



HOUSE OF LORDS

Environment and Climate Change Committee

Corrected oral evidence: Drought preparedness

Wednesday 7 January 2026

10 am

Watch the meeting

Members present: Baroness Sheehan (The Chair); Lord Duncan of Springbank; Lord Krebs; Earl of Leicester; Lord Lennie; Lord Mancroft; Lord Rooker; Lord Trees; Baroness Whitaker.

Evidence Session No. 6

Heard in Public

Questions 88 - 109

Witnesses

[I](#): Steve Moncaster, Managing Director, Norfolk Environment, Food and Farming; Dr Mark Betson, National Water Resources Specialist, National Farmers' Union (NFU); John Patrick, Group Manager, East Suffolk Water Abstractors Group.

Examination of witnesses

Steve Moncaster, Dr Mark Betson and John Patrick.

Q88 The Chair: Good morning. Welcome to the Lords Committee on the Environment and Climate Change. Today, we will take evidence from our panel of experts for the fifth session of our inquiry into drought preparedness; this time, we will focus on the agricultural sector. I thank you all very much for taking the time to be with us today.

Before we start, I remind everyone that this session will be webcast live on parliamentlive.tv. A transcript will be taken and made public. Witnesses will have an opportunity to review the transcript and, if necessary, make minor amendments. I remind Members that they should declare any relevant interests the first time they speak; let me take this opportunity to say that I am a director of Peers for the Planet.

Before I ask the first question, I ask our panel briefly to introduce themselves.

Steve Moncaster: Thank you very much. I am a managing director at a company called Norfolk Environment, Food and Farming, which is a water abstractor group in Norfolk.

Dr Mark Betson: Good morning. I work for the National Farmers' Union—a body that represents 44,000 farming and growing businesses across England and Wales. I focus on water resources—I am the NFU's water resources specialist—and deal with issues relating to drought.

John Patrick: Good morning. I am the group manager at the East Suffolk Water Abstractors Group, which is known as ESWAG and is made up of 103 agricultural abstractors. For the past 20 years, we have been co-ordinating them into the national process.

Q89 The Chair: Thank you very much. I am going to start with a very general question so that we can get an idea of the issues we are dealing with. This question is for each of you. How are different agricultural businesses affected by drought?

John Patrick: If I may, I will start off the response to that. The costs and impacts are varied across the whole country. Let me give an example of two extremes. Two weeks ago, I was on the Yorkshire Moors. I was speaking to a group of livestock farmers who, following the impacts of drought on their grass yields this year, are right on the cusp in terms of whether being able to continue. They were agonising over the cost of replacing a tractor that was 20 years old.

Compare that to one of our members, which employs 100 people, irrigates 23 different crops and is contemplating buying a potato harvester worth £1 million. The contrast and some of the impacts across the wider agricultural piece are massive. That is one of the reasons why we have such a hard job in representing what drought means to individuals in the farming community.

Bringing it back to East Anglia, Steve and I were mindful that we needed to gain an understanding of the impact on food production and food security. Through our two organisations, we commissioned a business in Norwich, Risk & Policy Analysts Ltd, to do a report on the financial impact on food producers in East Anglia; that is available through our website. The summary said that, if the reductions proposed by the agency take place, a 30% reduction in water would lead to up to £2.1 billion in gross added value lost.

The Chair: Sorry—2.1 what?

John Patrick: £2.1 billion for the Norfolk and Suffolk agriculture communities over a 20-year period, as well as a potential loss of 2,500 jobs per year. That is an overall impact assessment, but it is predominantly driven not by climate change-driven drought but by changes in regulation as the agency tries to protect the environment. It is a pretty good marker of how impactful a lack of water will be for many East Anglian food producers.

The Chair: You have highlighted the differences, in talking about agriculture, between the various practitioners in the sector. Your group represents all of their interests. You bring them all together. Does your water abstraction group represent all the interests of farmers in its area?

John Patrick: Yes. We have 103 members on 232 licences; that represents 92% of the agricultural abstraction in our area. It is interesting that, as I go about trying both to improve their understanding and to change their behaviour to a more sustainable footprint, we are bumping into paint factories, brewers and golf clubs that are equally unaware of the imminent cutbacks on their licences and the impact that those will have on their productivity. There is a lack of understanding around how these necessary cutbacks will have an impact on them.

Q90 **The Chair:** Can we talk a bit about regional variations? I do not know whether you, John, or one of the other panellists would like to pick this up. We can see that farming is very different in different parts of the country. Would anyone like to say how agricultural businesses affected by drought are impacted by the region they are in?

Dr Mark Betson: I will take that one. You are absolutely right: not only are the differences in impacts on agricultural businesses regionally significant, but it depends on what happens with a particular drought, because no two droughts are the same. Take, for example, the drought that we suffered last year. It had a strong impact on a lot of farms located in the West Country. John talked about the impact on forage for livestock, but that is not necessarily going to be the case in all droughts. We may see more impacts on some of the more horticultural businesses located in the east of the country, which is traditionally very dry.

One of the challenges in the drought that we had last year was that a lot of areas that traditionally would have not expected to be in drought, because they have high average annual rainfall, found themselves in that

position. This meant that they were less prepared than other areas. There was also a more diverse spread of impacts across the country; in previous years, droughts have been more focused in areas that are traditionally quite dry. So there is variation, but it depends a lot on the weather impact of a specific drought as well.

The Chair: Would any of you like to add anything before Lord Lennie asks the next question?

Steve Moncaster: May I quickly add something? Abstraction for spray irrigation is concentrated in relatively few areas in England: about half a dozen counties, including Norfolk, Suffolk, Cambridgeshire, Lincolnshire and Nottinghamshire. The stats I have are from the 2012 drought. It is estimated that that had an impact of £80 million, mainly on potato growers who were abstracting to irrigate potato crops. It is in few places and, if we have a drought, that is tens of millions of pounds of lost revenue.

The Chair: You say that the information you have dates back to 2012. That is quite a long time ago. Is there no up-to-date information?

Steve Moncaster: Not that I can find. Quite a lot of work was done around the economic impact of the 2012 drought because it was a very severe, multi-year drought. It also drove a lot of what you have seen in the water companies since, in terms of their strategic resource options and things like that. The 2010-12 drought really was the start of all that.

The Chair: Would it have been useful to have collected comparable data going forward from 2012 so that we would have had a better picture of the trends now?

Steve Moncaster: Yes, one of the big gaps is that we do not have estimates of the economic impact of individual droughts on agriculture. It is a bit of a problem that we do not have that information.

Q91 **Lord Lennie:** What lessons can be learned from 2012?

Steve Moncaster: I think the lessons were learned mainly in the water companies. It was about encouraging them to stop planning as individual businesses and collaborate more effectively. This is why we have seen regional water-resource planning emerge and have had the strategic resource options and RAPID and all the rest of it. Unfortunately, in agriculture there was there was no equivalent effort and we are still left a bit in the slipstream of all that work that has been done in the water companies. The water companies learned the lessons; I am not sure we did in agriculture.

