



# Environment and Climate Change Committee

## Corrected oral evidence: Mobilising action on climate change and environment: behaviour change

Wednesday 8 June 2022

10.05 am

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Members present: Baroness Parminter (The Chair); Baroness Boycott; Lord Browne of Ladyton; Lord Colgrain; Lord Grantchester; Lord Lilley; Lord Lucas; Baroness Northover; The Lord Bishop of Oxford; The Duke of Wellington; Lord Whitty; Baroness Young of Old Scone.

Evidence Session No. 13

Hybrid Proceeding

Questions 130 - 147

### Witnesses

[I](#): Rt Hon George Eustice MP, Secretary of State, Department for Environment, Food and Rural Affairs; Andrew Jackson, Deputy Director, Air Quality Directorate, Department for Environment, Food and Rural Affairs; Emily Cattell, Deputy Director, Office of the Director of Analysis, Department of Environment, Food and Rural Affairs.

## Examination of Witnesses

George Eustice, Andrew Jackson and Emily Cattell.

Q130 **The Chair:** Morning, everyone. Welcome to this evidence session of the House of Lords Environment and Climate Change Select Committee and our inquiry into mobilising behaviour change for environmental and climate goals. We are delighted today to have the Secretary of State from the Department for Environment, Food and Rural Affairs, George Eustice, and two of his colleagues from the department: Andrew Jackson is the deputy director from the air quality directorate, and Emily Cattell is deputy director from the office of the director of analysis.

You are all very welcome, and can we particularly say to the Secretary of State how pleased we are that you are here today? I know that we have had to change this meeting because it was initially meant to be a joint meeting with the Secretary of State for BEIS, but we are very grateful that you were able to maintain your commitment to us today. Thank you for that.

Before we open up for questions, there are just a few matters of housekeeping. This is webcast live and will go out subsequently on the parliamentary website. A transcript will be taken, and witnesses can have sight of that before it is finalised and put up on our website. Can I remind members to declare any relevant interests that they may have?

Without further ado, since we have only until 11.15 am and I am sure there will be lots of questions, can I kick off with the first question to the Secretary of State? We have had a lot of evidence in from various quarters about the potential of behaviour change to cut environmental damage and deliver climate change goals, although it would be fair to say that there is less focus on that in the Government's net-zero strategy than other approaches. Perhaps you could say to what extent you see behaviour change as a means to achieve environmental and climate goals and in which particular areas your department is looking to mobilise behaviour change.

**George Eustice:** Thank you very much, Baroness Parminter. You are doing a really important inquiry, so I am delighted to be here. Apologies for being a couple of minutes late.

In answer to your question, the really important thing is to see behaviour change as being integral to much of what we are doing on environmental policy, to a lesser or greater extent. It is always unhelpful to treat behaviour change as though it is a sideshow or in a silo, where there should be a bit of government advertising to encourage this or that behaviour. We have to recognise that all of the policy agenda we have is trying to recognise behaviour change and make it easier. The levy on plastic carrier bags was all about trying to drive a behaviour change so that people remembered to take a reusable bag and did not keep buying plastic bags. Measures that we take on waste and resource management, such as consistent collections and trying to boost recycling rates, are all about trying to make that behaviour change easier. Making recycling

centres more accessible, again, is all about encouraging that behaviour change.

That behaviour change is quite integral to many parts of government policy, but to tackle these complex environmental challenges is a shared endeavour. We all have a shared responsibility, and many of the policies we have are partly about Government having a role in regulation to make certain choices easier, so that the public can make the changes we want them to make to get better environmental outcomes.

**Q131 The Chair:** Can you give us examples of how some of this behavioural change, which you say is integral across all policy areas, will be achieved? Specifically, given your departmental responsibilities, could you say something about how behaviour change will be achieved in sectors where there are fewer technological options, such as in the areas of reducing meat and dairy or reducing fast fashion?

**George Eustice:** I have given the example of the levy on single-use plastic carrier bags. We have obviously also then made regulatory changes to ban the use of plastics in cup stirrers, cotton buds and many other things. We are looking at further such bans in those areas where alternatives are available. That is all about creating or acquiring a behaviour change among manufacturers and retailers to change the types of products that they offer people. That is an example at that level.

Moving through the policy programme, if you look at everything we are doing on future farming policy, it is all about removing arbitrary subsidies on land ownership or tenure and moving instead towards payments to incentivise, for instance, integrated pest management, so that we can support farmers in reducing their reliance on pesticides and encourage a greater focus on soil health and biodiversity in soils. Payments targeted at that will achieve that behaviour change that we want to see among farmers so that we can get those changes across the farmed landscape.

People will often reduce this debate to one that asks, "Should we run an advertising campaign to tell people to stop eating meat"? There is a constituency of people who have that sort of view. It is quite complex, in the sense that the debate about meat consumption is more nuanced than people would see at first sight. A statistician would look at it, measure methane emissions from animals and take a very simplistic view, which is that the more animals you have, the more methane they emit, and the more environmental harm is done.

There is a separate school of scientific thought. Those who are ecologists would argue that, if you step back and start to respect the environment as an ecosystem, having permanent pasture in a more flower-rich pastureland and recognising the value of livestock in the lowlands as part of a healthy rotation is good for the ecosystem.

It is always quite depressing when people try to simplify it as saying, "Livestock is bad; therefore, eat less meat". If you were to listen to Lord Deben, he would nuance that by saying, "We probably want people to

moderate the amount of meat that they eat, but eat meat that has been raised in a more traditional, pasture-based system". Even there, there is not a uniform view among scientists. Some would say you should fatten them up, feed them in controlled environments as quickly as you can and kill them as quickly as you can to reduce methane emissions. It is not always that simple.

