UK Research and Innovation

Briefing: De-risking the farming transition – what can we do?

Based on an AFN Network+ webinar, held 12.09.25

Table of Contents

About this briefing & speakers

About this briefing:

This briefing is based on a webinar discussion given to the AFN Network+ community on the 12th September 2025. It is written by Nina Pullman, food systems writer for AFN, and edited by Jez Fredenburgh, Knowledge Exchange Fellow for AFN; the transcript has been lightly edited to paraphrase in parts. You can also watch the webinar.

About the webinar topic:

Farmers are under immense pressure and transitioning farming practices can feel daunting – and risky – in those first few years. For many farmers, this can be enough to stop them taking that leap. How could collective insurance and green financing in its many forms help de-risk and unlock that transition? How can mindset change and coaching also help support the transition?

Our three speakers come from academia, banking, and farming: They share their latest research and business experience, including the viability of collective landscape-scale insurance, banking products, and what they've learnt from coaching farmers towards more sustainable systems.

About Dr Zainab Oyetunde-Usman:

Dr Zainab Oyetunde-Usman is AFN Year 3 Champion for Carbon Financing and a Research Social Scientist at Rothamsted Research Net Zero and Resilient Farming Department. She is a trained agricultural economist with experience in applying behavioural approaches to designing and fostering mechanisms to incentivise adoption of net zero innovations. She is involved in interdisciplinary research engagement co-developing pathways to achieving net-zero with stakeholders across the UK agri-food systems. Zainab has over time engaged with the AFN Network+ as an ECR member and a scoping study project lead.

About Carolien Samson:

Carolien Samson is the Head of Sustainable Banking at Oxbury Bank which encompasses all elements of sustainability both internal and external for the Bank. Carolien has extensive experience in agricultural finance spending more than two decades in both commercial banking and development finance institutions in South Africa in roles ranging from policy and product development to commodity trading. At Oxbury, she was responsible for the the consolidated 2023 Natural Capital report which was the first combined TCFD and TNFD disclosure to be published by a UK head-quartered bank and was instrumental in the launch of the Oxbury Transition Facility in 2025 to provide working capital for farmers changing practices to improve resilience. You can also read Oxbury's 2024 Responsible Impact Report and their Nature Markets and Corporate Demand report.

About Doug Wanstall:

Doug Wanstall is Head of Projects at Beyond Zero and a mixed farmer based in Kent. He is an innovative farmer, passionate about the reversal of climate change and biodiversity collapse. Doug led the development of the UK Carbon Code of Conduct which has been established as a central set of standards taking a holistic approach to drive investment into nature-based solutions. Following his Nuffield Scholarship in 2016, and based upon data, science and experience on his own farm, Doug provides consultancy in transitioning businesses towards regenerative agriculture and giving the strategic advice, the skills, the tools and the implementation techniques to ensure success.

Summary of key points

Doug Wanstall, Dr Zainab Oyetunde-Usman and Carolien Samson share their latest research and business experience on how farmers can be supported to derisk the transition to net zero and regenerative farming practices.

Key points from Doug Wanstall

Fear of change, yield uncertainty and mindset shift are some of the biggest barriers to farmer transitions

- The barrier to a transition mindset is caused by a fear of change, based on business risk and the uncertainty around yield reductions.
- There is a belief that falling yields means falling income. But if a transition is managed well and carried out slowly, reduced tillage can lead to reduced nitrogen and other input use.
- It takes time to build up soil carbon or soil organic matter; farms need to 'earn the right' to reduce nitrogen applications.
- Regenerative practice can work everywhere in every system. Success relies on the right interventions and good advice according to farm type.
- Another barrier to farmers is concern over what Defra will do next, as stewardship grants or funding like SFI are withdrawn with little or no notice.
- Farmers are advised not to rely on Defra or other government bodies to determine their future but to create their own resilience.

Financial jargon and low integrity offsets are confusing and risky

- Finance is a barrier to farmers looking to transition to regenerative farming, because of complicated acronyms or a limit to traditional funding from banks.
- It can be difficult to understand what the baseline requirements are for carbon offsetting systems.
- Farmers should work with a recognised, high integrity system that aligns with international standards and enables them to work with long term investors.
- If carbon offsets can be sold by filling in an online form, or in a simple process that doesn't require a farm visit, that is not likely to be a high integrity carbon offset.

Regenerative transitions often become long-term despite soil carbon debate

- There are limitations with the permanence of soil carbon, but once a farmer begins a true regenerative journey, cost savings become a long-term positive financial outcome that means they rarely turn back.

Carbon protocols provide structure to businesses and investors

- The UK Carbon Code has a soil testing protocol that analyses two sample points, made up of 16 points per point, which is consolidated into a set of results.
- This is used to calculate the total organic carbon stock per hectare, and how that can be increased over time.
- The carbon footprint is calculated with a full carbon audit of scopes one, two and three, across all greenhouse gas emissions.
- Under this system, businesses can only sell carbon offsets once they reach net zero.
- The Chapel Down winery case study shows the extent of a baseline and reduction journey for a large processing business, with over 1500 tonnes to remove before reaching net zero.