Q92 **Lord Krebs:** I have a very basic question. The agricultural sector in the areas you highlighted relies on water abstraction. Who owns the water being abstracted and how much do the users pay to abstract it?

Steve Moncaster: That is a very good question. In terms of who owns it, the abstractors do not own it; they have licences to abstract water. We

are about to change all that and go from licences to permits. The agency will gain powers to revoke permits if it thinks there are environmental problems associated with them. The abstractors definitely do not own the water. It belongs really to the state and the state allocates its use. In terms of what they pay, I hesitate to answer that question because I am not that close to it. I do not know, John, if you are.

John Patrick: In agricultural language or currency we talk about water applied to crops as an “acre inch”—how many inches of water to irrigate an acre of land. The cost to farmers, if they want to grow a crop of potatoes, say, varies, depending on how it is being sourced, from between £50 and £75 an acre inch. Elements in that include the infrastructure costs to do it. They vary, depending on the licence, but somewhere in the region of 10% of that would be paid to the Environment Agency for the privilege of using that water.

Lord Krebs: That is very helpful. Do you think that the cost of abstraction should be geared to the scarcity of water? Would it be an incentive for farmers to manage their water use more efficiently if they were charged more when water was scarce?

John Patrick: My farming members will not thank me for agreeing with you, but for any commodity that is scarce, a pricing mechanism that encourages people to use it more efficiently is a logical route.

Lord Krebs: Is that not in place at the moment?

John Patrick: There are different prices depending on when you take it—and I think the agency could do more around pricing to protect vulnerable times of the year—but it is one of a multitude of challenges the Environment Agency faces in modernising its approach. One of our frustrations is that, at a time when we are encouraging our members to change their behaviour from unsustainable abstraction to truly sustainable abstraction, we are finding a lack of capacity within the agency to come with us. It is still skiing on the blue runs when we are looking off-piste. We need it at least to come with us to red or black runs and find some common ground. Otherwise, we have motivated a lot of farmers to change their behaviour but we cannot get the capacity and licensing to allow that to happen.

Lord Krebs: That is very helpful.

Dr Mark Betson: To add to what John was saying, I think that although the opportunity is not there, the ability to have reliable sources of water and the opportunity to take water at a higher price would be welcomed, but the water has to be available for members. It is more about the resilience of supply than the pricing structure specifically, because without the water you will not get a crop at the end of the day and the value is lost. Therefore, having that ability to access the water is critical to members being able to grow what they need to.

Steve Moncaster: All I would add is that although water itself is not traded directly in the way that you imply, land with water is traded. A kind of shadow market exists for agricultural land with water which is used by growers to secure water for their crops.

Q93 **Lord Mancroft:** Mr Patrick, in your original comments, you talked about the reduction in abstraction licences. Putting aside price, how much is the reduction and what is the effect of that? Presumably it means less water for farmers.

John Patrick: Yes. I do not want to miss that this is a climate-drought driven committee but our biggest risk to food producing—certainly in Suffolk and a lot of England—is a regulatory drought, if you see my meaning. Some of my members who have time-limited licences could face reductions of up to 30% to 40% in their licences in April this year with no adaption time. This is the frustration.

We have worked hard with the agency to do heat maps to try and draw where those cutbacks might come but on 3 April¹ some farmers with crops already growing in the ground for supermarket contracts will lose their licences. There are also licences of right which will cease to have their rights in 2027 and people who have had those licences will all be faced with time-limited licences. The agency will then enter into catchment reviews where it reviews the status of all its catchments and there will be another series of cutbacks. At some time, probably in 2032 or 2034, there could be a further range of cutbacks. I have done a risk assessment for one of our members who is potentially looking at a 68% licence reduction.

The Chair: We will come to the review of licences later in the session.

John Patrick: I am not saying that climate drought is not important, but we face enormous challenges of water scarcity because of the regulation change, which is why we wanted to get the value of food into future regulatory decision-making to make sure it is valued when somebody cuts the cake next time.

The Chair: Let me make it very clear that we are not just looking at climate issues around drought. The regulatory framework is also really important to us. Please put climate out of your minds altogether for now.

Q94 **Lord Trees:** This question is about the overview and the big picture so I would like to just ask a couple of things about generalities. I know they are very difficult in this area, but I want to get a sort of idea. First, you mentioned livestock when you went to Yorkshire. In general, would you expect drought to affect arable much more than pasture-based livestock? That impacts on the long-term mitigation and breeding of appropriate animals, crops and so on. I also fully recognise that there is a huge difference in rainfall across the UK, which again makes generalities difficult, but, in terms of the potential for abstraction, is there a

¹ Note by the witness: '...on 3 April 2026...'

difference between the east and south, which have more sedimentary rocks, and the north and west, with a lot of igneous geology? I know it is difficult for you maybe to give those generalities, but I would be interested.

Steve Moncaster: It is fine. The north and west basically have what we call a hard rock geology, so there are not very many aquifers up there and it is vulnerable to single-year droughts. Things can turn nasty quickly. Obviously, there is a lot of cattle and livestock farming in the north and the west and they get affected. In the east, we have more aquifers—chalk and limestone—so our vulnerabilities in the east and the south are to two-to-three-year droughts. As I said before, those areas are where abstraction for spray irrigation is concentrated, so you might expect bigger impacts on potato growers, vegetable growers and those kinds of people.

At a high level, that distinction between the north and the west, and the south and the east, exists. Droughts are sort of splattered across the top of that in different years. That makes drought planning and preparedness really difficult because it might be a long time before a drought appears or reappears in a particular area after the one that you have just had, which is one of the things that we struggle with. It does not happen in the same place every other year. Otherwise, we would be spending a lot more time thinking about it.

Dr Mark Betson: As I mentioned beforehand, there are a number of specific elements whereby particular droughts impact different sectors more prominently. For example, the livestock sector was quite impacted this time because of the location of the drought, and how and when it impacted. There are also elements like temperature, for example, that will have different impacts on different crops. The pea crop was badly impacted by temperature issues with the heat waves last year.

However, there are generalities, and I know that some work has been looking, for example, at where different leys of grass have been able to withstand some of the pressures better than others last year. How can grazing strategies be done in ways such that they will minimise the impact that loss of grass due to poor rainfall levels will produce? Therefore, there is general good practice that can support farmers during drought periods, but that cannot get away from the fact that lack of water will mean reducing the amount of livestock produce at the end of the day.

Q95 **The Earl of Leicester:** You mentioned your frustration, Mr Patrick. You used the analogy of skiing whereby you are encouraging your members to become more sustainable. Is that through the building of reservoirs where they are able to store water? What is your frustration with the EA? What is it not doing?

John Patrick: The regulatory process is designed for an old style of licensing that does not relate to some of the innovative approaches

whereby we are trying to take flood-water, for example, and turn it into a water resource opportunity.

The Earl of Leicester: You have done that through this hydrocycle.

John Patrick: Yes. We are trying to develop that within the farming community through exemplars, and we are working closely with the agency on that. We would like it to give the resource to allow its licensing teams to come up to speed, because, as I am saying, some of our members will be faced with these challenges in April.