The conclusions that people reach tend to boil down to whether they are a statistician who looks at one area of our environment up close and reaches a conclusion or they are more of the ecologist tradition and would step back to look at the whole ecosystem where their conclusions on meat would be quite different quite often.

**The Chair:** You have obviously looked carefully at this issue. You say that Lord Deben would set out the benefits of eating a more plant-based diet, but less meat, while recognising the ecological value of a mixed farming system. If it is okay for Lord Deben to say it, why are the Government not saying that?

**George Eustice:** I do say it. I have never made any secret of the fact that I fall into that latter school, as somebody who believes it is important with the environment, given its complexities, to take several steps back and look at the ecosystem as a whole. It then starts to make sense and to look like a picture you can understand. The problem with the environment throughout the ages has been that, if you zoom in on one particular area and get too obsessed by what you can measure, you never get any closer to understanding it. Only when you step back and recognise that whole ecosystem does it start to make sense and look like a picture.

Q132 **Baroness Young of Old Scone:** Good morning, Secretary of State. Can we just cone this down a bit to climate change as one of the areas where we want people to change their behaviour? We have been hearing almost universally—and I have been surprised at how strong the message has been—that people want very clear messages from government about what the priorities for action by the public should be. They are bombarded by messages from every quarter, as you say. They want to know the three or four things that they need to do, and then they want help for these things to be made as affordable, easy and, in the case of poorer populations, fair as it can be in order for them to go along with them. I have been surprised, as I am sure other members of the committee have been, at just how committed the public generally are to taking action, but they are desperate to get some help with that.

First, can you tell us what government plans are for that task of identifying the few simple things people can do that would make the biggest difference on climate change? Secondly, what sorts of policy instruments do you see going into place—both policy and economic incentives and disincentives—in order to make their behaviour change happen in ways that are possible for them and not expensive, inaccessible and sometimes non-existent in their operation?

**George Eustice:** It is very important. I may bring in Andrew or Emily in a moment to talk through some of the specific things we have referenced in the net-zero strategy, for instance, and our own commitments under the Environment Act to do some work in this area.

On the general point, the critical thing to changing human behaviour in any field is to really try to make it as easy as possible to change a habit. Look at the example of smoking, which is obviously more in the health sphere than the environment sphere. Getting people to give up smoking is notoriously quite difficult, and it requires an enormous amount of individual willpower to do it. The development of electronic cigarettes, vaping and so on, which have far lower health impacts, has been quite revolutionary in making it easier for people to walk across that bridge to change a habit and a behaviour. It is the same in many other areas. If we want people to recycle more, rather than them feeling that they are being asked to give something up that matters to them, the key all along is to close the distance between what they do now and what you want them to do so that it becomes about changing a habit that they have got into and adopting a new habit that is better for the environment.

The plastic bag levy is a great example of that. In the initial phases, people were frustrated that they kept having to buy multiple-use carrier bags. After a while, everybody started to get into a different habit: when they go shopping, they take a bag with them. It is the same in recycling and water use. Again, there is a role for government regulation and building regs here so that you have new homes that are more water efficient; you start to mandate greater water efficiency in washing machines and other appliances. That is a great example where it does not require a particular behaviour change as such, but you make it easier for people to play their part for the environment.

Q133 **Baroness Young of Old Scone:** Just going back to the climate change stuff, we are facing the biggest and most urgent crisis that we have faced for many years. It is generally acknowledged that the four things that people can do are: changing the way they eat in modest terms, as you describe it; buying less; sorting out how their homes are heated; and sorting out how they travel, including air and road travel. Do the Government have an integrated set of instruments to communicate to the public about those priorities and make sure that they can in fact be met by reducing the barriers to behaviour change?

**George Eustice:** We do, as I said, through a combination—and behaviour change can work at several levels—of regulatory change, so that the things on offer to the public in retail environments change, therefore causing people to adopt more sustainable approaches; financial incentives on agriculture, so that we change the way food is produced, making it more sustainable and better for both biodiversity and lower carbon emissions, by reorientating our farming support policy towards those objectives; and other regulatory changes under the Environment Act to support things such as greater recycling. Andrew, can I bring you in to say more about the specifics in this area?

**Andrew Jackson:** The range of activity that the Government are looking at here is quite significant. The actions that the Secretary of State has talked about are all about making the green choice the easiest, making it affordable and enabling people to make that choice more easily. We have a range of initiatives, including with fashion retailers, around the sustainable clothing action plan. How do you work with industry to make the goods that people are consuming more sustainable? How does that industry tackle challenges around that at an industry-wide level? How can it reduce its own footprint? That enables people to make greener choices through that work.

Look also in transport at the decarbonisation that we have and *The Road to Zero Strategy*, where we have made electric vehicles more affordable. The uptake of electric vehicles through grant schemes starts to then trickle down into second-hand markets. That again facilitates choice for the customer.

You also have labelling initiatives that we are looking at under the food strategy to give people a greater choice and make those choices easier. This is across a whole range of environmental and other policy areas, so there is a wide variety of activities that we can undertake to give people greater information, enable the market to respond more quickly and help industries reduce their own footprints.

**Baroness Young of Old Scone:** I wonder if I could take that point you made at the beginning about the range of instruments and just press the Secretary of State on why the vast majority of the evidence that we have received seems to tell us that the public do not have a picture of that. They do not understand what you are trying to achieve and do not know about most of the things you are doing to help them make these choices. Is that something that government needs to address?

