said, when it comes to international comparisons, we are not comparing like with like. We have different regulatory systems with different responsibilities, and we are dealing with and working in completely different environments.

The first question is about the wider collaboration piece. We are always looking at what is happening elsewhere. We ask whether there a development that we could look at, which might not be a lift-and-shift model but might have elements that we can learn from or adapt or that might work in a Scottish context.

You are right that the work on persistent high mortality focuses on mortality, because we were tasked with examining whether there is a significant issue there that we need to address. That is what the development of that model was about. We have other mechanisms in place that consider all that information in the round. We are also working on the consenting framework and the sea lice risk assessment framework. Jill Barber might want to say a bit more about international comparisons.

Jill Barber: The original Norwegian sea lice traffic light system is predicated on sea lice and risks to wild salmon. That is what the figures for a 6 per cent increase, staying the same and a 6 per cent decrease were based on.

We always say that we should not compare, but I am going to do so. We have quite a strict environmental regime for seabed impacts, because our seabed and environment need it. However, our waters are not quite as deep as the fjords, so we are operating in slightly different environments.

Norway's sea lice traffic light system is now coming to a similar place to Scotland's. Our frameworks are starting to align, and they have committed to doing some additional work on fish health and incentivising good environmental performance. That is new, and it is under development. We are also interested in trying to do that. For example, SEPA has 50 per cent reduced Water Environment (Controlled Activities) (Scotland) Regulations 2005 licence fees for waste capture technology. There are different ways to do that, but we are in regular dialogue with Norway.

Tim Eagle: My understanding is that, when the Norway model started, in 2017, it was primarily for sea lice on wild salmon, but since then it has expanded to take other factors into account. That is my understanding—please correct me if I am wrong.

I am trying to consider the importance of high-quality welfare and product and also the community view. Paragraph 311 of our report had a big statement on moratoriums or pauses on production. That came from a massive conversation in the committee, but it was felt that that was pushing it too far. I am not sure that I want to go back to that, but I know that fundamentally the public is demanding that we address the industry's concerns. I am not sure that your robust analytical framework is doing it for me and that it will give us the outcomes we want.

I am not trying to draw comparisons. I am asking whether the traffic light system is easily understandable and whether it could be adopted in a different way, in a Scottish context, so that we can put all of it together—mortality, disease risk, environmental risk, the wild salmon population—and when the assessors go out on the ground, they can say, "There is persistent high mortality here, so we're going to move to an amber," or, "We are clear that the seabed is being damaged here, so we will move to an amber." Does that make sense? Why can we not adopt a model like that?

Mairi Gougeon: I think that I understand the point that you are trying to get to. The model would never provide all of that, because it was not designed to do that. It was designed to come up with a definition to discover, first, whether Scotland has a problem that we need to address. The model has a very specific purpose rather than being broadened out to cover everything.

You seem to be talking about the overall package of industry performance. I am trying to get to the point that, with all the robust regulation in place outlining the processes that go into it and managing some of those concerns, as well as the other frameworks, we are working to improve consenting and taking all those different factors into consideration. Are you asking about pulling all that together, or is your question about how we display that information?

Tim Eagle: It is about sending a clear message that the Government is genuinely trying to make sure that this industry is viable in the future while also protecting our landscape, our seabed and everything else, and ensuring the welfare of the sea salmon population. Maybe I am alone on this committee on that.

I need to wrap up—the convener is looking at me. A lot of words have been said this morning, but I just do not think that we are pushing at the pace at which we need to, or that it is all coming together in a package that people can really grasp and see where we are going. You say that there is robust regulation, but if there is, it is bitty and all over the place, and I am not sure that it has been there in one place since the 2018 report, although maybe I am alone in thinking that.