The Chair: Indeed, and we have a whole question devoted to on-site storage, so we will park this for now. Before we move on, can I ask you about the cost implications and impacts on food security and farmers, both in the short and longer term? We heard that, last year, farmers' revenues dropped hugely and there is a lot of anxiety among the farming community.

Steve Moncaster: In a drought, we would not expect there to be no food on the shelves. That is not really the way in which it happens, but manufacturers incur additional costs as they have to source materials from overseas and other places. The scale of the impact is similar to what is seen from the growers—so tens of millions of pounds per drought. That number is forecast to grow. Again, from work done in 2015, the EA looked at the effect of droughts in the 2050s and projected costs of £500 million, both for food manufacturers and growers. So the people who produce the food in the factories do not escape this; they also incur significant costs through droughts. But food security is a cost issue, not a "We have no food on the shelves" issue.

Dr Mark Betson: If I can jump in on that, there is an issue around risk associated with the supply chain that drought brings in. Whereas there will be an overall supply of food that probably would be able to be accessed, there will be short-term pain in accessing certain products that will result in shortages on the shelves. As well of that, there is the impact of repeated climate events on the farming community and the confidence in its ability to produce food, and whether people can continue growing the crops that require irrigation, for example, when they cannot access the water necessary in order to do that. A lot of those crops are the fresh produce that we are being encouraged to take up because of their nutrient value and them being better for us.

We did a farm business confidence survey in 2024, which noted that 82% of respondents had been fairly or very negatively impacted by extreme weather events. That did not separate out drought or floods in particular, but the impacts on farmer confidence from these repeated events in their willingness to take risks with their business or plant specific crops is something that will add to the risks to the supply chain. Again, that builds on other risks to the supply chain around at the moment, making food security more difficult in those circumstances.

John Patrick: Just quickly on food security, we are not talking about a World War Two situation, hopefully, but about the impacts on inflation at a time when we can least afford it and large-scale reductions in yield.² Irrigation for many producers is not a marginal benefit. You do not start growing a crop of potatoes unless you have certainty around your water resource.

Q96 **The Chair:** I have a quick question on the longer term before we move on. Dr Betson, are farmers rethinking their future in farming? Are there signs of that?

Dr Mark Betson: Longer term, for a host of reasons, people are considering the challenges that they face within the agricultural industry. In the shorter term, on the specific issues relating to climate impacts, they are considering whether, as John was saying, they are going to grow a crop of potatoes or not, because they require irrigation. If that irrigation is in question, they may be better served by planting an arable crop—wheat, for example. That reduces the overall national yield of crops such as potatoes and fresh produce. So there is long-term uncertainty for a host of reasons on which climate definitely impacts, according to the farmer business confidence surveys that we have. But there are also shorter-term impacts on the availability of homegrown produce, particularly in the fresh produce sector.

Q97 **The Earl of Leicester:** Before I ask my question, I had better declare my interests as set out in the register. I am a mixed farmer up in north Norfolk, including of a large number of beef cattle where we do rainwater capture on the shed roofs. We produce potatoes. We have abstraction from bore-holes but our main source of water is winter abstraction from rivers just before they head out to the sea, which is put into reservoirs. My question is: how involved are agricultural businesses in the local, regional and national drought planning processes and how is the sector prioritised? Do you have to bang on the door of the EA, the IDB or other organisations, or are they willingly coming to talk to you?

John Patrick: Both of those things are happening at the moment. We still have some members who have their heads in the sand; we are still trying to get them up to a very basic understanding of the threats that they face. We have some who have already built reservoirs. In our ESWAG region, we have built 17 reservoirs in the past 10 years, and another 25 are planned for the next five years. So farmers are not just whinging about it but getting on and doing something. My role is to try to make that transition to a new abstraction behaviour as easy and smooth as possible. For some people, the cost of doing it is prohibitive at the moment. The grants issued over the last two rounds of funding have been really appreciated. Sorry, what was the other part of the question?

The Earl of Leicester: How much are you involved with the powers that be, such as the Environment Agency?

² Note by the witness: '...about the impacts on inflation at a time when we can least afford it through large-scale reductions in yield.'

John Patrick: Just to complete what I was saying, it varies enormously. Sometimes, we have to lead the horse to water; at other times, it is already there and has got its head around it. It probably depends on the intensity and commerciality of the business being represented.

Dr Mark Betson: It varies greatly. Local Environment Agency area teams are not well resourced for engaging with individual farmers. It requires more group organisation to engage with area teams. Things such as the water abstractor groups that Steve and John are involved in are good mechanisms by which they can engage with local area teams on drought impacts.

As the NFU, we work with our county-based structure to engage with local area teams on drought. However, our engagement with the Environment Agency is variable across the country in terms of areas. Some have excellent practice, which we would like to see be rolled out to as many areas as possible. We understand that they are under pressure with resources, but we would like to work alongside them and offer the views of our members when there is a critical emergency, such as a drought.

That worked exceptionally well in Yorkshire last year, for example. We had a really good relationship with the Environment Agency area team there. We have had some positive engagement with the East Anglia area team as well, subsequent to issues that occurred with a lack of communication beforehand. It is absolutely vital that, even though the area teams are not well resourced to do this on an individual level, we somehow manage to enable farmers to communicate their issues to the area teams and enable us to communicate back what opportunities there might be for them to resolve some of those issues.

Steve Moncaster: In the abstractor group that I run, we are putting quite a lot of effort into our planning work. We have acquired the Environment Agency's regional groundwater flow model. We have hired consultants to run the model for us so that we can look at issues around the licence reductions that we expect in catchments in Norfolk and the vulnerability of our members to droughts—periods of prolonged dry weather—so that we can map vulnerability to water scarcity then help members deal with that by looking at different options: storage, sharing water and other things.

The Earl of Leicester: Steve, I forgot to say that my potato enterprise director is on your board. I understand that, in running that model and hiring these consultants, you have found that the Environment Agency model is flawed. Can you explain how badly?

Steve Moncaster: Yes. Through our work with the agency, we ended up examining the model and looking at how it represented abstraction for spray irrigation. We found that there were errors in how the thing had been set up and was working. Fortunately for us, when we rectified that, it had the effect of putting more water in the model during the dry period, so it is beneficial not just for our members but for abstractors

generally. The agency has been happy to accept that, go away and update its fleet of regional groundwater flow models.

For me, that illustrates the value of abstractor-led organisations such as ours getting involved in the detail of the modelling and scrutinising the tools that the agency uses in making its decisions.

The Earl of Leicester: So the EA was grateful for your work, rather than defensive.

Steve Moncaster: It was not exactly thrilled but, in the end, we updated the models and now have a better set of models for agriculture. As I say, the effect was most marked in dry periods because, of course, that is when we are pumping and abstracting for spray irrigation.

Q98 **Baroness Whitaker:** I have a short, ignorant supplementary question. If a farmer wants to build a reservoir, does he get any assistance or support—including for initial feasibility consultancy or the actual cost of the structure—or is it all out of his own pocket?

