

Vol. 782
No. 129



Thursday
23 March 2017

PARLIAMENTARY DEBATES
(HANSARD)

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OFFICIAL REPORT

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Abbreviation	Party/Group
CB	Cross Bench
Con	Conservative
DUP	Democratic Unionist Party
GP	Green Party
Ind Lab	Independent Labour
Ind LD	Independent Liberal Democrat
Ind SD	Independent Social Democrat
Ind UU	Independent Ulster Unionist
Lab	Labour
LD	Liberal Democrat
LD Ind	Liberal Democrat Independent
Non-afl	Non-affiliated
PC	Plaid Cymru
UKIP	UK Independence Party
UUP	Ulster Unionist Party

No party affiliation is given for Members serving the House in a formal capacity, the Lords spiritual, Members on leave of absence or Members who are otherwise disqualified from sitting in the House.

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House of Lords

Thursday 23 March 2017

11 am

A minute's silence was observed in memory of the victims of the London attacks on 22 March.

Prayers—read by the Lord Bishop of Leeds.

London Attacks

11.07 am

The Lord Privy Seal (Baroness Evans of Bowes Park) (Con): My Lords, I want to say a few words on behalf of the House in response to yesterday's tragic events. People from all over the world visit our capital city and this iconic building, the centre of our democracy. As is already beginning to become clear, the horror of yesterday's events will be felt not just in this country but across the globe. We know that victims included citizens from Romania and South Korea and children from France on a school trip.

What yesterday's rapid and effective response has shown is that the Metropolitan Police, the fire service, the ambulance service and the staff of both Houses have been well prepared for such a terrible event.

Yesterday was a shocking day for everyone who works within the Palace of Westminster, but what has shone through is the support and care that Members and staff showed for each other. I would like to thank all noble Lords for their patience and co-operation as events unfolded. All of us join together to extend our heartfelt sympathy to those who have tragically lost their lives, those who have been injured, and to their families. The thoughts of the whole country will be with them.

I am sure that all noble Lords will also want to join me in expressing our admiration and gratitude to the police and the security staff who selflessly put our safety before their own each and every day, especially those injured during yesterday's devastating events. It is a reminder to us all of the risks they take in order to protect us and members of the public. In particular, our thoughts are with the family and friends of PC Keith Palmer. We will never forget his bravery and sacrifice.

Baroness Smith of Basildon (Lab): My Lords, I endorse the Leader of the House's comments. After the numerous meetings we had yesterday, I also thank her for the personal leadership that she has shown. I also thank the right reverend Prelate the Bishop of Leeds for leading us in Prayers today. I think all of us feel the need to join in collective recognition of what London and our country have faced.

Last night as we returned home we were very grateful—not just because of the shocking and tragic events of the day but simply because we could return home and others would never do so. As the noble Baroness said, those injured and killed on Westminster Bridge were visitors and locals of our great global city. They were just going about their everyday business and enjoying their day. For many of the survivors, life will never be the same.

Each and every day, our police and security staff come to work not knowing what challenges and risks they may face. We all hope for the best—but their

training, experience and commitment prepares them for the worst. They never know when they will be called upon to protect the public and those who work in the Palace of Westminster—and, indeed, protect the very home of our parliamentary democracy and all that it represents.

In doing so, police officer Keith Palmer lost his life. Every instinct he had was to protect others. There are no words that can do justice to the sense of loss felt by his family and friends, and by everybody across the Palace of Westminster—his parliamentary family.

In the Statement that follows we can perhaps look forwards to some of the wider issues, but now our thoughts are only for those affected in any way yesterday. It is hard to express the level of gratitude and appreciation due to all of those involved in the security and care operation. We pay tribute to the police, the medical and ambulance services, those staff at St Thomas' who ran out to help those on Westminster Bridge, the fire and rescue service, our own Westminster security staff, and all staff and members of the public who sought to support those affected by these truly shocking events. In the worst of circumstances, they have given their best.

Lives have been lost and some lives will never be the same. Friends and families will share the pain and distress, as do we.

Lord Newby (LD): My Lords, I begin by associating myself with the remarks made by the Leader and the Leader of the Opposition. From these Benches, our thoughts and prayers are also with the families of those who lost their lives yesterday and our profound sympathies are with the innocent victims—members of the public who were on Westminster Bridge and also subject to this senseless attack.

I of course also pay tribute to PC Keith Palmer, who lost his life yesterday—an extremely brave man—and to all the police and security staff who do so much every day to protect all who come to Parliament to work or visit. I also pay tribute to all those from the emergency services who attended the scene yesterday and who worked with such bravery and professionalism. In particular, on behalf of my noble friend Lady Thomas of Winchester and others, I thank those who helped Members of your Lordships' House who are disabled and who needed particular help in being taken to a place of safety. Finally, I thank the Dean of Westminster Abbey and his staff, who opened their doors as a place of sanctuary to MPs, Peers and staff.

This morning we stand together against those who want to diminish our democratic freedoms. We are an open, tolerant country and we will never let those who spread terror and fear win—and we will not let them divide us.

Lord Hope of Craighead (CB): My Lords, as the noble Lord, Lord Newby, has reminded us, many of us were taken to the sanctuary of Westminster Abbey or to Westminster Hall as events unfolded yesterday afternoon. The Dean of Westminster invited those in the Abbey to join him in a prayer for the deceased, the injured and their families. Such information as we had at that stage gave us little idea of the enormity of what had happened—of the horror and brutality of the attack—until we saw the reality later on television. We

[LORD HOPE OF CRAIGHEAD]

on these Benches join with everyone else in this House in expressing our deepest sympathy to the family of PC Keith Palmer, so tragically taken from us as he sought to deter the attacker.

We remember, too, the families and friends of the members of the public who were killed and all those who were injured, including the students from France whose visit to our city was so devastated by what happened. The fact that the incident did not develop into something very much worse owes much to the teams of security personnel and police officers who guard us every day. Like others, I pay tribute to their courage and dedication as we seek to follow their example of standing firm against attacks of this kind, from wherever they may come. I pay tribute, too, to others in the security services up and down the country who work so hard in the service of this country's peace and security. For that, amid so much sadness, we must all be grateful.

The Archbishop of Canterbury: My Lords, I associate myself with the thanks and tributes paid today, and especially our prayers and thoughts for PC Keith Palmer and for his family. I also acknowledge the work of so many members of the public who pitched in and did what they needed to do when faced with things for which they had never been trained or prepared. Yesterday afternoon one of our own security staff at Lambeth Palace, a Muslim, arrived at the gate having been very narrowly missed by the vehicle and having spent time helping those who had been injured. It was typical of this community and this country that he refused to go home until the end of his shift and simply spent the time doing his job as he expected.

This was typical of so many in this city, including the emergency services who contained the incident within six minutes and the staff at this extraordinary place who give so much of themselves on both normal occasions and extraordinary occasions. Especially in our hearts today are those who wait at bedsides, who are suddenly caught up in things for which they could never have been prepared and which they never expected. Our prayers continue for them on this day. Much shock has been expressed, but we know from the reactions we saw yesterday that we have the strength to persevere through it. We will talk more generally about that later.

The Lord Speaker (Lord Fowler): My Lords, perhaps I may add my condolences to those already expressed today to those affected by these tragic events. A book of condolence has been placed in the Royal Gallery and in Westminster Hall. The usual channels have agreed to take the Statement on yesterday's events before Questions. Before that Statement I reassure the House that the House of Lords Commission, which I chair, and our Commons counterpart will be reviewing with the police and other stakeholders the arrangements in Parliament relating to yesterday's incident to see whether there are any lessons for the future. Above all, I reiterate the thanks of this House to those who work to protect us, and the others who work in Parliament, for their brave actions yesterday to keep us safe.

London Attacks Statement

11.19 am

The Lord Privy Seal (Baroness Evans of Bowes Park) (Con): My Lords, with the leave of the House I will now repeat a Statement made by my right honourable friend the Prime Minister in another place. The Statement is as follows:

"Mr Speaker, yesterday an act of terrorism tried to silence our democracy. But today we meet as normal, as generations have done before us and as future generations will continue to do, to deliver a simple message: we are not afraid. Our resolve will never waiver in the face of terrorism and we meet here, in the oldest of all Parliaments, because we know that democracy and the values it entails will always prevail. Those values—free speech, liberty, human rights and the rule of law—are embodied here in this place but are shared by free people around the world.

