

Environmental Audit Committee

Oral evidence: Environmental change and food security, HC 880

Wednesday 22 March 2023

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Members present: Philip Dunne (Chair); Clive Lewis; Caroline Lucas; Anna McMorrin; Dr Matthew Offord; Chris Skidmore; Cat Smith.

Questions 31 - 113

Witnesses

I: Professor Tim Lang, Emeritus Professor of Food Policy, City University London's Centre for Food Policy; Dr Elizabeth Boakes, Research Fellow, Centre for Biodiversity and Environment Research, University College London; and Dr Monika Zurek, Senior Researcher, Environmental Change Institute, University of Oxford.

II: Balwinder Dhoot, Director of Sustainability, Food and Drink Federation; James Young, VP Agriculture, McCains; and Guy Singh-Watson, Founder, Riverford Organics.

Written evidence from witnesses:

[UCL Institute for Sustainable Resources, and UCL Centre for Biodiversity and Environment Research](#)

[McCain Foods \(GB\) Ltd](#)

Examination of witnesses

Witnesses: Professor Tim Lang, Dr Elizabeth Boakes and Dr Monika Zurek.

Q31 **Chair:** Good afternoon and welcome to the Environmental Audit Committee, where we have our second oral evidence session in our inquiry into food security. We have two panels today. We are going to be interrupted by votes, but hopefully not during the course of each panel. I would like to start by welcoming our first set of panellists. I would like you to briefly introduce yourselves and explain what you do that is relevant to our inquiry. I will start with Dr Elizabeth Boakes from University College London.

Dr Boakes: Thank you very much for inviting me today. I am a postdoctoral research fellow at UCL. I am based in the Centre for Biodiversity and Environment Research, but I also work very closely with colleagues at the Institute for Sustainable Resources. The focus of my research is the impact of the world's food system on global biodiversity.

Professor Lang: I am Professor Emeritus of Food Policy, so that means I am an old git and work post hours. I work at the Centre for Food Policy at City University London, where I work on food policy.

Dr Zurek: Thank you very much for inviting me. I am a senior researcher at the Food Systems Transformation Group at the Environmental Change Institute at the University of Oxford. My work focuses on food system transitions, understanding food systems as a system, and the implications of food system change for the environment, food security and equity issues. I also look at the other side, the drivers of change in the system.

Q32 **Chair:** Thank you. When this Committee launched its inquiry, we had not anticipated quite as precisely as has come about that we would be living through shortages of vegetables right now, so it would be very helpful if you could, perhaps starting with you, Dr Zurek, explain why it is that we are seeing shortages. Tomatoes and salads in particular are, I think, the problem areas in the UK.

Dr Zurek: I think what these phenomena show us is part of the complex and very complicated nature of the way food ends up on our plates. On the one side, we had strange weather, as it is called these days. We had a cold spell in Spain and floods in Morocco that were unusual for this time of year and seriously impacted the productions of tomato growers. At this time of year we import, or we import anyhow, almost 80% of fruit and vegetables into this country, mainly from these two areas. At that time, if supply is low, then the second big driver came in, which is that it is easier at the moment for a lot of growers in Europe to sell within the European Union. It was more difficult for retailers from the UK to get to that supply. The two things are coming together.



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Then, of course, a lot of our consumers still expect to have year-round tomatoes, salads and whatever on the table or at least in the supermarket. It is bringing the different complexities of the food system together in a very significant way. That is what we have to deal with today and probably more in the future with more of these extreme weather events coming down the track.

Q33 Chair: Has the energy crisis and the rising cost of energy production impacted on the availability either of imported foods or domestically produced foods?

Dr Zurek: In my understanding, it definitely has. What I know here for the UK, although I have only heard it anecdotally, is that producers are definitely producing less in greenhouses because of the rising energy cost. That is the same across the board. In the Netherlands, one of the huge vegetable producers, the rising cost of energy is definitely an important part of that story as well. We will have to see how that continues in the future.

Q34 Chair: Is that impacting more in areas where they are growing unseasonal crops, so glasshouses in the UK that are growing products that could not be grown outside may mean that domestic production will be more impacted than in areas like Spain and Morocco—and you have already said there have been disruptions there—where they can grow crops without the need for glasshouse protection?

Dr Zurek: Of course. The price for growing food in glasshouses is quite high, so a lot of the cost for producers at this time of year has to do with the energy use. Then, of course, we also have high fertiliser prices because of the Ukraine crisis. That together again is a set of powerful drivers that change the behaviour of farmers who are working on the margin already quite drastically. That then also means, yes, we will see shortages and we will probably have to think of more to come in that respect.

Q35 Chair: Dr Boakes, in your evidence to us you also highlighted the risk to fruit and vegetable production in particular. Is there anything that you would like to add to what Dr Zurek has said?

Dr Boakes: You asked about the energy costs. I think I am right in saying that there are also problems with the energy costs for storing fruit. Apple farmers, for example, have been ripping down their orchards because that energy cost of storing the apples over winter is too high compared with the prices that supermarkets are prepared to pay.

Q36 Chair: I represent the Shropshire-Welsh border where there are a lot of apple growers, particularly in north Herefordshire, who are being encouraged to grub up their orchards because of the reduction in demand mostly for cider. We do not have so many dessert apples there. That is reducing the available supply because of changes in consumer habit. These things are all obviously interlinked and complex, but where would you rate climate change impacts of weather against some of the other



pressures, both consumer choice and energy as we have just been talking about, as a causal factor?

Dr Boakes: In terms of the salad shortages that we have been having?

Chair: Choose any product where it fits your argument.

Dr Boakes: The problem is that we are so dependent on these hand to mouth supplies that if there is an unpredictable climate event, that exacerbates the other supply issues that we have.

Dr Zurek: If I could add to that, as part of the resilience of the UK food system programme, we had a project that looked at water stress and vegetable production and fruit production in the UK. What became very clear was that, because we are in a system where the retail and consumer end wields quite a lot of power these days, in terms of setting contracts, making sure the system is run efficiently but also setting shorter and shorter contracts, diversifying a lot of their supplier base, what one end of the system did in order to make sure people had apples on the shelves that they could buy was undermining some of the measures that other parts of the system—in this case farmers—could take in order to build their own resilience and invest in their own capital because they had shorter contracts, less support for taking risks from the financial sector, and so on.

This is what we really need to understand. If you change one part of the system—for example, the demand side—that has huge implications for the rest of the system. In many cases, because we do not understand the whole system very well, we do not know how exactly it is going to pan out for different actors. We do not have a platform for them to talk when needed. When a crisis is there, basically there is no way for them to come together and say, “If we want to make sure that we have certain fruits for people available, how do we do this so that the whole system keeps functioning?” That was not possible at the time.

Q37 **Chair:** When you say there is no platform, who are the audiences that need to be engaged in that? Presumably, supermarkets have good feedback from their customers and have their supply chain relationships that are talking all the time, I imagine. Who is not in the conversation?

Dr Zurek: It is also the actors around it; for example, Government organisations or community representatives that are talking maybe for the poorer parts of the population that look at what it is at the end that we would like to have out of a well-functioning system. We know our system is not functioning very well with respect to food security, environmental impacts and so on, and we do not really have a platform to say, “If we are taking risky decisions about how to change the system, who is going to carry the risk? Who is going to decide about the direction of travel?” We often have players that see the persons before and after them but not the whole system, and we do not have a way for bringing them together at the moment.



Q38 **Chair:** Do you think that there is a role for Government in that?

Dr Zurek: Probably. I will hand this over to Tim. He is the—

Chair: Yes, I was just going to bring Tim in to comment on this issue.

Professor Lang: Could I go back to add to what my colleagues have both said, which I agree with? The question you asked was about where the threats, the risks and the tensions are in the food supply chain, whether it is salads and tomatoes or turkeys or eggs. We have had these sequences, and they keep coming, of shortages and disruptions. To get to your question, weather and climate change is clearly critical because it shapes what the food system can and cannot do generally. Britain has a highly concentrated food system, as you will know from your constituency. Five supermarkets have about three quarters of the market; nine supermarkets have 95.2% of all the British food retail market.

That applies in almost all sectors. There is a concentration down the line. When you have big sellers wanting to buy from multiple growers, essentially they have an interest to try to narrow from whom they buy it. Over the last 30 or 40 years, there has been a concentration of the horticulture industry, and in Britain's case there has been a decline in the horticulture industry, with the exception of strawberries, or the four berries, basically, in the west of England.

There is a combination of ecosystem stresses beginning to kick in. Business stresses, just-in-time investment—all that I am sure your Committee knows about—and concentration of ownership are squeezing the costs. As both my colleagues have said, there is not the incentive to grow more in Britain when the incentive coming from the marketplace is to get food at the lowest cost. We have had these shortages of eggs, of which there are a large number of imports, and of tomatoes and salads because the British supermarkets are not prepared to pay the price that continental supermarkets are prepared to pay.

That takes us back to some very old politics about the decisions by Governments, going back to the 1840s and the repeal of the Corn Laws and all that stuff, to say, "We will get food on world markets", or old empire imperial markets as it was, and now we have been dependent on the European markets.

There are different cultural demands going on. The rest of Europe pays more for food—less for housing, more for food. Britain, a huge amount, we are a housing bubble economy and we are not prepared to pay a lot of money for food. There is a class division about how much people will pay for food. The poorer you are, the more of your disposable income proportionately you pay. That is a squeeze. All this is now being squeezed: cost of living for consumers, energy costs for producers, energy costs for distribution, Brexit for the extra bureaucratic burdens, and the cultural differences. We are in a slow, constant flow of what can



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be little crises and then they become bigger crises, and underpinning it all is the ecosystems, climate change, water, soil, land use. As the former chief scientist said, you have a perfect storm coming.

Q39 Chair: You are illustrating the problem. Do you have any solutions for us?

Professor Lang: Yes, I will tell you what mine are. I won't dump my colleagues in it. Pay more for the food. Make sure that the standards are high. Government to provide facilities and support for growers to grow more. Diversify. We do not want concentrated horticulture in Britain; we want diversified horticulture in Britain. We must have diversification of what horticulture does.