John Patrick: For the majority of the workload, the responsibility sits with the applicant. There has recently been a series of feasibility studies, funded by the Environment Agency, called local resource options. They are more general about encouraging groups of farmers to look at the feasibility of moving to a different footprint of abstraction. That has been welcomed. The slight danger with that is that we now have 21 groups of farmers who are highly stimulated about the possibility but are not yet capable of finding the funding to build those exciting opportunities out. So it is a start, but I can assure you that there is nothing more dangerous than a group of frustrated farmers.

Baroness Whitaker: I believe you.

Q99 **Lord Rooker:** Following on from Baroness Whitaker's question, for the farmers who are doing their own reservoirs in quite large numbers, as you have explained, is planning permission required?

John Patrick: Yes. It varies by county and planning authority. In certain elements of Norfolk, we have real trouble getting traction. In certain areas of Suffolk, we have had some go through on 28-day permitted development. Both Steve and I are working hard with councils so that they understand the importance of smoothing that pathway. It is improving but it is probably, from start to finish, a two-year to three-year journey.

Dr Mark Betson: Some can be done under permitted development rights but there are additional potential challenges even there in terms of minerals, et cetera. Proposed reforms in the National Planning Policy Framework, which is currently out for consultation, could potentially benefit reservoirs by recognising them as a category and making the planning process more presumptive in terms of accepting those applications for farm reservoirs where they are a project to benefit climate adaption for the farm. That is through the planning process, but

the farm profitability review that Baroness Batters did has also recommended expanded permitted development rights for reservoirs, as well as the inclusion of structures and buildings within capital allowances. That is not direct funding, like the water management grant that was available previously, but it would support the construction of reservoirs by making it more tax efficient.

Lord Rooker: I have a supplementary for Mark. In answer to the Earl of Leicester, you lauded the effect of Yorkshire last year and the regional aspect of the Environment Agency. We do not want to know about all the things that are working tip-top. What we really want to know about are the areas that are not working tip-top. What is the opposite of Yorkshire? What is the one you had the most problems with, in terms of the regions of the Environment Agency?

Dr Mark Betson: We had little or no communication with the team in Kent and Sussex, which would be the opposite end of the spectrum in our experience. I take the example of Yorkshire because it is a good to give a positive example that people can copy. They have early triggers to get in touch with agriculture when the soil moisture deficit, which is one of the definitions of an agricultural drought, gets to sufficient levels so that communication can begin on what we need to do in a particular instance. That is not the same everywhere. It would be brilliant to see this level of proactive communication in all Environment Agency areas.

Q100 **Lord Mancroft:** My question goes on slightly from what Lord Rooker was saying. I do not quite understand something. It is slightly odd that one area would be working with you but, according to the impression that Dr Betson gave, other areas are almost working against you. That is the most extraordinary position to be in, is it not? Can you explain this relationship and why it is regionally different? How has it become like that? It is extraordinary.

John Patrick: It has come about through the importance of water to different regions. Take East Anglia, where we are growing on very light soils and which is the driest part of the country. When we first formed ESWAG in 1996, it was in the face of drought orders being forced on us by the agency. We had an initial response from farmers saying, "We need to fight this". We have morphed that into saying, "There's no point in fighting. We need to build a relationship with our local office". We now have a great relationship with the local office, whereas regions of the country that do not experience drought as regularly as us have not had the stimulus to build those relationships.

Lord Mancroft: Is it not up to the Environment Agency to build a relationship with you guys, rather than the other way round?

John Patrick: I often ask, "Who's the customer in this relationship?" I see us as a customer of the agency, but rarely do we see that as a standard piece across the country.

Lord Mancroft: Is this an adversarial relationship?

John Patrick: I do not think that the agency set out for it to be adversarial. There will be red lines that we get to but which the agency will not go beyond—then things become very certain—but a lot of the roles that Steve and I have to do are to stop it becoming adversarial and to make it truly collaborative.

Dr Mark Betson: Going on from that, we absolutely do not see it as an adversarial relationship. We are the customer of the agency, in some ways, but we can also support the agency by communicating with the agricultural community. So it has an opportunity to engage with us as well. It is under different pressures in different areas, as John said. We totally recognise that historical relationships have enabled a lot of very positive things to happen in certain places and that those relationships need to be rebuilt in some places, but it should be a priority for the agency to make those relationships with us.

Lord Mancroft: You are the customer but it is not the agency's product. It does not own the water. How come you are the customer? It is your water, is it not?

Steve Moncaster: No.

Dr Mark Betson: No.

John Patrick: No—it controls the water.

Lord Mancroft: It controls the water, but it is not theirs.

John Patrick: It is a very interesting debate as to where the final ownership of water sits. In terms of how we handle that water, it is predominantly controlled by the agency and its regulations.

Steve Moncaster: The other aspect of this is whom the agency is dealing with. In Norfolk, we have professionalised significantly in the past three or four years. We have transformed our WAG from what was an adversarial organisation; it was old-fashioned and not funded very well, and it did not do any work. We have completely changed all of that. We are planning now. We are using the agency's tools to look at the issues. We are presenting a different set of issues to it, which encourages it to engage with us more professionally than it did before. That is the opportunity in terms of changing what we have heard about—the adversarial "Do as you're told" attitude—into something that is a bit more of an exchange, where we can defend our interests more effectively.

We are in catchments with water companies. A lot of people are interested in the environment. It is all about choices and options. We have to be able to identify and articulate which options work best for us, then present them to the other stakeholders so that there can be some sort of agreement on what ultimately happens. That has not been the case before because farmers have never been organised to do that.

The relationship with the agency will become more positive, more professional and more useful for everybody as other groups evolve in the

same direction. We are a bit stuck at the minute because we are in the process of changing all of that at the sector level.

Lord Mancroft: I completely understand that. I must admit—

The Chair: If we have further questions, perhaps we can put them to our witnesses via email.

Q101 **Lord Lennie:** Are the regional water resource groups the right vehicle for co-ordinating and engaging with the sector on drought?

Dr Mark Betson: We certainly need a vehicle for having that conversation while a drought is happening. As part of the national framework on water resources, which was refreshed last year, regional groups were, for the first time, given a requirement to have a drought statement of intent; basically, they were encouraged to get all stakeholders round the table to discuss issues relating to drought. However, it is on a “best endeavours” basis, which means that it is not well supported and is not funded to do that in any way. They will do the best they can, given whatever limited resources they have, to bring people around the table. It is not ideal.

We need a forum that provides an opportunity for people to get round the table. Last year, I found it particularly useful to have regular updates—engaging with the Environment Agency, water companies and other stakeholders that abstract water to find out what the particular problems were—on the status of available water and the likelihood of water. Having that replicated elsewhere would be very helpful.

Lord Lennie: Would you put it on a statutory footing? You said that the voluntary nature of it is one of its weaknesses. Would that help?

Dr Mark Betson: I think that it would. There would be a positive benefit in having more statutory powers associated with that.

Steve Moncaster: We would prefer to deal directly with the agency. Part of the issue is who has the statutory powers and who does not, and who has the resources—

The Chair: Could you lean into your microphone, please? We are finding it more and more difficult to hear you.