A terrorist came to the place where people of all nationalities and cultures gather together to celebrate what it means to be free, and he took out his rage indiscriminately against innocent men, women and children. This was an attack on free people everywhere, and on behalf of the British people I would like to thank our friends and allies around the world who have made it clear that they stand with us at this time.

What happened on the streets of Westminster yesterday afternoon sickened us all. While there is an ongoing police investigation, the House will understand that there are limits to what I can say. But having been updated by police and security officials, let me set out what at this stage I can tell the House.

At approximately 2.40 pm yesterday, a single attacker drove his vehicle at speed into innocent pedestrians who were crossing Westminster Bridge, killing two people and injuring around 40 more. In addition to 12 Britons admitted to hospital, we know that the victims include three French children, two Romanians, four South Koreans, one German, one Pole, one Irish, one Chinese, one Italian, one American and two Greeks, and we are in close contact with the Governments of the countries of all those affected. The injured also included three police officers who were returning from an event to recognise their bravery. Two of those three remain in a serious condition.

The attacker then left the vehicle and approached a police officer at Carriage Gates, attacking that officer with a large knife before he was shot dead by an armed police officer. Tragically, as the House will know, 48 year-old PC Keith Palmer was killed. PC Palmer had devoted his life to the service of his country. He had been a member of the Parliamentary and Diplomatic Protection Command for 15 years, and a soldier in the Royal Artillery before that. He was a husband and a father, killed doing a job he loved. He was every inch a hero and his actions will never be forgotten. I know the whole House will join me in sending our deepest condolences to his family, and to the families and friends of all those who have been killed or injured in yesterday's awful attacks. I know also that the House will wish to thank all those who acted with such speed and professionalism yesterday to secure this place and ensure we are able to meet, as we are doing, today.

At 7.30 pm last night, I chaired a meeting of the Government's emergency committee, COBRA, and will have further meetings and briefings with security officials later today. The threat level to the UK has been set at "severe", meaning an attack is highly likely, for some time. This is the second-highest threat level. The highest level, "critical", means there is specific intelligence that an attack is imminent. As there is no such intelligence, the independent Joint Terrorism Analysis Centre has decided that the threat level will not change in light of yesterday's attack.

The whole country will want to know who was responsible for this atrocity and the measures we are taking to strengthen our security, including here at Westminster. A full counterterrorism investigation is already under way. Hundreds of our police and security officers have been working through the night to establish everything possible about this attack, including its preparation, motivation and whether there were any associates involved in its planning. While there remain limits on what I can say at this stage, I can confirm that overnight the police searched six addresses and made eight arrests in Birmingham and London.

It is still believed that this attacker acted alone, and the police have no reason to believe there are imminent further attacks on the public. His identity is known to the police and MI5, and when operational considerations allow he will be publicly identified. What I can confirm is that the man was British-born and that some years ago he was once investigated in relation to concerns about violent extremism. He was a peripheral figure. The case is historic, and he was not part of the current intelligence picture. There was no prior intelligence of his intent or of the plot. Intensive investigations continue.

As acting Deputy Commissioner Rowley confirmed last night, our working assumption is that the attacker was inspired by Islamist ideology. We know the threat from Islamist terrorism is very real, but while the public should remain utterly vigilant, they should not, and will not, be cowed by this threat. As acting Deputy Commissioner Rowley has made clear, we are stepping up policing to protect communities across the country and to reassure the public. As a precautionary measure, this will mean increasing the number of patrols in cities across the country with more police and more armed police on the streets.

Since June 2013 our police, security and intelligence agencies have successfully disrupted 13 separate terrorist plots in Britain. Following the 2015 strategic defence and security review, we protected the police budgets for counterterrorism and committed to increase cross-government spending on counterterrorism by 30% in real terms over the course of this Parliament. Over the next five years, we will invest an extra £2.5 billion in building our global security and intelligence network, employing over 1,900 additional staff at MI5, MI6 and GCHQ and more than doubling our global network of counterterrorism experts working with priority countries across Europe, the Middle East, Africa and Asia.

In terms of security here in Westminster, we should be clear first of all that an attacker attempted to break into Parliament and was shot dead within 20 yards of the gates. If his intention was to gain access to this building, we should be clear that he did not succeed.

The police heroically did their job. As is routine, the police, together with the House authorities, are reviewing the security of the parliamentary estate, co-ordinating with the Cabinet Office, which has responsibility for the security measures in place around the government secure zone. All of us in this House have a responsibility for the safety and security of our staff, and advice is available to Members who need it.

Yesterday we saw the worst of humanity, but we will remember the best. We will remember the extraordinary efforts to save the life of PC Keith Palmer, including those by my honourable friend the Member for Bournemouth East.

Noble Lords: Hear, hear.

Baroness Evans of Bowes Park: And we will remember the exceptional bravery of our police, security and emergency services who once again ran towards the danger even as they encouraged others to move the other way. On behalf of the whole country, I want to pay tribute to them for the work they have been doing to reassure the public, treat the injured and bring security back to the streets of our capital city. That they have lost one of their own in yesterday's attack only makes their calmness and professionalism all the more remarkable.

A lot has been said since terror struck London yesterday. Much more will be said in the coming days, but the greatest response lies not in the words of politicians but in the everyday actions of ordinary people, for beyond these walls today, in scenes repeated in towns and cities across the country, millions of people are going about their days and getting on with their lives. The streets are as busy as ever. The offices are full. The coffee shops and cafes are bustling. As I speak, millions will be boarding trains and aeroplanes to travel to London and see for themselves the greatest city on earth. It is in these actions, millions of acts of normality, that we find the best response to terrorism, a response that denies our enemies their victory, that refuses to let them win, that shows we will never give in, a response driven by that same spirit that drove a husband and father to put himself between us and our attacker, and to pay the ultimate price, a response that says to the men and women who propagate this hate and evil: you will not defeat us. Let this be the message from this House and this nation today: our values will prevail. I commend this Statement to the House".

11.31 am

Baroness Smith of Basildon (Lab): My Lords, I thank the noble Baroness for repeating today's Statement. I understand that some of the words at the beginning of my previous comments were lost, so I will just repeat them. The noble Baroness and I had a number of meetings yesterday until quite late in the evening, and I add my personal thanks to her and pay tribute to the leadership she has shown.

The Prime Minister, in her words last night and as we have heard today, has I believe spoken for the nation. Yesterday showed us the best and the worst of society, the worst being those who seek to maim and murder. Yesterday's atrocities can never be justified by any belief or cause. But we also saw the best, as the

[BARONESS SMITH OF BASILDON]

noble Baroness has said. We have paid tribute to Police Officer Keith Palmer, who was killed as he protected others. I hope we will be able to have a permanent memorial in the Palace of Westminster to him. Many others from inside this great building and across Westminster ran towards trouble to care for and give comfort to others. That is the London I know.

The full facts may not be clear for some time, but it is clear that this was a vile attack both on innocent individuals and on the institution and symbol of parliamentary democracy. As we receive more information, I have no doubt that security will be reviewed and assessed. That is right. Those who work here in the Palace of Westminster and in London and beyond, and those who seek to protect Parliament, public institutions and the public, should expect nothing less. We must do all we can to ensure the security and safety of our Members of Parliament and their staff. It is less than a year ago that I stood here after Jo Cox, our Member of Parliament for Batley and Spen, was murdered as she worked for her constituents. In seeking to protect lives, we must also seek to protect our way of life, our values and our democracy. At this stage I ask only that the noble Baroness keeps Parliament informed and engaged in this process.

Yesterday's attack, as truly shocking as it was, ultimately failed—but at a very high price. Our determination to continue our work and our way of life is not false heroism, but based on sound values and responsibility. It is only possible because of the courage, commitment and professionalism of those such as Police Officer Keith Palmer who stand day in, day out in front of danger and evil to protect us all.

Lord Newby (LD): My Lords, I too thank the noble Baroness the Leader of the House for repeating the Statement. The horrific events of yesterday were an attack not just on Parliament but on democracy. It was an attack on the values that are represented by this building and recognised across the world: freedom, openness, tolerance, human rights, mutual respect for our neighbours and the rule of law.

