HOUSE OF LORDS

Science and Technology Committee

Corrected oral evidence: Nature-based solutions for climate change

Tuesday 26 October 2021

10 am

Watch the meeting

Members present: Lord Patel (The Chair); Baroness Brown of Cambridge; Viscount Hanworth; Lord Holmes of Richmond; Lord Kakkar; Lord Krebs; Baroness Manningham-Buller; Lord Sarfraz; Baroness Sheehan; Baroness Walmsley; Baroness Warwick of Undercliffe; Lord Winston.

Evidence Session No. 7 Heard in Public Questions 74 - 84

Witnesses

Harry Greenfield, Senior Land Policy Adviser, Country Land and Business Association; Professor Rosemary Hails, Director of Science and Nature, National Trust; Professor Mark Reed, Professor in Rural Entrepreneurship, Scotland's Rural College.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.

Examination of witnesses

Harry Greenfield, Professor Rosemary Hails and Professor Reed.

Q74 **The Chair:** Good morning and welcome again to our witnesses today, Mr Greenfield, Professor Hails and Professor Reed. Thank you very much for coming this morning to help us with our session, which we look forward to very much. Also, I see our specialist adviser, Professor Pete Smith, on the call, so welcome to all of you.

I will kick off with the first question. All the organisations that you represent and other organisations have made commitments to net zero. What plans do you have to meet those commitments, in what timescale, at what scale—how much carbon—and when will you implement it? Let us start with Professor Greenfield.

Harry Greenfield: Thank you. You have promoted me a few levels. I am not actually a professor or an academic. I am here representing the CLA, the Country Land and Business Association. We represent around 28,000 farmers, land managers and rural businesses in England and Wales. We are very supportive of the move to net zero. We think that land managers have a big part to play in this.

Land use is quite a tricky issue, because it is acknowledged, particularly on the part of agriculture, by the UN, the Committee on Climate Change and others, that it will be very hard to eliminate emissions from agriculture, although we are encouraging our members to look at how to reduce carbon emissions from farming and other types of land use. We are advising them to measure their carbon footprint and look at ways to reduce it.

Relevant to this inquiry, land use is quite unique in being able to offer the potential for negative emissions and for our members to sequester carbon in the soil, trees or plants. We think there is a twin-track approach: we need to reduce the emissions from land management practices and other types of rural business that our members are involved in; and we need to encourage them to change land management practices or land use where possible, so that they can deliver the nature-based solutions that will sequester carbon and help to avoid climate change.

In terms of public policy and motivating private investment, we have various things that we think will help to achieve this. The role we see ourselves playing, as the CLA, is helping to communicate to those land managers on the ground how they can play their part in achieving net zero.

Professor Rosemary Hails: We have done quite a comprehensive carbon account for the National Trust, and the big ticket items are of course agriculture, but also our investments, our let estate and the goods and services we procure. We have already worked on our investment portfolio and have reduced the carbon footprint of that by about 40% in 18 months. Our next priority is to reduce emissions in line with the

overall science-based pathway across our whole value chain, including procured goods, built let estate, land use and farming. By 2030, we are aiming to have reduced emissions by 45% against our 2019-20 baseline.

We then seek to reach net zero by sequestering a roughly equivalent amount of carbon through nature-based solutions. We are aware that this is extremely ambitious. We can do quite a lot directly as landowners, where we manage land, but working in partnership with our tenants, commoners and other organisations is also going to be really vital. This includes restoring our upland peatlands 50% to good condition by 2030 and 100% by 2040; sustainably managing our existing woodlands to maximise the amount of carbon they sequester; and using harvested timber in ways that keep carbon locked in as much as possible. We have also made a commitment to establish 20 million trees by 2030 and to restore other carbon-rich habitats. That is the outline of our plan.

The Chair: Thank you very much. That is very interesting and we will come back to some of it.

Professor Mark Reed: Organisations like the CLA and the National Trust obviously work with land managers, whether that is tenants or owners, to deliver net zero on their land. Getting the incentives right will be really important if those land managers will do the things that we might hope for them to do as part of these plans.

It is really important to be aware that this is a very rapidly moving area. There are two very different approaches to this, which I would characterise as land sharing versus land sparing. Land-sharing approaches include the Peatland Code. A UK farm soil carbon code is currently being developed whereby you can continue farming your land, using it as you are, producing food or whatever else, get the carbon credits for that, and, at the same time, measure and count that.

The land-sparing approach is all about land acquisition for carbon. This year, there is a growing number of green funds chasing land. Large-scale land acquisition programmes, often to change land use into forestry, clearly are part of the picture, if you look at the Committee on Climate Change's land use report and the need to increase our forest stock. Done without the right kind of planning and consultation, that could lead to trade-offs for local communities, food security et cetera, so we need to think carefully about that mix between land-sharing and land-sparing approaches and how that then plays out in win-wins and trade-offs.