Working with corporate partners can help fund net zero transitions

- Beyond Zero works with corporate partners like the Met Office, which has invested in three farms, in the Lake District and Devon, to help finance baselines.
- Over time, the Met Office will buy the offsets that are created by these businesses once they get beyond net zero.

Key points from Zainab Oyetunde-Usman

A new form of collective insurance can help farmers derisk transition

- Collective insurance for farmers is a new form of insurance scheme designed to help transitions to net zero.
- Since Brexit, there has been a policy shift towards collective orientation. For example, the local nature recovery and landscape recovery schemes are different from the EU direct payment system, which supported landowners and large-scale farmers.
- But while post-Brexit farmer payment models are better designed for British farming systems, they have not always incorporated regenerative farm practices. Importantly, they also do not adequately account for multiple risk factors.
- Risk cannot be individualised to one aspect of a farm or food system. There is an opportunity to bond different risks, and allow farmers to collectively run trials with adequate insurance to cover their losses.

Rothamsted has considered three types of new insurance models

- One model was a watershed-scale collective insurance scheme for farmers on a flood-prone landscape, to provide coverage for flood risk.
- Another example looked at how downstream farmers could take up innovative practices like fertiliser inhibitors, to reduce nitrate leaching flow, reduce emissions and improve water quality.
- A third model looked at farmers who are reducing livestock numbers combined with agroforestry, who could join a regional collective insurance programme in case of any form of loss.

Pooled premiums can help bring costs down for farmers

- Collective insurance can account for multiple risk factors, including income loss, transition cost and climate impacts.
- Premiums are also pulled together, reducing costs to individual businesses.
- Research shows that farmers are already jointly covering the cost of some items, such as special purpose vehicles, or funding for trials.

Pricing the risk of regenerative transitions is challenging

- More data and research is needed to price multiple risks and bring a collective insurance product to the market at the scale that is required.
- A public-private partnership could help fill this gap, where a product module becomes part of a system like SFI, which is still very much based around individualised incentives.
- SFI has its strengths but collective actions and schemes will help scale and move farms more quickly towards net zero.
- The policy framework would also need to be updated, so that a collective insurance scheme could work within Elms, with policy support guarantees for insurance premiums.
- The private sector has a huge role to play. For example, insurance and water companies could help tailor new insurance schemes for different net zero farm practices.

Key points from Carolien Samson

Banks are looking to finance regenerative practice as evidence of financial sustainability

- The average loan term of Oxbury's lending portfolio is 21 years. In that time period there is a lot of uncertainty that could affect the viability of a farm, from climate change to supply chain demands around net zero.
- It's in the bank's interest to identify farmers who are undertaking practices that will make them more resilient in future.

Oxbury's transition facility uses carbon footprints as a baseline

- The Oxbury transition facility uses two specific indicators: carbon footprints, used as an emissions baseline and how progress will be monitored, and soil organic carbon content as a proxy indicator for soil health.
- This is based on the theory that farms that have higher levels of soil organic carbon will be able to absorb water better, withstand droughts, and cope with flooding better over time.
- The bank looks at evidence that provision for change is occurring, rather than a specific number or outcome.

Yield uncertainty is countered by low interest rates for transitioning farmers

- To counter yield uncertainty, the transition facility will support a farmer for up to six years with a working capital facility to either draw down or repay, at 1% above the base Bank of England rate.
- Most applications to the fund have come from farmers who have already made changes and are looking for support, rather than farmers who are thinking about transitioning and don't yet have the evidence.

Key points from audience Q&A

Carbon offsets can help boost income but only once net zero is secure

- Farmers should establish their own net zero status before they sell off surplus carbon.
- In most cases, that means farm businesses will need to be well down the transition journey before they will have anything to sell.
- It is possible to raise funding and sell carbon before reaching net zero. But farmers who do that, risk being in a worse position down the line when their own carbon status is insecure.

Food producing farms could be helped to reach net zero by farms with more nature or carbon storage

- Farm type varies, from those producing food efficiently to those that are in water catchment or nature-friendly landscapes. Farms working together can help balance a journey to net zero without losing food production capabilities.
- Beyond Zero is working on some schemes to help equalise the benefits across groups and clusters.
- As an example, one large catchment would see huge benefits from re-wiggling a river, but would require cooperation from five different landowners to make it work. The group is slowly coming together to realise they will collectively share the benefit from that scheme.

Mindset shift towards a food system transition is changing but not quickly enough to help unlock barriers

- The infrastructure around farmers, such as banks, insurers and other service providers, is moving to a transition mindset at different rates.
- Those invested in nature and systems recovery have a faster moving mindset and are useful in helping farmers unlock their own transition.
- On the other hand, there is a less clear direction of travel from input companies, such as fertiliser manufacturers. There is still an unhelpful dialogue around nitrogen fertiliser and feeding a global population.
- Mindsets are shifting towards the need for a food system transition, but the pace of change isn't quick enough.

Webinar transcript

Speakers: Zainab Oyetunde-Usman (ZOU), Carolien Samson (CS), Doug Wanstall (DW), Jez Fredenburgh (JF).