Steve Moncaster: Sorry. I was saying that, certainly in the company I work for, our preference is to deal directly with the Environment Agency on drought. Only the agency has the powers to apply restrictions, approve water trades or offer any other kind of response that involves changing what happens on a licence. A regional planning group cannot do that.

In a way, we are not really resourced at the abstractor group level to have several different conversations about this. We want one conversation with a person who has the power to change or action our needs, and that is the Environment Agency.

Lord Mancroft: Does that mean that, at the moment, you are having different conversations?

Steve Moncaster: We do not. If I have an issue, I go straight to the Environment Agency.

John Patrick: I do likewise. I do not want to be critical of the regional process in particular, but I do not think that it has served not just agriculture but many of the stakeholders, as we are about to witness 100 tanker movements of water 30 miles up the east coast in order to allow Sizewell power station to be built. There has been a fundamental failure in that process. We would love to professionalise our businesses so that we can, with credibility, represent from a bottom-up position into the national framework. We realise that we have a lot of work to do to be seen as credible. Many things were suggested in the Cunliffe report around new systems management streamlining some of the regulation; we would welcome a structure that allows us to feed into that.

Q102 **Lord Rooker:** I was going to ask about the level of planning that farmers are currently doing or are expected to do in order to prepare for drought, but we have covered a fair bit of that.

The second part of my question is: is there enough clarity around the implications of the drought measures for agriculture and horticulture businesses, particularly those using the public water supply? It is clear that, if you know in advance that you will not be able to water your crop, you will not plant it. There are some serious issues there. What is the situation with clarity for those businesses? Logically, I realise that crops are spread around the country—some areas are more prevalent to horticulture than others—but it is, nevertheless, a big part of the business, as it is of food production.

Dr Mark Betson: The impact of drought measures on horticultural growers that use the public water supply is not really when a drought is occurring, because those that have the public water supply can still access it. The greater issue is the real encouragement there is, at the moment, for the public water supply to reduce business use. In some places, there are moratoria or proposed moratoria on new business use over and above 20 cubic metres per day, which would limit the ability of a lot of businesses to expand or improve what they do.

Also, that sort of drive to take businesses off the public water supply does not give them recourse to alternatives if there is a drought. Certainly in the south-east, for example, a lot of businesses will turn to the public water supply to top up the amount of water that they require when it is not available through rainfall or storage. If they are being asked to come off the public water supply, what is the alternative? There is not one at the moment.

Lord Rooker: I had never heard of this. I know about hosepipe bans and that sort of thing, but I had never heard—it is in our briefing—of the non-essential use bans, which affect them, although we are told that they are

not really used commercially. Who imposes bans on the non-essential use of water?

Steve Moncaster: Those are imposed by water companies on agricultural businesses that take mains supplies. They typically do not involve livestock. I do not think a water company would turn off supply to somebody who had a load of cows, ducks, geese or stuff like that. You commonly hear that, for example, people running garden centres are threatened with a non-essential use ban, which would obviously be catastrophic to their business. That risk arises because they take a mains supply from the water company; that is the way that non-essential use bans feed into our sector.

The risks that we are exposed to are voluntary restrictions on irrigation, followed by partial restrictions and then full restrictions. To some extent, they mirror what happens with the water companies, so there is a degree of co-ordination between the two. For our members, who are growing things like potatoes, anything like a partial restriction certainly has an immediate and significant effect on the crop. The work that was done around 2012 talked about partial restrictions resulting in a 50% loss of value from an irrigated crop, with a full restriction adding only another 10% to that. So the restriction thing is real and it worries us.

To come back to your question on how much planning is done around this, if the gold standard is a water company drought plan, nobody in agriculture is producing those. I suspect that the reason for that is that we do not have a policy-level debate about agriculture, drought and safeguarding food production during prolonged periods of dry weather. The response we see is always much more tactical; we do not have things like planning objectives, where the implications are spelled out, allowed to be debated and agreed, and then fed back into a planning effort that would produce a change on the ground. None of that is in our sector. It is for the water companies, which is why they have drought plans and water source management plans, but we do not have anything like that. It is another gap for us.

Lord Rooker: Perhaps it is a gap that our report might be able to fill.

John Patrick: To put it in context, there are very few field-scale vegetables that are irrigated with mains water—the majority are not—because it is cost-prohibitive; it comes at 10 times the cost to farmers. The impact on protected crops in glasshouse work is considerable. I understand the flip side for water companies, if they suddenly start pulling hard at a time of the year when they are already very challenged on their resources.

We are doing interesting and increasing work on protected cropping, with more and more rainwater harvesting off their own surfaces. Because the public water supply is becoming less reliable, they are now starting to look at some of the rainwater-capture and recycled water schemes that field-scale agriculture is using, so they are changing their behaviour.

Lord Rooker: My final question is prompted by what you just said. I can remember when I was a Minister visiting—I will not say the location—a covered crop of tomatoes with huge glasshouses. They were collecting everything that was coming down from the sky. They were growing tomatoes but, because of the way that they were using the water to grow those tomatoes, they could not get organic certification, because they were not in the land. Is that a problem or not?

John Patrick: I am not sure where that has got to, but it seems illogical to me. I cannot comment on whether they have removed that barrier.

Q103 **Lord Duncan of Springbank:** I wonder if I could take us in a slightly different direction. Before I do, I should declare that I am the chair of the Confederation of Forest Industries. There has been a great deal of work in forestry on bringing in cultivars from more drought-significant countries and using those as a means of mitigating the water uptake. There are, of course, other methods such as genomic manipulation and so on. How much work are you aware of that tries to reduce consumption of water by crops through these sorts of methods?

Dr Mark Betson: There is only limited work going on at the moment within this country, simply because there is only a limited budget to do research and it is focused on areas that have a more regular occurrence of, for example, pests and disease and trying to prevent them within crop varieties. As far as I am aware, there is very limited work going on that is looking at improving drought resistance within varieties, certainly of fresh produce, at the moment. It is something that people are very interested in doing, but there is not an unlimited amount of funding available and there is much prioritisation of it.

The Chair: I think that fits neatly with another question, Lord Duncan.

Lord Duncan of Springbank: I would like to follow up the question that I have just asked, if I may.

The Chair: Okay, but please look ahead to see if questions are coming.

Lord Duncan of Springbank: I do look ahead. I am not an idiot. Thanks for reminding me. If I may just follow up on that, is that an area in which you would encourage the Government to spend money?

Dr Mark Betson: Yes, given the trajectory we are under with climate change.

Lord Duncan of Springbank: Thank you, Chair.

Q104 **Lord Mancroft:** Can I ask you to turn your attention to abstraction licences? How could greater flexibility be integrated into the Environment Agency's review of abstraction licences? How critical is improved water monitoring to enable that flexibility?

Steve Moncaster: We are looking for flexibility in the licence review process that has been proposed by the agency in something called catchment permit reviews. There are two things that we are really

interested in. One is that there is an awful lot of headroom in licences: it might surprise you, but quite a bit of licensed abstraction is not used. The current strategy of the agency is to remove the unused portion of the licence first; once it has done that, it will go back and look at actual abstraction and start removing those bits of it that are causing problems.