It is going to be a different paradigm and we keep fudging it in Britain. We are in paradigm change and we keep thinking we will do a little tweak here or a little tweak there. It is missing the point. This is big paradigm change time and we are not gripping it. Again, I won't say what my colleagues think, but the UK food security report ducked it. All the important issues like the ones I have just summarised were not addressed. How much food do we want to grow in this country? Are we prepared to just see the slide down occur, which is what is going on? In 1980, 82% of British food was grown here. Now the UK food security report keeps saying "54%, 54%, 54%", but if you look at some commodities it is much less than that.

We need some specificity from Government. I am with Monika. We need Government to be clear what they want, and they are not doing so. If we want to address the environmental aspects of British food security or UK food security, I would like your Committee to lay out targets. You have to say what you want. You have to put the infrastructure in because it is not there. The National Infrastructure Commission does not even talk about food in it, but it is a rare bit of the British Government system that looks 50 years ahead. Get on with it. It is a priority. Do you want to feed your people, yes or no?

Chair: We are going to move on to colleagues in a moment because we could discuss this all day, I think.

Professor Lang: I am sure.

Q40 Chair: Where does the consumer and consumer choice fit in this? It seems to me that the consumer, as you were saying earlier, demands access to what have become staple foods—used to be seasonally available, now all year round—and that is what is driving demand through the supermarkets to be able to source all year round. You cannot do that in the UK because it is too expensive to produce unseasonal goods all year round.

Professor Lang: We are not going to grow pineapples. What is Britain's favourite fruit? Bananas. You are not going to grow bananas in Britain.



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Chair: We do not grow them at any point, nor pineapples.

Professor Lang: Exactly.

Chair: That is not relevant, so what is relevant? What is it you can grow here but it is too expensive?

Professor Lang: The point is that it is fine to trade things that you want to eat that you cannot grow, should not grow and would be stupid to try to grow. You can actually grow bananas in Britain but you have to have a lot of energy input.

Chair: Only in Kew Gardens.

Professor Lang: Yes, exactly, in Kew Gardens you can get a British banana.

Q41 **Chair:** You mentioned strawberries as being one of the things that has been successful. I have a strawberry grower in my constituency who is going to cease production next year because the costs of producing, both energy and labour, have become too high. It is obviously very significant for that farmer, but should we be growing strawberries 10 months of the year or whatever it is in this country?

Professor Lang: That is the issue. You asked not whether we should be growing strawberries full stop, but whether we should be growing them 10 months of the year. That is the problematic issue. That is when the energy cost goes up and the embedded carbon goes up. The plastic greenhouses route to strawberries is not a good route for strawberries.

Chair: I am sorry. I have dominated the questions and I know that my colleague Chris Skidmore has to leave shortly.

Q42 **Chris Skidmore:** Thank you. I might ask my last question first because it relates to what we are talking about now around targets and outcomes for domestic food production.

Professor Lang, you mentioned 82% in the early 1980s going down to now 54%. How would you frame that outcome and the target? Would you look specifically at a ratchet mechanism? Would you create a food security budget in the same way we have a carbon budget process? Would you focus on specific produce and try to ratchet that up in particular? I know that the Secretary of State wants us to eat more turnips, but in particular are there areas of domestic production that we should be highlighting and targeting? Instead of being national, should that be regional? Should we have greater devolution around food security as well?

Professor Lang: If you are asking me—and I look forward to hearing from my colleagues—I would say yes to the last bit. I think we have to be more regional about this. I will tell you why. The ultimate source of resilience is to regionalise. A concentrated system is always vulnerable, whether you are talking food defence, literally hard defence, military



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defence, supply chain management, or whether you are talking about social resilience and stuff like that. I think your comment just before that latter question was spot on, which is that we should do sector-specific suggestions, not just British food security should be up to 80%, as I was implying. Which particular things do you want to have more production of? We are not having that discussion and we should be.

Dr Zurek: We have been working on something that we call a food system sustainability compass, where we try to look at what some of the key issues are that a lot of stakeholders are interested in. In this case it was for the EU system. It is definitely different parts of the food security question, both on the production end and very much on the consumption end. If we are supposed to eat more healthily, we definitely have to eat more fruit and vegetables. We need to understand what is then the bit that makes sense to grow here because we have the right conditions for it, and with climate change that might be changing quite a bit.

That is the one end, but then there is also the implications of how we do this and what that then means for the environmental impacts, the social impacts in terms of equity, and for the economic livelihood impacts. All these come together and all these, if you start changing on the one end it will automatically impact the four other big areas.

One thing that we have not done enough yet is definitely to understand the issues of trade-offs. As I said earlier, if we change something on one system, it is going to have impacts on any of these other dimensions. If we try to grow something different, it will have an impact on livelihood possibilities for farmers. It will have impacts on prices and affordability. We need to look at these four dimensions together and understand the implications of different possible changes and the trade-offs we might be making between having different types of food but maybe more environmental impacts here.

Then we can start a negotiation. What kind of trade-offs are we as a society willing to make? It is not about saying we ignore the trade-offs, which is what we have done in the past. We have called them externalities of the environment, for example. What we need is a proper discussion of how to incorporate and manage these trade-offs. You can on the one side try to minimise them as much as possible or you can start to say if farmers in a particular area might be losing out or if consumer prices might rise, what do we then do with the people who might be losing out in this so that we take them along with it?

That is what I mean with these platforms I mentioned earlier. This is where we need some kind of societal debate, probably mediated through Government but maybe also through other actors in the system, to understand and visualise these trade-offs. That is what the compass is for, to have a different debate from what we have right now, which is very single-minded on whatever we need to grow.



Professor Lang: Single issue, not just single-minded, I would add. My version of what Monika has just eloquently put, and I think we would all agree this, is that we want a multi-criteria analysis of the food system. We cannot just judge it by price. We cannot just judge it by biodiversity or by water. We have to have blocks of criteria that matter for public policy and within those have better metrics.

A recommendation I would certainly make to your Committee, and I have given it to Mr Davies, your Clerk, is a paper I co-wrote to the EFRA Committee in its broader food security review. We have to sort out the indicators by which we judge whatever it is we want Government to be doing.

Dr Zurek: That is winning the contest.

Professor Lang: That is what Monika means by the compass. It is about getting those multi-criteria goals into policy, overt policy of what we want and the indicators, and then we can measure it. We do not even know which crops we could grow more of at low carbon, low water, big biodiversity benefit, and which ones we might think we can grow more of but it would not be worth it because it would be bad for biodiversity and bad for carbon.

Q43 **Chris Skidmore:** In terms of those indicators and the analysis that is needed, Dr Zurek, I know you have taken part in a past Intergovernmental Panel on Climate Change assessments. The latest synthesis report published today has very much said that we are in the last chance saloon when it comes to a 1.5 degrees pathway. In your view, would you agree with the UK Government's latest climate change risk assessment that classifies food security from climate change as low if we have a modelling scenario that takes us beyond 1.5 degrees to potentially above 2 degrees? What is the risk to the UK's food security on our current projections?

Dr Zurek: My big problem with that assessment is that I do not understand the assumptions that were made to classify it as low. If this is over a very short period of time—which I think is what the assessment was supposed to do over three years—yes, we can probably buffer a lot by trade as long as we have the money for it.

The big issue is this longer-term question around food production and food security in the wider sense, and again food production does not equal food security. There is all this mediating bit around access to food, what is culturally appropriate and what is nutritional food in the middle that the food system mediates right now.

Taking that aside, any of the forward looks, any of the scenarios that you look at in the moment basically say that we are not yet prepared well for dealing with the shocks to food production around the globe. In general, we are importing a lot, so the question is where we import it from. It is not just the risk of having more extreme events, it is the risk of having



more extreme droughts and floods across what we call multiple breadbaskets, for example. We do not even know yet how this is going to work. The tomato crisis, having bad weather in Spain and flooding in Morocco, as two of our main sources for that—that demonstrates what I mean by these multiple shocks coming together. Then you may have a geopolitical shock on top of that, like the Ukraine crisis, and you have some additional risks.

In terms of understanding some of these interactions of different driving forces and what that might do to different food systems, we are becoming better but are we adapting enough? There is a huge question mark across the board. At the same time, food is, for example, one of the key drivers of climate issues; 30% of emissions come out of the system. We have to not just adapt, we also have to urgently mitigate, meaning getting emissions down.

Fortunately, quite a few of the practices you can use both for adaptation and for mitigation, but in the moment none of the big pushes that we need on the mitigation side are happening. There is this feedback loop that if we do not mitigate enough we might have more impacts and we need to adapt more. That relationship between adaptation and mitigation is becoming difficult to sort out for the food system. If we have multiple crises across different places we import from or here in the UK, then we need to think about how to deal with that.

Professor Lang: Can I give a very quick—

Chair: We are going to come on to mitigation measures in a moment.

Q44 **Chris Skidmore:** I was going to ask Dr Boakes my final question, and she might be able to wrap them up together. Climate change is worsening a biodiversity crisis. In your opinion, when it comes to looking at worsening biodiversity, how is that impacting on the UK's food security and wider global food security chains?

Dr Boakes: As we have been saying, the UK imports an awful lot of produce from overseas, particularly fruit and vegetables from tropical countries. Tropical countries are the first to be impacted severely by climate change. Tropical biodiversity is particularly vulnerable due to various intrinsic characteristics, and in agriculture biodiversity underpins food security.

It means that for commodities that the UK is currently importing, the areas at the growing end are being exposed to climate-induced biodiversity loss. For example, some of the production areas in which biodiversity will be most vulnerable to climate change, which my colleagues at UCL have identified, are rice from India, soy from Brazil, cocoa from Côte d'Ivoire, coffee from Indonesia and bananas from Costa Rica, so staple products that we are used to having.



We have the problem that climate change may make it impossible to grow these particular crops, and even if the crops can continue to be grown the biodiversity that they rely on may not be there anymore. I think that 75% of tropical crops rely on wild pollinators, for example. You also need biodiversity for protection against pests and against natural disasters like hurricanes, floods and so on. Biodiversity really is critical to food security.