Speakers discuss the barriers and solutions to help derisk the food system transition for farmers.

JF: Hello, everybody. Welcome back from summer. Thanks very much for joining this AFN Network+ webinar on derisking the sustainable farming transition. We'll get into what this means a little bit. But first, let me introduce everybody. I'm Jez Fredenburgh. I will be your chair today. I'm based at the School of Environmental Sciences at the University of East Anglia, where I'm the knowledge exchange fellow for the AFN Network.

Also with me is our project manager, Jon Haslam, and our co-lead Neil Ward, also based at UEA, and Jon is at University of York. I'd also like to welcome our guests, Dr Zainab Oyetunde-Usman, a researcher at Rothamsted, and one of our champions, Carolien Sampson, head of sustainable banking at Oxbury bank. And Doug Wanstall, a farmer in Kent and head of projects at Beyond Zero.

Farmers face immense pressure from climate and rising costs, so shifting their business to regenerative practice feels risky and uncertain

So today's topic: de-risking the sustainable farming transition. What can we do? So it's fair to say that farmers are under immense pressure. At the moment, they're dealing with lots of uncertainty, whether that be climate change, extreme weather, costs, farm gate prices, changes in government policy. Many do not have large reserves of money or, perhaps, emotional energy. Right now, in those circumstances, making changes to a business is pretty hard. It can feel risky, even if you know that it might be the best thing in the long run.

So for many farmers, this feeling of risk can be enough to stop them taking that leap to make changes in their business for a more sustainable, resilient system. And in fact, the Soil Association Exchange last year found that 66% of farmers identified financial and business risks as barriers to transition. So it's a really big thing that we need to understand better. So our question today is, how do we remove this feeling of risk as much as possible and enable more farmers to start that transition for their business to long-term sustainability and resilience?

I'm going to hand over to Doug in a second, who will talk us through this much more from his perspective as a farmer himself, but also as someone who coaches farmers in this transition. He'll be talking about mindset and other barriers as well as enablers. Then we'll be hearing from Zainab, who will share her research with us about collective insurance for farmers and whether that might be a good tool. Then we'll round off with Carolien, who will be talking about Oxbury bank's development of a transition fund to help with that transition.

So Doug Wanstall is head of projects at Beyond Zero. He's also a mixed farmer based in Kent. Doug is an innovator and passionate about the reversal of climate change and biodiversity collapse. He led the development of the UK Carbon Code of Conduct, and he provides consultancy in transitioning businesses towards regenerative agriculture. Doug, I will hand over to you.

Barriers to regenerative farming include mindset, uncertainty over yields and farming policy

DW: Thank you very much, and thank you for inviting me to talk to you today. So my name is Doug Wanstall. I still identify as a farmer based just outside Ashford in Kent. Our farm, it's a mixed farm. We have arable crops, poultry, cattle, market garden. We have a black soldier fly larvae production system, working

with a company called Inspro, and we do a lot of work with the University of Kent. What we're trying to do, really, is create a Knowledge Transfer Centre and a centre where we can not only build the evidence, but also share that knowledge to farmers within our network. And I think a lot of people will agree that one of the things that's missing from the regenerative agricultural industry is evidence that what we do is leading to meaningful change.

So for the last 10 years of my working career, I've focused on the development of a company called Beyond Zero and the UK Carbon Code. So Beyond Zero works with farmers and landowners across the country and even abroad to help them develop circular and regenerative systems and work with them to ensure that they can not only develop those regenerative and restorative systems, but do so without risking a shock to their business.

And we find that increasingly, people are interested in what we do, mainly because of the reduction in the profitability of agriculture, certainly arable agriculture, over the last few years. So Beyond Zero really works with farmers and landowners across the country, and then we connect them with investors who either want to buy carbon offsets or invest in nature recovery in some other way.

We've developed two or three different models of investment within farms. So what are the barriers to a resilient and regenerative transition? Well, we talk about the five m's of change: mindset, mindset, mindset, mindset... It's obviously a lot more complicated than that. But you know, while mindset is the number one barrier to change, it's the fear of change. So what causes reticence to change? What are these barriers, and how can we break them down?

So really, number one is always business risk and fear of reducing real yields. Falling yields means falling net income, right? That's the question we always get asked. But no, not necessarily. That's just not true. If a transition is managed and carried out slowly, you have to earn the right to reduce tillage and reduce nitrogen and reduce input use. Don't expect to be able to do it on day one and see the same result. It takes time to build up soil biology and soil carbon or soil organic matter, in order to get some of that free nitrogen that's above our heads.

It takes time and effort, and it takes a bit of time to build up the right biology in one soil. But what we always say is, seek good advice, learn from experienced practitioners. It's really important to do that. So also, what's the other concern? Concern over what Defra will do next. We haven't got a clue what's coming out of Defra next. We've had problems with BPS being removed. Stewardship grants, SFI etc, get withdrawn, almost at the drop of a hat. And people don't know what to do. They don't know what's coming next. And my advice really is, and always has been, don't rely on them. Don't rely on Defra or any other government body to determine your future. Let's try and build businesses that are resilient, that can stand on their own two feet. Now that's easier said than done, but it can indeed be done.