Q75 **Baroness Walmsley:** Mr Greenfield, in order to move forward you need to know where you are starting from. We have heard that the National Trust has done a study and it knows pretty well where it is in relation to emissions. How much do your individual members know about the emissions status of their farms? I know that in Scotland there is a scheme whereby farms can get a grant for scientists to come in and assess whether they are carbon positive or carbon negative, and advise what to do. Is there such a scheme in England, and, if there was, would it be welcomed by your members?

Harry Greenfield: Yes, we would definitely welcome that. You are absolutely right: our first step would be to understand a baseline. We very much advocate the idea. We are encouraging our members to take a carbon audit and to think more widely about their natural capital, and their environmental baseline more widely.

We are aware of the scheme in Scotland and we would definitely welcome something similar in England. In fact, we suggested to Defra that part of the transition to the new environmental land management schemes should involve encouraging or incentivising farmers and land managers to do a baseline audit of their land, so that they can look at their carbon footprint but also look at opportunities to deliver environmental benefits on that land. We think that should also be packaged with a training and capacity-building programme, so that farmers can understand a bit more what that data actually means.

There is a lot of confusion or sometimes even misinformation about the environmental and climate agenda, and farmers often do not know where to start. We think that baselining, as well as providing data on which to act, would help people to understand a bit more about the impact their business has on the environment and the things they could do to have a positive impact.

Q76 **Lord Krebs:** I would like to ask a small follow-up question, which relates to things that both Harry and Mark have said, namely trade-offs. For individuals, whether they are tenants or owners, the change to nature-based solutions will inevitably involve trade-offs between, for example, using land to grow food or using land to sequester carbon.

As a follow up to Baroness Walmsley's question, I wondered whether the calculation of these trade-offs has in any sense been formalised. Are there mechanisms for working it out or is it a case-by-case basis? Do individual landowners have access to how to think about those trade-offs?

Harry Greenfield: There needs to be a combination of a national-level picture and individual. Some of the baselining and audit tools can provide a view of a piece of land, a farm or a holding, and give the trade-offs of what land is good for food production, flood risk reduction or carbon sequestration, so you can start to get a picture of where the best land use might be, or what types of management might be needed.

Obviously, if each farmer makes those choices, that may not add up to the best land use at a national level. There need to be government policies and incentives to make sure that you can calibrate those trade-offs a bit at a local and national level. We are starting to see a bit of that with, for example, the local nature recovery strategies coming through, which might help to identify the best pieces of land for nature recovery.

Obviously for carbon sequestration, in some ways, taking carbon on its own, it does not necessarily matter where it happens in the country, so you need to take account of what else the land could be used for, whether that is nature, food production or other things. I definitely think it needs to be a combination of looking at the individual farm scale, at

what the opportunities are and what you could use that land for, and then plugging that into a local or national picture to try to get a more coherent idea of what should be done where.

Lord Krebs: Mark, do you have a brief answer? Maybe Rosie could also say how the National Trust is dealing with this. Keep it brief, please.

Professor Mark Reed: The trade-offs are pretty clear. This is a land-sparing approach, taking land out of production and turning it into a forest. There are also win-wins or trade-offs, depending on whether you are a landowner or a tenant, on the land price. It is already evidenced that land acquisition for carbon is driving up land prices.

In terms of land-sharing approaches and the Peatland Code, it is fairly obvious that for the duration of your contract, minimum 30 years, you will have to make changes in your stocking and burning practices. The size of most of these estates means that you can do that without overall impacting negatively on what you are currently using your estate for at that broader scale.

In terms of regenerative agriculture, it will vary depending on what kind of intervention you are using, your soil type et cetera. In some places, there may be a compromise in terms of productivity. In others, there could be a win-win in terms of more productivity at the same time as those benefits for carbon, biodiversity and other things.

Lord Krebs: Rosie, how are you doing it in the National Trust?

Professor Rosemary Hails: There is a lot of information out there actually, so we have drawn together a number of data layers, for example the Natural England habitat opportunity mapping exercise. We have looked at where there are the biggest opportunities to uplift in public benefit in terms of carbon and nature, so that we can make informed decisions about where we might want to make big interventions.

I would very much emphasise that we need to adopt both land sharing and land sparing depending upon the local context. We need to work with communities to really engage them in the process, which we have done successfully in some very large-scale projects, for example Changing Chalk and the Skell. Also, we have aspirations to become the landlord of choice for low-carbon, nature-friendly farming, so we are adopting a multipronged approach.

Q77 **Baroness Warwick of Undercliffe:** My question is a natural follow-up to the previous discussion. The predominant stakeholder for nature-based solutions on land in the UK is the farming community. From the point of view of stakeholders in the land use transition, do you view the ambitions in the Government's net zero and nature recovery policies for land use change as realistic? If carbon savings need to be delivered without substantial conversion of land from its current use, predominantly agricultural, how can this be done? Is sufficient support currently in place for land managers to do this?

Harry Greenfield: The targets are realistic if the right policy support and investment are there to deliver them. A target on its own will not result in dramatic change, but the whole point of having government setting these goals is that it then puts in place what is needed to meet them. On their own, they are realistic, but it is a difficult transition to make.