11:30

Mairi Gougeon: I think that we are looking for simple solutions to complex problems that it has taken us years to grapple with and address. We are talking about an ever-changing environment and regulatory landscape. You are right to suggest that there has not been progress in some cases. We have spoken about a lot of different areas this morning, which shows the sheer volume and significance of some of the massive pieces of work that we have undertaken. The work has been on-going for years. When we look at the overall progress that we have made on sea lice, on transparency and on the data that we collect, as well as all the commitments that we have still to take forward, I recognise that there is more to do.

However, there is no single, simple solution when we are dealing with such complex matters. We are always looking at other models and at what is working elsewhere. As Jill Barber mentioned, a comparison is being made with a model that had a completely different genesis. I am trying to demonstrate that, through the work that we have taken forward, we are delivering on our commitments.

There will always be a call for us to go further and faster on particular pieces of work. We have finite resource and must prioritise as best we can—addressing the key issues as we see them while trying to identify whether those key issues exist in the first place, which was the reason behind the work on persistent high mortality levels.

Tim Eagle: I have to be quiet now.

The Convener: Yes. To avoid the risk that every committee member sums up what we have heard over the past two years, we will draw that line of questioning to a conclusion.

I now turn to Edward Mountain.

Edward Mountain: I remind members that I am a board member of Fisheries Management Scotland.

I welcome the committee's interest in salmon mortality rates, which reflects the work that the Rural Economy and Connectivity Committee undertook in 2018. I draw the cabinet secretary's attention to recommendation 10 of that committee's report, which refers to having

ambitious, world-leading targets to reduce mortality levels. It goes on to say:

"It considers that this should include appropriate mechanisms to allow for the limiting or closing down of production until causes"

relating to mortality

"are addressed."

At that stage, mortality was 3.8 million farmed fish, which was about 7 per cent of the total. As the cabinet secretary suggested, it increased to about 17 million in 2022, which was about 25 per cent of the total. It increased again the following year to 17.5 million, dropped slightly in 2024 and then shot up again in 2025. We now have mortality at around 20 to 25 per cent. What figure will the Government set as an acceptable level—in percentage terms—of fish stock dying in pens in Scotland?

Mairi Gougeon: We touched on that when I previously appeared in front of the committee. I will simply reiterate the response that I made then: we want to drive down mortality to the lowest possible levels. Are any of those levels acceptable? No. I want to see them driven down to the absolute lowest levels that they can be. That is what our work to identify whether there are persistent issues and how best to address them has been about.

Edward Mountain: The figures are remaining stubbornly high and well above the numbers that the Rural Economy and Connectivity Committee considered to be totally unacceptable. Let us translate that to other stock across Scotland. There are about 6.5 million sheep in Scotland. If 1.5 million were found dead on the hills across Scotland every year, would the Government find that acceptable, or would it take action to deal with that?

Mairi Gougeon: In using that scenario, you are not comparing like with like. It is about driving down mortality to the lowest possible levels. That is where the focus of our work has been. Ultimately, that aims to identify whether there are persistent issues that we need to address. However, there is significant investment and on-going work to try to get ahead of problems where they exist and to drive down mortality.

Edward Mountain: My final question is this. If the figure reached 10 per cent and there were fish pens across Scotland where 10 per cent was being exceeded in every production cycle—I can point you to a few, cabinet secretary, but I will resist the temptation to do that—would that be an acceptable figure, or would you say that it should be lower? If it is 10 per cent, will you say to such sites that production should stop, as both the Rural Economy and Connectivity Committee and this committee have suggested?

Mairi Gougeon: I am sorry—do you mean that 10 per cent would be an acceptable level of mortality?

Edward Mountain: Mortalities.

Mairi Gougeon: We have not set a threshold, and we are not considering doing so, because there are many different causes that can lead to mortality events. For me, the key focus is on how we are addressing those issues, whether action is being taken to prevent them from happening in the first place and whether action is being taken following those events to ensure that they do not happen again. That is where the focus of the work is, and we are trying to drive them to the lowest possible levels.