So another barrier. We've seen our neighbours do it. We've had a go and hey, you know what? Regenerative agriculture, it just doesn't work here. Well, one of the greatest regenerative practitioners was once asked, where is this here? Where is this here that regenerative agriculture won't work? And he said it's between the right ear and the left ear. It's mindset. Again. It can work everywhere. Regenerative practice can work everywhere in every system. You just need to choose the right interventions for your system and your farm and take really sound advice.

Finance. I can't borrow any more money, and carbon offsets are confusing. The industry is beset with acronyms that people don't understand. And they don't really understand what the baseline requirements are to get involved with some of these carbon offsetting systems that exist, and actually can't borrow any money because the bank has said no or there isn't a facility to do. So I'm not going to steal Carolien's thunder and talk anymore about banking and finance, because she's the expert on that. But what we say is, work with a recognised transparent, certainly in terms of carbon offsetting and nature finance, work with recognised, transparent, high integrity systems that align with international standards and that enables you to work with long term investors.

High integrity carbon offsets require a baseline, full audit and security in net zero status

If you can sell a carbon offset to someone by filling in an online form or a very simple process without anybody actually going on to your farm or within a couple of hours, it's not a high integrity carbon offset, and it won't last for very much longer. So our system really is all about gathering really high integrity data. So we start by creating habitat baselines. And this is an example of Chapel Down, which is a big winery in Kent where they asked us to work out a net zero journey for them.

So we start by working out what have we got now? What are the habitats that we have now, and where are the opportunities to connect those habitats, build on those habitats, and develop new ones. We count all the trees on a site. This is all blue sky data. This counts basically every tree over three metres in height and the canopy size as well. And what this allows us to do is to look at, what are the opportunities for connectivity? Where can we add something like agroforestry, or other woodland parcels to connect habitats together to help create wildlife corridors and, of course, remove more carbon? So we look at soil carbon, so the UK Carbon Code has developed a soils testing protocol.

Now there's lots of academics in the room, and I'm not going to pretend that this is perfect, but if we want to make progress, we have to start somewhere. And so we've developed a soil testing protocol that analyses two sample points made up of 16 points per point and then consolidated into a set of results. And really what we're interested in is the total organic carbon stock per hectare, and how we can influence that over time to increase it. And what we find is once we get somebody on a true regenerative, restorative journey, they never go backwards. So there's always the issue of permanence, of soil carbon. I get that. I do understand it. But what we find is, when you start this regenerative journey, and when you start reducing costs elsewhere and seeing positive outcomes financially within your business, you never turn back.

So we then do a full carbon audit. We measure all scopes, scopes one, two and three across all greenhouse gas types. Chapel Down is a big processing business, so they've got 1508 tonnes to remove from their system before they get to net zero. And I should stress that under the UK Carbon Code system, you can only sell carbon offsets once your business has got beyond Net Zero themselves. That's not the incentive for these guys at Chapel Down, their incentive is just to get them there, just to reduce their emissions significantly over time. And we're helping them develop a roadmap to that net zero position. And really it's all about getting stakeholders involved. So we're working with the Met Office. We're working with large corporations up and down the country, and really the opportunity is to develop long-term relationships with these guys.

So the Met Office has invested in three farms, one in the Lake District and two in Devon, where they are helping to finance the baselines. And then over time, they will then buy the offsets that are created by these businesses once they themselves have got beyond net zero. And what we've done is we've got heavy engagement between the Met Office and the farms themselves. And it's developing into a really good long term, scalable and multipliable concept going forward.

Multiple risk factors are not currently accounted for in traditional insurance products

JF: Brilliant, thanks. Great to hear your insights. I'm sure we'll be coming back to you on all of this. Zainab, if I can handover to you. So Zainab Oyetunde-Usman is an AFN year three champion for carbon financing, and she's a social scientist at Rothamsted's net zero and resilient farming department. She's an agricultural economist with experience in applying behavioural approaches to designing mechanisms that can incentivize net zero innovations. So Zainab, if I can hand over to you.

ZAU: Hi everyone. I'm glad to be able to share this project and results and evidence from what we've done so far from collective farmer insurance, which is more like promoting a new form of insurance scheme for transitioning to net zero. So we are very much aware of the need to transition to net zero. And of course, we are very aware of how agriculture is contributing and accounting for 68% of nitrous oxide emission and 47% of methane emissions.

And we are aware of the need to move fast, as much as we can. But we cannot shy away from the fact that farms are open systems, and we need farmers to do a lot of some of these experiments, which require

multiple neighbouring farms. And we also should be aware that they have to take on multiple risks, and most especially, much of these farming practices, which are like regenerative farming, are quite inherently a financial risk which farmers must take.

But how do we deal with new models of insurance to tackle some of these multiple risks, to be able to foster a quick transition to net zero for the UK agri food system? So it's very interesting that we've seen a great policy shift towards collective orientation. For example, since the post Brexit shift, we know that now in England we have new policies looking into collective approach.