**George Eustice:** It depends. If people see behaviour change as operating in a silo and divorced from wider government policy, and they therefore perceive it to be about a government information campaign on the television that tells them they should do this or that, they will quite rightly say that they have not seen anything because that is not our approach. I would be challenged to say that anyone has not realised that they now have a charge for buying a carrier bag in a supermarket. If they were observant, they would notice that you no longer really see plastic cutlery on offer. People have reverted to the use of wood instead. They are changing their behaviours because we have introduced regulatory changes that make that easier or, in some cases, compulsory. It depends whether you see it as operating in a silo or being integral to wider government policy.

Q134 **Lord Lucas:** Secretary of State, we met with students from the six schools on the committee's youth engagement programme in advance of this session to discuss the issues that they would raise with Ministers in relation to this inquiry if they were given the opportunity. One of the recurring points raised by the students in all six schools, as well as many expert witnesses, was the need for the public to be provided with more

information about behaviour change for environmental and climate goals to enable individuals to make more informed choices.

What efforts are being made to communicate the scale of the change required and the role of the public in reaching environmental and climate goals? If I can pick a particular example that echoes what you said before, the makers of oat milk claim it is better for the environment than cow's milk, but it is twice the price, so there must be a lot of costs and emissions in there somewhere that they are not telling us about. How can you produce a structure that enables the ordinary consumer to make a fair judgment of what the system effect of oat milk versus cow milk is?

**George Eustice:** It very much links to the point I made at the start about the complexity of the environment and sometimes, therefore, the difficulty in giving people very simplistic messages where there are a lot of complex interactions in our ecosystem.

On a more general point, it is great that you have taken evidence from schools. I regularly have quite a full mailbag from children in schools up and down the country, often related to plastics pollution and other environmental concerns. During my time here as an MP, we have definitely seen a growing consciousness among a younger generation about our environmental impacts and their own responsibilities to the environment. That is obviously a positive thing.

I might bring in Emily in a moment because she has done some of the research in this area. On something as complex as food and the relative benefits of oat milk versus dairy milk, we are doing quite a comprehensive piece of work at the moment looking at what the options might be around food labelling. Some countries—notably France, but one or two others as well—have made an attempt at effectively a traffic light system or a tiered system that grades something as being very environmentally friendly, pretty good or not so good. It is a triaged three-category score. Any approach like that is always going to be a bit arbitrary and will have some complexities.

As we look into this, it is complex. Are we looking just at climate change and carbon emissions, or at biodiversity and other wider environmental outcomes? Sadly, I am afraid there is often a tension between those two. What you often might do because it is right for carbon reduction turns out not to be quite the right thing for biodiversity, and vice versa.

It is complex, but it is an area that we are looking at because I recognise that we owe it to the public to make those more informed choices if there is a wish there. Rather than having to rely on reading the newspapers and being given a different story week after week about what is good and what is bad, we owe it to them to try to get some sort of consistent methodology that will not be perfect but will give them the ability to make those informed choices. That is something we are looking at.

**Emily Cattell:** The Secretary of State has already mentioned the research on labelling that the department is undertaking. I thought it might be useful to explain the range of behavioural research that the

department also undertakes and the role it plays in informing policy options, but also communications messaging, which is a very important part of delivering environmental messages and facilitating the choices that people want to make. I have a few examples.

Behavioural research can be used in a number of ways. A key way that we use it is to inform messaging. If we have learned one thing from behavioural science over the years, it is very much that there is no one-size-fits-all approach. Each behaviour we are trying to facilitate or outcome we are trying to encourage might require quite a specific response.

The department looks very carefully at its messaging activity. For example, a recent campaign on domestic burning was built quite largely upon some research that we did to both raise awareness of the negative health impacts of domestic burning—fires in homes, for example—and identify which messages were more effective in encouraging people to alter their behaviours or go with the grain of what they wanted to achieve. In that instance, a very directive message was not appropriate. Instead, the messaging that incentivised people more was connected to thinking about their own health and the health of their families.

In other examples, a more directive message might be slightly more appropriate. When we undertook research to raise awareness of the new responsibilities for domestic waste disposal to prevent fly-tipping, a slightly more directive message was more impactful. They are a couple of ways that we have used research for messaging.

In terms of informing other policy options, there is a strong culture within the department of monitoring and evaluation. We look to understand the barriers or frictions that might be in place within certain processes. The Secretary of State has mentioned farming, for example. As I am sure you are aware, we are developing a very comprehensive test and trial evaluation programme with farmers as part of environmental land management changes. We understand their barriers. They can help raise problems that they encounter and be part of the solution in helping to design new programmes. There, the research is used for policy optimisation. There are lots of examples from across the portfolio of the department that I thought it might be useful to share here in order to reinforce what the Secretary of State was saying.

**Q135 Lord Lucas:** Do you, as part of that, maintain a monitoring process of how people are thinking about these things, public attitudes and the public level of understanding and information?

**Emily Cattell:** We would do that in two ways. Across government, we have a number of public opinion trackers that provide those really important trends across a whole range of policy areas. That allows us then to dive into specific areas we might want to pick up in the department.



A key tracker that we use is Defra's survey on attitudes to the environment, which is very much linked to the 25-year environment plan programme. The questions we place in that survey, which is in its third wave now, are very responsive to the issues within the 25-year environment plan. Defra runs the People and Nature Survey, which, as its name suggests, is more about how people use nature and the benefits they derive from it. BEIS also has a public attitudes tracker. Across these and the other surveys, but these are the principal ones, we have a good set of trends as to which issues are priorities and on people's minds.