As we talked about in the last question, there are a lot of competing uses for land, whether it is food, fuel or housing, and then all the various environmental benefits that can be produced. This means that you have to think quite carefully about what each piece of land is used for and how it is managed. For us, that means that policy cannot be delivered in silos. You cannot have targets for development and housebuilding, for example, on one side, then climate and nature, and then food production. They need to be considered holistically, which does not always happen.

Although these targets are achievable, they represent a radical shift in the land use sector and the farming sector in particular, as you say. We are very keen that there is a just transition, so that particular attention is paid to the potential winners and losers in these changes and support given to the sector to change. There needs to be really clear communication, which has potentially been lacking up until now, in the sense that there has been a signal: that the common agricultural policy is changing and we are moving to a new system that will look quite different and that can help to deliver on these targets. But there is still a lot of confusion and, dare I say it, a lack of awareness among some farmers, partly because of the lack of detail. People are aware that change is coming, but are not quite sure what that will look like for them.

Another side of this is that, for these ambitious targets such as net zero and nature recovery to be delivered, they need to be broken down into much more manageable chunks. We think that means sectoral analysis, so what net zero means for agriculture and what the pathway is for individual sectors of the economy, but also place-based contributions, so who needs to do what where. That needs to be intelligible for farmers, so that an individual farmer in a particular part of the country can understand what net zero by 2050 actually means for their business.

That is the gap that is still there. As I said, a lot of policy support will be needed to help them to get there. At the moment, it is partly about starting to communicate what this means for individual businesses on the ground.

Baroness Warwick of Undercliffe: Professor Hails, I wonder if you could also add something about the National Trust position on the right solution in the right place, which seems to differ somewhat from the Government's current focus.

Professor Rosemary Hails: It is entirely complementary actually, because it is about the fact that every place is different, with its own ecology, existing land uses and needs of communities. We are wedded to working out the best solution for local places. Also, we feel it is really important to connect that up with what is going on in the landscape, with our partners, so that we can work with our partners to make sure that, collectively, our solutions bring more than the sum of their parts, which is

particularly relevant for nature and connecting up habitats in delivering nature.

For example, we have just won some money from the National Lottery Heritage Fund to work in the South Downs on Changing Chalk. That is in restoring nature and heritage, and increasing carbon sequestration within a landscape, which involves work with local communities and local authorities, as well as other national organisations. My answer to that would be that those two approaches are compatible if they are connected up.

Professor Mark Reed: When we consider how realistic this is, we have to think about the economics but also the sociocultural dimension, so my concern is that, unless we significantly expand the amount of public funding available, this may not be realistic, and we need to think very cleverly about how we might be able to responsibly and safely harness carbon and other ecosystem markets to blend with that, in a planned way, to potentially expand the amount of money available to deliver on these targets.

It is not just about how much money is available and those economic incentives. People have preferences and we need to do two things. One is to look at both the perceived and the real risks that land managers see when they look at nature-based solutions. There are a number of things that we can do to reduce that, which I can speak about later if you want. Also, we need to learn lessons from psychology in how we communicate these messages. There are some very significant changes we can make to our messaging that could make a big difference to how these solutions are perceived and how likely people are then to adopt them.

Q78 **Baroness Sheehan:** How easy is it to disseminate information to farmers and other stakeholders on a local basis? Is that an issue? Can you get information to farmers and receive information back from them easily enough?

Professor Rosemary Hails: We do that through our networks of estate managers and local land use and farming advisers. We are thinking about how we can step up engagement with our tenant farmers in the future to support them in this forthcoming very big change for them.

Harry Greenfield: It is a real issue and an area of focus for us. We obviously talk to our members on a regular basis, but we talk to different members different amounts. We know that some farmers and land managers are harder to reach than others and do not necessarily hear all the communications that are directed at them. There is a changing policy landscape. Farmers will be expected to do things quite differently in the future and there are a lot of new ideas, whether that is private sector investment or new policy, that will impact them. How you engage with land managers on the ground, how you hear their views, how you explain to them what changes are coming and how they can take advantage of opportunities, is an issue.

There needs to be a lot of thinking about how to do that better, because it has not necessarily been done well in the past, possibly by anyone—the

Government but other organisations as well. Potentially, until now, that might have had a limited impact, but, given the transition we are facing and the changes that are happening, people cannot afford to be isolated from communications, whether it is from us, the Government or other organisations. It is something we have been thinking about.

We think that a lot of the new policies, the new direction of government, needs to factor in how you talk to the 100,000-odd farmers in England, for example, about what is happening and what they can do. If you do not, I think Professor Reed talked about perceived risks. There are a lot of perceptions out there that are potentially misinformation. When you are talking about private markets for carbon or nature, there are potentially people out there willing to try to take advantage of landowners and farmers, and potentially their lack of understanding or knowledge about the issue. Communication, engagement and opening up dialogue are really important.