Edward Mountain: With respect, cabinet secretary, if 25 per cent of my cows died every year, I would be out of business, and I would not want to continue, because I would be sickened by it. I leave it at that.

The Convener: I believe that the cabinet secretary would like to make some closing remarks.

Mairi Gougeon: It was really just to say that this will be my last time appearing before the Rural Affairs and Islands Committee, although it will not be my final appearance before a parliamentary committee. I want to thank you, convener, and the members around the table. I cannot say that it has always been a pleasure sitting at this end of the table, being on the receiving end of the various topics that we have discussed—it is, as committee members aware, a very broad-reaching portfolio. I have always welcomed the scrutiny that the committee has undertaken.

I wish all the best to those of you who are stepping down, and all the best to those who are standing for re-election in May. Thank you all so much for working alongside me. We have completed some significant pieces of work during that time.

The Convener: Thank you, cabinet secretary. From my personal point of view, over the almost 10 years that I have known you, you have always enabled civil and respectful debate without, on any occasion that I can remember, that discussion turning hostile. That is a credit to you, given some of the intensive questioning that we have had around the table. We can agree that you have disagreed—or we have disagreed—agreeably, which is to be commended.

I am sure that I can speak for everyone around the table in conveying our thanks for the way in which you have engaged with the committee over the years, including on some pretty heavy topics. We all wish you very well in your future, whatever that might hold for you. Thank you very much.

I suspend the meeting for five minutes to allow for a changeover of witnesses and for a comfort break.

11:36

Meeting suspended.

11:42

On resuming—

Petitions

Control of Wild Goose Numbers (PE 1490)

The Convener: The next item on the agenda is consideration of PE1490, lodged by the Scottish Crofting Federation, which calls on the Scottish Parliament to urge the Scottish Government to address the problems created by increasing populations of wild geese. The committee last considered the petition in May 2024 and agreed to await the publication of NatureScot's delivery plan as part of its review of the national goose management framework before taking further evidence at that stage.

At today's meeting, we will hear from officials who are involved in developing the plan and discuss how it will address the issues that are raised in the petition. I welcome to the meeting Donald Fraser, head of wildlife management at NatureScot, and Sam Turner, wildlife management team leader at the Scottish Government.

We have allocated around an hour to this agenda item. I will kick off and set the scene. Can you give us an update on the population status of the different goose species and whether there have been significant changes in recent years?

Donald Fraser (NatureScot): A number of different species are present in Scotland. Some are resident populations and some are international or shared populations. Based on the most recent full census that we did, in 2023, our current estimate of the number of Greenland barnacle geese is just under 50,000. The 2021 census found that the figure for Svalbard barnacle geese was about 36,000. The 2025 census found that the figure for Greenland white-fronted geese was 8,000. We have two greylag populations: a breeding population estimated at just under 50,000 and a wintering population that comes in from Iceland, which was estimated at around 55,000 in 2023, although it could be higher. We also have around 270,000 pink-footed geese that come into Scotland for wintering. Those figures are from 2021.

11:45

There have been significant changes in the trends in those populations over that time. For a number of reasons, we have seen increases in our resident population of greylag geese but there have been some concerns about reductions and decline in Icelandic populations. Pink-footed geese have been doing well over that time, and we have seen sustained populations coming into

Scotland, but there have been concerns about declines in Greenland barnacle geese and barnacle geese in general. The most significant recent issue was avian influenza in 2023, which impacted on the population, although, in the past couple of years, we have seen changes in responses to that.

Goose populations overall are quite a mixed picture. There are spatial and temporal differences in how those populations are doing.

The Convener: Greylag geese appear to have the largest population and are the geese that are most often focused on in relation to agricultural damage. Can you give us an idea of why there is a change in the numbers of those that are resident and those that migrate? Are weather conditions or climate change resulting in these birds staying rather than heading back to Iceland?