Chair: Thank you. Just before Caroline Lucas begins, I have just had notification that we are likely to be voting rather earlier than we thought, so we will crack on but we may well have to pause before we finish this panel.

Q45 **Caroline Lucas:** We have already mentioned the Government's food strategy for England that was published last year. I was going to come to Professor Lang first, although he has already expressed something about it, I think. To what extent do you think that strategy did meet the challenges we are facing from climate and biodiversity loss in particular?

Professor Lang: In a sentence, rather weakly. The critics have said about it that it failed to answer anything. I regret that because back in 2007-10, there was a process across Government that ended up with the Food 2030 strategy that people forget about. It was an agreed national food security strategy linking diet and production, six big indicators about what we want from the food system, there was a change of Government—that happens—and the new Government swept it all away. We then left the European Union and we have no policy framework about food security—not yet. So, your inquiry and the EFRA Committee's inquiry are incredibly important and welcome to those of us who are interested in these things. We think it is very, very serious.

After some thinking, the Government set up a National Food Strategy to be led by Henry Dimbleby, who had done work for Michael Gove. Michael Gove was then Secretary of State for Environment, Food and Rural Affairs, and he asked Henry Dimbleby to switch from school meals to the National Food Strategy, which he did. Covid interrupted. Dimbleby came up with one and then a second report.

The first report addressed the issue of food poverty, and food insecurity for low-income people in Britain. His final report, in June 2021, which he called "The Plan" gave a very clear outline of what he thought was needed. It was very good on the environment, very good on intra-food chain crises, and very good on the public health aspects, but silent about food security and production. I understood the politics that were going on. There were internal DEFRA politics.

A year later, the Government food strategy for England came out in June 2022. It was a 30 to 35 page report, basically saying nothing about the critical issues that we have already been talking about. How much food? Does it matter where it comes from? Does it matter how it is produced? Does it matter what the British eat? We are still waiting.



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Let's be clear: we don't have clear guidelines that are sensible to the food industry or which were sensible to link public health to food production in the country. The argument was a very simple one. We are a rich country. We can trade. We can get food from everywhere. However, that is not thinking about the environmental considerations of what it is that you are getting, to Liz's points—what is the embedded carbon, the embedded water, the embedded whatever in your imported bananas, mangos, oranges or clementines? We get clementines and oranges from southern Spain and the same companies, many of them, are the same companies from which we are getting them in Morocco. We are drifting in terms of a clear mid-21st-century view of what we want from our food system.

I declare an interest. I was on the EAT-Lancet report where we tried to thrash this out at the global level. The EAT-Lancet 2.0 report is now being done and your Committee will need to look at that. It is not out for a year or so but it is using a multi-criteria approach, by region. We know that in planetary terms we can feed the world healthily, without destroying the environment or accelerating climate change, but we are not doing it at the moment.

Chair: Thank you. I am sorry—the bell does not ring but we can see it sounding and we have a Division. I am going to call the panel to a halt and we will resume as soon as we can if you can stay.

Sitting suspended for a Division in the House.

On resuming—

Q46 **Chair:** We are now resuming with Caroline Lucas, who had not quite completed her questions.

Caroline Lucas: As I was saying, we have been talking about food security and you have already indicated things such as sector-specific proposals, and more regionality, in order to increase resilience. Is there anything else you would add about food security in the 21st century? If there isn't, that is fine.

Professor Lang: Is that for me, Caroline?

Caroline Lucas: It is for anyone who would like to respond.

Professor Lang: Can I kick it off? Following on from Mr Skidmore's question, one of the things my colleagues and I would like to see is a multi-level approach to food security, which is global, European, the continent—we are still dependent on the continent—national, subnational, city, local and household. Part of the confusion for policymakers is that the term "food security" is used to mean household food security as much as national food security.

This goes back to Monika Zurek's opening point. We need a framework of thinking that operates not just multicriteria but multilevel to link household insecurity to national insecurity.



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I will just flag to this Committee that in a month's time there will be a launch by the Food Foundation and the consumer organisation Which? looking at food poverty and food insecurity, about that local dimension. To have a resilient food system—which is what we should be aiming for—one that can bounce back from shocks, whether they be climate change or war or water shortage or price volatility or whatever, we need to have a diversified food system with capacity at all those levels.

To summarise, I would say we must have a multilevel approach to food security and we don't have that. It means engaging with the governance at those levels. As you know, the UK is a very concentrated, London-centred and English-centred system of governance. What we have to do for food, if for nothing else—and I think as a system for everything else too—is to have a diversified and more decentralised approach.

Whether it is fruit and vegetables, as Lizzie Boakes has mentioned, we are not going to have pineapples from Edinburgh any more than pineapples from Cornwall, but we can pose the challenge of what it would be to feed the people of Cornwall as opposed to Scotland, Wales or East Anglia, in a way that they can get a grip on their land use and labour potential. This goes back to Mr Dunne's point about the constraints on his constituency in the berry industry. We do not have that at the moment. In the mid-19th century, local authorities were asked to begin to sort that out. There was the 1875 food Act, the Public Health Act in the 1850s and the Local Government Act in the 1890s. We need that same sort of big thinking now about Britain.

Q47 Caroline Lucas: I am going to run you on a little bit because of time. Dr Boakes, do you want to add something?

Dr Boakes: Yes. Something we have not discussed yet is dietary shifts. One of the most useful things that we can do to improve food security, promote biodiversity, reduce greenhouse gas emissions and also improve human health, so it is going to be win-win-win, is to reduce the amount of animal-based produce that we use.

Caroline Lucas: There is a question on that coming up any second now so I might just pause you there and my colleague will pick that up

Dr Zurek: Could I add one big picture thing to what Tim and Lizzie have just said? We keep on using the words "food system" as underpinning food security, more and more these days, but if you look at the understanding of what our food system is today, it is still not very well developed.

As part of transforming the UK food system programme, which my group is part of, which is a wider research effort across different research councils, we have developed for the first time an overview of what the food system is, not just the food production or the consumer end or the value chains but how it looks all together. How the food system functions is not very well understood so far, so thinking about these broad



multicriteria, multilevel elements needs to be coupled with a good understanding of what it is that actually provides us with all of this. I think that understanding is missing.

Scientifically we are bringing more and more to the table. For example, 4 million jobs in the UK depend on the food system but we only have 500,000 farmers, but we have 2 million people working in catering who totally depend on that system. Knowing some of these numbers is important, but we also need to how they interact and then translate that into what does it mean, that different understanding, and operationalising it. This is also a big step that is still part of the whole food system story.

Q48 Caroline Lucas: Can I invite you to translate that in terms of the land use strategy that we briefly touched on? Apparently DEFRA is indeed producing a land use strategy later this year. From the collection of things that you want to see, what would you prioritise that needs to be in that land use strategy?

Dr Zurek: On the one side, based on an understanding of that whole system, what are the key drivers of land use at the moment? What we already know is that we have quite a lot of competing interests around land use. We need it for biodiversity. We need it for food production, to a certain extent. We also need it for housing developments. We also need it as a carbon sink. There are a lot of competing ideas around what land needs to be used and for what, so understanding the potential but also what drives decisions about land-use change and how can we change that transaction—

Q49 Caroline Lucas: If we are serious about food security, what specifically should we be looking for in that land use strategy? I appreciate that there are lots of different pressures.

Professor Lang: Is food part of the land-use purpose? Is it there?

Dr Zurek: Exactly, and where?

Professor Lang: Is it there and where? Exactly. The Agriculture Bill talks about everything except food. The Government's food strategy does not answer the key questions Mr Dunne was asking. How much? What? Where? Those are the answers that we need.

Dr Boakes: It is also important to be aware that we are quite efficient at growing food here. Every hectare of arable land that we convert to housing or something and then offshore the food production must be replaced by on average 2.9 hectares of land overseas, which will often be in tropical countries that will, therefore, have a much higher biodiversity impact, sometimes three to four times higher than in the UK. Therefore, it is important that we are aware of the facts about offshoring arable land.

Q50 Caroline Lucas: Why is there such a big difference?



Dr Boakes: Because the yields in the UK are quite high.

Dr Zurek: Much more intensive systems over here so we get more from the land.

Q51 **Caroline Lucas:** I have one last question and it is to do with Brexit, which we have not mentioned very much yet. Maybe to Professor Lang first, to what extent do post-Brexit trade deals risk undermining UK farmers and the Government's wider sustainability commitments?

Professor Lang: I wish the Government had had the courage of their convictions and just done the Australian and New Zealand deals and said, "Let's throw away all our European standards". Instead of that, they have done the slide. In 15 years, hormones and pesticides that are not currently usable will be usable. We will be importing them in the offshored way that Lizzie was pointing out.

I don't want to see that. I think that for the environment, climate change, soil, water, farmers, human health and public health, we need to be ratcheting those standards up. The trade deals are really very important. Subtle signals were blandly put, if I may be frank, in the Government food strategy for England, but if you look at the Wales document and the Scottish document, the Bills and the Good Food Nation (Scotland) Act 2022, they have been much clearer about putting the environment and human health at the heart and the point of the food system. We need to make sure—and I am sure this Committee will do this—to audit the land use framework when it finally comes out to make sure that it is multicriteria.

I repeat my disappointment with Mr Gove as Secretary of State. His Health and Harmony Green Paper said nothing about health. It was about the health of ecosystems, not human health, so the Dimpleby process was set up—the National Food Strategy—to try to fill that gap, but then it was pushed away, so England is basically adrift at the heart of its in theory land use strategy.

Your colleagues on the Climate Change Committee are very clear that they want that to be filled by the question of diet that Lizzie was raising. My life's work is on sustainable diets. Unless we get ecosystems and human health in alignment, we will just be offshoring, getting fruit and vegetables from somewhere else that is damaging their biodiversity and not paying the penalty ourselves.

That is why that very arcane academic and scientific issue we were all raising about indicators, goals and metrics is so important. We cannot expect the food industry, which you will hear from later, to get things right unless it too has a framework. There is a mutual interest between we academics, the science, the public interest and the food industry.

Chair: Thank you, Caroline. I think that the group that you have not mentioned is the consumers, the choices of individuals and the extent to



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which consumer choice drives purchasing behaviour through the chain. Perhaps we will come on to that in another session.