When you think about it, if you were to apply that two-step removal of unused and used licences, you would end up restricting the options you have for redistributing the abstraction in a catchment by combining unused licences with relocation of used licences. A very important piece of flexibility that the agency could give us is to take a holistic view of the licence stock and then redistribute that so that the impact on used licences is minimised. That would be very helpful for us.

The second thing is to do with the way we are organised. As I said earlier, the kind of abstractor group that I run is not typical: it is a lot more technical than most of the other groups. Eventually, the other groups will have to start doing the sort of things that we are doing as they are faced with the catchment permit reviews and the scale of licence reductions that are coming. For us all to get in a position to make a good job of the catchment permit reviews, we need more time. I know John touched on this earlier: his members will have large reductions in licence quantity this April. Ideally, we would have enough time to get that WAG set up and to get it running a technical programme, so that we could help individual members look at what the agency needs for its final solution and then work out what is best for us and how that fits with what the water companies need at the catchment. All that stuff takes technical capacity, time and, of course, funding. At the minute, it feels like we have been given quite a compressed set of timelines to work to, and there is a lot of risk associated with that. I think a lot of abstractors will be caught out because they simply have not had enough time to prepare themselves for catchment permit reviews.

Dr Mark Betson: One of the challenges with that is precisely that if there is a delay in the review process—currently, there is every possibility there might be, and we want to make sure that the process is done well—then there is no consequent move when that review process is enacted for people to make the adaptation necessary. The window gets smaller and smaller as the review takes longer, and there is no flexibility in moving when the changes come into force for people to adapt to them. That is a real challenge for us and the agency.

John Patrick: One of the other flexibility things is that, when you look at the licence review that my members will face this April, the qualifying period for the water they used was based on 2000 to 2015. During that period, we had two agricultural droughts. If you look at the actual usage in the last 10 years, we are looking at five significant agricultural droughts, but their removal of headroom—which is the one buffer that they have to protect themselves against an unpredictable drought—is based on old data. There is a real frustration that it will leave them short

not only of water but of the time to adapt. That is the flexibility we would like to see.

The other thing is the comparison with how public water supply licences are handled in the same catchment. We are all for protecting and improving the environment—we have one environment and one catchment—but we have different rules if you are abstracting for public water supply or for food production. This comes down to our desire to better represent the needs of food at the national framework table, because, currently, food is not seen as a public good when they cut the cake for financial support. That is one of the reasons we did this report: to try to raise the profile and impact of food at the national framework table.

Lord Mancroft: That is very helpful, thank you. My follow-up question is about timescales. All three of you touched on that. Can I go further than that and talk a bit more about the level of engagement with the Environment Agency over this review and over the timescales? Are you content, or confident, that communication of that is right?

John Patrick: Steve and I have already said that, because of the activities that have gone on, we have built very good relationships at street level, let us say, within the agency. It is often quoted, and I am not joining the queue here, that there is a disconnect—a silo approach—within the agency. With that disconnection, we are finding it hard to take the messages agreed at local level through to change the impact from national decision-making teams. It is an area where I think we have to be seen to be more credible, to allow ourselves to be recognised by the teams that will make those regulatory changes in the future.

Lord Mancroft: How would you make this communication and engagement better? What do you need to improve it and get where you want to get to?

Steve Moncaster: We need more openness and transparency. The catchment permit review process starts in 2028. That is two years away. Right now, we do not understand how the agency is going to go into catchments and cut licences there. On sharing the shortages, we talked about the level of reductions in catchments; the agency published information on that last summer. Some catchments will have a 95% reduction in licence quantity. We need that number to be confirmed, and then we need to know what the proposals are for sharing that among the dozens of abstractors that might be in that catchment. With two years to go, we do not know what the plan is.

Lord Mancroft: Why do you not know?

Dr Mark Betson: It is in part because the work has not been done yet on the catchment reviews.

Steve Moncaster: That is true, but it comes back to what we are saying about timescales and flexibility. Our window for dealing with this is getting shorter and shorter. What we do not have is any assurance that the deadline is going back as well. If we find ourselves squeezed between a deadline and a lack of preparation on our part or the agency's part, then then the upshot is licences going that maybe should not have to go—suboptimal outcomes, to use jargon.

Dr Mark Betson: To go on, you mentioned the unused or underused licences. The catchment reviews programme is separate, and Environmental Destination is another programme. There needs to be join-up between all these. Otherwise, you will get abstractors having cuts being made at different times, with no certainty about what the future might hold for them. There needs to be real join-up between the programmes and that flexibility to provide options for them that make up for any lost water.

Lord Mancroft: Do I sense some frustration here?

Steve Moncaster: We are committed to sustainable abstraction, but we want to build our reservoirs once, not six times. That is the deal for us: we want it to be as cheap and efficient as possible, and we want it to be fair. We want it to be treated in the same way that the water companies are—or, at least, we want the risks that we carry to be considered in the decisions that are made in catchments.

The Chair: Thank you. I have several colleagues who want to come in, but we are running very short of time, so I am going to ask them to hold their questions for the end, if we have time. I am going to come to Lord Trees for his question now.

Q105 **Lord Trees:** Mine is quite a big question, about the barriers to increasing localised catchment and on-site storage, particularly looking at solutions. There are three areas: planning, funding and moving water. First, how could planning be improved and planning regulations be revised to make it easier for farmers to achieve infrastructure that is appropriate? Secondly, how can the funding challenges be moderated or facilitated to enable the funding for such infrastructure to be achieved? Slightly different is a part asking about how moving water can be expedited. We heard from the Earl of Leicester—and there is mention of a Felixstowe Hydrocycle project here—about capturing river discharges just before they enter the sea and then diverting them back. We have also received some evidence from the Canal & River Trust about using canals to move water from where there is a shortage to where there might be a need. Those three are planning, funding and moving.

John Patrick: I will start with the moving one, because Felixstowe Hydrocycle is a project that I was engaged with the farmers to deliver. I think it is such an illogical thing: if we are short of fresh water, why are we paying the IDB to pump it into the North Sea? That was set up as an exemplar. It has now been copied and we have five hydrocycle lookalikes up the eastern seaboard. It will be a way in which we can do the logical

thing, which is to catch our water better. We need flexibility around the licensing of that. To be fair to the agency, it has worked closely with Felixstowe Hydrocycle, and that will come. On the funding, I have already mentioned the enormous response we had from farmers to the capital grant fund that was put out. I know the tills are pretty empty at the moment but another round of funding would further allow farmers to build their own resilience to drought and would be much appreciated.

On planning, we have already mentioned that it is practical engagement with our local planners, county by county, that would improve that. The really interesting one, and it links to one of the other questions, is the adjoining of flood activity and flood prevention, and how we can use the skills of something like the IDB, where appropriate, to help us turn those flood prevention events into other sources for water to fill reservoirs. The planning element to that again will need a considerable update in the planners' understanding of the benefits of those facilities.