Donald Fraser: Pink-footed geese are the ones that we are getting in the highest numbers, but you are right about the impacts of the increase in the resident population. In that regard, the greylag goose is the bigger issue in Scotland. There is some suggestion that it is down to climate factors. For example, there is the issue of short stopping, which means that, instead of going further south to winter, greylag populations are staying in more northern parts of Scotland, such as Orkney and Caithness and Sutherland. Therefore, we are seeing increased populations further north as a result of warmer winters. That is one factor affecting population distribution or changing populations.

The Convener: You touched on the potentially different management approach needed as a result of avian flu. Since the last update, have there been changes in national or international obligations that have affected how populations can be managed?

Donald Fraser: I mentioned that there have been concerns about a decline in the Icelandic population of greylag geese. Through the African-Eurasian migratory waterbird agreement process and the European goose management platform, there has been a change in the status of Icelandic greylag geese to A*, which is recognition of a potential decline in the population and the need for further measures to manage that. In essence, that means that we have to put a management plan in place, working with international partners in Iceland, to ensure that we are putting adequate protection in place for the species. The first part of that is getting a better handle on the numbers of the species, and we have been working with Iceland on that, doing some satellite tagging of birds to get a better handle on where the population is and developing a methodology for better understanding that population. There has been a status change to A* for greylag geese.

The Convener: The petition exists because of the impact of geese on crofting and agriculture and because of wider concerns about the loss of native grassland or species because the seed base or whatever is not there. Does the A* status make it more difficult to achieve the petition's outcomes?

Donald Fraser: Not necessarily, because it is about putting in place a management plan that deals with potential population declines but that also manages impact. That is where we are at in that regard. If the population was seen to decline significantly, we would have to put measures in place to protect the international population. We are still dealing with both a resident and an international population, so measures that are targeted at resident populations can continue, because there is a time when those measures can take place to specifically target those geese. Potentially, protections will need to be put in place, but we are not at that stage yet.

The Convener: That is helpful.

Beatrice Wishart: On the point about species moving south or staying north, I note that we have certainly seen more of the geese in Shetland in recent times.

Will you explain the delay in the publication of the 2022 review and the delivery plan? What have been the reactions of members of the national goose forum to the documents?

Sam Turner (Scottish Government): We published the policy review back in 2024. I can clarify that, although publication of the documents has been delayed, they have been circulated to local goose management group members. There has been a lot of work and stakeholder engagement with those members in developing the documents and producing the recommendations. It was unfortunate that the publication of some of them was delayed, but the management plan is due to be published over the next couple of weeks, and work has been going on in the background with stakeholders. We have been trying to keep stakeholders engaged as we have been doing the work.

Beatrice Wishart: What have the responses been?

Sam Turner: There has been a bit of frustration from stakeholders. A lot of work has gone into the documents and the actions, but work has still been going on in the background. The schemes that support farmers and crofters to host protected species and the schemes that help with the management of resident greylag geese have continued to roll over. There has also been continued knowledge sharing while we have been

working on the recommendations. Local group members on Tiree and Coll are learning from what is going on in Orkney in terms of different methodologies for controlling resident greylag geese. That work has been going on in the background while we have been working on pulling the policy review and the delivery plan together and getting them out there.

Donald Fraser: There was a national goose forum meeting on 12 February. The stakeholders want to see the delivery plan and the recommendations taken forward with pace and urgency. That is the feedback that we are getting, and we accept it. Commitments have made to do that, certainly in relation to the key areas of the recommendations on the schemes and the greylag issue in particular.

Alasdair Allan: As you will appreciate, this long-running petition is of great interest to my constituents. You mentioned the national goose forum and the delivery plan, and you mentioned the need for swiftness. The Scottish Government has recognised the problem that exists in some parts of the country with recent funding, not least that relating to Uist. Do you think that, going forward, there needs to be a swifter reaction to extreme situations with some species in some locations?