- Q52 **Cat Smith:** Dr Boakes, I have a couple of questions about sustainable diets. Could you say what role a change in diet could play in improving food security, mitigating climate change and reducing the loss of biodiversity?

Dr Boakes: The single most useful thing that an individual can do is to reduce a meat-based diet. Going to consumers, the UK has cut meat consumption by 17% in the last decade, so there is a move towards that. The public are clearly on board.

Livestock farming is an inefficient way to get calories for consumption. It has an impact overseas because, even if livestock is produced in the UK, animals may be fed on soy that has been grown in Brazil, for example.

Within the UK, a recent study funded by the Wellcome Trust showed that converting grazing land to arable land has huge benefits for food security and biodiversity. The model showed that if we convert just 5% of UK grazing land to arable land, it would produce sufficient calories, via fruits and vegetables, to allow us to free up a further 18% of grazing land to be converted back to a natural landscape. That would increase habitable land for biodiversity by about 10% for 500 UK species, which would boost biodiversity, which in turn would feed back into farmers' yields and would benefit agriculture overall.

Another advantage is that, with that land, we would be able to produce sufficient fruit and vegetables to allow everyone in the UK to consume the recommended 400 gram daily amount. I understand that it is most upsetting from a cultural and heritage viewpoint to talk about getting rid of grazing land, but I think it is one of the only answers.

- Q53 **Cat Smith:** Do you identify any socioeconomic implications of reducing meat and dairy?

Dr Boakes: Livestock farming is an important part of the rural culture but it is important to look at ways to support farmers to transition to more sustainable ways of farming or different careers. A lot of farmers are going out of business anyway so they need that support. An analogy is how oil workers in Scotland are being supported to transition to greener careers.

- Q54 **Cat Smith:** Therefore, you would see transitioning, say, for dairy farmers to transition into other kinds of farming?

Dr Boakes: Yes, to horticulture or just general nature stewardship, perhaps, because biodiversity performs such important ecosystem services and our society cannot survive without them so we should be recognising that and support provision for it in the same way as we would support transition in energy sources.



Q55 Cat Smith: I have a question for Dr Zurek about public health. In the UK we have a huge obesity problem and I wonder if there are any synergies between moving to a more sustainable diet and health benefits. Do you have any information about that?

Dr Zurek: In general, there is a big need for us to reduce salt, fat and sugars in the diet here in the UK and in Europe too because of the rising obesity problem but, also, because of what we call hidden hunger, in other words, not the right nutrition so people lack certain vitamins or minerals because they are eating too little of the kinds of things they should eat and too much of other things. That is a problem.

Another big problem with diet at the moment is that a lot of junk food, high in sugars, fats and salt, is cheaper in many cases than healthy choices. How can it be that you can eat bad stuff so much more cheaply than good stuff? That is why we see obesity rising in a lot of the poorer parts of the population—because it is cheaper to get that kind of food. That is a problem to start with.

As we just discussed, the good news is that eating more fruit and vegetables, eating more plant-based foods overall—I am not saying you have to go vegan but perhaps eating less meat—has health benefits. We know that. It also has some benefit for climate, water and so on, so there is a win-win here.

The issue may then be with the people losing out, such as the farmers that we just discussed or other people in the wider system. That is the trade-off debate that I mentioned earlier. We need to have that debate. We cannot just say, “Okay, we will all shift now,” or, “Everybody should eat differently” and so on, for these reasons. What will happen to the people who are losing out in that change? That is the debate we need to have.

There are some different ways of having that debate with those people, in this case dairy or livestock farmers, about perhaps transitioning to something else, but finding solutions together and not against people is the important bit. You need to discuss that and find solutions.

Q56 Cat Smith: I will have a question for Professor Lang in a moment but I have one follow-up question for Dr Zurek, if I might. How does the Government encourage people to make choices? Are there steps that the Government could take to help people makes those switches?

For instance, my son’s school has a meat-free Monday every week so all the school dinner options are plant-based. That will not change things by itself but are there other, perhaps similar things, that the Government could be doing to encourage that switch?

Dr Zurek: We are running a project on plant-based meals in schools. Of course, education, knowledge and choice around food are what I would call the basics but are not enough on their own. Even if people might want to eat more healthily, there are questions about price and the food



environment. Even if you want to make healthier choices, are you able, for example, to get those choices cheaply enough to afford them? Are the choices culturally appropriate? Are they nutritionally appropriate? There is a call towards understanding what drives consumer behaviour, which is the starting point, but we know now for sure that it is not enough to prompt people to make the right choices.

The food environment within which choices are made is very important. That is where it goes towards working with the rest of the system on rethinking the structures that offer certain choices to consumers. Who is gaining and who is losing? At the moment, we see poor people in marginalised places becoming obese and, for them, their lifestyle is not healthy. There is a huge issue to be addressed through more sustainable diets but there can be quite a lot of win-wins for the environment and health. However, it is not a case of, "You know better, so do it". We know that is not happening.

Q57 Cat Smith: The Government do not want to tell people what they can and cannot eat but, Professor Lang, perhaps you could suggest some things that the Government could do to help nudge people in the right direction.

Professor Lang: It is tricky. There is no evidence from any country that I have looked at that consumers like to be told what to eat. Everyone thinks they choose their diet. We don't, actually; we choose it by race, by class, by family, by gender, by culture, by when we were brought up, by the power of advertisers and their expenditure. Nearly £1 billion is spent on advertising food in Britain and it is overwhelmingly the ultra-processed foods that get that advertising. There is very little advertising, let alone national guidance, for eating more appropriately.

To answer your question about what your Committee could recommend, I would like to see you recommend that the Department of Health and Social Care's eat well plate—now the Eatwell Guide—becomes the sustainable diet guidance. If we want people to eat in a way that is appropriate for climate change reduction, for water preservation, for biodiversity and all the things we and other people you have had before you have been talking about, why is it not part of the national dietary guidelines?

Then they would become the guidelines that your contractor, whether hotels, school meals providers or the restaurant trade, could start being judged against. We need to have that. We need to have some sort of "this is our new national goal" standards. We don't have that so that would be a very important symbolic thing to do.

Another thing would be something I just hinted at, turning off the tap of cultural pollution, in other words, the advertising industry. My own brother was an advertiser so I know these things are very delicate. Everyone is amused by advertising. It is remarkably effective, the social



marketing, the huge amount of effort put into encouraging people to eat rubbish because it is profitable. We have to turn off that tap.

People get nervous about doing that, thinking it is the nanny state, but it isn't. Nannies are good. They are called parents. I just don't get this nanny state argument. Everyone needs guidance. Everyone needs some advice. Let's give it to them and that will begin to minimise the constraints that encourage people to eat badly as opposed to being aware of what better public health would be. What we have is a food industry—

Chair: I will have to give you some guidance, Professor Lang, which is that I am afraid we are running out of time. Have you finished your questions, Cat Smith?

Cat Smith: That was my last question.

Chair: Thank you. Clive Lewis now with our last set of questions for this panel.

Q58 **Clive Lewis:** To Professor Lang and Dr Zurek—and Dr Boakes, feel free to chip in—in the realm of innovative agricultural technology, what role do you see for gene editing and, as I think the term is, controlled environmental agriculture in being able to mitigate some of the risks to food security? Or do some of those innovations increase the risk to food security? It is an open question. One can go either way on it.

Dr Zurek: As with any technology, it can go either way. It is about how we use it. There is a lot of enthusiasm around controlled environmental agriculture, indoor agriculture and vertical farming. People do think there might be quite a bit of potential for it in urban areas. There is some scope, for example, to diversify the type of food that is available in a given location if the potential materialises. That will depend on the constraints the technologies face: how costly are they? Is the food produced as nutritious as food produced in other ways and will people see it that way? I know that there is quite a lot of indoor farming already for micro-greens and tomatoes, for example.

I am not a specialist on the gene technology side. I think Lizzie might know much more about that. As with any of these technologies, however, there are pros and cons and the question is: do we assess them and then what do we do? In order to adapt to climate change, we do need technical change. There is no question about that. However, the question then is: who gains from that technical change? Who can use it? Who has access to the technologies? Is it equitable, and is it protected by intellectual property rights? That needs to be sorted out.

Professor Lang: I agree. For me, that is the key issue. Who owns it? Whose property is it? Who is controlling it? What frames what is being asked of the gene editing process that could be—let me be stark—the people's gene editing or corporate gene editing? There could be very



different potential outlooks. That does not mean to say that one or the other is good or bad.

Q59 Clive Lewis: I think the Government's argument on this is that by deregulating you open up. The EU regulations make it extremely expensive. That means that certain big corporations dominate, but by deregulating you open it up to smaller operations who can bring the price down. However, over time, monopolies emerge.

Professor Lang: In your constituency there is the UEA hotbed—friends of mine work in it—of that technology and development. The critical issue goes back in history to how Britain privatised its plant breeding and the seed development organisation that we had. I am sufficiently old to remember those and to have planted them when I was a farmer—indeed, fruit. We must have some sort of social contract about what is the purpose of gene editing and of all the technology. There is a vast amount of technology that could be very useful, but it could also be very destructive. Just think of robotics. Just think of big data. Who owns the big data? Who is controlling that big data? Who is framing AI and its application to food? It is of immense importance to biodiversity outcomes now.

You raise a hugely important issue, but this takes us to basically having to rethink the Rothschild approach to science policy in Britain, which was to remove the state from it and to privatise it. I think we must put the state back in so that there is some public governance, to help shape choices, which our chair is constantly, rightly, going on about. What would public choices be for a better food system? I have not met anyone in the world, and certainly none in Britain, who wants the food system to accelerate climate change and we do not put it to them like that. The British public must work out it is being sold a cornucopia that is undoing its own children's future. This is completely bonkers. Self-interest can be appealed for in the public interest.

Dr Boakes: I cannot comment on new technologies. Technologies are needed, but we have some of the solutions now, and we should be implementing them before gambling on future technology. One of the biggest risks for food security is climate change, so we need to limit climate change as much as we can. We need to deliver the Paris Agreement and that will bring us more food security, so things such as home insulation, onshore wind, solar, would give us food security in some way, and also reduce our meat, which we can start doing now.