No doubt there will be lessons that we can learn from the events of yesterday, but we must not lose sight of the fact that the person who carried out this horrific attack was, as the noble Baroness said, prevented from entering the building and was stopped a matter of yards within its precincts. The security arrangements in place for such an attack swung into action, for which we thank our security staff and of course PC Keith Palmer in particular.

I hope that, as we move forward from yesterday's events, we maintain the sense that Parliament is an open place which the public can visit to lobby parliamentarians and to see our democratic processes in action. But we must listen to the individual experiences of Members and staff to determine where improvements can be made.

I welcome the statement by the Lord Speaker that the House of Lords Commission will be considering these matters next week. No doubt individual Members will have views of their own. I, for example, would like us to look again at the long-standing proposals to

pedestrianise some of the streets around this place. However, there are many other sensible suggestions that we need to look at tomorrow.

I have only one question for the noble Baroness the Leader of the House. We do not know at this stage the extent to which this particular incident was entirely home-grown, but we do know that terrorism is an international business. I hope she can give the House an assurance that as we move forward in the months and years ahead, the Government will do everything they can to ensure that our strong and growing security links with our closest neighbours across Europe are maintained and strengthened.

I hope that today, as we condemn this senseless violence, that condemnation will be expressed by both faith and secular communities across the country, for the greatest tribute we can give to those who have lost their lives is to come together as a country and uphold our way of life and democracy.

Lord Hope of Craighead (CB): My Lords, it is not the usual custom for the Convener of the Cross Benches to respond to a Statement of this kind, but this is a very special occasion. I pay my own thanks to the Leader for repeating the Statement in the other place by the Prime Minister.

There are lessons to be learned from yesterday, and they certainly will be. One of the things that struck me as the evening wore on was the challenge faced by the security forces, police and staff—indeed, the doorkeepers in this Chamber—in moving so many people about without risk to themselves. It was an enormous undertaking. I do not have the exact figures but something like 800 people were in Westminster Hall, while it was said that 2,500 people were present in Westminster Abbey. You have to imagine the process of moving people from place to place. They included children who were kept in Westminster Hall, who kept themselves and many other people happy by singing songs, which was a remarkable achievement by their teachers. That is just one of the examples of the good-natured way in which people responded to the demands of the evening.

I pay my own tribute to the doorkeepers, because we depend upon them. It was stressed in a recent rehearsal for something similar to this incident that we would be subject to the direction of the doorkeepers and, with their usual tact and firmness, they made sure that we were in the right place at the right time and guided to the places where we ought to be taken.

As I said at the end of my short statement, there are things to be thankful for, and there are certainly things we can learn from. Thank goodness the incident was not worse than it was. Just imagine the real horror if the person had broken into the Chambers with his knife. It is for that, the fact that the incident was stopped so early, that we owe so much to PC Palmer and his colleagues.

The Archbishop of Canterbury: My Lords, I add a welcome from these Benches to the Statement by the Prime Minister, which, as the noble Baroness the Leader of the Opposition said, rightly set the tone and spoke for this country. I also convey to the House the messages of sympathy and support that I have received through the night from faith leaders around the world

and across this country who want this House and Parliament, particularly its staff and those who have suffered, to know how much those people are in their hearts and minds.

With regard to values, I want to refer to something that seems to me to go deeper, to something that is at the foundation of our own understanding of what our society is about, and I want to do so in three simple, brief pictures. The first is of a vehicle being driven across Westminster Bridge by someone who had a perverted, nihilistic and despairing view of objectives, and of what society and indeed life are about, that could be fulfilled only by death and destruction. The second is of that same person a few minutes later, on a stretcher or on the ground being treated by the very people whom he had sought to kill. The third is of these two Houses, where profound, bitter, angry disagreement is dealt with not with violence, despair or cruelty but with discussion, reason and calmness.

Those three pictures point us to deep values within our society—deeper even than those that have rightly been mentioned in the Prime Minister's Statement and other statements. You would expect to hear this from these Benches, but it is the sense that comes from a narrative that has been within our society for almost 2,000 years. It speaks at this time of year, as we look forward to Holy Week and Easter, of a God who stands with the suffering and brings justice, and whose resurrection has given to believer and unbeliever the sense that where we do what is right—where we behave properly, where that generosity and extraordinary sense of duty that leads people to treat a terrorist is shown, where the bravery of someone such as PC Keith Palmer is demonstrated—there is a victory for what is right and good over what is evil, despairing and bad. That was shown yesterday; that is shown not just in our expression of values but in our practices, which define those values; and that is the mood that we must show in future.

Baroness Evans of Bowes Park: My Lords, I thank the noble Baroness, the noble Lord, the noble and learned Lord and the most reverend Primate for their comments. I also thank the noble Baroness and the Opposition Chief Whip for their help and support yesterday. It showed that we can all work as a team in times of great distress and difficulty.

I am sure that the noble Baroness's suggestion of a permanent memorial to PC Palmer will be something that the Houses reflect on in due course as we come together to think about our reaction to these tragic events. I also confirm that we will of course keep Parliament updated of developments as and when we are able to do so.

The noble Lord, Lord Newby, and the noble and learned Lord, Lord Hope, rightly raised the experiences of Members of this House, the public and the other place yesterday. I reiterate the words of the Lord Speaker: we will be assessing with the police and other partners what happens and how we can improve things, but I echo all of our thanks to the police, the doorkeepers and all members of staff, who had as traumatic a day as we did yesterday but helped us throughout and put us first, as ever.

I also reassure the noble Lord, Lord Newby, that we will continue to work closely with our international partners to combat terrorism. The warm and strong words we have already heard from our partners around the globe show the strength of the relationships we have and will continue to have.

Finally, I thank the most reverend Primate for his powerful words. There is nothing I can add to them, so I will leave the last word to him.

Education: Nursery and Early Years

Question

11.44 am

Asked by **Lord Storey**

To ask Her Majesty's Government what estimate they have made of the level of annual funding required for nursery and early years provision, in order to ensure quality of service.

The Parliamentary Under-Secretary of State, Department for Education (Lord Nash) (Con): My Lords, we will be investing an additional £1 billion per year in the free early years entitlement by 2019-20, including over £300 million per year to raise hourly average funding rates. Our record level of investment was based on our review of childcare costs, which was described by the National Audit Office as thorough and wide-ranging. More children than ever now benefit from high-quality early education: 93% of settings are now rated good or outstanding.

Lord Storey (LD): I am very grateful for the Minister's reply. He may know that UK and international research shows that high-quality early years education, led by a graduate teacher, is one of the most decisive interventions for tackling poor preschool attainment and has the biggest impact on children, particularly those from deprived communities. What are the Government doing to make this a reality?

Lord Nash: The noble Lord is extremely accurate in this, and I know he has great experience in this area from his career in the primary school sector. Of course the early years workforce is the sector's greatest asset in ensuring that we continue to maintain such a high standard, with 93% of providers rated good or outstanding, in the future. The proportion of staff in group-based providers with a level 6 qualification, degree level or higher, is 10%; and 79% of staff in group-based providers and 69% of child minders have at least a level 3 qualification. Earlier this month we published the workforce strategy, which outlines a range of activities to help employers attract, retain and develop high-quality staff.

Baroness Massey of Darwen (Lab): My Lords, I thank the Minister for that, and I am pleased that he mentioned the development of staff in his reply. I wonder if he could be more precise. Surely he will agree with me that the quality of service in education of any kind depends on the quality of the staff. Can he say something further about the notion of the qualified status of nursery school teachers and what the Government are doing to develop it?

Lord Nash: We are investing heavily in improving the quality of the status of nursery teachers, and increasing the funding rate will help with recruiting more high-quality staff. A lot of details on that are set out in our workforce strategy.

Baroness Howe of Idlicote (CB): Will the resources that the Government make available cover the particular requirements and needs of those with special needs?

Lord Nash: Yes. Our recently published workforce strategy sets out how we will support staff to offer good-quality provision for children with SEND. We are funding a range of training and development opportunities in this regard, working with organisations that specialise in SEND. We have a new targeted £12.5 million disability access fund and a requirement for local authorities to set up a local inclusion fund to support providers for better outcomes for children with SEND.

Baroness Farrington of Ribbleton (Lab): My Lords, will the Minister undertake to look at research into high-quality preschool experience combined with adult education for children who fail later in life? Will he look at the Midwinter experiment in Liverpool, which did so much many years ago to demonstrate that the most important investment is high-quality nursery education combined with help for parents who sometimes have difficulty themselves in helping their children unless there is high-quality adult education for them?