It is a positive opportunity, because it gives farmers the chance to talk more about the benefits they provide. As well as being able to shape their own destiny a bit more by engaging in discussions that are happening, whether at political or local community level, they can also tell a more positive story about what they are doing and what they intend to do to help solve these big problems.

Professor Mark Reed: There is a problem, though which is how farmers actually learn about these kinds of things. Niki Rust, along with other colleagues and I, just published a paper called, *Have Farmers had Enough of Experts?* The simple answer to this is yes, they have. That includes pretty much every kind of expert, with significant scepticism about the farming press. The answer is that farmers learn most about farming innovations, including nature-based solutions, from other farmers. We need to think about peer-to-peer networks as a primary mode of communication where possible. That is not easy, but there are options.

I should also say that my colleagues and I have been doing interviews with farmers about their perceptions of carbon markets and nature-based solutions. I can tell you a bit more about some of the concerns we have uncovered if you are interested.

Q79 **Baroness Walmsley:** Can you tell us what the major barriers are for land managers and other stakeholders to implement nature-based solutions? How might they be addressed? We have just heard something about information, but what about skills? What about the complexity of the funding landscape? That can be very confusing. We have heard about at least two ways of getting funding this morning already. Some people have complained that there is a lack of consistency and long-term consistency. Perhaps you could address some of those.

Professor Rosemary Hails: Yes, there are a number of barriers. Uncertainty is one of them. It is hard for farmers to plan how their business should evolve into the future at the moment. There is still a lack of clarity about the new ELMS and exactly what will be paid for. There are

a number of organisations that are trying to help farmers to get ready for this big change. How those agricultural subsidies will play out in the future is the first step when farmers are trying to plan their future.

There are also barriers in skills and culture. Some farmers very much want to continue doing what they have always done, so an element of cultural change is needed as well as skills. They will say that they do not necessarily have the skills either to restore peatland or to create woodland. However, they have a lot of skills, so with the right training and support there is some potential to redirect those skills. For example, if you can drive a digger, you can be trained in how to do peatland restoration work.

For me, they are some of the main barriers. We need to illustrate how the financial bottom line can work for them in the future by diversifying into nature-based solutions.

Harry Greenfield: Professor Hails covered some of the issues I would agree with. There is a spectrum among farmers and land managers. Some of our members are heavily engaged with nature-based solutions. They are listening to experts, taking their advice and looking for new opportunities. There are others who are enthusiastic perhaps but do not know where to start. Part of it is about tailoring what can be done to different levels of interest, enthusiasm and skill. Some things will probably need to be packaged up in a very accessible way. The new ELMS has an opportunity to do some of that through a really accessible scheme that can incentivise farmers to do what you might call the basics for nature-based solutions, for soil management and that kind of thing.

Lack of certainty is definitely a problem, but that has been covered. Examples of what a nature-based solution or sustainable farming looks like are sometimes a problem. People hear the word and do not necessarily know what it means for them. Following on from what Mark said, examples and case studies, hearing from other people who have done it, will obviously have a big impact. It is quite a new area, so that is often lacking, especially sector or geographic specific, so what it might look like for an upland farm or a farmer in the south-west is important.

I would also make a point about permanence and permanent land use change. Some of our landowning members would be very happy to have a permanent land use change for their own reasons. Others take a more pragmatic approach, and it would be about the incentives and whether they could use the land for other commercial activities as well as a nature-based solution. There might be others for whom it is unrealistic to hope that that is what they want. That needs to be addressed.

Slightly connected to that, in terms of long-term thinking, there are tax implications to changing land use, and that should be considered. People are thinking about how this is treated by the tax system. I know we have been in discussions with the Treasury and HMRC about that, but there is a lack of certainty at the moment about the tax treatment for nature-based solutions, which is another barrier to people going into them.

As a final point on training, as I think I mentioned before, there is a lack of skills. Investing in training and upskilling the sector now would be worth while. It would produce a lot of benefits, as I outlined before, apart from just nature-based solutions or something quite narrow.

Professor Mark Reed: This echoes some of the findings from our research with farmers, who are concerned about tax implications and just huge uncertainties. Government could very easily clear those up, especially about whether, if you enter into a nature-based solution type scheme, that will impact on your ability to get funding from a publicly funded agri-environment scheme. It is about that clarity, not necessarily that the two can be stacked, but just knowing whether this is possible, to enable people to make wise and appropriate decisions about whether to adopt these.

We also heard concerns in our research on carbon prices. I am told that this is how much money someone is willing to pay through a broker. How do I know that they are giving me 10% of the actual price? A lack of transparency and understanding to work out whether they are being offered a fair price is a real concern. With some of the models that are currently being used for pending issuance units, for example in the peatland carbon market, there are concerns that it is the brokers who hold on to them and profit from them in the long term.

There are mechanisms that we could use, for example the peatland carbon guarantee, that could enable the landowners to hold on to those credits and sell them at their full price at a later date, rather than all the profits being made by the brokers. That works within the context of the Peatland Code. We have a code there and huge interest in arable soil carbon. There are other areas. A saltmarsh code is being developed, and I think five new codes are being developed by an Environment Agency-funded scheme at the moment. We need those codes and standards to protect the interests of both the land managers and the investors.