Donald Fraser: The goose management process, like most wildlife management, is an adaptive process. It is about understanding the issues that crop up and trying to get the best responses—and timeous ones—to them. Some of this is inevitably tied in to funding and resourcing, and planning for and management of that needs to be done. However, we are absolutely committed to the mechanisms for understanding the issues and what the solutions are.

Alasdair Allan: As I alluded, people regularly raise the issues with me, as I am sure they do with you, specifically in the Western Isles. A particular issue has arisen in Uist, where people have come to me—and, I am sure, to you—to comment on the impact of one species: greylag geese, which are not merely making agriculture difficult but are imminently threatening the viability of traditional forms of agriculture.

Close cropping and the use of seed types that have been used on Uist for the last 2,500 years might simply not be available in a few years' time if something is not done to deal with the rising number of greylag geese. As I have said, I very much welcome the fact that funding exists, but are you, as an organisation, alive to the imminent concern in some places about the very viability of agriculture?

Donald Fraser: Yes, absolutely. You have alluded to the funding that has been made available in Uist, but a number of factors, of which geese are a significant and predominant one, are impacting on the machair and seed availability. Since 2012, we have been involved in various methods of adaptive management, and we have been testing and piloting ways of getting reductions in areas. In some areas, we have been successful in getting populations down, but the challenge is in sustaining that.

Unfortunately, after we put those adaptive management approaches in place, we had Covid, and there was a bit of a hiatus in continuing with that sort of management. That has had an impact, and populations have started to build again. One of the challenges, therefore, has been in ensuring that we have sustained management—that we do not take our foot off when it comes to what needs to be done—and that we have the resource and capability in place to maintain populations at those levels.

Alasdair Allan: Finally, when you look at solutions to arrive at what might be considered sustainable numbers of greylag geese in some locations, is the only alternative that you are looking at the shooting of geese and the finding of shooters? If not, what alternatives are you open to looking at in the future?

Donald Fraser: A number of methods are available, but not all of them are practical. There is egg oiling and egg removal as well as corralling, which happens on Orkney and which, as Sam Turner has alluded, they are looking at applying in other areas. We are open to other methods that are available, but the question is whether they can be practically taken in certain locations.

In NatureScot, we have also been looking at those areas where there is no conservation concern and at deregulating things so that there are effective means of controlling populations—in other words, moving to general licence, allowing the sale of goose meat and so on. We have been working on those aspects.

Alasdair Allan: Thank you. [*Interruption*.]

The Convener: I think that the roof is going to stay on. For those tuning in, we have all been looking at the roof in a very worried way, because the wind is very strong.

We will move on to a question from Ariane Burgess.

Ariane Burgess: The 2022 review recommended that another specific review of support for goose management take place, to ensure that the schemes are operating in an equitable and transparent manner and to clarify matters around public funding. Has the review commenced, and has the working group that was recommended been set up, too?

Donald Fraser: No, it has not commenced, but it is about to. At the national goose forum on 12 February, we committed to doing just that and to setting up a process that will involve stakeholders. A number of pieces of work on agricultural support have been going on for some time now, but certain aspects of the schemes, such as payment rates, where they will be prioritised and the species involved, are part of a piece of work that we are just about to initiate.

Ariane Burgess: Once it gets going, what will the programme of work look like?

Donald Fraser: The review is looking at the current schemes—that is, the five protected area schemes and the greylag aspect, which is slightly separate. We will look at all of that in the round to see where the public finances, which amount to a not insignificant £1.1 million or £1.2 million, are going.

We also need to look at the mechanisms that are in place. Given that quite a lot of the schemes have been in development since 2000, but principally since 2010, a bit of a review is required of how they have been set up, how the payment rates work and what they are based on.

We also need to take a more holistic view. As has been mentioned, the number of greylag geese is becoming more of an issue, so, if we have limited public funding, which we do, where would it be best to target support? That more holistic review will require engagement with stakeholders who are involved in current schemes, so that we consider those impacts, and with those who are suffering impacts that were not felt four or five years ago.