Lord Nash: The noble Baroness is quite right in her remarks. We all appreciate that helping children at an early age, particularly those who have a difficult home life, is absolutely essential. The payback on that for both those children and our society is massive. I certainly would be delighted to look at the research to which she refers, and I would be happy to discuss it with her because I know that she has experience in relation to this.

Baroness Walmsley (LD): My Lords, the early years sector is very diverse in relation to types of governance. We have the state-funded sector, private settings, and not-for-profit and voluntary settings. Can the Minister ensure that the money to employ qualified early years teachers is easily available to all kinds of settings?

Lord Nash: Yes, I think that that is the aim. As the noble Baroness says, there is a mixed range of providers and we must ensure that they all have access to the appropriate funding. As I have said, the quality of provision speaks for itself.

Lord Lexden (Con): Does my noble friend have confidence in the inspection arrangements that exist for these sectors of education and in the part that they can play in helping to raise standards?

Lord Nash: The inspection arrangements are absolutely essential and Ofsted's role in this is crucial, so I agree entirely—we have confidence in it.

Lord Blunkett (Lab): My Lords, leaving aside the tragic demise of the Sure Start local programmes, can the Minister comment on how we can implement better the report by Sense, the organisation for deafblind men, women and children, which was published last year, in terms of early years settings and the training not just of professional staff but of volunteers, which is absolutely crucial in ensuring that those with the severest disabilities have the best possible start in life?

Lord Nash: I agree entirely with the noble Lord in this regard. I am not familiar with that report but I will look at it and, I hope, have the opportunity to discuss it with him.

Lord Watson of Invergowrie (Lab): My Lords, if the Government really are serious about social mobility, then children's first four years is where they should be concentrating—and doing so relentlessly. As the noble Lord, Lord Storey, said, early years teachers are crucial to the development and effectiveness of childcare. In the workforce strategy, launched earlier this month and to which the Minister referred earlier, the Early Years Minister, Caroline Dinéage, said that if we are to prepare “the best” for our children, “in their earliest and most formative years, we must ... value”, and train adequate staff to ensure their development. That is fine—that is as it should be—but the Family and Childcare Trust recently reported that one in 10 nursery workers do not receive the national minimum wage. Will the Minister work with Ms Dinéage and other Ministers to ensure that all childcare workers are properly and fairly paid and that public, taxpayers' money does not go to employers that are breaking the law?

Lord Nash: That is an extremely good point. Nurseries are of course legally required to pay the national minimum wage and, just as any other organisation or business, they risk fines or even prosecution if they do not. We will be vigilant in this regard.

Young Carers Question

11.53 am

Asked by **Baroness Hussein-Ece**

To ask Her Majesty's Government what progress they have made in ensuring that children and young people who care for family members are identified and supported.

The Parliamentary Under-Secretary of State, Department for Education (Lord Nash) (Con): My Lords, we introduced changes to the Children and Families Act 2014 to ensure that local authorities identify needs and assess and support young carers. We have considered recently published research and are exploring policy avenues to help local authorities, schools and professionals to improve young carers' identification and support. We will be setting out our vision and future plans in the cross-government carers strategy, led by the Department of Health, to be published later this year.

Baroness Hussein-Ece (LD): I think the Minister for that response. Is he aware of any more accurate figures of the sheer numbers of children and young

people who care for family members with disabilities and those with mental disabilities? Barnardo's has estimated that it is somewhere in the region of 200,000, possibly more. Can he say whether, in the strategy that will be published, health professionals will be trained to identify children who are carers? Can he also say what is being done about 16 to 18 year-olds who are twice as likely as their peer group to not be in employment or education? What support will they get to reach their full potential?

Lord Nash: My Lords, we have supported various programmes in this regard, such as the Suffolk Family Carers programme, to raise awareness of young carers among teachers and other staff. We have focused on embedding a whole family approach to this issue and have trained school nurses to be champions for young carers. As I say, we will set out further proposals in the carers strategy. I agree entirely with the noble Baroness: although we collect some data centrally, we need to work harder to collect data and identify young carers wherever they are.

Lord Laming (CB): My Lords, I know the Minister will agree with me that there is deep concern when you meet young carers that some of them do not want the teachers to tell children's services about them in case that leads to care proceedings. Will the Minister assure the House that in the new strategy everything will be done to tell and reassure young carers that the state services are there to support them, not to add to the burden that they carry?

Lord Nash: The noble Lord makes an extremely good point. I know from experience that this can be a very sensitive issue with children, who may not wish even to tell anybody that they have these responsibilities. Our training of school nurses can help greatly with this.

Lord Watts (Lab): My Lords, would it not be a good idea for young carers to be given a statement setting out the support mechanisms that would be put in place to support them and their families?

Lord Nash: Again, I make the point that the first step is to identify them. The Children and Families Act now places an obligation on local authorities to assess their needs and support them, where they request it. However, we need to do more to identify them in the first place.

Baroness Thomas of Winchester (LD): My Lords, I remind the noble Lord's department that some young carers do not identify themselves with the words "caring" or "carer" if they care for a disabled parent. The noble Baroness, Lady Grey-Thompson, has confirmed this. They undertake this caring as a matter of course and have done so all their lives. They need to be identified but they may not know the word "carer".

Lord Nash: The noble Baroness makes a very good point. Again, our guidance to schools is helpful in this regard. As I say, the work we are doing with schools and school nurses will, I hope, make sure that all pupils are aware of what the terminology means.

Baroness Finlay of Llandaff (CB): My Lords, I declare my interest as chair of Dying Matters. Do the Government accept the figure that approximately 10% of schoolchildren are bereaved, a third of those of a parent or sibling, and that many of them have cared for that person during their final illness and, after death, often provide care and support for the other bereaved members of the family? Will the whole House join me in expressing the most sincere condolences to the two children who were bereaved because their mother was killed yesterday on Westminster Bridge?

Lord Nash: I agree entirely with the noble Baroness on child bereavement. I suffered from that myself and share the sympathy that she expresses.

Lord Cormack (Con): My Lords, further to the point made by the noble Baroness, Lady Thomas, do general practitioners as a matter of course annotate their records where there is a child carer looking after a patient?

Lord Nash: I am afraid that I do not know the answer to that question but I shall talk to the Department of Health and write to my noble friend.

Lord Watson of Invergowrie (Lab): My Lords, the Children's Commissioner recently reported that four out of five young carers were not receiving support from their local authority and that not enough local authorities take steps to identify children in their area who may be providing care. Too often, it seems that funding under the Care Act is used for assessment purposes rather than providing support and activities that would allow young carers to enjoy some aspects of the childhood that every child surely should have. Will the Minister say what steps the Government are taking to ensure that young carers receive appropriate assessment and support, no matter where they live, through inspection and other forms of monitoring?

Lord Nash: The noble Lord makes a very good point. We welcome the Children's Commissioner's report. We have just concluded our analysis of its findings and are considering what more we can do. We know that many local authorities are making great progress in their data analysis and capabilities but, as the noble Lord says, there is more for us to do. We are considering that in the light of the Children's Commissioner's report.

Baroness Farrington of Ribblesdale (Lab): My Lords, will the Minister undertake to ensure that psychiatric nurses treating patients are very careful? Often they have responsibility for doing what is best for the parent in a case of severe and distressing mental illness, but sometimes no one looks to the needs of the child, who may be in a home with a parent in an extremely distressing state. Surely there should be somebody there to protect the child from what can be a rather frightening and very paranoid parent.

Lord Nash: As I am sure the noble Baroness knows, we are working with the Department of Health to commission a major countrywide thematic review of

[LORD NASH]
children and adolescent mental health. We will bring forward a new Green Paper on children and young people's mental health, and I shall certainly feed the noble Baroness's comments into that thinking.

Premium Bonds

Question

Noon

Asked by Lord Lee of Trafford

To ask Her Majesty's Government what is their policy on encouraging further premium bond sales.

Lord Lee of Trafford (LD): My Lords, I beg leave to ask the Question standing in my name on the Order Paper, and I declare an interest as a bond holder—one among 21 million.