Within the department, as part of this strong culture of monitoring and evaluation, each policy that is developed will have alongside it a monitoring and evaluation programme. Going back to an earlier question about how we decide on mechanisms, this conversation about appropriate interventions is fleshed out within the business case proposal. I am sure you are familiar with appraisal techniques and processes within government for submitting business cases and making decisions about policies and implementation. The internal scrutiny and governance processes and the cross-government appraisal templates bring out the direct and indirect costs and benefits—things you can monetise and things you cannot. A lot of scrutiny is applied to plans, and behavioural responses are very much part of that conversation.

One final piece of very positive information on appraisal systems is that the Civil Service has recently adopted a new appraisal approach to valuing natural capital. This is the ENCA guidance, which is about enabling natural capital approaches. This is a way of further strengthening the environmental agenda and bringing out behavioural elements within policy design.

**Q136 Lord Lucas:** Thank you; that is very encouraging. Secretary of State, can I just ask you a couple of supplementaries? First, we have been extremely disappointed by the way the supermarkets have refused to come and give evidence to us, but they are obviously a very important part of communication with consumers. Are they more collaborative and better with you?

Secondly, to pick up on a Question I asked Lord True in the Cabinet Office and got a very dusty Answer to, what progress are you making on considering the benefits or otherwise of reducing the temperatures in your offices to reduce your impact on the climate?

**George Eustice:** On the latter, I grew up on a farm, so I like an office to be quite cool generally. When people who turn up for meetings, they are usually wearing a jumper. Of course, let us not forget that that can have the opposite effect in the summer. You might have air conditioning going when that is not appropriate either.

I am surprised that the supermarkets have not taken up the opportunity to come before your committee. It is an area that all of them are obviously looking at, and not least because one of the crucial behaviour changes we are incentivising through the Environment Act is the

introduction of extended producer responsibility that we are working with the industry on. We have producer responsibility schemes already that mean they contribute to some of the cost of recycling, but this makes them take full cost for that recycling. It means that there is quite a powerful incentive on food manufacturers and retailers to reduce the amount of plastic packaging that they use, reduce the volumes and have more recyclable types of plastic so that they can reduce the impacts of those charges.

Of course, we have also introduced the plastics packaging levy that took effect from this April. It is driving quite a lot of thought as to how you can recycle the film covers on food packaging in particular. At the moment, it is very problematic and difficult for people to work out how to recycle that, but the technology around the chemical recycling of that is developing all the while as they work out how to respond to the new levy that was introduced.

The government policy that we have, particularly on extended producer responsibility, is driving behaviour change as we speak among both food manufacturers and retailers because they are having to give this consideration. It would have been an opportunity for them to explain what they were doing in this area.

With plastic packaging, it is very important that we also keep things in perspective and recognise that, if you were to go too far and say we did not want any plastic packaging, the upshot of it would probably be greater amounts of food waste. This would have its own problems. Under the current system, processed meats in particular, but also some fruits, often use a sealed plastic film that has carbon dioxide trapped within it, so that there is a modified atmosphere within the food package. If you did not have the plastic film, you would not be able to have that modified environment with enhanced CO<sub>2</sub>. If you did not have that, then shelf life of food would deteriorate quite significantly and you would have a different problem, which is all the carbon associated with food waste.

These things are never easy. It is important that, in our desire to drive down and reduce the amount of excessive, unnecessary plastic packaging, we recognise that it also has a value in some contexts.

**Q137 The Chair:** Can I just press you a bit, Minister, on the comments you made about labelling? It is very encouraging to hear that you are looking into it. We had the French Minister here talking about the French labelling system. It is difficult, but is it the hope of the Government that you will be in a position to launch a consultation or a labelling scheme within the near term? Is that your hope?

We have also had quite a lot of evidence about the issue of marrying the *Eatwell Guide* with climate change requirements, so that you have one guide that can give people information about both diet and climate-friendly meals to eat, which could then be used in procurement, schools and other catering opportunities. Are you working with the Department of Health on a revised *Eatwell Guide* that embraces environmental and

climate goals as well?

**George Eustice:** The answer to your first question is yes. That is our hope, but I have flagged the complexity of getting this right. Labelling has been most successful in the sphere of animal welfare. The coding of eggs as organic, free-range, barn or caged eggs has been remarkably successful over the last 20 or 30 years. It has become widely understood and has driven a significant shift in this country away from caged production to predominantly free-range or barn-raised eggs. That was incredibly successful because the public understood it. It was simple. They understood what each of those four categories meant. It became lodged. It was consistent. It was legislated for, so it was used universally. That is an example of where you can get these things right.

It has been more problematic to get into wider animal welfare type labelling. There are some very good schemes; the RSPCA Assured one has been an example. There are existing environmental ones. The LEAF label used on some fresh produce recognises farmers and growers who have gone above and beyond on their environmental commitments. Some of those have been somewhat successful, but, because what they might mean is still unclear to the public, they have not been quite as successful as we would like. The trick is to get something simple enough that the public can really recognise, but not so simple that it lacks integrity because it is not telling the whole story. That is what we are wrestling with. We are looking at that.

We as a country, more than probably any other country in the world, put a lot of labelling on all our products. Whenever there is a challenge of whatever type—be it health, environment, drink driving or whatever—a call goes up that you should put something on a label. Other countries such as the United States have a very different culture: “Too much on the label is confusing to people”. I am starting to get to the view that we probably need to have an approach that looks at labelling holistically. If we think it is important to put on something that gives people a clear understanding of the environmental or animal welfare impact or the calories that are in a product, we also ought to think, “Are there things on there that are a legacy of the past and no longer needed? Could we remove them to declutter labels so that we prioritise the things that are most valuable to consumers”?