Q60 Clive Lewis: I can hear the Chair shuffling his papers, so I am going to miss out one of my questions. I will ask you the final question here. We have the Food and Drink Federation giving evidence next, and I wonder what UK food producers and the Government can do to ensure they are contributing to maintaining biodiversity abroad. I think that is something that is clearly very important and has an impact on our own biodiversity.



Dr Boakes: I am very aware that there is an appetite among businesses to calculate their biodiversity footprints and they are working with scientists to try to do that, but it is hard at the moment because they do not have transparent supply chains. This requires accurate and accessible data to link the production locations of raw ingredients to the final food products. It is hard to get that data. Governments can help with that by ensuring that Customs records are in the public domain, for example. That is important.

The food companies are slightly at the mercy of the traders that they buy the food from in the transparency, so it is important that food companies club together to put pressure on the traders, and Governments, to increase that transparency. For example, 60% of UK companies are signed up to the UK Soy Manifesto, which is a deforestation-free supply chain, so one of the questions is how to get the remaining mostly smaller companies on board, if there are financial barriers to that, for example.

Q61 **Clive Lewis:** My final point, on the issue of food, would you make profit the ultimate driver of food security? That is what we seem to have at the moment in our system. Profitability is the key driver in many of the decisions that are made. Is that good enough? This question is for all of you.

Dr Boakes: Good enough for decision making?

Q62 **Clive Lewis:** Yes. There are no two ways about it, profitability can drive good outcomes, but given the downsides of it as well, would you make that the most important driver when deciding on food security?

Professor Lang: No, I would not.

Dr Zurek: No.

Dr Boakes: No.

Professor Lang: We have all said no. Profit has its place. How much is more important. Retailers make very little profit in terms of return on capital, ROCE, very low. Food manufacturing makes vast profits; farming can make no profits and go into loss, as Philip Dunne knows only too well, not personally, but the capital assets of farming can be huge. My view is we need a bit more of a nuanced approach.

The ownership of that profit, and where it goes, Britain needs to rethink what it wants from the food system and rethink how much money it wants to put into research and the future of things. We are not even in Horizon 2020. We are slipping at the moment on all sorts of fronts.

Dr Zurek: Maybe also rethink what is the common goods or public goods that are coming out of the system and who governs that provision. At the moment, nobody. We are seeming to push it more towards monetisation of a lot of these public goods. The question is: is that the approach that gets the most public benefits that we need out of the system, the



biodiversity, the carbon, the water, the social equity aspects that the system also needs to provide together with the food security aspects? I think no. That is why we definitely need a different way of valuing, not in monetary terms, but valuing both the public and the private benefits and decide what is supposed to drive the system. At the moment it is definitely very skewed to one side, and that is not helpful with the public goods provision of the system.

Professor Lang: The English food system, the policy guidance on ELMs or any of the other mooted things, does not even deem food to be a public good. I find that staggering. That is the arrogance of Britain thinking that it will always have food. I think we must wake up. Those days are over. There is no empire, there is no Europe. Europe might choose not to feed us.

Chair: Thank you very much indeed. I am afraid I am going to draw this panel to a conclusion. Thank you, Clive. I think Professor Lang has been using AI to access my farm accounts and I should have indicated that I am involved in farming.

Professor Lang: I carefully said it was not you.

Chair: I would like to thank our panellists, Elizabeth Boakes, Tim Lang and Monika Zurek for joining us today. That concludes the first panel.

Examination of witnesses

Witnesses: Balwinder Dhoot, James Young, and Guy Singh-Watson.

[This evidence was taken by video conference]

Q63 **Chair:** Welcome back to the Environmental Audit Committee where we are joined for our second panel both in the room by James Young of McCain Foods and Balwinder Dhoot from the Food and Drink Federation, and on the screen joining us from the west country, Guy Singh-Watson from Riverford Organics. Just before I ask you to explain what you do in those organisations, I should declare that I am a grower for McCain Foods—not one of your biggest growers but you are an important customer of mine—so I draw that to the attention of the Committee. Perhaps James could indicate his role at McCain Foods.

James Young: Good afternoon. I am the Vice President of Agriculture for the UK arm of McCain Foods and, in the context of the inquiry, we rely on 250 farmers across the United Kingdom for the supply of our primary raw material, potatoes.

Q64 **Chair:** Thank you. Balwinder, at the Food and Drink Federation, what do you do?

Balwinder Dhoot: I am the Director of Sustainability at the Food and Drink Federation. The Food and Drink Federation represents food and



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drink manufacturing businesses, which is a huge part of the economy, a big employer and many of our members have links into the supply chain in agriculture. McCain Foods is a good example where they have very close relationships with farmers.

Q65 **Chair:** Guy, I think you are the founder of Riverford Organics. Could you give us a potted account of how it has grown and what it is today?

Guy Singh-Watson: I started growing organic vegetables on my parents' farm in Devon in 1987, and today we deliver to 70,000 households a week with veg boxes. We also farm in Cambridgeshire and in France and we have a supply chain that stretches around the world, but mostly in southern Europe. It is unique in that we have very close relationships. Many of those growers we have worked with for 20 years. Almost everything we buy is on a contract that often runs for many years.

We are an employee-owned company, and we were very early to start looking at our environmental footprint, working with Exeter University back in 2006 and have progressed with that.

Q66 **Chair:** Thank you very much indeed. I am going to start with Balwinder. You were listening to the previous conversation. We did not perhaps focus quite as much as I would like to in that session on the direct impact of climate change on growing conditions in the UK and what impact that has had on availability of both fresh and non-fresh food. For example, last summer we had the driest period in our history. What impact has that had on the availability of foods in the UK in the period since?

Balwinder Dhoot: For our members and the industry the adverse weather has had an impact. We have seen decreases in yield, and McCain will be able to talk about its experience, and, although we have seen a shortage of salad, for our members they have not told us about the explicit shortages they are having. Because of the nature of their supply chains, it means they are very agile. They have been able to source from other parts of the world, or from the spot market. They have been able to source and ensure that they get their materials, but there has been an impact on yields from the adverse weather. Although they have been able to source the material, they have had to pay a premium for it. You are scrambling around in a market where there is a shortage and high demand, so prices go up. That will then feed into consumer prices.

Q67 **Chair:** We have seen some supermarkets with bare shelves for some products for the first time in my recent memory. I am not sure if others can remember periods when we have gone through this, other than through non-related scares. Have many of your members suffered from inability to produce to contracted volumes?

Balwinder Dhoot: They would probably have been able to source the material but would have had to pay a premium for it. The shortages you saw in the supermarkets around salads, they would be the relationship between agriculture and retailers. Our members tend to be in the middle



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of that and, although some of them will deal with those products, they then process and manufacture that into other products. They would not be directly involved in the shortages that you saw in the retail space.

Q68 **Chair:** James, could you address the same issue? What impact did the drought have on your growers?

James Young: Specifically for this last crop in 2022, with the drought and the extreme temperatures, we were around 15% below our contracted volume with those growers. The wider problem for us is that that variance is happening more regularly now than it used to, so three of the last five years have been similar in terms of shortages versus our contract position with growers.

As we have just heard, it forces us into the market and again, specific to the potato industry, the availability and the number of growers is reducing, so the reliability of being able to fill those gaps is reducing, so that is through market pressures as well as the climate impact.

Q69 **Chair:** Much of your product is irrigated to be grown in some parts of the country. Have there been challenges with access to water, which has impacted yields?

James Young: Very much so. That was a key theme last year but also now a very live issue as growers are preparing for the 2023 season. That is a concern. The drought of last year, the relative lack of rain over winter, is very much front of mind from a climate point of view, but also in terms of infrastructure and the availability of irrigation water for next season.

Q70 **Chair:** Guy, you are probably most directly able to address this question, although you are not supplying supermarkets. Have you seen difficulties in sourcing the full range of vegetables that you supply through your box scheme?

Guy Singh-Watson: With regard to the drought, after having a conversation with someone from the Met Office 10 years ago, we have invested heavily in winter storage, both on our farm in Cambridgeshire and my farm in France. Sadly, we did not in Devon and we did run out of water by about mid-August last year and basically every green crop after that failed. It cost us hundreds of thousands of pounds. It was catastrophic and we will certainly be investing in more winter storage.

Regarding the more recent salad shortage, I must correct the previous panel. People were talking a lot about there not being salad crops available due to increasing energy costs and people not planting. The UK season for tomatoes, peppers, cucumbers and so on does not start until April, so clearly that is just not true. Virtually everything at this time of year, over the last few months, will be imported from southern Europe.

As people pointed out, the empty shelves were as the result of cold weather but, just as importantly, the result of the UK being viewed as a



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customer of last resort—that is something I have first-hand experience of—because of the trading relationships with supermarkets but, more particularly, because of post-Brexit. Lack of flexibility and additional costs really do not make us somewhere that you would sell to, if you have choice. Because we have those close relationships with our growers, we did not have any problem with supply, but I think we were pretty unique in our industry.

Q71 **Chair:** Would that apply in particular to tomatoes and salad?

Guy Singh-Watson: With tomatoes the yields were down in Spain. However, because our growers like us, they scrabbled around and perhaps sent more to us than they would have done. We had enough. It was not a serious problem.

Q72 **Chair:** In relation to the vegetables that you grow in this country, you mentioned investing in storage. Are you also investing in irrigation and other systems to try to build better resilience into your ability to supply?

Guy Singh-Watson: Sorry, that is what I meant. I meant winter storage of water.

Q73 **Chair:** Sorry. Do you grow any of your product under cover? Do you use polytunnels?

Guy Singh-Watson: We do. Since doing a study back in 2007 with Exeter University and finding out that it had 10 times the carbon footprint growing a pepper in the UK with heat, compared with buying it from southern Europe without heat, we do not buy anything from heated glass. We do have a lot of tunnels, many hectares of tunnels growing winter salads and tomatoes, peppers, cucumbers and so on in a very short UK season without heat. Heated glass to my mind should be illegal. It is complete environmental insanity. It is equally as insane as airfreighting vegetables from Kenya, but it is hard to convince people of that. It goes against their intuitive beliefs.