For example, the local nature recovery scheme and the landscape recovery scheme, we've seen that this is quite different from the usual EU direct payment system, which only supports landowners and large-scale farmers. But the British farming system supports small family farms. We want to keep such tradition and also we want to enable collectivity for so many reasons. We understand that we need to work collectively.

And we're having so many programmes propping up to support collaborative family trials. But there are still some gaps or disadvantages in this aspect, in that these programmes do not yet have insurance coverage that could fit into this new idea and model. And there is also limited uptake of collaborative models, which are still a bit individualised or incentives-based. But we need to move to systems that can allow for all, and not only for only multiple risks. We can also look at taking into consideration a lot of other practices and other challenges that could, to a very large extent, help us to transition quickly, as a financial safety net as well for our climate innovations.

A study by Rothamstead looked at the potential in innovative insurance models

For example, some of these models have not incorporated many of these new farm practices that we want farmers to transition into, but, most importantly, they do not adequately account for a lot of all this risk. So one important study which we did, which was funded by the AFN Network, looked into different models, such as innovative insurance models. And also looked into how can we come together to develop these types of models to transition quickly to net zero? So it means that we would have to do some testing, do some trials, but do we know if there is a gap for this or what exactly is happening?

So the idea stems from the fact that we are used to insurance in different aspects, for example, paying for insurance for a block of flats. But we try to see how this model could also apply to farms, because we know that farms work in an open system, and the risk is spread as such. And risk cannot be individualised to one aspect of a farm. It's spread across the food system as well. So there could be opportunity to bond, do different risk, and try to see if farmers could collectively carry out experiments, knowing that there is an insurance to cover their losses.

I'm going to show you three types of models, which we thought about while carrying out this research. For example, there could be a watershed-scale collective insurance for farmers. Where we have farmers on the landscape, we have different farms, and we have flood prone areas, for example. And farmers on this landscape could take up boundaries of collective insurance coverage for flood risk, energy product at watershed scales. So it just means that farmers can work collectively as such. This one is particularly relevant to catchment level areas for water companies especially. And for this case study, we did consult water companies, and we understand that they wanted farmers along their catchment areas to take up innovative farm practices that could reduce our leaching.

So we know that if we take up this kind of scheme, besides helping our agricultural system and reducing emissions, we will also have outcomes such as water quality, which are very key to mainstream net zero goals in the UK. So we can have something like this, where we have upstream farmers. We know that downstream farm farmers here will feel the effect of nitrate leaching as much as the overall populace, in terms of leaching into our water system. So if they take up innovative practices like fertiliser inhibitors, we know that nitrate leaching flow could reduce, emissions could reduce and then we know that we could have good water quality.

Collective insurance could help cut premiums for farmers

So we looked also at modules that include livestock farming. So we know that reducing livestock is very key to one of the strategies to reducing emissions in the UK agri food system. But then we were quite sceptical. How much could this affect us? We are not sure of it, but we need to start somewhere, like Doug said earlier, and the model here is that farmers tend to, let's say, reduce their livestock and also incorporate some other activities like agroforestry. There could be collective insurance that farmers could join, let's say a regional collective insurance programme where they know that they can collectively fall on insurance in case of any form of loss.

But we know if they are taking this at large scale, then it means that we can jointly move faster to transition the system. So these are examples of three models. I'll try to elaborate on the livestock model case, in which collective insurance can work as if farmers jointly do this. For example, in the landscape, then it just means that risk like income loss, transition cost and climate impacts. All that multiple risk could be accounted for. And premium is very important in terms of insurance.

Premiums are pulled together, reducing individual cost. And we think is the catch. Some of the consultation we did actually shows that there is a gap. And also it shows that people are already doing some collective work at a small scale, for example, jointly taking up or pulling together their funding, or taking up insurance for a special purpose vehicle.

We also had examples of people jointly doing a lot of ecosystem services on their landscape, maybe a group of four or five or six farmers. We have lots of cluster projects ongoing now in the UK, in England especially. And we have environmental farmer groups springing up to take a lot of actions together, but we need to scale larger. And that's where this research is going in terms of, how do we scale this quickly, while we, of course, understand that there are some perceived risk and barriers.

Of course farmers will tell you this. We think there will be trust issues. We think there will be this problem of premium, what governance structure actually works? So there's still lots of unanswered questions. And from talking to experts and insurance companies, there was a critical problems of pricing the risk. They said they couldn't place a price to the risk. And because there is lack of data in this aspect. We know we still have to do a lot of research, and gathering data to be able to build such model.

New models are limited by low data collection and ability to price multiple risks correctly

So there is lack of data to base this product on, and there is not enough information, and scalability is a big issue. So this is where we are thinking of how to bring this product to life, in terms of scalability. It could actually work in terms of public private partnership, where we have this product module that instead of the current system, for example, the SFI is still very much individualised incentives.

It's a good scheme, but we know that we should be moving more into collective actions and collective schemes that will help us to scale higher and bigger towards net zero. We also need to work on our policy framework. This can work within the Elm scheme in that we can have the policy support guarantees for insurance premiums. We can have policy support for data infrastructure, largely on climate risk mapping, keying into different landscapes, landscape structures.