The Commercial Secretary to the Treasury (Baroness Neville-Rolfe) (Con): My Lords, premium bonds are a popular savings product. They date back to 1956 and were introduced by Harold Macmillan, the Chancellor of the Exchequer of the day. They provide a way for government to raise debt financing through the retail savings market. Depending on the Government's financing requirement, NS&I promotes sales through its website, through direct correspondence with customers, through media coverage and through advertising.

Lord Lee of Trafford: My Lords, is it not time, after 60 years, to look again at the rules and aims of premium bonds? Specifically, why cannot clubs, societies and charities own premium bonds? Could not those who win, say, £25 but do not wish to receive that prize have it designated and directed to a national charity by ticking a box? More radically, could we not think about reconstructing and converting premium bonds into something perhaps rather more popular, such as national care bonds? I think that would generate much greater public support, particularly if the unclaimed prizes were hypothecated to the care sector.

Baroness Neville-Rolfe: My Lords, that is for a debate, not a Question. I am not a fan of hypothecation. The Government raise premium bonds to fund government expenditure, as I have explained, and obviously there is nothing to stop anybody giving their tax-free winnings to charity as they see fit. We do not have any plans to introduce a direct transfer to charities, which would require stakeholder consultation and a systems change. The product is a good part of the portfolio of savings products that we have and, as I said, it is very popular.

Lord Dubs (Lab): My Lords, would not more people buy premium bonds if there were not such a miserably low rate of interest?

Baroness Neville-Rolfe: We try to make sure that premium bonds are a reasonable deal in the market for savings. The noble Lord will probably know that we delayed reducing the rates on premium bonds until quite recently. They continue to be popular, and it makes sense to look at them in the round, aiming for a

balance for savers and taxpayers, as well as stability in the sector, obviously, in which they have a role as part of NS&I's work.

Lord Lansley (Con): My Lords, will the Government consider giving pensioners who are eligible for the winter fuel payment the option of electing to receive premium bonds instead of a cash payment, thereby helping to meet the Government's funding requirement and reducing the cash call on government?

Baroness Neville-Rolfe: That is another innovative idea for premium bonds. I will certainly think about it, but the basic point about premium bonds is that they have to be part of a portfolio of sensible savings, such as the investment bond that we are bringing in. That seems to me the right way to go. They are popular and successful, and they give people a bit of excitement, as well as easy access to saving, and there is a 100% Treasury guarantee.

Lord Davies of Oldham (Lab): My Lords, every statistician and financial adviser can establish that premium bonds are a pretty poor deal, and the Government are in the business of reducing the rate yet again, so the deal is not getting any better. What they are is a flutter but, as my horse will fall at the second fence in the Grand National in the fairly near future, I am not going to argue against gambling at this point.

Baroness Neville-Rolfe: I think we can agree on the excitement, but there is also a more serious point underlying this. When you are choosing how to save, you need to look at a number of options, which we have debated here in this House, including having a pension through the auto-enrolment system and taking advantage of other savings products such as ISAs and so on. I see premium bonds as a very important part of the savings market. And I am so glad that the noble Lord likes to have a flutter.

Baroness Kramer (LD): My Lords, I exclude my noble friend Lord Lee from this but many people who purchase premium bonds also have an adverse amount of credit card debt or personal loans outstanding. They are attracted rather to the prize element of the premium bond. Would it be sensible to have on the website some advice to encourage people to think first about paying down their debts before they go for a low-interest savings product?

Baroness Neville-Rolfe: As I said, it is important that people have choice and look at a sensible way of saving. Having material on different websites is important but, in the round, we try to make sure that government advice gives people a sound sense of direction on savings, including what is good value for money. Again, I emphasise the point about pensions: investing in a pension is a very good form of saving.

Lord Forsyth of Drumlean (Con): My Lords, would my noble friend look at the rules, which, while respecting the importance of avoiding money laundering, make it extremely difficult for grandparents and others to gift premium bonds to young children? That would be a very useful way of encouraging saving.

Baroness Neville-Rolfe: I am grateful to my noble friend. I will certainly look at the point without commitment.

Lord Brooke of Alverthorpe (Lab): My Lords, I am not sure whether the Minister is old enough to qualify for the silly £10 a year Christmas bonus that most of the people in this Chamber will receive. Apparently it was introduced decades ago and if it had been updated with inflation it would now be worth £187 a year. Building on the suggestion of the noble Lord, Lord Lansley, why should that not be converted into savings rather than paid out, when many people do not know what it is about, why they are receiving it or what they do with it?

Baroness Neville-Rolfe: The noble Lord highlights that there are many good pension benefits in this country. I take his point but this is a difficult area in which to make sudden changes.

East Africa: Famine Question

12.08 pm

Asked by **Baroness Hayman**

To ask Her Majesty's Government what assistance they are giving to those suffering from famine and acute food shortages in East Africa.

Baroness Hayman (CB): My Lords, I beg leave to ask the Question standing in my name on the Order Paper. In doing so, I declare an interest as a trustee of the Disasters Emergency Committee.

The Minister of State, Department for International Development (Lord Bates) (Con): My Lords, the scale of the humanitarian crises facing the world in 2017 is unprecedented. The UK is leading the way on the response, stepping up life-saving emergency assistance for those affected by food insecurity in east Africa, and calling on the international community to urgently step up its support before it is too late.

Baroness Hayman: My Lords, I thank the Minister for that reply and for the work that his department is doing. The humanitarian crisis in east Africa is, as the Minister said, of horrifying proportions, with 16 million people on the brink of starvation and cholera a growing threat. But lives are being saved as we speak thanks to the work of British humanitarian agencies on the ground in east Africa, funded by the £30 million that has been raised already in the DEC appeal. Will the Minister join me in acknowledging the generosity of the British public, who always respond very generously to appeals like this? The theme of the DEC appeal is "Don't delay, donate". Does the Minister agree that that is a message not only for individuals—who might think about their winter fuel payment, in fact—but for Governments? Will Her Majesty's Government agree to continue to urge other nations to replicate the generosity that the UK has shown and to keep the UK contribution under review?

Lord Bates: I am very happy to do that. I also pay tribute to the work of the Disasters Emergency Committee in this instance. The immediate response to the crisis

and the generosity of the British people in raising £20 million, which was then aid matched by DfID, is typical of the character of the British people, to which the most reverend Primate referred earlier, and their humanitarian concern for their neighbours. That commitment is there and is being built upon by the £100 million that has been announced for South Sudan and Somalia. We are keeping those numbers constantly under review because the situation is at crisis point.

Baroness McIntosh of Pickering (Con): Will my noble friend look closely at the work that Nestlé and other multinational companies have been doing in countries such as South Africa? Will he inform the House of what we believe to be the underlying causes of the famine and whether we can use technical assistance from companies in this country to improve irrigation in east Africa to enable it to secure its crops against future droughts and floods?

Lord Bates: Certainly, part of the cause is the drought that is affecting many countries because of the record level of the El Niño effect in the region. However, overwhelmingly this is a man-made crisis; this is because of conflict. If it was not for the conflict we would be able to reach people in the same way we are able to reach people in Ethiopia and Kenya. It is the fighting and insecurity in South Sudan, Yemen, north-east Nigeria and Somalia that are causing the difficulty, and people are dying as a result. The fighting has to stop.

Lord McConnell of Glenscorrodale (Lab): My Lords, the Disasters Emergency Committee has done a fantastic job over recent years in focusing the attention of the British public on particular crises as they happen. However, one of the knock-on effects of that focus can be to reduce the donations going to other humanitarian problems, in some cases happening nearby. North-east Nigeria, mentioned by the Minister, may be a case in point. It is not covered by this appeal but the situation there is desperate at the moment. Can we be reassured that the Government will do what they can in the international arena to ensure that the global community, while perhaps focusing for the moment on east Africa, do not forget the other humanitarian problems close by, and ensure a balanced approach over time to make sure that even more lives are saved?

Lord Bates: I can give that assurance; the noble Lord is absolutely right. As the noble Baroness, Lady Hayman, will recognise, there is great thought and soul searching about whether to launch a second appeal on the back of Yemen so soon—normally there is a one a year. This reflects the fact that the situation is extraordinary. Stephen O'Brien referred to the situation in 2017 as being the greatest humanitarian challenge that the United Nations has ever faced. These are huge issues when Syria is included, and our response has to be there. There also has to be a recognition of the wider response needed in Nigeria.