12:00

Rhoda Grant: What was the significance of refreshing the key objectives of the goose management policy? What implications will that have for goose management in the Uists and other places where there has been damage not only to farming, crofting and the economy but to the natural environment?

Sam Turner: Although the objectives have been refreshed, they are not totally different from the objectives following the previous review. However, updating them ensures that they keep in line with on-going Government policies, including the Government's agriculture, biodiversity and climate objectives. We have ensured that the objectives keep in line with Government policies across the board, so that our approach to managing geese dovetails with our approach to looking after our agricultural production and other Government policies.

The objectives reflect the broader strategy that we are sticking to, and the recommendations from the review cover the specific things that we will be considering. The review found that our overall approach is consistent, and we want to stay broadly in line with that, but there are specific recommendations on specific issues, such as the increasing resident greylag population. We want to do more work to develop those proposals.

Rhoda Grant: If you do not anticipate huge change, that suggests that we will be taking a piecemeal approach to managing the issue. Or will there be change so that we can get the population under control and manage it at a reasonable level? It just feels as though the issue is getting out of control.

Sam Turner: There was a change in the objectives following the policy review. The two sets of objectives are set out next to each other, so people can see the objectives following the previous review, in 2017, and the updated ones from 2022. The objectives are broadly similar, but they have been updated in line with developments in Government policy over the past five years. The objectives set out broader actions in trying to manage the conflict between agriculture and less-protected geese species.

We will take forward specific action off the back of the recommendations from the review, which include some fairly significant changes. As Dr Allan acknowledged, the review recommended changes to greylag geese management. There will be delivery plans for national populations of certain species, including greylags, and there is a specific recommendation about managing greylag numbers. That represents a bit of a step change in geese policies, which historically have focused more on protected species. There is now an acknowledgement of the issue with greylags, and consideration is being given to how we manage the population with the resources that we have.

Donald Fraser: The context in which we are operating has changed since the 2000s. Biodiversity and climate policies are now key considerations, and issues such as the use of nitrogen must be taken into account when schemes are developed.

On the wider point, it is right to say that we need a more holistic approach to goose management in Scotland. Instead of focusing on single-species issues, we need to take a more holistic view of the priorities and impacts. Planning ahead, which is being done through the work that we have been talking about, will help to provide a more managed process.

Emma Roddick: The goose management policy review stated that the goose management schemes would end in April 2023, but the Scottish

Government has suggested that that funding has continued in the interim. What does that look like on the ground, and how has work continued within that period of not knowing what is going on?

Donald Fraser: The schemes have continued for the past two years and there is a commitment to continue them this year on the same basis. The review that we are talking about will look at whether changes to that are needed, but the funding that has gone in is, as I said, about £1.2 million. It is being sustained at the same level. Obviously, some stakeholders are looking for increases, because costs have risen over that time. However, the schemes have been rolled over on an annual basis, and some of our stakeholders are looking for continuity and assurance that that will continue in the medium to longer term, so that they can plan ahead. It is one of the aspects that we will have to look at in relation to the future funding mechanisms and the funding around that; however, the schemes are currently being rolled over on an annual basis.

Emma Roddick: Does that work for both parties, though? Does it make sense to just carry on and not to commit any further forward than the current moment?

Sam Turner: In an ideal scenario, we would have longer-term schemes. However, at the moment, due to the limitations around Government finances, we are limited to single-year schemes. It is not ideal, but it is the situation that we are in, in terms of the level of expectation that we can provide.

Emma Roddick: I suppose, though, the fact that the funding has continued over every year shows that it is needed.

Sam Turner: Yes, and there is the intention to continue the schemes. There is a recommendation to look into longer-term schemes—I cannot remember which recommendation number it is—and what benefits those would offer.