We will try to bridge different types of gap, knowing that this landscape is prone to leaching. This landscape is mainly livestock and needs this type of system. This type of agri food system approach can key into this beautiful imagination that we have about net zero. Then the policy could also have a regulatory support for an innovative insurance scheme. So the private sector has a huge role to play.

For example, the insurance companies and other actors like the water companies have a huge role to play in trying to tailor this kind of insurance scheme for different net zero farm practices. Like I have mentioned in the different modules that I showed, they need to build risk modelling tools, satellite data and all of that. Then we need the tech sector to help us build such products as well. Then the farmers in this aspect, are able to pull risk and premiums together, enabling them to have a lower cost of insurance.

Farmers take out insurance anyway, but now this scheme, or products keying into existing insurance schemes could help them have a lower premium. If you take this kind of insurance, it will cover more of your multiple risks. That's what such a product is tending towards. And I think it's very interesting, and farmlands are still very much individualised. But we understand that we need collective support. I end with saying that if we are thinking net zero, we need to think collective.

Banks need farmers to be viable long-term so look for evidence of sustainable practice

JF: Thanks Zainab, that was really interesting. Thank you. So Carolien, can I hand over to you now. So Carolien Samson is the head of sustainable banking at Oxbury bank. She spent more than two decades in both commercial banking and development finance institutions in South Africa. She was instrumental in the launch of the Oxbury Transition Facility in 2025, which we will hear about, I'm sure. So Carolien, would you like to take over?

CS: Yes, morning, everybody. So I think linking to what Doug said earlier, what we see as a financial institution is that farmers would very much want to transition, but there is quite a lot of uncertainty in that process. And so as a bank, what we had to think about was, how do we support that decision making process? I think just firstly why we are as a financial institution interested in supporting farmers to transition, would be to remind everybody that the average loan term of our lending portfolio is 21 years at this point. And therefore what we look at is to say, well, I need to have a farmer that I have financed be able to repay our loan over that very long period of time.

And we know that there's going to be a lot of uncertainty into this future landscape, partly due to climate change. Changes in weather patterns. We're already seeing those, but also in the changes that the supply chain is making in terms of demands on farmers to be able to provide data, provide information on the status regarding net zero.

And so for us, there's a real risk that farmers will either get excluded from supply chains, will not be able to get the kind of prices for their produce in future from the supply chain, but also that there's going to be a lot of pressure through weather changes on them and therefore - we're not a philanthropic organisation, as I remind everybody, we're a bank - and wouldn't be able to repay us. So we can't predict the future, but what we can do, and that has been our philosophy, is to say that it's in our interest at this point to identify farmers who are undertaking practices that will make them more resilient in future.

Oxbury transition facility looks at carbon footprint and soil carbon content

That's all that we can do at this point. And so with our transition facility, we have brought that down to two very specific indicators that we're measuring, and those are does a farmer have a carbon footprint, as part of our evidence, because it's that baseline that we need for supply chains, and it's how we're going to monitor progress over time. And then the second element that we look at is carbon stored in soil as a proxy indicator for soil health.

We know that the theory is that farms that have higher levels of soil organic carbon will be able to absorb water better, withstand droughts better, and be able to cope with flooding better over time, and therefore that's the indicator that we're looking for. We don't expect any of this to be a straight line exercise, and we look at change over time. In this case, it's more important for us to see that there's change so that provision is occurring than that there's a specific number that's being met.

And so the question that we also get is, and that's been really difficult for financial institutions to get their heads around, that there's this uncertainty about is it going to change yield? Do they have to have higher costs initially, to make these changes? There's all these questions that arise, and it's really difficult for financial institutions to say, well, how are we going to model that to make a financing decision? And so we kept our transition facility really, really simple. Effectively, what we've said is we will support a farmer for up to six years with a working capital facility, they can draw it down, they can repay it. So for these fluctuations, they need money for the transition. It comes at a very low interest rate. We're putting this out at 1% of the Bank of England base rate.

To give an idea of comparison... to be able to get that at about 2.5-3% and allow admin fee, all that we're asking for is give us the evidence that you are starting to engage in sustainable practices. And one of the the learnings that we've seen over this period has been that when you look at the literature, there's general conversations. There's a perception that farmers aren't doing a lot, but because we are just asking, you have to give us evidence. But what are you doing?

Most farmers applying for funding have already established regenerative practices

We're seeing a lot of change happening initially, because we do have a version of the product where, if a farmer is thinking of making change but hasn't implemented anything for two years, to think through that process. And we initially thought we're going to see a lot of farmers in this thinking about making a change process applying. But what we're seeing is, by far the majority of our applications are farmers that have already made these changes they're implementing, they know they have to change, and so it's just up to us to support them.

The other thing that's been interesting is we don't want farmers to have to go through another bunch of admin to do this, and there's enough requests in the supply chain for farmers to give evidence, and so we've tailored our system of evidence gathering to say farmers can give us things that they've already done for other people.