Again, that is quite complex. We are working very closely with the Department of Health and Social Care on this, so that we do not have endless government consultations with this or that new labelling requirement that drives industry to despair and we start to have a much more holistic approach about what is important to have on those labels.

We have a food strategy that we will publish shortly. That is going to reference our ambition in the area of food labelling in particular, and I would expect that to be followed by another consultation, but it is something I would rather take the time on and get right than rush and end up with something that is not quite right.

Q138 **Lord Colgrain:** This is a question for you, please, Emily. Did I understand you right when you said that the Government are implementing an appraisal of natural capital? If so, can you just expand on that a bit?

**Emily Cattell:** The Treasury holds the pen on appraisal guidance for government business cases, and a new enhancement to that is the enabling a natural capital approach—ENCA—framework. It is a methodology for valuing natural capital within business cases. We see that as a very important step forward for government policy-making from an environmental perspective.

I was having a look just yesterday to make sure I was familiar enough with how it is structured. There is much scope within that to bring out the behavioural assumptions. Within the template, which is quite a fixed one, it runs through, in the way that normal appraisal guidance does, the list of potential costs and benefits of each policy option you are considering. Where you can quantify those, you are asked to quantify them. Interestingly and importantly, from a behavioural perspective, it also asks you to draw out the potential costs and benefits that are more difficult to monetise.

There are prompts within this guidance as well for business case authors to include. I jotted down some of the categories here as I thought it might be interesting. Under “benefits”, for example, you are prompted to think about impact on mental health, volunteering, recreation and education, all of which have quite obvious links through to behavioural responses. That is one way that behaviours can get baked into those important templates that go on to inform decisions and, importantly, money from the Treasury.

Q139 **Baroness Boycott:** Thank you, Secretary of State. I have a few supplementaries that I will come to. You know the question. How do you respond to reflections that we have heard in our evidence that the Government are not showing sufficient leadership on the environment and climate change? Is this influencing the public’s willingness to act?

**George Eustice:** It will not surprise you to know that I reject that caricature, in the fact that we have just introduced the Environment Act, which sets a whole new governance regime of environmental targets. We are consulting on those targets now. We have established the Office for Environmental Protection so that there is longevity. Governments come and go, but you want to make sure that there is a trajectory of long-term improvement for our environment that all Governments sign up to.

We have been leading internationally in the last year, through both COP 26 and the work that Zac Goldsmith is doing with the CBD COP on biodiversity. Of course, the Environment Act also had many other facets to it, not least extended producer responsibility and biodiversity net gain in our planning system, which is again a huge change. We are probably the first country in the world to embark on a very ambitious journey to completely reorientate the way we support agriculture and the farmed

landscape away from subsidies on land ownership and towards payment for the protection and enhancement of environmental assets.

I am very proud of what we as a Government are doing on all of those fronts and, therefore, do not accept that we are not doing enough. However, I mentioned Lord Deben earlier as one of the few people who did this role longer than I did in different guises. He has said many times that, whatever you do as an Environment Minister, people will always say, "That's very good; however", and there will always be something else that they want you to do. I do think we are leading.

**Q140 Baroness Boycott:** I have a few questions on that. I have just come back from where I always am at the end of May, which is the Hay Festival. You may have followed the saga that, regardless of the excellent labelling on egg boxes, the chicken farms have now polluted the River Wye to the extent that whole sections of it are now dead. In May this year, the researchers found that the particular trefoil weed, under which all the fish, the little guys and the insects in the Wye breed, is now almost 90% gone.

This causes a terrific dilemma for environmentalists, because it should not be legal that these products in the chicken manure and the chemicals that are part of their feed leech into the Wye. Some of these chicken farms are owned behind the scenes by Cargill, one of the world's four biggest food producers, a completely hidden entity in Dakota and a family that has 16 multi-billionaires among it. It gets away with the fact that it has farming licences, and therefore pays farming taxes rather than industrial taxes, so can just put up these sheds.

Also take on board that we have not one river yet in the UK that has international bathing status. We have one campaign for the River Wharfe in Ilkley run by a bunch of women, and they still have not succeeded. As an environmentalist in this country, that makes me feel that we are not getting something right. It does not give you confidence in the Government to say we are all on the same page with this because that is just one example and there are others.

You have talked a lot about what the Government have done about plastic; we all applaud you. Plastic is, in a way, quite easy. We can all get that. The Government are taking a long bus journey on plastic at the moment and we need some other things. I completely applaud ELMS; it is a brilliant scheme. Let us start with the chickens, the rivers and the example it gives the young, committed people in England who really care.

**George Eustice:** The large chicken farms need a permit from the Environment Agency to be able to operate. It will stipulate what they need to put in place in order to manage any of their impacts on the environment. We are doing other things on water quality more generally. Roughly half of nutrient pollution comes from sewage treatment works where they are not removing enough of the phosphates. We are looking through the next Ofwat pricing round at the moment, but also bringing forward any investments we can to increase the technical ability of all those sewage treatment plants to remove the phosphates. That is why

we have some confidence that we can deliver a significant reduction in nutrient loads coming from sewage treatment plants. We have set that out in our consultation on the environmental targets.

On diffuse pollution from agriculture, which accounts for about half, depending on which part of the country you are in, we have just doubled spending on catchment-sensitive farming. I will increase it again if there is demand and we can get delivery for that. We will run rounds of grants for farmers, particularly dairy farmers in the south-west, to help them to improve the slurry handling infrastructure.