Donald Fraser: There has been a consistency of approach over the past couple of years, but in terms of what that future funding will look like, there will need to be some kind of transition period for that. The business support has been there for quite a long time, so some transition element will be needed as well.

Emma Roddick: Has there been an assessment of any costs that could be incurred as a result of not continuing schemes?

Donald Fraser: Assessments of agricultural impacts have been done for various locations, but not on a Scotland-wide basis. Some of the scheme areas have had economic impact assessments done for them, although some of them are a bit dated. We will be looking at where the impacts are going to be located—at the geographic and spatial elements of that.

Emma Harper: The Scottish Government announced an extra £20,000, which brings the funding up to a total of £30,000. As was mentioned, it would be better if it was recurrent funding, so that it could be better managed. What is the additional funding used for? What is the plan for that?

Sam Turner: An additional £20,000 has been given this year for a specific acute problem on the Uists around managing the impacts of greylags. That is mainly as a result of not enough seed being harvested, and it is about making sure that there is a specific traditional type of seed that ensures that the machair cropping system can continue next year. That is obviously a small part of the overall goose budgets, but it is quite significant for the greylag budgets.

Ideally, we would be able to continue to offer increased budgets, but, as Donald Fraser outlined earlier, we have a limit on the budgets that we can play around with and utilise. That additional money is to try to deal with that specific acute problem and get the greylag numbers managed over the next year or two, so that that issue is alleviated.

Emma Harper: Is it about supporting agriculture but also managing the geese population to reduce the number of greylag geese?

Donald Fraser: In terms of the greylag, it is almost exclusively for population reduction. These are not payments to farmers; the payments are to the local goose management groups to control the species. That is what will be delivered on Uist over the next two years to support the population reduction.

Alasdair Allan: To pick up on some of what has been said, I note that the goose management policy review described how the management schemes were due to come to an end in 2023. Since then, there has obviously been very welcome funding that has continued the schemes. I realise that there is a limit to how far ahead you can look, but, in the future, how much can or should we plan around a sustained and consistent approach to this environmental issue? I realise that, inevitably, funding will run from year to year, so how can we move forward in a sustainable way?

Sam Turner: It is recognised in the policy review, as I alluded to before, that this is now an integral part of goose management policy in terms of consistent greylag management. As has been set out before by NatureScot, either to this committee or the Citizen Participation and Public Petitions Committee, we had trials running from 2012 to 2017. The idea behind those pilot projects

on greylag management was to provide local goose management groups with the techniques and methodologies to allow them, with limited support from NatureScot, to sustainably manage the populations.

We are in a bit of a different position now, whereby we have recognised that there will need to be on-going Government support and intervention. On a strategic level, that is now in goose management policy, as it is in the review.

There is also recognition that resident greylags move around. Although there are acute problems in certain parts of Scotland, they will still move between certain islands, so tackling them in just one area when there is an acute flare-up is not sustainable and we need to do more to address the situation on a national scale.

Alasdair Allan: On the point about thinking ahead, this is an unusual example of a shared interest between crofters and environmentalists, because the landscape that is provided by crofting or traditional low-intensity agriculture is the environment that is needed by the bird species in which your organisation also takes an interest. I know that, as an organisation, you do this, so will you say more about how you intend to build that useful coalition?

Sam Turner: You are absolutely right. There is a lot of interest from the likes of RSPB Scotland in ensuring that greylag numbers are managed appropriately, especially where there is machair cropping. I have had a number of meetings with the RSPB recently to look at what can be done in that regard. I am waiting for a report from the RSPB on the feasibility of the sale of goose meat, which we are keen to use where possible, although I know that that would be limited. The RSPB has done a lot of work over the years on protecting the machair and ensuring that that habitat is protected. We will be keen to work with all stakeholders on the issue.

12:15

The Convener: We heard Emma Harper welcoming the £20,000 funding. However, that money is for something specific; it is not an increase in funding, so it cannot be dressed up as that.