Chair: Thank you. I think that is a good moment to move on to Anna McMorris.

Q74 **Anna McMorris:** Thank you. I will just say that I am a customer of Riverford, so I do know your produce very well and it is excellent, especially for Christmas lunch. It is amazing.

I am going to move on to the food resilience industry forum that was set up during Covid, which the Government set up to co-ordinate with food suppliers and retailers. James Young, how effective do you think that forum was?

James Young: If I am honest, I have not been that close to it. I think the ask from us is for further strengthening of that resilience and including businesses like ours, so that we can contribute more. We have not been close to it as a business. I think resilience is the No. 1 theme for us at the moment.



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I mentioned earlier about the number of years recently where we have had the opposite and we are not getting a reliable supply. The impact on our growers from weather, and some of those inabilities for investment in various parts of the business as well, is difficult. I am not that close to it, but I would ask that we could be a bit closer and we can start bringing those asks a bit more to the table, those asks from our growers as well as an industry.

Balwinder Dhoot: The Food and Drink Federation participates in the food resilience industry forum. We also have a forum called the F4, which is made up of the NFU, the British Retail Consortium, UK Hospitality and the Food and Drink Federation. It provides a good forum in terms of dealing with immediate shocks and issues that arise. In our experience, DEFRA shares information and we have an ability to engage in and give a sense of what is happening in the market and the pressures in the market when a shock occurs.

More generally, looking forward to what we need, the sector has been under intense pressure for a number of years. It has had shocks with the change of trading relationship with the EU, Covid, Russia-Ukraine and behind the scenes the food and drink manufacturing industry has carried on working, providing food, with people working in quite precarious situations particularly with Covid, and lots of challenges, but the sector is adaptable and has been able to make sure food is still on the table.

That has reduced the resilience of the sector. Margins have gone down. We think 50% of investment decisions are being paused in the sector, because they are firefighting all the time. What we need is a long term, stable policy environment, particularly if we are going to deal with the issues around sustainability.

The resilience of our members in the manufacturing sector is low because they have been dealing with all of this. Things such as the food resilience industry forum provide a good way of looking at current issues, but if you want confidence to invest in the challenges of tomorrow then you need a different forum. You need much more certainty about the long-term position.

Q75 **Anna McMorris:** I will take that as you do not think it was right for the Government to wind that forum up, or it was right to wrap that one up but you need an improved forum now.

Balwinder Dhoot: On that forum, I am sure if something happened it would restart, but that forum is looking at immediate issues. The climate change issues, and sustainability issues are long term, so how do we address that? Policy sustainability and partnership with Government is key around that.

Q76 **Anna McMorris:** Guy, do you want to comment on that, and on the forum?



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Guy Singh-Watson: I don't know anything about the forum, but I would like to support what Balwinder just said about the importance of stability and constancy in Government in enabling businesses like ours to make long-term plans, particularly when it comes to the environment, which normally requires an even longer-term approach than most commercial decisions.

It is frustrating to see policies changing so quickly, sometimes on a political whim, it seems to me, without an appreciation of what that means to people who are planning these long-term investments, be they wind power, or building a reservoir, or the whole furore about the environmental land management scheme. Under Liz Truss that was almost abandoned and then brought back to life. How are we supposed to plan? I will stop there.

Q77 **Anna McMorris:** Turning to McCain and James, I know that McCain Foods is calling for a food security council. Moving on from what our other two witnesses have said, how can a forum of this nature make sure that the UK prepares for food security risks from climate change and ensures that long-term sustainability?

James Young: Policy stability is key, as Guy said. That is what we very much support. I think there are practical things it could do. ELMs has come up, and it came up in the previous panel of course, so some clarity there, so that growers understand what support they have.

We talk quite a lot about regenerative agriculture at McCain, which I know lots of people also talk about and are driving for and have lots of definitions of, and does it balance with food production as well as the environmental gains? That clarity from a council there for that long-term view would be within that remit.

Guy just mentioned reservoirs. We have already talked about water stress and water availability. Annually there is no problem with water, but it is just how we can keep hold of it. Growers do not have the certainty to invest in reservoirs or in irrigation infrastructure when there is so much change and volatility around, so being able to take that out and give that stability through that council so they have the confidence to make those investments.

Q78 **Anna McMorris:** You have talked about other ideas for improving the food system and the resilience in the UK, so these are ideas that can be discussed and decided on within the food security council, the food security fund to provide emergency top-up, or the national strategic farming reserve. Can you tell us a bit more about these ideas?

James Young: Yes. We have farmers who are going out of growing potatoes as we speak. Despite our best efforts, in terms of the long-term relationship and varying our contract prices rather than sticking to what was agreed before any inflation, there are still farmers going out of business as well as out of potatoes. Any step in from the Government to



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create some of that continuity across a period of years, rather than these fluctuations from one year to the next, I don't know how exactly that would look in terms of a fund, but that concept of being able to take some of that year-to-year variability out for farmers would be the right thing to do

Q79 Anna McMorris: Guy, as a farmer, do you want to comment on that, seeing this on the front line? Would you agree with that, or would you like to amend the way that was done?

Guy Singh-Watson: I have said my bit about constancy and I think that is the only thing I have to say on that.

Balwinder Dhoot: Whether you have a food security council, one thing we think would be welcome is you have a lot of Departments who have an interest in the food system and some kind of Cabinet Committee, whether it is food security or wider, would be a good way of co-ordinating that.

For example, trade policy has an impact on domestic production and food security. You have the health agenda, the net zero agenda, all of those things. DEFRA is a core Department that we have a relationship with. It is how you co-ordinate those disparate objectives into a coherent narrative. I think a Cabinet Committee could be a solution.

Q80 Anna McMorris: Yes. That would be an interesting and useful way forward. It is also covered within the SDG—the sustainable development goals—so that would be a start for Government to do. Would you agree?

Guy Singh-Watson: I would say that our industry up to the field gate amounts to about 1% of GDP. That is very small. Clearly there is a strategic significance, which tends to appear historically in times of war, in terms of food supply, but probably now much more significantly we are contributing to over 50% of loss of biodiversity, probably somewhere between 20% and 25% of climate change. Clearly, to have a lack of policy and just to abandon agriculture to market forces is ridiculous. It has no logical basis to it as a policy. We desperately need to have an agricultural policy, a food supply policy, an environmental policy, a land use framework that goes beyond something that is dictated by very short-term market forces, which is certainly as a farmer how it feels at the moment. It is madness.

Q81 Anna McMorris: What is your view on the Government's National Food Strategy, which they published last year?

Guy Singh-Watson: I did read it at the time. I cannot recall very much of it. I am not sure there is very much to recall, as a matter of fact. I will leave it at that.

Q82 Anna McMorris: Thank you. Can I ask our two witnesses here what you thought of that food strategy?



James Young: Similar in a way, in that the focus on being clear on how the food is produced, the way it is produced and improving that resilience is missing from there. That is for the next phase, for sure.

Balwinder Dhoot: The FDF did submit something to the Government through the Food and Drink Sector Council. It was a joint submission with the NFU, the British Retail Consortium and UK Hospitality. We were supportive of the objectives around sustainability. We want to see again coming back to a stable policy environment that enables people to protect the environment, as well as producing food. The intentions around sustainability we are supportive of.

Q83 **Anna McMorris:** Would you agree with McCain that it lacks climate resilience and long-term sustainability?

Balwinder Dhoot: Some of that is in there, but you could do more. I think there is lots of policy in the Government, but whether it is joined up enough at the moment is a question around—

Q84 **Anna McMorris:** Is the food strategy joined up?

Balwinder Dhoot: I guess the food strategy, in terms of the Government response to Henry Dimbleby's report, there is probably quite a lot in there. Whether it is joined up is a question for the Government.

James Young: It isn't. That was my point. To elaborate on the joining up piece, again, when I speak to our growers, the clarity they need in terms of the expectations on them around environmental benefits or public goods, or however you want to describe it, balanced with producing food and enough food in a resilient way, is the bit that is missing. It is that joining up that is missing.

Q85 **Caroline Lucas:** I want to come to James Young first. You have already mentioned regenerative agriculture and that that is something you are pursuing. Can you say a bit more about what that exactly involves and how you would describe it as being different from organic?

James Young: We do not farm the land ourselves, so it is through that relationship with those 250 farmers. We are asking them, encouraging them and trying to motivate them to farm in a different way. It is specific to potatoes. The different components of our framework, which we have released publicly and asked growers to work towards, includes things such as cover cropping and ensuring no bare soil in the rotation. It is a different approach to fertilisers and pesticides.

Q86 **Caroline Lucas:** Different in what way?

James Young: Reduced and more targeted: organic fertilisers where possible, reduced pesticides but not organic. We are still trying to maintain the yield and the quality of our product at the end of the day. We do not believe at the moment that the organic systems for large-scale potato production would fit the business requirements and a lot of those farm requirements.



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It is about making improvements in these different aspects of how they grow, so whether it is cover cropping—potatoes have traditionally been a very intensive crop to grow from a cultivation point of view. What can we do to reduce that? Some biodiversity improvements are also part of our framework on regenerative agriculture.

Q87 Caroline Lucas: Do you use it as part of your marketing? Do you say these potatoes are grown using regenerative practices or not?

James Young: At the moment only in a very small way. In the future we probably will, to be honest, but that is not the primary driver. The primary driver is our resilient supply.

Q88 Caroline Lucas: If you were to use it for communications purposes, how would you measure any of those things? Although all of them sound to be supported, using less pesticide or trying not to do X or Y is quite a difficult thing to capture in metrics.

James Young: It is, particularly when you overlay the seasonal variations. In some years you might need to use more of one thing and less another year anyway, so it is tricky. One benefit of that close and long-term relationship with those farmers is that my field staff on the ground managing that relationship with the farmers are able to track that. They are doing surveys so that they are able to monitor and track that from one year to the next.

Q89 Caroline Lucas: Guy, as an organic farmer, do you have any concerns with practices being labelled as regenerative when perhaps some aspects of them are not so sustainable?