Lord Collins of Highbury (Lab): My Lords, the UN estimates that £4.5 billion is needed to address urgent needs, but only 2% of that is in the pipeline. The noble

[LORD COLLINS OF HIGHBURY]

Lord mentioned the need to mobilise the international community. He also responded to my noble friend a few weeks ago about taking up the idea of working within the European Union. Surely the time is now for the G7, the G20 and the World Bank to convene an urgent financial summit. Will the Minister commit the Government to making that call?

Lord Bates: I have taken my opportunity to do so. I was grateful to the noble Lord, Lord Foulkes, for his excellent suggestion. I attended the EU Foreign Affairs Council for Development last week and made exactly those points and the plea. The Secretary of State also wrote to High Representative Mogherini on the same issue. Later today, the Foreign Secretary will be chairing the Security Council on this issue at about 8 pm GMT. That will be an opportunity to reinforce the need for the international community to do more—and do it quickly.

Baroness Sheehan (LD): My Lords, I commend the Government on their high-profile response to the famine in east Africa, which has helped to galvanise not just public support but support among the international community. DfID's hunger safety net programme in Kenya provides small, regular cash transfers through secure biometric systems and has been shown to be very effective in reducing extreme hunger. Notwithstanding attacks from the *Daily Mail*, are there plans to extend this proven programme to other countries in east Africa—and if not, why not?

Lord Bates: Certainly this is a tool that has been used to get relief to the people who need it most, but often there is a scarcity of food supplies. To come back to insecurity, when there are terrorist organisations, conflicts and civil wars, sometimes just handing out cash to individuals fuels the conflict because the money finds its way to the terrorist organisations. We need to be extremely careful in these areas that we provide relief to those who need it and not resources to those who are causing the conflict.

Greater Manchester Combined Authority (Fire and Rescue Functions) Order 2017

Greater Manchester Combined Authority (Transfer of Police and Crime Commissioner Functions to the Mayor) Order 2017

Motions to Approve

12.15 pm

Moved by Baroness Williams of Trafford

That the draft Orders laid before the House on 6 and 20 February be approved. *Considered in Grand Committee on 21 March.*

Motions agreed.

Electricity Supplier Payments (Amendment) Regulations 2017

Electricity and Gas (Energy Company Obligation) (Amendment) Order 2017

Motions to Approve

12.15 pm

Moved by Lord Prior of Brampton

That the draft Regulations and Order laid before the House on 20 and 8 February be approved. *Considered in Grand Committee on 21 March.*

Motions agreed.

Collection of Fines etc. (Northern Ireland Consequential Amendments) Order 2017

Public Guardian (Fees, etc.) (Amendment) Regulations 2017

Judicial Pensions (Additional Voluntary Contributions) Regulations 2017

Judicial Pensions (Fee-Paid Judges) Regulations 2017

Judicial Pensions (Amendment) Regulations 2017

Motions to Approve

12.16 pm

Moved by Lord Keen of Elie

That the draft Orders and Regulations laid before the House on 6, 9 and 27 February be approved. *Considered in Grand Committee on 21 March.*

Motions agreed.

Industrial Training Levy (Engineering Construction Industry Training Board) Order 2017

Motion to Approve

12.16 pm

Moved by Viscount Younger of Leckie

That the draft Order laid before the House on 23 February be approved. *Considered in Grand Committee on 21 March.*

Motion agreed.

Immigration Skills Charge Regulations 2017

Motion to Approve

12.16 pm

Moved by Lord Nash

That the draft Regulations laid before the House on 20 February be approved. *27th Report from the Secondary Legislation Scrutiny Committee. Considered in Grand Committee on 21 March.*

Motion agreed.

Homelessness Reduction Bill

Third Reading

12.17 pm

Bill passed.

Financial Services and Markets Act 2000 (Regulated Activities) (Amendment) Order 2017

Motion to Approve

12.17 pm

Moved by Baroness Neville-Rolfe

That the draft Order laid before the House on 9 February be approved.

The Commercial Secretary to the Treasury (Baroness Neville-Rolfe) (Con): My Lords, the order that we are looking at today forms part of the UK's transposition of the markets in financial instruments directive II. The directive is accompanied by the markets in financial instruments regulation. I will, if I may, refer to these collectively as MiFID II.

Before I turn to the specific changes made by the order, let me start by explaining the important context in which the changes are made. MiFID II is a key part of our post-financial-crisis regulatory reform. Agreed by the EU in 2014, it will have a significant role in strengthening the regulation and transparency of our financial and commodity markets. This means keeping pace with market developments and strengthening the protections available for investors. MiFID II applies from 3 January 2018 and member states are under an obligation to transpose the directive into national law by July 2017. That brings us to why we are here today.

In the UK, we are transposing MiFID II through legislation and regulators' rules. Last month, we concluded our consultation on the legislative changes needed to do that. This order therefore makes amendments to the regulated activities order, which sets the regulatory perimeter for financial services in the UK, to give effect to MiFID II.

The order makes three key changes. First, it brings the new activities and investments introduced by MiFID II within the regulatory perimeter. This includes, for example, structured deposits which are sold or advised to clients, emissions allowances and organised trading

facilities. In accordance with the regulated activities order, this will mean that performing a specified activity in relation to a specified investment is a regulated activity for the purposes of the Financial Services and Markets Act.

Secondly, the order classifies binary options as a type of financial instrument. This means that the regulation of binary options will move from the Gambling Commission, where they are currently regulated as bets, to the Financial Conduct Authority. An example would be betting a sum of money against the FTSE 100 rising by 50 points. This is an important change that will ensure that consumers receive at least equivalent protections to those that exist with similar financial instruments.

Thirdly, the order updates definitions, references and makes a number of minor amendments to allow MiFID II to operate within our domestic legislative framework. I will be happy to answer any questions that your Lordships may have on the detail of the order as far as I am able. I beg to move.

Lord Davies of Oldham (Lab): My Lords, I apologise to the Minister for failing to contact her yesterday and give her some indication of one or two of the anxieties that I had about the order, but I am afraid that the disruption that affected the Palace also affected my liaison. Consequently, I was not able to warn her of what is to come. Nevertheless, I am sure she will be able to answer the points I make with great facility, as she usually does, or, if not, perhaps she will write to me in due course on the issues which are not covered.

Of course, we support MiFID II and bringing it into our national law. It entrenches consumer protection. If we learnt one thing from the financial crash of 2008, it was the need to guarantee consumer protection in the most adverse circumstances. MiFID is a European response to that worldwide crisis, which affected our colleagues in Europe as it did us here in Britain. I appreciate the fact that the Minister has brought the instrument forward.

The consultation for the Government's transposition plans revealed that, along with this order, two further statutory instruments were required in order to deliver MiFID II: the Financial Services and Markets Act 2000 (Markets in Financial Instruments) Regulations and the data reporting services regulations. When can this House expect to scrutinise and debate those instruments? They are a crucial part of the package. As the Minister will appreciate, they have at least an indirect impact on the workings of the instrument in front of us today—I am thinking particularly of the extended regulatory provisions and their subsequent impact on the FCA and PRA. Given this, perhaps it would have been more helpful to debate all three instruments in the round, but we are making progress on this one first.

The public consultation on transposing MiFID closed in June 2015, nearly two years ago. The Economic Secretary to the Treasury, when moving this order in the other place, stated that,

"last month we concluded our consultation on the legislation needed".—[*Official Report*, Commons, Second Delegated Legislation Committee, 14/3/17; col. 1.]

[LORD DAVIES OF OLDHAM]

What were those discussions, who were they with and why did they last so long? Where are the documents on those proceedings, which, as far as I know, are not available to your Lordships' House?

We of course support the supervision of binary options being transferred from the Gambling Commission to the Financial Conduct Authority. We agree that they are financial instruments and as such the FCA is clearly better placed to regulate their use. When does the Minister expect the FCA to produce its guidance, particularly about how it intends to protect potentially vulnerable consumers? The Minister will clearly appreciate that consumers need full disclosure about the product they are purchasing and we need the greatest clarity. Related to this, the consultation document says:

"Ahead of the legislation coming into force, the Government will consider whether consequential amendments to the Gambling Act 2005 are necessary in order to support the transfer of the regulation of relevant binary options from the Gambling Commission".