Farmers are saying they want flexibility in how they actually deliver stuff. "Great, give us a target and we will deliver that, rather than telling us exactly how to prescribe this". They need protection, for example through these codes, against unintentional losses. The Peatland Code and the Woodland Carbon Code operate a pooled buffer. If your project fails, you can still meet your commitments to the investor through unsold carbon that has been pooled across all the projects.

My view on training is that we might want to invest our time and energy in training the project developers and brokers who actually work with the farmers. These are your existing land agents and land advisers. Train up the army of people with expertise in this area who are already trusted by their clients to help to simplify this. Get rid of the red tape, because there is red tape as soon as you enter any of these carbon market schemes. That could be a very efficient way of doing this and could be done by the existing private sector, or you could train up publicly funded people to do this, as Scotland has done with its peatland action officers.

Q80 **Baroness Walmsley:** Professor Hails, there are a lot of tenant farmers,

and some of their tenancy agreements prevent them implementing nature-based solutions. Some might be reluctant to do so because they do not own the land in the long term. Can you tell us about that?

Professor Rosemary Hails: More than 50% of National Trust land is managed by tenants. I can speak only for National Trust tenants. As far as we know, most National Trust tenancies do not restrict tenants in any way from engaging with nature-based solutions. In fact, we want to encourage them to do so. We are really interested in developing new types of sustainable rural economies, and our tenants are a vital partner in how we are actually going to deliver our strategy.

If you know of any specific examples where this is not the case, I would be very happy to pick it up offline, but I am not aware of them. This might be a minority of cases where we have made specific agreements mutually with tenants as the best way to deliver environmental outcomes. Apart from that, I am sorry, I cannot help.

Baroness Walmsley: Perhaps Mr Greenfield has an example. He just put his hand up.

Harry Greenfield: I do not have any specific examples necessarily, but it is something that we are aware of. We have been talking to the Tenant Farmers Association about this, and we have got to the importance of dialogue and collaboration between tenants and landlords. As things change, there needs to be open and transparent communication, so that each is aware of what can and cannot be done under the terms of the tenancy agreement and what the long-term aims of both parties are for their businesses.

It might be a difficult road to tread, especially with the lack of clarity about the details of some of these new schemes and the details of the private contracts for nature-based solutions. Those are capable of being overcome through collaboration, clarity and dialogue, starting early. Our members are starting these conversations now and we would encourage them to do so.

Professor Mark Reed: I sit on the executive board for the Peatland Code and I can confirm that it is possible for tenants to have benefit-sharing contracts. The units are owned by the landowner and it is possible for the contractual arrangements to share those benefits with tenants.

Q81 **Lord Sarfraz:** My question is about voluntary standards in markets, such as the carbon code for woodlands, the one for peatlands and the others that are coming online. Mr Greenfield, I have a simple question. Are the current standards appropriate, or are they too complicated for landowners to effectively engage with?

Harry Greenfield: They are appropriate. We have had examples of how both codes, the Woodland Carbon Code and the Peatland Code, could be improved. There might be disagreements about whether they measure carbon accurately, but those disagreements are happening elsewhere anyway. Having a code where you have an agreed standard, even if there

can be debate about whether the code can be improved, is a huge step forward.

As to whether they are easy to engage with, it goes back to what I said earlier. Some of our members are engaging with them already and entering into contracts on the basis of these codes. Whether they are appropriate for every type and size of farm is potentially a different question. There may be a role for advisers and brokers or for something different if that is needed. As Professor Reed said, more codes are being developed and we think that is a good thing. Once they are out there, they can be improved over time if problems arise.

Lord Sarfraz: Professor Reed, if you could have any set of support measures available for landowners to engage and implement these, what would those be? What support is missing?

Professor Mark Reed: The first is clarity. There is a real lack of clarity about whether you will be eligible for ELMS or other kinds of payments, so creating that certainty would be the first thing that we need. Reducing the red tape is important. We are in the process of developing version 2 of the Peatland Code and taking feedback from landowners, project developers and suchlike in trying to do that. There is also a lack of contractors, so as this begins to take off and we get more interest from investors, it is all very well taking the contracts and getting the money, but getting the skilled contractors in place to do the work can often be a bit of a problem.

It is difficult to say what else we can do, but clarity from government and building capacity in the land advising community and the contractor community could go some way towards helping to meet the demand for this that is out there.

Professor Rosemary Hails: I know there is work ongoing on a soil carbon code. That is actually quite badly needed. At the moment, farmers think they are dealing with people who are certified, but it actually means they are certified in reporting, rather than in verification of soil carbon. This could ultimately undermine farmers' confidence in the whole system, so we would very much welcome a soil carbon code as soon as possible.

Professor Mark Reed: It is anticipated that that will be piloted next year. I am on the team that is developing that code, so that is coming soon.