Guy Singh-Watson: I do. To my mind the term “regenerative” is fairly meaningless at the moment. It can mean anything from organic-plus, which I would absolutely support, to simply not ploughing, which almost inevitably involves using large amounts of glyphosate. That is the sort of regenerative farming that would be within PepsiCo and Unilever and so on all claiming that their land is going to be all regenerative. It may have some environmental benefits by reducing ploughing, but the breadth of farming practices that are using this term are just so ludicrously wide that I think it is meaningless. It is not a term that I personally use.

Q90 Caroline Lucas: James, are the farmers who are using that approach using glyphosate?

James Young: No, not as a specific tool within the potato crop to get to regenerative agriculture. That is not part of that framework.

Q91 Caroline Lucas: However, they could be using it and still call themselves regenerative?

James Young: Yes, they could. I do agree with Guy about the different definitions and so on, but when I think about intensive potato production in the past, what can we do better? I do agree on those varying



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definitions, but that should not stop us trying to do better in all those different parameters of growing potatoes.

- Q92 **Caroline Lucas:** Do you think it would be useful to try to work towards a nationally recognised definition of what regenerative is? Is that even possible?

James Young: I am not sure it is possible. The no-plough example when it comes to potatoes is not practical. However, we still must produce food, so it may sound a little bit naive but it is trying to find that sweet spot and that balance in improving those practices while still having a good quality product at the end of the day, and a profitable farmer, so thinking back to the previous panel in terms of the requirements there to keep those farmers in business.

- Q93 **Caroline Lucas:** Guy, I know that you have touched on it already, but could you say some more about what you are doing at Riverford in terms of reducing the impact of the food that you grow and increasing the resilience of your farms?

Guy Singh-Watson: Starting in 2007 when we carbon footprinted the farm and our veg boxes, for a while we thought we would carbon label the boxes and people would select the lowest carbon box and that would drive us to have better practices and whatever. Very quickly it became apparent that that approach was completely hopeless. Indeed, I would extrapolate from that to say that any idea that a well-informed consumer is going to drive improvements in these incredibly complex areas is just ridiculous. It is just a smokescreen used to resist legislation.

We abandoned that very quickly. However, where it was useful is in identifying where the real carbon costs of the business were. Heated glass was a very quick one. That just went straight away. It took us three years to extricate ourselves from contracts with people who were using heat.

We then started looking at where we import from, so New Zealand apples had to go. Anything that has emissions of over 400 grams of carbon dioxide per kilogram are unacceptable now, and I still think that is way too high. With my farm in France, we get down to about 100 grams on most things. It is just to use that knowledge in an internal way to stop doing stupid things. It would be great if the Government adopted a similar approach.

There is lots of madness in our system. Growing maize to feed biodigesters and selling it to us as green energy, which we subsidise once through our taxes through the single farm payment and then again through our electricity payments, is something that is almost certainly bad for our environment. We must stop doing the really stupid stuff. Stop growing stuff in heated glass. That to my mind is where this measurement comes in. Stop refrigerant losses. It was 25% of Tesco's carbon footprint when I last looked at it; really stupid stuff. That is what



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we should be using this internal measurement to change, rather than pretending that it is going to inform a consumer to make better choices, which is just completely ridiculous.

- Q94 **Caroline Lucas:** You mentioned just then about the differential between the impacts on your French farms versus here. Is that mostly to do with the climate in France or what else is making that difference?

Guy Singh-Watson: It is mainly the transport. The 250 road miles and 100 miles on a ferry adds up to that carbon footprint. It is not always true that local food is better. It usually is. I have used the example of heated glass, where it isn't better. That is an extreme, but if you start getting much lower yields because you are outside of the climatic range—for instance, we grow all our onions in the east of England now because growing them in the west of England we regularly lost 25% of the crop through fungal disease. Sometimes there is an environmental argument for growing a crop where it is comfortable, but as a rule normally keeping it as close to where it is going to be consumed as possible. Moving something 100 miles in a fully loaded articulated lorry is pretty cheap in terms of environmental impact.

- Q95 **Caroline Lucas:** Coming back to James, what is McCain's view of the Government's environmental land management schemes, and are your potato growers confident that they are going to get adequate support in particular if they move in your case towards regenerative agriculture? Is that going to be recognised by the ELMs?

James Young: On the first point, it is fair to say there was a positive recognition of the extra standards that came out earlier in the year, and I think it seems to be moving in the right direction. I think there is still a bit more that we and growers would like to see on top of that as well, but certainly that change was welcomed.

The second question is there is still a high degree of uncertainty around that and scepticism with the growers. They are all still there with their calculators working out all those different payments for those different activities. It is still in the balance. They are still wondering if it is the right thing to do. The income foregone approach, is it going to make a difference to them or not? It should not be as unclear as that. It should be very clear that they need to do these, and they will be rewarded properly, so I think on that second point there is still more to be done.

- Q96 **Caroline Lucas:** Finally, coming back to Guy, I know you very succinctly said that the Government should just stop doing the stupid stuff, but if you were to suggest recommendations that our Committee might make in terms of encouraging more farms to follow the lead of the kind of work that you are doing, are there policy changes the Government could make that would make it easier for more farms to do that?

Guy Singh-Watson: Just to return to the constancy thing, the ELMs is moving in the right direction. It has been painfully slow now. We are six years post voting for Brexit. I would like to think that we could have been



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further, but it is fiendishly difficult. Public money for public goods, you must be able to measure the public goods to be able to contribute the public money, and that is extraordinarily difficult. What public goods will come from what measure?

However, I think we are making progress. This week I received back my mid-tier plan for my farm, which was approved, and there was a lot of sensible stuff in there. As I went through it I contemplated how that whole process started. It started with walking around the farm with an ecologist who pointed out the wealth that was under my feet, the fairy rings in the permanent pasture I had not even noticed. I found that tremendously motivating and, although I do acknowledge James's argument that it must work financially for farmers, we are all essentially emotional beings and it is also incredibly important that the farmers are emoted to acknowledge what is under their feet and want to protect it. Then the framework of financial tools must be there to help them, but without that desire to do the right thing it is going to be almost impossible to implement this public money for public goods.

I would advocate putting some money into getting an ecologist on to farms and helping them fill in those mid-tier application forms and so on, which I was lucky to have. I employed the woman who walked around the farm to come to help me do the application. I feel very glad to now be able to use that money to farm in the way that I want to farm.

Balwinder Dhoot: We talked a bit about measurements and data. In the short time I have been in the job, one of the things I have picked up is there are a range of initiatives and ways of measuring your carbon footprint and other impacts on the environment. One of the recommendations that came out of the food strategy was the Food Data Transparency Partnership. We know the Government are looking at how you measure eco impacts and that work is being taken forward. In principle, we welcome that. Having some kind of system that can standardise and bring consistency around the environmental impact of commodities and produce is welcome, but it needs to be done right. We are keen to ensure we can input into that, in terms of what would work practically. There is something promising there if it is implemented correctly.

Q97 **Clive Lewis:** I will come back on to that point shortly, Balwinder. I want to pick up with you, Guy, very quickly. If I can just add that I think that, "Stop doing the stupid stuff", would be an excellent comms policy for us. If we could send a report to Government with just one page on it, and it said that, it would do very well.

You talked about the carbon footprint and then you touched on the ecology, which is an interesting idea. What are you guys doing to reduce your biodiversity footprint? I know you talked about payments and so on. I had never heard the term biodiversity footprint until today, which I assume means farmers and their size 10s stepping on insects is not what it is about; it is a bit more complicated than that. What are you doing?



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You have talked about carbon, but biodiversity is a lot more complex and detailed. What are you doing to enhance that?

Guy Singh-Watson: It is always going to be very locally specific. We are in Devon. We have the most wonderful hedgerows, so we are letting all our hedgerows grow up. We are allowing them to sprawl out into the field, so they are no longer 2 metres wide. They are perhaps 10 metres wide, so you then get those boundaries between almost the mini woodland environment and the grassland or cropping environment, which ecologists tell me are so important in promoting biodiversity. We are establishing some new hedgerows, planting some trees. We have identified the pasture that is species rich and should not be disturbed, should not even have trees planted on it, we were advised.

Where we are cropping, on our steep slopes soil loss is an issue. We are reducing the length of run. We are putting in buffer strips. If we have a long run of 200 metres, we will break it into two 100 metre runs and there is a payment under the stewardship for that.

We have gone in quite a big way into agroforestry, so growing nuts in a silvopasture system, walnut and hazelnuts intercropped with grass, which is grazed and the nuts will produce roughly four times per hectare what the beef will produce in terms of edible protein and also sequester carbon and foster biodiversity. There are a range of things, and it is always going to be very specific to the farm.

Even between where I live now and where I was born, which is only two miles away, the soil is completely different and needs treating in a different way. I think that is where it makes it so difficult coming up with universal solutions and, although DEFRA do drive me nuts at times, I do have immense sympathy for it trying to come up with at least universal principles, but even universal practices, which are going to apply across such different soil types, climates, topographies. It is incredibly complex, but a whole range of things.

On the cover cropping that James is talking about, trying to ensure that we never leave the ground bare—indeed, even not worrying too much about weeds in the crops—we will do one cultivation early and then let the weeds grow in something like a squash or a pumpkin crop, where it is too late to put a green manure in, and we try to allow the weeds to make sure that the ground is covered when the pumpkins are harvested.

There are a whole range of things and part of it is embracing the very concept of complexity. Nature is incredibly complex. If you walk into any natural environment they are not monocultures. They are incredibly complex, and that is how farms should be. That is very difficult to work into a modern agricultural system where all the commercial pressures are towards scale and specialisation. Most farms now tend to be mono-enterprises, so dairy, specialist pigs, specialist poultry, combinable crops, or sheep and beef. Those are typically how UK farms are. There are very



few of what my parents would have called mixed farms when they started in the 1950s.