Dr Mark Betson: I was going to add to that. One of the challenges that could be addressed by a presumption of enabling planning to go forward for reservoirs is over funding spent on surveys—for example, archaeology or environmental impact assessments—without any probability of success. Therefore, there is no incentive for people to make that investment because they are not sure whether that money will be well spent or not. It is having that assuredness that, if their funding is spent in making those assessments, there will be a positive outcome at the end of the day or, at least, some mechanism by which they can assess the likelihood of that.

John Patrick: Just a thought on funding: here is a funding opportunity around at the moment. We all contributed over the past 20 years to something called the EIUC levy to protect those abstractors who, through no fault of their own, had to have their licence removed for environmental reasons. That was a pot of £20 million-plus. Some of it has been given to people who are impacted. The residual funding pot is somewhere around £12 million, which could be used, not for the capital cost of building but helping with both the development of WAGs—water abstractor groups—to professionalise what we are doing and the feasibility, and maybe some of the up-front costs for building reservoirs. At the moment, it is being suggested that that fund will not be returned to the agricultural contributors. The Minister has been advised that she should return it to the agency and the regional groups. It is something we would love to see coming back directly to support a different abstraction footprint.

Steve Moncaster: One of the ways in which that money could be spent is that, when we build reservoirs, we get licences to fill them—another set of abstraction licences off rivers to fill the reservoirs. Those licences come with conditions. They restrict the amount of water that we can abstract from the river and put into the reservoir. Typically, the restrictions are related to the flow in the river. You get one set of restrictions related to the flow. In the Broads, where I do a lot of our work, we are also getting

restrictions applied to salinity ingress into the Broadland rivers. The effect of both is to limit the amount of time that the abstractor can pump from the river into the reservoir. For winter storage reservoirs as a way in which to increase resilience, in some instances, abstractors are gaining risk around the reliability of those new assets. If you have a reservoir but you cannot fill it, it is not a lot of use to you, and you have spent quite a lot of money to have a half-filled reservoir that does not meet your needs. When I hear you talking about planning, I suspect you mean planning at the local authority and getting something built. What I actually hear is planning to make sure that, when these reservoirs get built, there is water to put in them reliably, so they do what people expect them to do. Again, that typically does not happen at the moment, partly because there is not a lot of awareness about the risks that you incur when you go to winter storage reservoirs, and partly because of dealing with all that costs money for consultants.

John Patrick: Another quick comment in terms of barriers: it is the term of the licence. If you are a farmer wanting to borrow money from the bank to build a half-a-million-pound reservoir, the bank manager is going to want a certainty of payback on that. The initial time-limited licences that would be offered now will start at a six-year certainty term. There are situations whereby you can apply for a long-duration licence that will move that term to 12 years. But, for many investors, the payback does not work on a 12-year term. All these people trying to protect their business are worried about the risks that they are facing. The certainty of term is a significant barrier if it is not available for them to make the investment that allows them to change their abstraction behaviour.

Lord Trees: Is this what is referred to in our notes as the extended permitted development rights?

John Patrick: No.

Lord Trees: That is a different issue?

John Patrick: Extended permitted development relates to where planning permission is not required in order to construct a reservoir. Currently, if a reservoir is less than one hectare in size and is not within a designated area—for example, a site of special scientific interest—then it can be constructed without planning permission. However, for anything bigger than a hectare, if you are trying to build a multiannual reservoir to deal with what might be the case in terms of drought in the future, you are going to need a bigger area. Extended permitted development rights would potentially take into account some of what we might be facing in terms of the water we need to store.

Q106 **Baroness Whitaker:** Could you move on to nature-based solutions? We have had a lot of written evidence about their efficacy and value for money, and I have certainly been in countries where they simply have not got the resources. The result is it not only makes the drought more severe if they do not maintain the rivers and the marshes, it makes the likelihood of a shorter rainfall turning into a drought next time. We have

not got to that stage yet, but what can we do that is nature-based?

Steve Moncaster: The nature-based solutions are critical to managing drought vulnerability. There are two aspects of that for us. One is to do with the way in which soils perform and what can be done with them to, in effect, reduce the demand for water by the crop. There is a set of activities around soil management that is important. In the sense that you mean it, what we need in these catchments where we abstract is for the for the natural processes within them to be as resilient as anything that we build for irrigation. The way in which the agency acts in droughts is driven by impacts on the natural environment. If the natural environment is in a good state, then our vulnerability as abstractors is reduced. In water company language, we in agriculture need a twin-track approach, and NbS is part of our way of managing the demand for water generally but also in prolonged periods of dry weather.

Baroness Whitaker: So, do you think this ought to be incentivised more than beyond the environmental land management schemes?

Steve Moncaster: At the minute, there are landscape recovery schemes going through, and we have members who are running a couple of those schemes. They are about to report on the feasibility of developing markets for this kind of stuff. We are interested to see what comes out of landscape recovery schemes and whether we can use the power of markets to put nature back in catchments with benefits for abstraction. The bottom line is that we are very interested in them and we think that they have a big role to play.

Baroness Whitaker: And you communicate that to your members.

Steve Moncaster: Yes.

John Patrick: There is a real positive development happening on the ground now. There are two kinds of NbS schemes that I am seeing develop in Suffolk. One is small-scale and motivated by flooding; Storm Babet drove a lot of this behaviour change. These small-scale schemes are what I call "100 one percenters", rather than looking for the silver bullet of something that will cure the whole problem. Just in my local parish, we have seven small schemes that are delaying water rushing into flood-sensitive villages. They have been funded through local council schemes, they are relatively low-cost and they are not going to provide irrigation resources, but they will attenuate the water so it does not rush into the villages and they will help recharge the aquifers. So they are quietly doing a little bit towards the challenge.

As well as that, there are some big attenuation schemes that are attaching to the likes of the River Deben, which are motivated by a five-acre flood attenuation zone used to fill two reservoirs. That is part of the water resource challenge, but it also helps with the water quality challenge because we are taking a lot of silt off the river at the same time.

What we need here is support and engagement. Please, please, can we support the IDB? It is the one credible water authority with an understanding of catchment knowledge. We need to retain and improve its resources to allow it to do the job that it is currently doing really well.

Baroness Whitaker: It is intimately connected with flood mitigation then.

John Patrick: Yes, absolutely.

Baroness Whitaker: That is the important point.

Dr Mark Betson: I 100% agree with what John has just said about encouraging engagement with internal drainage boards and enabling them to do more work in on a broader scale that is not just about removing flood-water but more about being water level managers.

On your specific question about whether ELMS is sufficient, any barriers to combining ELMS with other funding opportunities—from water companies, say—should be removed. There is a combined benefit that could be had from accessing funds from WINEP et cetera—water company funds for improving the environment—and ELM schemes that could be used in harmony to promote bigger schemes and more opportunities for land managers to implement them on their sites. At the moment, there are some regulatory barriers to them being used together.

Baroness Whitaker: What are they?

Dr Mark Betson: For example, you cannot stack funding. In other words, you cannot add things that potentially deliver on the same subject, so not resources for a moment but nutrient management.

Baroness Whitaker: It is Treasury coding.

Dr Mark Betson: Yes.