When it comes to poultry farms, what we need to get to, in many ways, comes back to what I said earlier about the importance of taking a few steps back and seeing the whole ecosystem. Rather than fretting about the waste that comes from poultry farms and not being sure what to do with it, we need to recognise that the solution rests in the natural cycle of life. One of the technologies that is developing quite quickly at the moment is the ability to take the residue from AD plants. It would be relatively easy to have an AD plant that used poultry litter as one of its key components.

**Baroness Boycott:** What is an AD plant?

**George Eustice:** It is an anaerobic digester; it generates either biomethane or energy from waste. The digestate that is left from that, particularly with poultry litter, can then be turned into an organic-based but pelleted fertiliser. You then have a real win. Rather than using huge amounts of fossil fuel gas to manufacture ammonium nitrate, as we do now, and then probably overapplying it on arable land so that it ends up in the water courses and has a big carbon footprint, you could take something that is currently seen as a waste and is probably overapplied in certain landscapes and turn it into a pelleted fertiliser that could go in a one-tonne bag that farmers in arable areas are used to using. You then solve two problems with one technology. That is coming on at a great rate. The current sharp rise in fertiliser and ammonium nitrate prices is causing farmers to look at this with renewed rigour. That will be the eventual solution to some of these challenges.

Q141 **Baroness Boycott:** Yes, I agree with you that that will happen. The word is "eventual". How many years are going to go by and how many people will be disillusioned by that?

I would like to ask one last question. Obviously, we came out of the EU so that we took back control, yet the trade deal that we did with Australia certainly left a bit to be desired from an environmental point of view and, indeed, an animal welfare point of view in terms of the mulesing. I wondered if you could comment on that.

**George Eustice:** We looked quite carefully at this in order to get an agreement. The first thing to say is that the two areas that were sensitive to us were beef and sheep, and that is why we concluded in the end that we should have quite a long period to liberalisation. It will be 10-plus

years, with quite a tough agricultural safeguard for any sharp increases in volumes for the next five years after that.

On the animal welfare point, if you look at some of the international indices that are used on animal welfare, both Australia and New Zealand generally score in a way that is comparable with the UK overall. Of course, there will be differences. Mulesing is currently still permitted in Australia, but it is looking at that. New Zealand followed the UK in banning the practice three or four years ago. One of the reasons it had to do that is that retailers demanded it in order to access the UK market. The Australians will find the same thing. Their access to the UK market will be hollow unless they abide by the standards that UK retailers set for them. That may drive a change that they are already contemplating anyway.

More generally on the environment, we obviously worked very closely with Australia on these matters at COP 26. There has obviously been a change in Government there. It is probably fair to say the new Government will be more supportive of some of the work done internationally on climate change. Having said that, we should acknowledge what Australia agreed and committed to at COP 26.

Q142 **Baroness Boycott:** Finally, you mentioned the food strategy. One of Henry's big conclusions is the reduction of meat, however much we dodge around it. Obviously, there is a big difference between cows that graze on nice meadows where you could not do anything else and are pasture-fed, and cows that are reared industrially and have feed that takes up a great deal of land that we might not be able to spare. Their feed comes from the Amazon; this is an international issue. It certainly comes out that it is one of the single most important things that we can do as individuals.

There is such an ambivalence from the Government about how they handle meat. The Duke of Wellington's cows, I am sure, are really happy and produce amazing meat, rather than the meat you might get in a supermarket that had had a big environmental impact on its life. Are the Government going to stay on the fence about this because of the NFU?

**George Eustice:** It is nothing to do with the NFU; it is to do with a proper appreciation of the more holistic role of livestock in the farmed landscape and the environment. Methane is quite a potent greenhouse gas, but also quite short-lived.

**Baroness Boycott:** I am thinking more about the amount of land that produces grain to feed animals.

**George Eustice:** That is right, but soya milk, as a dairy alternative, uses soya beans. People might think they were doing the right thing for the planet; they could be aiding and abetting deforestation. These things are complex and a lot of the challenges that we have in our farmed environment started with the ploughing-up campaigns in World War II, which were seen as an essential imperative to feed the nation. A lot of permanent pasture and meadows that were a mecca for biodiversity in

our farmed landscape were lost because the local agricultural committees literally said, "Plough that field up and put potatoes in it". In the post-war agricultural industrialisation, the loss of that permanent pasture and those traditional meadows contributed to the loss of biodiversity that we have seen in our farm landscape. It is not as straightforward as saying, "Livestock is bad for the environment". Livestock done the right way is a positive for biodiversity.

There could be a technological answer here. At the moment, we are putting a lot of emphasis on feed additives that could be used to act as methane inhibitors. There are some products, of which we are assessing one at the moment called Bovaer, that could, once authorised, reduce methane emissions from ruminants—cattle and sheep—by around 30%. Other emerging technologies claim they could go even further than that.

If you could do something about the diet of the ruminants rather than lecturing people and trying to tell them to eat less meat, coming back to everything we know about behaviour change, it would probably be a better way to tackle the challenge than trying to lecture people about meat eating. The Government have no intention of doing that beyond the Eatwell plate that is long established. We are ultimately omnivores in our natural state. We will have meat and animal products and proteins as part of our diet, in particular eggs, which are obviously quite healthy. That is the natural state of us as a species. Of course, some people will choose to be herbivores, and that is equally a choice that they can take.

**Q143** **Baroness Young of Old Scone:** I wonder if I could summarise what I think I am hearing from you and see if you agree with my summary. We are hearing that the Government are looking at behaviour change on individual elements of environmental and other climate change practice. However, you would not intend to bring that together into some coherent whole and have a conversation with the nation about the most important things for them to do, despite the fact that we are getting the evidence that they are confused. To some extent, they are also put off by a lack of clarity from government and by signals that they are getting that the environment or climate change are not that important, which confuses them even more. For example, there is loose talk about reopening coal mines, energy sustainability and food security in the aftermath of the Ukrainian crisis. Am I misrepresenting the Government's position, or is that what the Government's position is?