Q98 Clive Lewis: Touching on that, that implies the monoculture enhances what you would call in economics economies of scale, because you then can bring down the unit cost, but that then relates to our whole relationship with food and what we say we are prepared to pay for it and people's incomes and ability to pay for good quality food. It is quite a complex relationship, because clearly going down the more diverse, complex route, means that you do not have those economies of scale. Therefore, that means that food inevitably becomes more secure but more expensive, but then expensive and inexpensive are relative terms. Food is part of a bigger social issue, isn't it?

Guy Singh-Watson: Yes, and it is hard to get it to stack up. The short-term economic pressures and the long-term economic and indeed ecological sense are pulling in different directions. It is because of the mental set in terms of time that you are thinking about, largely. I would encourage you to come back to that fact, have it in your head. Food at the farm gate is 1.6% of GDP. We spend roughly 10% on it when we go to buy it at a supermarket or a restaurant, but having a more sensible agricultural system is not necessarily going to have a significant impact on the cost of food. Reducing those rows from 200 metres to 100 metres and losing a bit of land, it is going to be a fraction of a per cent. doing those measures on our food bill but, hopefully, it is going to preserve our soils, preserve our biodiversity, sequester carbon and make sure that we leave a habitable planet for our children.

Q99 Clive Lewis: Balwinder, you were talking a bit then about the metrics for biodiversity and your members being interested in that. What are your members doing? I am thinking particularly in terms of protecting biodiversity abroad.

Balwinder Dhoot: They are doing things domestically around paying farmers to increase the land they put aside. In terms of overseas, there are examples of a number of our members, confectionary is a good example, where they are working with cocoa farmers in West Africa and other parts of the world and it is a complex relationship because you have thousands of smallholders that they have to work with, so it is not of big farms that you can easily direct. They are trying to ensure that they take account of biodiversity in their production, as well as some of the social goals around empowering women in those farms and making sure that there is equity in the supply chain. That is probably a good example. Our members are also supportive of sustainable palm oil and there is work going on around that.

Q100 Clive Lewis: What about McCain?

James Young: If I could answer domestically, rather than globally. Relating to that last question as well, I do think we need to not be as black and white and assume straight away that it is about cost, and



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adding cost and that complexity equals cost. I do think there are examples when it comes to biodiversity if we look over a longer period of time, so back to that stability point, it does not necessarily need to equal cost.

To specifically answer your question, we are funding the cover crop seed, for example, to our growers, so that is money that we are spending but the improvement in the soil health in between the potato crop over a long period should pay for itself. It is improving that soil health and therefore improving the resilience in the crop productivity and the rest of the rotation.

Also, when it comes to biodiversity we are funding some wildflower mixes, for example, that growers can use to increase species in field margins and so on. That is not taking away from the crop. That is in areas that are unproductive or would not be cropped with potatoes anyway. It is not always necessarily a direct relationship between complexity and cost when we are looking at biodiversity, if that makes sense.

Q101 Clive Lewis: It does. I have one last question and I am going to read it out, because it is a specific question that someone wants to know the answer to, and it is slightly technical. This is for you, Balwinder, "Are your members preparing to establish due diligence systems for forest risk commodities?" I don't know what I am asking here, so I am going to ask it, because it seems like an important question, and, "What is the view of the Food and Drink Federation on the Government's proposed due diligence regulations under schedule 17 of the Environment Act?"

Balwinder Dhoot: That is a very specific question. I think what you are referring to is around deforestation.

Q102 Clive Lewis: I think that bit is quite clear. Under the schedule 17 bit it is less so.

Balwinder Dhoot: I am afraid I don't know schedule 17 of the Environment Act off the top of my head. I touched on the palm oil and our members have a real interest in that. You have due diligence schemes being developed at EU level and UK level now. Now that we have left, we have our own independent regulations on this. A lot of our members operate on a European level at least and so they want to see good systems in place, good regulation. We have touched on it before. It is important to have good regulation.

Q103 Clive Lewis: For a level playing field?

Balwinder Dhoot: A mixture of level playing field, but also efficiency if you want the right outcome. A good example would be the extended producer responsibility about plastic for packaging waste, where the Government are bringing forward proposals. We think those proposals will not deliver the outcome in terms of increased recycling and it will add cost to consumers' shopping baskets. As an industry we want to see



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increased recycling rates. We want to see that in our packaging. We want to see a policy that delivers that, and we do not think that will.

Q104 **Clive Lewis:** When you say increased costs for the consumer, that implies that you will pass those costs on to us, rather than take a hit on your profit, doesn't it?

Balwinder Dhoot: I will touch on something that Professor Tim Lang said, where he said it is a high profit margin in the sector. The food and drink manufacturing sector is high output, low margin, and 97% of the businesses in the sector are SMEs. They are not able to gouge profits. They are caught between farmers and retailers. It is highly competitive. There is no position there of market dominance and ability to extract excess profit. I disagree with the comments there. If you have low margins and your costs increase, you either go out of business or you pass those costs on.

Q105 **Anna McMorris:** I want to come in on this question in terms of the due diligence and your members signing up to this amendment or proposed amendment that the Government could bring through on schedule 17 under the Environment Act. Many of your members will be quite large companies that will have to comply, that currently operate overseas in deforestation, also ensuring that communities and people working there are kept in poverty and children are also working within these—for example, cocoa within the Côte d'Ivoire and in Ghana. Further to my colleague's question, are you talking to your members about this and what it is going to entail, and are you ensuring that they are making the changes necessary in advance of this legislation?

Balwinder Dhoot: I have been in the role for a couple of months. The early conversations I have had are that this is of interest to our members. They clearly want to have supply chains that work in terms of they do not have negative impacts on communities or on children and families and the environment.

Q106 **Anna McMorris:** As they currently are?

Balwinder Dhoot: They are working to ensure that they do not.

Q107 **Anna McMorris:** What are they doing to make sure?

Balwinder Dhoot: For example, Mondolēz, the owner of Cadbury, has a programme where it is working with cocoa farmers in West Africa. There was a reception here last week with Mars, where they highlighted the work they are doing with local communities to improve not just the environment and biodiversity but the impacts on the communities in those areas. As I have said, the challenge is they will be working often through middlemen and there are 10,000-plus providers of cocoa. It is not a straightforward and easy thing to do, but they are working hard to do that.

Q108 **Anna McMorris:** There are co-operatives there and there are operators



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working with better regulation off their own back, but Cadbury and Mondolēz are not doing that.

Balwinder Dhoot: I can get some information and I will send it to you.

Q109 **Chair:** I am going to conclude with a quick question, slightly extending beyond the food security topic to the question of EPR, extended producer responsibility. Balwinder, this is an issue that I know your federation has expressed some concerns about. Could you tell the Committee what those are?

Balwinder Dhoot: I touched on it in the response to Clive Lewis. Like I said, we absolutely want to see a circular economy where packaging can be recycled, businesses can then reuse that and, in effect, avoid the plastic tax, but also improve the saleability of their products. There is a real appetite to do that. The proposals being put forward by Government will not deliver the level of recycling and they will come at a significant cost, so it is not the most efficient way of doing it. We think there are other models that have been done overseas that do work, which give the responsibility for the packaging to the industry and they have an incentive to then recycle and return into the packaging.

It is estimated that it is going to cost about £1.7 billion to the industry, which, as I have touched on, is going to then be passed on to the consumers, because of the low margin nature of the sector. We are in discussion with the Government and we would like to see a good outcome on this to ensure that we get a model that is based on best practice overseas and will deliver the outcomes.

Q110 **Chair:** Can you illustrate what you mean by best practice? What sorts of schemes are being used elsewhere?

Balwinder Dhoot: It is around who administers the scheme. If that is a public body or an industry body is a key one. We have done some work where you can see that the model that the UK is pursuing is a more state-type model aligned perhaps with Russia and Hungary, whereas other models will have more sector intervention in terms of the various components of the structure of the delivery mechanisms in that.

Q111 **Chair:** Thank you. James, is McCain taking steps to reduce the environmental impact of its packaging?

James Young: Packaging and recyclability is one of the four pillars of our overall global sustainability strategy, so yes we are in terms of progress on that and the link to what Balwinder was talking about there. I do not have the updated details but we can always forward it on at a later date.

Q112 **Chair:** It would be very helpful if you could write to us and give some indication of what you are doing. I know it is not in your department. Guy, I think you have made a virtue—as you were talking about earlier—of not using plastic in your packaging. Is that right? Do you have entirely



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organic?

Guy Singh-Watson: We do have a zero packaging box, but we do use plastic at times. It is not technically plastic. It is starch-based and it is fully home compostable. Even accounting for that, we only use 18% per kilo of vegetables sold on average at a supermarket, so I think there is potential to use a hell of a lot less packaging. Whether compostable is a good thing, if it is compostable; definitely not degradable—that is never a good thing.

Home compostable is what we use and it is four times the price of the oil-based alternative. It is absolutely crippling. We started three or four years ago. We hoped that other people would come in behind us and the volume would increase and the price would come down. I am afraid almost no one has come in behind us and it has stayed prohibitively expensive.

On the packaging thing, my main plea to the Government—and I think there may be a debate going on about this at the moment—is one for a unified kerbside collection. For anyone trying to come up with a sensible policy for their packaging, when there are 34 different regimes, whether there are composting facilities available, how can we plan anything when we do not know what the end life of our packaging will be? I have heard this debated a little bit. To my mind, the argument for unified kerbside collection is absolutely overwhelming. I know it will be painful in the transition but long term I think we should do it.

I want to chip in and say any hope that any industry is going to self-regulate, in the way that I think either James or Balwinder were suggesting is just a plea to have more time to do nothing, in my experience, so I would argue against that.

Q113 **Chair:** We did have the Secretary of State for DEFRA before us in January. She indicated an enthusiasm to encourage common standards for kerbside collection, so we will see where that goes.

Balwinder Dhoot: On the point about self-regulation, it is not self-regulation. The industry will be paying for the system so it wants to ensure that it can get the packaging back to reuse. We are prepared to pay into the system; it is just that we then want to manage the system that we are paying into.

Chair: Thank you for making that clear. That concludes our panel. I am very grateful to Guy Singh-Watson for joining us from Devon, to Balwinder Dhoot and James Young for joining us here in the Committee, and to Nick Davis for preparing our brief. Thank you very much.