So we're not prescribing a specific carbon footprint. It's whatever you have already done. Only if you haven't done one in forever will we have a link, and point customers towards options. And the second one is evidence of sustainable practices. It could be anything from SFI agreements, participation in various supply chain programs, it's paying for certain practices, any of those things where we're accepting from our perspective.

We then want ongoing monitoring on this, and what we're giving back to the customers in the process is we have partnered with Downforce Technologies to estimate soil organic carbon stored. It uses technology that allows us to give farmers a seven year history of the process, and that becomes a really important tool for us to then start assessing and hopefully in time supporting customers, to look at what a net zero pathway would look like.

If anybody's interested, we've published a case study on that in the dairy industry and our Responsible Impact Report. My main message around all of this has been, there was a lot of talk for a very long time in the financial industry about how do we support farmers? And in the end we went and said, well, let's just do something. This isn't perfect. This will change over time, but it has given us at least a first step into making some of this change.

Questions from the audience

JF: To what extent do you feel that mindset shift is happening in other areas, not just farmers, but in banking, insurance and sectors that have the tools to unlock a transition?

ZAU: When we talk to farmers, they did say a lot of things when they talk about collectives. Insurance does come up when they talk about collectives. Then when we talk to an insurance company, they said they've been in a situation to hear about collectives, they know there are some collectives ongoing, but they cannot see how to scale it.

So, scalability is what they care about, and there is no data to be able to price the risk at that point. So they talk about problems of data infrastructure to work for collectives at large scale. So they know they want the mindset, but there needs to be support for them to be able to do that.

JF: What data do they need?

ZAU: For example, if you're working on a particular landscape, you could need, not only data to measure the price, but also data to measure the outcome or impact. For example, water quality data, spatial data, climate

data, soil data for that particular landscape, for them to be able to price the risk. Because insurance would want to be able to look at uncertainties of having or not having loss.

So they need large data, which, let's say water companies could key in on people, also farmers meeting up, or whatever they're supposed to meet up. What data do they use to measure the targets that farmers are aligning with, not with their policy, or something that could make up their policy? So they said they would need to build large scale data for different landscapes, for which they think it's not available. There needs to be a lot of evidence for that.

JF: Do you feel like the infrastructure around farmers is starting to change? Where are the sticking points?

DW: There is definitely a change in the wind. We're seeing the agrochemical fertiliser companies all starting to look at alternatives and starting to change their language. But I don't think it's really happening enough. And I was watching a YouTube video the other day from a fertiliser company who were absolutely focused on, you know, nitrogen fertiliser feeds half the people in the world, and if we don't have that nitrogen fertiliser, half the people in the world will die. That was the dialogue they were using, which is frankly wrong, and not helpful. So there is directional change. It's not fast enough. It's not quickly enough.

We are seeing lots of other stakeholders, like insurance companies that we're working with who are desperate to start investing in nature recovery, they've actually moved their direction, which is really good. Actually not really focusing on carbon.

Carbon was the big thing we've got to get our carbon down to net zero. We do absolutely but what they're looking to do is to invest in nature recovery, in natural system recovery, that actually has a side benefit of also removing carbon from the system. So we're actually seeing a faster moving mindset from those that want to invest in nature recovery and systems recovery quicker than we are the farmers.

CS: I think there's a willingness to try things and do things, but it is really complex, and we're in a really, really lucky position. If I turn my computer, you can see our office at the back end, and the sustainability team sit between our relationship managers and credit, but both sides of us so we're able to answer things, make decisions, and really work with the teams that need to do this very, very closely. And I think a lot of other institutions are that big. This is complex, and it's really hard to just bring all the pieces together. So we're seeing a lot of willingness, but it's really hard to get this to action.

JF: Are farm businesses motivated initially more by potential cost savings or improved profitability of regen, or the potential for additional income through nature or carbon markets?

DW: Everyone has different incentives. I think now really, the two get equal billing. Yes, they want to unlock new income, but they realise they have to transition their businesses, and can see the change, the reduction in input use, the reduction in fuel use, actually leads to a very positive addition to their bottom line. So look, we very much focus on adapting your farming practices.

You will see changes to your bottom line, the unlocking of the additional income is a nice to have once you've gone beyond that net zero status. But we're really about driving down emissions, driving down cost, driving down risk, and if they get to that point where they can sell some carbon, that is an added benefit.

JF: Do we need different mechanisms for different for people who are on different parts of that journey?

CS: I think the one thing that we say to customers is that they have to establish their own net zero status before they can sell off anything. And in most cases, that means the customer has to be very far down their transition journey before they will have anything surplus that they can sell off. And so it does feel like a way to provide revenue, but customers need to first understand where they actually are in the position, because you could go and raise funding initially, but actually put yourself in a much worse position further down the line.

I think the challenge that we see is that it is really hard to establish that baseline position, and that's why we were giving information back to customers and trying to help them to see that pathway.

JF: How do these models, including collective insurance, address the difference in farm size in the UK and ensure that no one is left behind?

ZOU: I would say the basic purpose of collective is to share risk in any way, so when we talk about collectives, from my own mindset, we are thinking that small farms are not left out. Over the years, historically, we've seen that some subsidies have really not fulfilled small farms, in terms of how it favours mostly large farms. So I think the models should, of course, look into how this would work, since you pay for insurance.