Lord Sarfraz: Professor Reed, in terms of the financial incentives from the carbon code, do you have any forecast or any idea of what price point would make it very attractive, from the voluntary market, for these codes to be widely adopted?

Professor Mark Reed: We have done a little bit of modelling in the Peatland Code that suggests that, at a price of as little as £10 per tonne, with public funding for the capital works, you can pay for the work to be done, the maintenance over the 30 years and all the verification work that needs to be done. At a price of £20 per tonne, you can do this without any public funding at all, potentially.

To give you a sense of what the pending issuance units are selling for, they typically sell for between £10 and £20. The highest that we have seen so far is £25 per tonne for a pending issuance unit. Bear in mind that these pending issuance units are promises that there will be carbon in future and they then get turned into verified carbon units as the verification takes place, at five-yearly intervals, that the work has been done, it is working and emissions are being reduced. We anticipate that those verified carbon units, as we have seen with the Woodland Carbon Code, will be worth significantly more.

Lord Sarfraz: If it hits £20 and above, do you think farmers would be able to make the up-front investment needed themselves, instead of the Government support at £10?

Professor Mark Reed: That is based on pending issuance units, which is where you pre-sell the carbon. Depending on the nature of your investor and what they are willing to do—whether that is a lump sum or they want to profile that over the 30 years—if they are willing to pay that up front, because for peatlands the capital works are quite expensive up front, that works. For the soil carbon code, it is a bit different. You do not have those up-front capital costs, so the barriers to entry are much lower.

The Peatland Code is your worst case scenario, in terms of financial barriers to entry, and it works at £20 per tonne without any additional government funding and at £10 with additional government funding. We think that it will work, potentially, at lower prices for the soil carbon code. We do not have any precise figures on that at the moment.

Q82 **Baroness Brown of Cambridge:** Could I follow up on Lord Sarfraz's question? I think that in a previous evidence session we were told that these pending issuance units were coming in at carbon prices of about £3 to £7 a tonne. I was interested. Does that apply to woodland planting then? Clearly that is well below your number for what is realistic for peatland.

Professor Mark Reed: I presume so. This is information that I have as a member of the executive board of the Peatland Code, which has come from our statistics internally. We do not publish those statistics, but I am giving those to you here as part of this evidence, so those figures are for the Peatland Code.

Baroness Brown of Cambridge: Professor Hails or Mr Greenfield might have a sense of whether those numbers sound realistic to them. No? Thank you very much.

Q83 **Baroness Manningham-Buller:** My question was about the lessons we have learned about our past attempts to engage with stakeholders, farmers, landowners and land managers. You have given us some of the answers already in your very helpful evidence on the financial incentives, tax, psychology, messaging, suspicion of experts, skills, clarity et cetera. I am looking first at Professor Reed. Where it has worked well, what are the components that have made it work well? Can you describe them to us for a broader lesson in how to do this work?

Professor Mark Reed: Moving away from the stuff we talked about in relation to reducing risk perception, I guess there is some of the psychological stuff and then maybe an exemplar. It depends on the value orientation of the land manager. If you have a biospheric orientation, so pro-environment, and a social, altruistic orientation, so pro-people, community and others, when you frame a scheme as being all about tackling the climate crisis and protecting the environment, you get adoption. That works.

However, there is a large group of people who would be described as being more egocentric in their value orientation. In this case, you need messages that emphasise the financial benefits to the land managers themselves: increases in productivity, a sense of personal achievement and respect from peers, or a greater opportunity for social interaction as a result of the stuff that they do. That message framing matters, as well as who delivers that message.

An interesting exemplar of this is something called landscape enterprise networks. This model is described as green commerce, rather than green finance. That is really important, because there is a lot of talk about green finance. Actually, what we are talking about here is burdening landscapes, land managers, et cetera, with huge amounts of debt that then have to be repaid. When it comes to the Peatland Code, Woodland Carbon Code and landscape enterprise networks, this is a buyer and a seller.

As Nestlé, for example, I want to reduce risks to infrastructure or to supply chains from climate change. I am going to pay for that risk reduction and the farmers are now going to do some things that will deliver that reduction in risk. That commerce, that exchange of funding, really works.

In LENs, we have studied this as a group. We found that farmer feedback on this is incredibly positive. They prefer the LENs privately funded scheme to the public alternatives. If you look across the dairy sector in particular, where we have looked at this we have seen very low adoption of publicly funded schemes but huge adoption of this, so all of Nestlé's farmers. It has now extended out to other investors. It is 40% oversubscribed by farmers in East Anglia.

This is because it is a place-based approach and the interventions are co-designed, with the farmers saying, "Here's what we can supply", and a bunch of investors saying, "Here's what we want". You look for where those supplies and demands meet, find the price at which the farmers are willing to sell and which is still a good deal for the investors, and you have your deal. The evidence from our work suggests that not only is this good for farmers and liked by farmers but it delivers outcomes, with more hedgerows planted more quickly under this scheme than in the comparable publicly funded scheme in parallel with this, and benefits for animal health in terms of vector-borne disease, et cetera. It is possible to get this to work.