I was somewhat involved in the Gambling Act. The experience does not rate enormously highly on the list of my joys in speaking in this House and introducing legislation, so I am very glad to see that the Government are taking a very different view in this instance.

The consultation document goes on to say that further consideration will be given to the fee arrangements for firms that hold a Gambling Commission licence and to the implications of these legislative amendments for the relevant tax framework. Again, I do not expect an immediate, full answer today—perhaps I will get one—but I hope we will get an indication as to the progress that is to be made. Can the Minister say where the Government are on these issues, given that they are not included in the order? I am sure that firms will be grateful for clarification as to where they will stand when this legislation comes into force.

I feel particularly guilty about dropping my last question on the Minister at this point, but she has enormous support and great experience and she will handle it readily. I would have given her notice had I not been so disrupted by events yesterday. An issue was raised in the Explanatory Memorandum which accompanies this order. It says:

"The Treasury is working closely with representatives from local government and the FCA in order to mitigate the possible effect on local government's participation in financial markets".

Yet we have not been able to find anywhere in the impact assessment or the consultation document what the Government expect those effects to be. Is the Minister in a position to outline the key monetised and non-monetised issues involved in the transposition of MiFID II for local government in this country? What discussions have taken place between local government representatives and the Treasury?

My final point relates to costings. The estimated annual net cost to business has been calculated at £105.2 million, while the impact assessment states that the direct impact on business will be £148.5 million. Can the Minister clarify the disparity between these two figures?

Baroness Neville-Rolfe: My Lords, I thank the noble Lord for offering to accept a written response to some of his detailed points. We were all disrupted yesterday;

it was an extraordinary day. My officials have had a great deal of difficulty advising me because nobody without a parliamentary pass is now allowed into the building. That makes it somewhat difficult for me to answer all his questions. I will do my best and will then follow up, copying the reply to anybody else who has an interest in the issues.

I very much agree with the noble Lord that these changes enhance consumer protection. We have to transpose vital parts of the post-financial crisis legislation into UK law and, indeed, until exit negotiations conclude we have an obligation to do so: we need to move ahead.

The noble Lord asked about the transposition of MiFID II in the round. As he said, in February we concluded our consultation on the legislation needed to transpose the instruments and there will be three statutory instruments. One is the order we are discussing today. As I explained, that applies from 3 January and we are under an obligation to transpose it into law by July, which I understand is very important in terms of people making preparations.

Of the other two statutory instruments, one transposes relevant requirements on the provision of data reporting services and the second transposes a wide range of other MiFID II requirements. For example, in accordance with MiFID II, it creates a position limits regime and imposes obligations on certain persons engaging in algorithmic trading. Regulators have also been consulting on the proposed rules to transpose MiFID II, one or two of which the noble Lord mentioned. I will obviously take away the point he made about consultation and debate on those issues.

I was glad to have the noble Lord's support on the changes on options and I will look carefully at what he asked about the Gambling Act. However, there is a fair amount of agreement that it is right to bring that into the curtilage of the FCA. I am afraid that I do not have a reply on local government and I will ensure that I respond properly in my forthcoming letter.

It seems to be agreed that these are important reforms to ensure that our financial system is transparent and resilient. This is important to the City of London and other financial service operators right across the UK, which actually provide more employment outside London than in London. The changes form part of the wider regulatory reforms since the financial crisis to ensure the efficient functioning of our financial markets. I hope that we have learnt lessons from the past; this legislation puts those into practice by ensuring that our financial markets are effective and stable. There has been a fair degree of consultation. The noble Lord knows that I always value that, but I will ensure that his specific questions are answered and if necessary, we can have a further word about that.

Lord Davies of Oldham: Let me say how much I appreciate the Minister's response. She will know that we are enthusiastic about the developments contained in the MiFID position. I was therefore not in any way being critical of the Government, merely seeking to elucidate things further. I am grateful for her response.

Motion agreed.

Crown Estate Transfer Scheme 2017

Motion to Approve

12.32 pm

Moved by **Baroness Neville-Rolfe**

That the draft Scheme laid before the House on 1 March be approved.

The Commercial Secretary to the Treasury (Baroness Neville-Rolfe) (Con): My Lords, this instrument seeks to ensure that it is Scottish citizens who benefit from the revenues raised from the wholly-owned assets of the Crown Estate in Scotland. That was a specific recommendation made by the Smith commission agreement in its report on the further devolution of powers to the Scottish Parliament. We have worked closely with stakeholders to make sure that we are ready to implement it, and to transfer the management of the Scottish assets efficiently. The draft scheme has been agreed with the Scottish Government.

Allow me to clarify two important aspects of the provisions in this scheme: first, the nature of the change and, secondly, the important protections it incorporates. Under this draft scheme, all rights and liabilities connected to managing these Scottish assets will be transferred to Crown Estate Scotland (Interim Management). Revenues will henceforth go to the Scottish Consolidated Fund and the commissioners currently managing these assets will have no further role in doing so. Assets will, however, continue to be managed on behalf of the Crown and maintained as an “estate in land”, which ensures that any sale receipts must be reinvested. This is in accordance with the Scotland Act 1998.

I should also be clear that the assets include both rural and urban holdings, and mineral and salmon fishing rights. This includes an area that incorporates around half of the coastal foreshore and almost all of the sea bed, covering all the Crown Estate’s activities up to the 200 nautical miles limit. Your Lordships will recall the amendment proposed by the noble and learned Lord, Lord Wallace of Tankerness, during debate on the Scotland Bill to ensure devolution of aspects of the management of the Scottish assets to the island authorities. As my noble friend Lord Dunlop said at the time, we believe that the devolution of management responsibilities will be quicker, simpler and come with fewer practical difficulties if the UK Government devolve these responsibilities in a single transfer to Crown Estate Scotland (Interim Management). This is what the transfer scheme delivers.

A consultation is now under way by the Scottish Government to consider the long-term management of the Scottish assets. The Government will make a Written Ministerial Statement to Parliament six months after the transfer of the assets. This Statement will outline the progress that the Scottish Government have made on the onward devolution of these assets.

I now turn to the second point, the important protections set out in this instrument. One of the key considerations is that this scheme ensures the continued safety of citizens across the UK by

ensuring that the transfer is not detrimental to defence or national security. The Scottish assets are key to delivering strategic capabilities for the defence and security of the whole of the UK. It is prudent to ensure that there are powers which the Secretary of State for Defence can exercise where there is an overriding public interest to do so. These powers will enable the UK Government to protect all of their citizens both now and in the future. It also protects other UK-wide interests, such as maintaining a consistent approach to telecommunications throughout the UK and keeping pipeline rental increases at market value so as not to hold back our oil and gas industry.

Lastly, the draft scheme protects the rights of existing members of staff as they transfer to Crown Estate Scotland (Interim Management). Provisions are in place to cover dismissal, contract variation and pensions. They will ensure that the arrangements for transferred staff will be no less favourable than those that they currently enjoy.

We are now in a position to make this transfer of powers to Scotland smoothly on 1 April 2017. I beg to move.

The Earl of Kinnoull (CB): My Lords, I thank the Minister for her usual eloquence in explaining the transfer scheme. However, I ask her for help on a number of matters in relation to the scheme. I should say that I am not in any way wanting to object to the devolution contained in the Scotland Act 2016, of which this forms a part and which was the statutory embodiment of the Smith commission agreement of November 2014. I emphatically feel, however, that where these precious assets are concerned, we must be very careful to go no further than the Smith commission agreement, especially in relation to their status.

The framework document between the Treasury and the Crown Estate puts the status of these assets well. It is,

“a trust estate, independent of government and the Monarch”.

These assets are not therefore available for political uses. The first issue I will ask the Minister about is that of the onwards devolution which she spoke about a moment ago. Paragraph 33 of the Smith commission agreement saw this onward devolution going to named local authorities and to other authorities that ask. We debated this at length. As the Minister pointed out, the noble Lord, Lord Dunlop, made a ministerial undertaking in respect of the report six months after the transfer. In making the commitment, he also said that the UK Government would continue to press the Scottish Government on this issue. Can the Minister can update us on what progress has been made on that issue?

The Crown Estate is governed by the Crown Estate Act 1961, which sets out the duties and powers of the Crown Estate Commissioners and the general environment under which the assets are held. In her remarks, the Minister went some way towards this, but can she confirm that these provisions remain fully in force, now and in the future, over the Scottish assets that are transferring and the only real change is in the people and institutions who will be involved in the management of those assets?