I think insurance companies might have an idea on how to now to do that. So like I said, this is developing, and it's looking at new funding to be able to experiment how this could work. So this idea is very much welcome, on how it can work for everybody. So that's why it's a collective. That's as much as I can answer it because it's a developing model.

JF: Is collective insurance being looked at in terms of landscape recovery initiatives?

ZOU: For the landscape recovery scheme, it's new, and it's just coming on. The model is different from collective insurance in that we are looking at it as a proper insurance, or proper products that could shift us away from mainly depending on subsidy, which we know overall, cannot take us largely to where we want to be. So it's very different from that model, but it's a good start for the EMS program.

And I think it should devolve into many public partnerships where we do not really have to rely on government moving everything. We want to put it in the arms of farmers to be able to work collectively. So I think collective insurance is working mainly towards something that is quite scalable and not localised. Localised but then scalable across regions. So I think it builds upon such models.

JF: How important is working collaboratively across different farms to the transition?

DW: So to start with, all these baselines cost money, and the larger scale we go, the cheaper it gets, frankly. And so encouraging groups to work together is very positive. We're working with a number of clusters and nature recovery groups, and they're really important, because not every farm is equal. Some farms can take lots of action and want to take lots of action.

Some are in a catchment or in a cluster that are really productive food producers, really profitable, efficient food producing farms, and they need to keep doing that, but they might need some help from somebody else to help to get to net zero.

So we're working on a few schemes where we're helping to equalise the benefits across groups and clusters. And again, we keep coming back to it, but it is mindset. Farmers are notoriously bad at working together. But actually what we're seeing now is that slowly changing, and that little bit more cooperation. We've got large catchments, one particular large catchment where there's huge benefits to be had from re-wiggling a river, but it takes, I think it's five different landowners to make it work. And so they've been slowly coming together and realising they will collectively share the benefit from that scheme.

CS: I think it definitely helps. And I think we need to remember that change on one farm will have an impact on the neighbour, and so they do come together. So the more there is collaboration, the wider the impact will be. But it's not only the farms. I think it's also up to the supply chain to get better at collective action and coordinating their own actions. And I think we're seeing movement on that as well, to just try and get things a bit smoother for everybody. But yes, the impact will lie in larger groups, doing things together.

JF: If you were talking to Defra, and there happened to be some money available for de-risking things for farmers and unlocking this change, what would be the most effective and practical way of doing that?

ZOU: Next week, I'll be attending a Carbon Seven Project programme. So yeah, I'll be happy to tell them there, of course: trust me with some funding to try out collective insurance as a product, building the model to try it out. I think we are thinking of this as not going to be possible, but we need to start something. So I will tell them how important collective [insurance] is in driving a net zero agenda in the UK food system.

DW: Yeah, definitely investing in some sort of collective insurance system similar to what they have in the States, where some of the risk is removed from product productivity or from production. But really what we would like to see is the entire, and this won't be popular, but the entire SFI budget being put into creating baselines and starting the journey to that net zero position.

And once we've got all the farmers properly baselined and on that journey to net zero, private capital will do all of the heavy lifting, because there's a lot more budget in the private sector than there ever will be in Defra. And we need to unlock it, and we can, and there is a system to do so.

CS: We've been saying that providing some kind of guarantee system to the financial institutions would enable all of us to scale transition finance and financing for things like landscape recovery projects, which we're limited in how we can apply our capital at the moment. But guarantees would enable all of us to do it, do more, and we'll actually probably use less capital than a straight grant of some kind.

JF: Brilliant, thank you all very much. That was really interesting, and I feel like we've only just scratched the surface on this topic, and it's a really big one to understand more about. Let's all please keep talking about this and trying to understand it better and keep unlocking change. So thank you all. Bye.

About the AFN Network+

The AFN Network+ (UKRI Agri-food for Net Zero Network+) is a unique network of 2,000+ academics, researchers, third sector organisations, policy makers, and agri-food industry professionals from farmers to retailers.

Together, we are working to identify key research gaps that may be holding the UK food system back from transitioning towards a net zero UK by 2050, while also enhancing biodiversity and healthy ecosystems, nurturing livelihoods, supporting healthy consumer habits, and minimising the environmental impacts of overseas trade. Our findings will inform the next decade of research investments in this area by UKRI (our funder and the UK research councils umbrella organisation).

Alongside our core research, we run in-person and online events, produce topical resources, and give out hundreds of thousands of pounds of funding a year.

The AFN Network+ is coordinated by the University of East Anglia, University of the West of England, University of York, and University of Leeds, and is a £5m, 3-year project funded by four research councils; the Biotechnology and Biological Sciences Research Council, Economic and Social Research Council, Engineering and Physical Sciences Research Council, and the Natural Environment Research Council.

Website: www.agrifood4netzero.net

Email: contact@agrifood4netzero.net

LinkedIn: www.linkedin.com/company/agrifood4netzero/

X/Twitter: @AFNnetwork