Interestingly, this is a business-led approach. It came out of the business community and the people who are selling this to the investors are doing so business-to-business. There is a lot we can learn from that.

Baroness Manningham-Buller: You started your evidence on this question by saying that the message had to be very much tailored to the recipient. How do you do that across a range of motivations, from commercial to social, philanthropic or more self-centred? Can you have a consistent message?

Professor Mark Reed: There are two different approaches here. First is our messaging, collectively, whether that is schemes or government. That is about having this as a multifaceted message, so I am appealing to different motives. Some colleagues and I have looked at messaging from Governments around the world on this. The messaging is almost always, first and foremost, about the environmental benefits. The evidence suggests that that leaves many landowners cold, so, great, let us put that in there, but let us frame it in relation to these direct benefits to the land managers themselves. Then you can pick which bit of that resonates with you, but the key thing is that we have those other framings there as well.

As I was saying, that is one way of communicating this, but the issue is that there is huge distrust of academics, government and even some types of adviser out there. As a result, it is peer-to-peer communication that typically works between likeminded farmers. That is much more adaptive, typically. We need to think about those kinds of networks and giving them the fodder: "Here are the benefits and the range of different things that you can sell to your peers, based on the evidence". I think that more peer-based approach will make the biggest difference if we can facilitate it.

Baroness Manningham-Buller: Harry Greenfield, do you have anything to add to what Professor Reed has said on the specificity of what works, and what has worked, as opposed to the barriers and problems, which you have all outlined?

Harry Greenfield: Yes, I would agree with Mark's point. Above all, it takes time and investment of time and resources to do this. The examples that I think of are farmer cluster groups, so groups of farmers who have often been operating for years, if not decades, together and over time have gradually become more engaged and aware on environmental issues, talking to their local communities about what they are doing for the environment and working with advisers to take advantage of government schemes to do more.

That does not happen overnight. It is often about taking farmers on that journey, where each one will go at a different pace. It is a mistake to think, as Mark said, that because experts know the answer to something and government knows what it wants to do, they can roll it out in a couple of years just by telling everyone. Actually, it will take a lot longer than that.

There is the LENs example that was mentioned. We are impressed with that but, again, the feedback we have had is that it took quite a lot of

investment and facilitation to bring those investors and land managers together to talk about what they could deliver. Again, it does not happen overnight, which is one of the reasons why we think this should be done now for a transition that is over the next five or 10 years. We should be starting, even if it is just facilitating those groups of farmers to come together and start talking, on the grounds that that will produce benefits.

We, as the CLA, have partnered with Championing the Farmed Environment, which is about sharing quite simple messages but in the same language across different farming sectoral organisations, so that the farmers are hearing from different places the same idea about how to manage your farm to increase environmental benefits.

There is an issue with language barriers or people talking past each other. We have come across this in the nature-based solutions arena between the finance sector and land managers. As the CLA, we have engaged with some of the City of London initiatives, looking at green investment, green finance and nature-based solutions. Some of those meetings start off with just trying to make sure we are all talking the same language.

The finance investment community, which is very interested in green finance, does not necessarily know what land management looks like on the ground and how you produce a nature-based solution. Similarly, farmers and land managers are not necessarily au fait with the latest ins and outs of what the investment community wants or is looking for. There are similar issues with non-governmental organisations and the language they use, and policy jargon coming out of government.

On that government point, there has been a slow eroding of trust in government public agencies from farmers over recent years, or decades even. It goes in peaks and troughs, but that needs to be rebuilt. For many farmers, there is a relatively healthy scepticism as to whether public agencies can deliver what they are intending to, which is a big barrier. The Government can help to communicate that they are able to do what they say they will do.

Professor Rosemary Hails: I can give an example of where we feel this has worked well. One example I mentioned earlier was the Skell Valley project. We had some seed funding from the National Lottery Heritage Fund to develop plans for the whole area. Over 1,000 people attended an event, a workshop or a presentation about the project. It was a genuine example of co-design. This can be done in ways that genuinely co-design land management transitions with the community. Together, we submitted a stage 2 application, which got a further grant to deliver that. I wanted to add that example to the mix.

Q84 **Lord Kakkar:** I would like to turn to the question of environmental land management schemes. Would our witnesses be kind enough to give us a view on what they believe to be the ideal design of such a scheme, if there is such a thing? We have heard much in this evidence session about suggestions.

Harry Greenfield: The CLA set out, three or so years ago, our land management contract idea, which was a sort of blueprint for how a future policy based on public goods could work. Much of that still stands. We think that there needs to be a flexible approach, based on contracts between land managers and the Government, to deliver certain outcomes, and flexibility on how they do this.

The way the new schemes have been split into three separate schemes, the sustainable farming incentive, local nature recovery strategies and the landscape recovery scheme, is helpful. There is no one-size-fits-all approach, recognising that there are some things that need to be delivered by a majority of land managers and farmers, to make sure that we meet national environmental targets, and that are quite straightforward to deliver with the right support and incentives. There are others that are much more locally targeted, where you might want to spend some time developing a project proposal for a nature-based solution or another intervention. That needs to be more tailored.