**George Eustice:** As I said at the beginning, it is a mistake to look at behaviour change in a silo and think that there therefore needs to be some kind of public communications campaign to tell the public what to do. The right thing is to recognise that behaviour change is integral to this shared endeavour. We all have a role to play. The Government have a role to play through changing regulations to make things easier and creating the financial incentives to drive behaviour change, for instance, among farmers and landowners. Individuals have a role to play as well. Often, government lecturing them on their role is not the way the best way to deliver it. The best way to deliver it is often to make it a much easier choice for them to make. That has been our really big focus.



On the wider issue, we cannot ignore the fact that there are other challenges in the world, most notably energy. We probably passed peak oil about a decade ago. As oil reserves diminish and the remaining reserves often end up in the hands of untrustworthy countries, as we are seeing, it is important that there is an imperative for us to have an energy security policy. It is also recognised that, in the road to net zero, there is going to be a very important role for transition gas. That is to say that, in order to make this transition, blue hydrogen is probably going to have a very important role in powering some vehicles—lorries, tractors and so on. Therefore, if we are going to have to have gas during that transition to get the blue hydrogen we need, it would be better if it were our own gas coming from our own oilfields rather than us being at the mercy of other countries.

Our national resilience and our energy security are absolutely legitimate policy considerations. That has to be part of our thinking.

Q144 **Lord Lilley:** At the beginning, you made a very interesting point about the difference between the statistical and ecological approaches to meat eating. There is one relevant issue that we have not considered directly as a committee. To what extent are there biotechnical options that might just reduce the amount of methane emissions by cattle by changing the feed and the breed? Is that something the department is looking into? Is there any potential to it? If there is, it will upset the vegetarians when they find they have lost an excuse for phasing out meat. Is it something to think about?

**George Eustice:** We will shortly introduce the Genetic Technology (Precision Breeding) Bill, which is focused on breeding techniques. As many of you will know, a judgment of the European Court of Justice in 2018 held, probably erroneously from a scientific perspective, that gene editing should just be treated like any other GMO technology. The strong scientific consensus is that it is nothing of the sort because it is only moving a trait from one species of wheat to a different species of wheat in a way that has been done down the decades in any kind of plant-breeding work, whether it is having F1 hybrids to try to get more uniform crops or whether it is using mutagenesis of some sort in order to try to get a mutation in a particular gene. We are recognising that that judgment by the European Court of Justice was wrong as a point of science and introducing some legislation to have a scientific approach to this that treats gene editing type technologies—that is those that could have been performed in any traditional breeding technique—as very distinct from genetic modification, in which you are taking a gene across species boundaries.

That is going to create all sorts of opportunities to have more drought-resistant crops, which will be very important as we deal with some of the impacts of climate change, in particular with water scarcity probably becoming quite a challenge for the world in the 2030s. The UK could be home to a whole new generation of plants that are bred for their drought resistance. We can breed plants that need less fertiliser, are naturally deeper-rooted and use the fertilisers that are in the soil more effectively.

Work is even being done to look at whether you could use gene editing techniques so that some crops naturally fix nitrogen in the way that leguminous crops already do, removing the need for exogenous fertilisers altogether. If you could do that, you would make big changes in your carbon footprint because around half of the CO<sub>2</sub> equivalent greenhouse gas emissions from agriculture come from fertilisers; nitrous oxides are predominantly from fertilisers. If you could use these technologies, you would make some major strides in reducing the number one greenhouse gas in agriculture, which is nitrous oxides.

As I mentioned earlier, there is that scope for feed technologies that reduce methane. It will not happen in the near term, but there could in the longer term be ways to refine animal breeding, which again has been done down the centuries, so that you have breeds of animal that are emitting less methane and less greenhouse gas.

It is an area that is sometimes caricatured by saying, "There is no technological answer. Therefore, people just have to eat less meat". That is wrong on both counts, first because the science about whether meat eating is good or bad from the point of view of the environment is disputed. There are very legitimate arguments that say livestock is part of a healthy environmental approach. There are also some technological answers there.

**The Chair:** I am sure the Houses both here in the Lords and in the Commons will look forward to debating the Genetic Technology (Precision Breeding) Bill and your point about whether the EU was wrong on a point of science.

Q145 **The Duke of Wellington:** I declare my agricultural interests. I am extremely interested by the discussion initiated by Baroness Boycott and Lord Lilley, and your very good answers to some of the questions of different types of meat that human beings consume. It is obvious that, with all the natural pastures we have in this country and in northern Europe, the only way to convert that into something edible for a human is for it to be grazed by cattle or sheep.

The messaging from you and others in government should make a greater distinction between the different types of meat. You have touched on it very clearly this morning, but I am not sure that that message is getting through to the public. The public are being told, "Meat eating is bad. Reduce your meat consumption". That is the simple message that is being given. It would be sensible and environmentally advantageous to try to educate the public into the different types of meat, which you and all your department clearly understand. It seems very sad that the farmers of this country, other northern European countries and, indeed, elsewhere in the world who are producing livestock in an environmentally friendly way should appear to be classified as doing something that is bad for the environment and human consumption.