What is really concerning is that, when I look at the goose policy delivery plan and the section on key projects and priorities for the period from 2025 to 2030, I see that recommendation 5 states:

"Management approaches to goose management will require medium term commitment, as opposed to year on year, to allow farmers and crofters to plan management of their businesses."

Critically, it then says that

"Future support that depends on funding will be discussed in line with the changes that are being made to agricultural support."

Finally, it says that—as we know—

"the transition from current arrangements towards future rural support"

is

"unlikely to be ready before 2030".

That is the wider concern. What is your view of the fact that we are actually going to be in limbo and unable to look at this transition before the new support schemes come in, in 2030, which is quite some time down the road?

Sam Turner: As Donald Fraser has set out, there will be a bit of a transition period, but we are still rolling the current schemes on a year-to-year basis, so there is scope to develop that and see whether anything can be done in the medium term between now and the future agricultural support schemes.

The Convener: That is far from ideal. You will, in effect, be treading water, because you will have no rural support plan in place, or no indications of what rural support is likely to be before 2030.

Sam Turner: I still think that we can develop what we have now, while we are in this period of agricultural support transition. Given that we do not know what future agricultural support will look like, we cannot commit to anything now in respect of how the goose schemes and agricultural support will dovetail, but there are things that we can do with regard to the other recommendations in the goose policy delivery plan and our on-going annual schemes to see whether this work can be shored up.

The Convener: It is far from satisfactory if we are, effectively, treading water and if we are having to put in interim measures because of the Government's failure to set out that rural support. We are going to have five years of less than adequate—or perhaps I should say less than perfect—solutions because of the lack of a rural support plan.

Donald Fraser: The future agricultural support is one aspect, but the other aspect is the review that we talked about earlier, which will look at current or future need. That is an important bit of work that we need to do.

The mechanism for the payment is slightly a side issue—the issue is more what is needed and where it is needed. That is the important bit of work that needs to be done, and then we can have the discussion about the mechanisms and the funding levels that are required. It is really important that we get this first piece of work, on putting in place

the recommendations in the goose policy delivery plan, done and concluded.

The Convener: Okay. Thank you. As there are no more questions, I thank the witnesses very much for joining us.

We now move on to formal consideration of our next steps with regard to the petition, and I refer members to paragraph 10 of the clerk's note, which invites us to consider closing the petition on the basis that, after hearing from officials, we are satisfied that the actions set out in NatureScot's delivery plan and the national goose policy framework will sufficiently address the problems created by increasing populations of wild geese in crofting areas.

I propose that we include in our legacy paper for the committee next session, which will have responsibility for NatureScot, a reference to monitoring the issue and the implementation of the framework and delivery plan. I propose, therefore, that we close the petition but include those steps in the legacy paper.

Do members have any comments, or are we happy?

Ariane Burgess: I have a comment, convener, although I do agree with what you have suggested. Given that the working group on the area that I was asking questions on has not yet been set up, I think that that it would be great if the successor committee could look at that, too.

The Convener: Thank you. Is the committee agreed on the approach that has been proposed?

Members *indicated agreement*.

The Convener: That concludes our business in public. Before we move into private, and given that this will be our last committee meeting in public, I want to put on record my thanks to all the committee's members, both those who have been here for the full five years and others who have dipped in and out. I thank all of you for your contributions.

I know that this is not generally done, but I also want to mention the team of clerks behind us. I believe that Emma Johnston has been the only one of the team who has been with us from the start, and I just want to put on record my huge thanks for the support that she has given me as convener through the good times, the bad times and the difficult times. We have had a legislation-heavy agenda over the past five years, and, without her guidance and the support of the team who sit under her, that task would have been made even more difficult for us.

I just want to say thank you to the clerks, everybody who has supported the committee and the witnesses that we have had over the past five years.

We will now move into private session.

12:20

Meeting continued in private until 13:01.

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