The payment rates are an important question. We are happy to see that the Government are moving somewhat beyond the previous system of paying for forgone income and the costs of a project, which often does not incentivise enough for delivery of these things. Moving towards more of a payment that recognises the value to society of the sort of environmental management that they are being paid for will make a big difference.

Advice is really important. There needs to be built-in, funded advice to help people, whoever it is. Touching on what I mentioned earlier, there is a need, particularly in the early years, to frontload these schemes with advice and training, so that people can get an idea of the baseline environmental value of their land and what they could deliver.

Finally, on the design of the schemes, you need to have really clear objectives about what the Government are aiming to achieve. These have been slightly lacking until now. One of the reasons why farmers are not necessarily clear about what they are expected to deliver is that the Government have not always been entirely clear about the objectives of these schemes over the long term. We know that there are a few years of transition towards a new scheme, but it is not clear how much the farming sector will need to change from its current practices in order to deliver this. There is an assumption that quite a lot of change will be required, but that has not been explicitly stated and quantified. That makes it hard to plan.

You need to be able to have progression through the schemes. That is really important to build in at the beginning. People start at very different levels in terms of how comfortable they are doing environmental management and what they want to do with their land. You need to make sure that any government investment in farmers entering at a fairly low level of ambition should help them to progress into doing more for the environment, if they want to. That includes building in a better understanding and advice on what more they can do, having built in a foundation.

If you enter into a sustainable farming incentive for five years, what does that mean you could do in year 6 or year 10? That is not clear, partly because of the lack of clear objectives about what the scheme is aiming to deliver over the next 10, 20 or 30 years.

Lord Kakkar: If I may pick up on some of that, in the evidence we received from the CLA, there was a suggestion that the delay that has attended the introduction of these environmental land management schemes was an opportunity for piloting and co-design. Are any of the points that you made being adopted in co-design as these schemes are being piloted?

Harry Greenfield: Yes. I think some of them are being piloted. Particularly the tests and trials that Defra has funded, which are more small-scale tests of different elements of the schemes, have been very interesting at revealing, on a small scale, what the different components of the scheme could look like, such as a blending of public and private finance or different ways to introduce a land management plan. The CLA is quite supportive of the idea that each farm should have a land management plan that sets out what they are currently doing on their land and what they would like to do over the next years of the agreement they might be in.

These things have been trialled in different places by Defra. The piloting is only just starting as we speak and it is only piloting the sustainable farming incentive scheme, so there is a slight mismatch between what is being piloted and when they are hoping to roll out the scheme in full. That might be okay, as long as they are flexible enough to change and evolve the scheme quite rapidly on the basis of what they learn as it is rolled out. We are comfortable saying that the environmental land management schemes might not be perfect when they are first rolled out. There will be things you can learn.

We want to avoid the system under the common agricultural policy where you had to wait five years before you could change anything, or you had to go to the Commission to ask permission. We want Defra to be able to adapt and iterate these schemes quite quickly on the basis of what it learns and what feedback it gets.

Professor Mark Reed: The key thing is that you need to design ELMS with private markets in mind. If you do not do that, there is the potential for public and private to compete with each other. In an ideal world, we are looking for the markets, responsibly, with all the safeguards in place, to do as much of the heavy lifting as possible and for the public purse to pay where there would be market failure or where there are landowners who do not want to take private funding.

In that way, we optimise the amount of funding that is available, but you need to bake that into the design. I am also helping to co-ordinate a policy group across all four UK countries to avoid competition between the four countries in this. Depending on how you design ELMS and that interface, you potentially make it more or less attractive for investors to invest in England versus Scotland versus other parts of the UK. That also needs some thought. We need to think about how that interface will

work. In my written evidence, I have provided six examples of blending options that I am discussing with policy officials at the moment.

Thank you for the opportunity to present today. I appreciate it and I will leave you to it, if that is okay.

Professor Rosemary Hails: Adding to what has already been said, I would make the point that we would like to see connectivity between the three components of ELMS. I suppose there is concern that the sustainable farming incentive is starting off at too low a base. Of course, the idea there is to get a high uptake and that it will evolve over time, but we need transparency in how that will evolve over time.

Also, we need clarity in how the local nature recovery strategies will link to landscape recovery. Again, there is that potential for local nature recovery strategies, if appropriately co-ordinated, to contribute to larger-scale benefits, being more than the sum of their parts. That connectivity is not yet apparent to us.

The Chair: Thank you very much to all three of our witnesses. It has been a very informative session. The proceedings of today are recorded, but they will be in plain print. We will send you a transcript and, if you have any comments or corrections to make, please feel free to do so. If you feel you have any other material that you would like us to see, feel free to send it to us and we will receive it as evidence. For today, can I thank all three of you very much indeed for helping us? It has been a most informative session, so thank you and goodbye.