**George Eustice:** The Government are very explicit in saying that, from an environmental perspective, we are not telling people that they should

not eat meat. There are obviously lobby groups that make that case, but they are what they are; they are lobby groups with an agenda. That is not the government position. We are seeking to reduce the environmental impact of these. That is what environmental land management is all about: trying to reduce the greenhouse gas emissions from the livestock sector. That is why we are supporting all the research into methane inhibitors in the livestock sector and alternatives to manufactured fertiliser to reduce, again, the greenhouse gas emissions for all of that. Beyond the *Eatwell Guide*, which is very much from a health perspective and recognises that meat protein is part of a healthy diet that should be eaten in moderation, we do not have any messages to the public about meat consumption from a food production angle.

In the context of labelling, you make a good point. Should we do more to encourage people to eat meat that has a lower environmental impact because of the pasture-based production? This is an area that we will look at as part of our labelling work. In particular, we will look at whether we should have some consistency about what it is to be grass-fed or pasture-fed. There are often labels on which people say, "This is grass-fed". That might have meant just a few weeks on grass or it might have meant just fed silage, to be blunt. We desperately need people to have confidence in the integrity of the label, so we are looking at whether "pasture-fed" should be a classification that has a particular meaning and requires a particular type of system.

**Q146 Lord Browne of Ladyton:** Thank you, Secretary of State. Being an ecosystems person, which is a status that I aspire to because I do not know any area of public policy that does not require a systems approach, you will be pleased that the written and oral evidence that we have had overwhelmingly requires us to accept that behaviour change to support the environment and deal with climate change needs a systems approach. That is a given. As you agree that this is a whole-of-government response, you might say that we need an ecosystems government. Try as we might, we have been unable to find any cross-government mechanism that we can be allowed to engage with at all that encourages a consistent approach to behaviour change across government.

For example, we sent out a questionnaire to all departments. They were published. They revealed a lack of co-ordination across government and a great variability across government in terms of behaviour change. We invited the Cabinet Office to send an official, if it could not send a Minister, to this evidence session to discuss it, but apparently it does not have anybody senior enough to come before our committee who knows anything about this. Any time we get anywhere near the Cabinet committees—and you are a member of both the strategy and implementation committees—we get the standard legal advice of the law officers to government about Cabinet Office committees, which I understand, but nobody can talk about them.

We cannot find plans to improve co-ordination across government departments or anybody to engage with on behaviour change for

environmental or global goals. I hope that you, as an important Secretary of State in this environment, are aware of that. Do the Government have such plans?

**George Eustice:** I am conscious that a number of you on this committee have ministerial experience, so you will all know that joined-up government is a fine thing, but it always remains quite an elusive thing to achieve as perfectly as we would like. That goes for whatever hue of government is in power.

Just to talk through the mechanisms that we have in place, which I hope will answer your point, the first is that we have two Cabinet sub-committees. Many of you will know that the standard way to join up policy thinking across government is specialist Cabinet sub-committees. We have the climate action strategy group, which sets the overall direction, and a climate action implementation group, which is about delivery of that strategy. Those committees meet regularly. Defra is represented on all of those and BEIS takes the lead on climate change matters in particular.

As many of you will know, Defra also has a direct cross-government role when it comes to climate change mitigation. Whoever's policy area it is, there is a co-ordination role for Defra specifically on climate change adaptation and mitigation. That is a function that my ministerial colleague Jo Churchill currently performs, and in the course of her duty she will talk to all sorts of government departments about planning systems, planning regulations and the transport network to ensure that other government departments are thinking as clearly as we need them to about those emerging challenges.

On the wider environment, we have just established the Office for Environmental Protection and we are establishing a suite of environmental targets. We will be putting in place a set of environmental principles that will be binding on all government targets. That is all about recognising that this is a cross-government endeavour. You cannot just say, "That is for Defra. They're on their own". The whole of government needs to think about this in planning policy, transport policy and everything else. The OEP will judge all government departments and all public bodies on the work they do, both to abide by those environmental principles and to strive towards the cross-government targets that we have set.

Through the architecture we put in place in the Environment Act, we have that legal mechanism to pull things together, and then we have the well-used conventional Cabinet sub-committee structure that enables government colleagues to come together and work out how to get there.

Q147 **Lord Browne of Ladyton:** That is very interesting and may improve the environmental architecture. Will it improve the accountability of government to Parliament for its performance in that area? That is the problem that we face. That is our role, but we cannot engage it because we cannot find people who will talk to us about it. Will you bear in mind

that good government also requires accountability? There has to be some clear mechanism for how people can judge whether the Government are working like that.

**George Eustice:** Yes. I am here, so I take my role as a Minister accountable to both Houses of Parliament very seriously. Indeed, I always take up invitations to appear before committees in the devolved Administrations as well because it is critical that UK Ministers do that. I suspect that the Cabinet Office probably thought that Defra would have more technical knowledge on this matter than it might, and it would probably be right in that assessment. Cross-government working does not mean that every government department has to have the same degree of technical knowledge. It would be quite normal for it to refer matters relating to the environment and climate change to either BEIS or Defra.

**Lord Browne of Ladyton:** They need to know that they are part of the same ecosystem. Therefore, there has to be something going on inside the department to reflect that.

**George Eustice:** Of course, and again, because many of you were Ministers, you will be familiar with the write-round process. Even notwithstanding those Cabinet sub-committees, if anybody wants to progress any area of new policy, legislative or otherwise, they need to get write-round clearance from every other government department. Defra obviously has a particular role on both the environment and rural-proofing. At times, we block proposals until they are amended to reflect our concerns on these issues.

**The Chair:** Thank you. Colleagues, I am afraid three of you have not been able to get in, but we are over time. I am grateful to the Secretary of State for putting himself before the parliamentary scrutiny process today and the answers that he and his team have given. Thank you, colleagues, and particularly you, Secretary of State, for your time. We have really appreciated it.