Q107 **Lord Krebs:** Before asking my question, I should declare that I was chair of the adaptation committee of the Committee on Climate Change for eight years. As you may be aware, in the adaptation committee's latest report to Parliament last year, climate-resilient agriculture was described as having "Insufficient policies and plans" and "Limited delivery". The climate change risk assessment identifies drought risks as one of the top eight risks that the country faces.

In light of that, and bearing in mind the evidence we have already heard from you this morning, could you summarise which practical measures you think will be the most important in increasing the resilience of agriculture to future drought? To recap, we have heard a bit about water storage and water recovery from estuaries. We have heard about drought-tolerant crops and a little about the more efficient use of water through more sophisticated irrigation. From looking at those and perhaps other measures, could you tell us which are going to make the biggest

contribution to resilience? Do they altogether add up to enough to ensure resilience in the future? Mark, maybe you would like to kick off on that one.

John Patrick: I will throw the first one in, if I may. For me it is the recognition of the value of and need for water to produce food. I know that it is a bit inflammatory to say that food is not a public good but, when you look at how we are faced with multiple rules around one catchment and one environment, we need food to be recognised as something that needs a fair share of the cake in future regulation and the sharing of a water pot that is becoming increasingly competitive. That, for me, is the biggest factor in giving food producers the confidence to invest in their businesses going forward.

Lord Krebs: That is fine as a policy objective, but if we are to talk about practical measures that would fill the gap between water supply and water demand to produce food, which of the various measures to which we have alluded will make the biggest contribution?

John Patrick: If there is no restriction to licensing policy and access to water, in very simple terms, there would be no groundwater left for food producers to use. Their groundwater is actually being restricted. There is no summer surface water left for agricultural producers. The only practical option is the storage and better capture of these increasingly peaked high-flow activities in the winter. That is the one significant practical measure, certainly for our Suffolk catchment. It varies a bit with Norfolk, which is one of the hard things: every county and every catchment will have slightly different ways of resolving it, but that is where we would like the biggest support in Suffolk.

Lord Krebs: So you do not see other measures, such as breeding more drought-tolerant crops or regenerative agriculture to improve soil health and water retention, as being effective.

John Patrick: I do, but a pace of change is coming for food producers tomorrow, as much as I totally agree that we need to invest in that kind of research. The Cambridge University Potato Growers Research Association is doing an enormous amount of work on drought resistance. All of that is great, but it will come through as a 1% or 2% difference in the next five years, when we will be seeing regulatory changes that make differences of 25% or 35%. I agree that we need to do both.

Lord Krebs: We have to look further ahead than the next five years, because the situation is going to get worse, not better.

Dr Mark Betson: Steve may wish to comment more, but in an ideal world, where the regulatory system is not going to change rapidly but you have to put in some practical measures, there is some really good and positive work going on around smart farming—I wondered whether Steve was going to come in on that. Basically, it is much more predictive and agile when it comes to working out the amount of water that will be available. It uses modelling that relates to previous flows using up-to-the

minute weather information and has a system to match that to what is required by the regulator to preserve flows within watercourses. That will enable a lot more water to be made available. We know that there will be enough water, even under climate change situations, but it will not arrive at the right time. There needs to be that flexible ability to access that water using the best available technology combined with storage to maximise the ability to keep the water for when it is needed, with priority for crops. It will not be a magic bullet for everything, but it will be a huge opportunity to maximise use of available water. Steve, do you want to come in?

Steve Moncaster: I am just going to echo stuff I said earlier. Abstraction for irrigation—the bulk of the value of what we are talking about—occurs in maybe six or eight places in England. Each of those places wants a water abstractor group and each of those abstractor groups needs to produce a water resource management plan and a drought plan in which all the things that are talked about are put into some kind of proposals that can be delivered by the farmers. If we do not have plans in those places, we cannot engage with the regional planning framework, the national framework for water resources or the adaptation and climate change committees. The big gap is water resource management plans and drought plans. We do not need them everywhere; we need them in half a dozen places. If we are funded through something such as the EIUC, we can deliver them in two years so in two years you can have 25-year plans in the places where it matters.

The Chair: I think that is a good point on which to finish. I know that some colleagues had some questions. If there are any questions remaining, this is your last opportunity.

Q108 **Lord Duncan of Springbank:** I will take us back, if I can, to the strategic framework, which we were talking about earlier, and the notion of how it is prioritised. I was looking online at that framework and in its three priorities the third one is to enable growth and wider national objectives, including in housing, net zero and food security. Are you suggesting, however, that that food security that you were alluding to there is not being recognised in the trade-off between other water users and agriculture?

John Patrick: Yes, bluntly. But we accept that, as an industry, we have not corralled the 12,000 abstraction licences that agriculture represents into a position that we can professionally represent. Why should an industry that controls 90% of the possession of the game worry about the 10%? But there is that 10%—we have to become organised so that we can be heard. It is the combination of those two that will give a better outcome for food security.

Lord Duncan of Springbank: Is there a plan to gather together into a representative consensus?

John Patrick: There is. Steve and I have been on the road to different counties, trying to encourage them to start forming WAG's to allow us to

have a forum where we can take the multitude of abstractors and then drive that up into the regional process. The regional process is essential, but we would like to drive it from the bottom up and not have a top-down approach, which is what we are facing at the moment.

- Q109 **Baroness Whitaker:** I was very intrigued by Mr Patrick's suggestion that food is not a public good. The relationship of affordable food to drought is clear—we do not want to rely on potatoes from Cyprus and Egypt all the time. We have a Minister for Food and Lady Batters's review has a proposal for a food committee. I think you said it is not in the national framework. Is it because it is not part of economic growth, which of course is not true? It is certainly part of the cost of living. Is it really the case that it is not taken into account?

John Patrick: When it comes to the hierarchy of water allocation when things get tough, we are not seen as a public good compared to the importance of providing water resource for public water supply, industry et cetera. Also, funding directly to farmers is possibly close to being funding for private good, so that is why I make that distinction between private and public good. The rules are stacked against food producers. That is not me whinging; it is the reality of the regulations. To give an example, where we are looking to get certainty for new licences for people to move towards winter abstraction because it is a sustainable route, we are faced with public water supply pre-booking water on that same river for the reservoirs they are going to build in 2035 or 2040. For the individual farmer, there is an overriding lack-of-public-good barrier to being able to compete for that water to make the investment to produce drought resilience in their business.

Baroness Whitaker: No doubt we will discuss this with the Minister for Food. I believe we are going to interview her.

The Chair: We can leave it there. We are at 11.34 am. Colleagues thank you all very much. If any of our panel feel that there is something that they would like to say, this is your last opportunity.

Steve Moncaster: I will just thank you for having us. It has been a very welcome opportunity for us to air some of the issues we have been dealing with.

John Patrick: If I may, there are a few subjects here where I would like to write—and I think Steve would like to as well—to put some points for clarification, as much as anything, to this committee. That would be appreciated.

The Chair: We would very much appreciate that from our end. Thank you very much for the offer and thank you for being so generous with your time. I call this public session of the meeting to an end.