[THE EARL OF KINNOULL]

The Treasury and the Crown Estate have a framework document, which I have already referred to. It is four pages of common sense in plain English. It contains two further important phrases:

“The Crown Estate ... is not an instrument of government policy”,

and, when referring to ministerial direction:

“A direction may be given only within The Crown Estate’s statutory duties”.

Can the Minister tell us whether a similar framework document is ready for 1 April in Scotland, given its importance in underlining the independence of the Crown Estate commissioners and providing clarity?

Lastly, I turn to the Scottish Government’s Crown Estate consultation document. The noble Baroness referred to the consultation, which started in January and finishes on 29 March. The document is 70 pages and contains, early on, a “Way forward” statement which says:

“The Scottish Ministers intend to introduce legislation which puts in place a new legislative framework for management of Crown Estate assets in Scotland”—

then, the part I emphasise—

“that ensures ... alignment with Scottish policy objectives”.

Later on, it says:

“After the transfer, the Scottish Parliament will have the power to legislate on the new framework for managing Crown Estate assets in Scotland”.

Then there is the part that I would emphasise:

“This will include the ability to depart from the Crown Estate Act 1961”.

Could the Minister comment on those two assertions as well?

Lord Wallace of Tankerness (LD): My Lords, as the Minister indicated, I moved an amendment on Report, and possibly also in Committee, on the Scotland Bill, which the noble Earl, Lord Kinnoull, has already referred to. The Minister has already answered one of the questions I was going to ask, which was whether it was still government policy to have a statement after six months. I am delighted to hear that it is, and we look forward to the statement.

The noble Earl has asked the second question, which is a request for a bit of colour and flavour to the commitment made by the noble Lord, Lord Dunlop, when he was replying to the debate on my amendment and said that the Government would continue to press the Scottish Government to deliver what was promised to the island communities and other communities in the Smith agreement: some detail as to what the Government have been doing to “hold the feet of the Scottish Government to the fire” on this matter, which I think were the words used during the debate. This is a welcome first step in fulfilling the intention of the Smith commission and we hope that onward devolution will become a reality sooner rather than later.

Lord Adonis (Non-Afl): My Lords, I am sorry to add to the questions that have been posed to the Minister, but could she tell the House a bit more about the relationship between the income from the Crown Estate that is being devolved to Scotland and the sovereign grant? Under the Sovereign Grant Act, a substantial proportion of profits from the Crown Estate

go to fund the monarchy, and that proportion is rising significantly with the arrangement that the Government have entered into for the refurbishment of Buckingham Palace. The agreement in respect of the Crown Estate profits in England is for 25% to be used that way. Will a similar share of the profits from the Crown Estate in Scotland be allocated to the sovereign grant from the profits of the Scottish Crown Estate under this arrangement? If not, are the Scots making any contribution to the monarchy at all?

Lord Davies of Oldham (Lab): My Lords, I have no wish to pile Pelion upon Ossa, because the Labour Opposition of course fully endorse this instrument. It would be surprising if we did not, as after all we were closely associated with the development of the Smith commission. We are very much in favour of devolution of income tax to Scotland and of course see the benefits to the Scots of them being able to obtain financial advantage from the Crown Estate in Scotland, so I am very much on the Minister’s side. She has been asked some interesting questions, which I am sure she will answer in a moment or two. I have only one, very general question, which was asked by a colleague in the other place, to which I think we have had no indication of an answer subsequently. On the question of resolving disputes between the UK and Scottish Governments, there has been a substantive change since the publication of the original draft seen by Parliament in October 2015.

Will the Minister say a little about the negotiations with Scottish Ministers, particularly as the process seemed to involve the resolving of disputes through determination by independent experts? We do not know who those experts might be, nor do we know how they will be chosen. That seems a very important point, to which the Minister should address herself in the context of this instrument.

12.45 pm

Baroness Neville-Rolfe: I am grateful to so many noble Lords for taking an interest in this important order. Again, I apologise for not being able to answer every question due to the difficulties that our officials have had getting into our House, which I fear may be a problem for a day or two.

I think there is general agreement on the usefulness and timeliness of this order, which follows on from the Smith report and many hours of constructive debate in this House. It was good to hear the noble and learned Lord, Lord Wallace of Tankerness, express his general satisfaction. I will agree to check on the latest position relating to the conversations that my noble friend Lord Dunlop has had with the Scottish Government, and write to noble Lords with an interest.

The noble Lord, Lord Adonis, has asked me quite a detailed question about exactly how finances work. I would prefer to take advice and write to him with a proper answer on that.

Lord Campbell-Savours (Lab): To all of us.

Baroness Neville-Rolfe: To all noble Lords, of course.

Lord Adonis: The Minister says my question was detailed, but in fact is it not a quite fundamental one? One-quarter of the profits of the Crown Estate in

England are going to fund the monarchy. Under this arrangement, are one-quarter of the profits of the Crown Estate in Scotland going to fund the monarchy or not? If not, is the inference to be drawn that it is only the English who will be funding the monarchy henceforth?

Baroness Neville-Rolfe: In the absence of expert advice, I would rather write to the noble Lord and engage if the need arises.

Lord Adonis: I am very sorry to detain the House but, given how important a point of principle this is, if the House is not even aware of what the situation is, is it reasonable for us to agree to the order today with no knowledge at all of how the funding of the monarchy is going to continue henceforth?

Baroness Neville-Rolfe: If I may, I will answer the other questions that have been raised, and we will see if we can get an answer for the noble Lord.

The noble Earl, Lord Kinnoull, asked a number of questions following on from the debates in this House at an earlier stage. Devolution, as he knows and as I have said already, is a matter for the Scottish Parliament to determine. The Scottish Government are currently consulting on the long-term management arrangements.

On the question of whether Scottish Ministers will adopt the Treasury Crown Estate framework, particularly regarding the independence of the Crown Estate commissioners, Scottish Ministers will make their own arrangements for the oversight of Crown Estate Scotland interim management, consistent with the Scotland Act and the Smith commission agreement. The Crown Estate commissioners will not be involved in the management of Scottish assets once they are transferred. This will have no impact on the independence of the Crown Estate commissioners, who will continue to manage Crown Estate assets in the rest of the UK.

The Scotland Act 2016 will enable the Scottish Parliament to legislate for the management of Scottish assets. Section 1 of the Crown Estate Act will not apply since this makes provision for the giving of directions by UK government Ministers to the Crown Estate commissioners. Scottish Ministers are currently consulting on the long-term management arrangements, as I have already said. On the management of assets, the ownership will remain with the Crown.

To respond to the noble Lord, Lord Adonis, we will ensure fiscal neutrality by making a block grant adjustment, ensuring that the Scots do not profit from the transfer.

Finally, the noble Lord, Lord Davies, asked me about the process for resolving disputes between the UK and Scottish Governments and how independent experts will be chosen. In the current draft of the scheme, we have ensured that dispute resolution processes will be carried out by an independent person. Where there is a dispute about market value, an appropriate independent person with specialist expertise will be appointed by agreement between the interested parties, or between Treasury and Scottish Government Ministers, as the case may be, and in the event that agreement cannot be reached, the Royal Institute of Chartered Surveyors can be asked to nominate an appropriate person instead.

This is an important transfer of powers to the devolved Administrations. We want the administration to be seamless and to take effect, as I said, from 1 April.

The Earl of Kinnoull: I am not sure I have quite had an answer on the simple issue of whether the assets can now become political footballs: whether the Crown Estate Act absolutely applies, or whether the Scottish Government can depart from the Act or order the managers of the Crown Estate assets in Scotland to ensure alignment with Scottish policy objectives. Those are critical points—certainly for me.

Baroness Neville-Rolfe: Those points were considered. The order before us today reflects what was agreed during the passage of the Bill. We have consulted and come forward with these arrangements. I have reassured the House that the Scottish block grant will be adjusted to take them into account, so the Scottish Government will not be getting extra funding from the UK and Scottish taxpayers will continue to contribute to the sovereign grant. It is paid out of the Consolidated Fund, to which all taxpayers contribute and is calculated with reference to the Crown Estate revenue, but not paid directly out of it.

Motion agreed.

EU Membership: UK Science

Motion to Take Note

12.52 pm

Moved by The Earl of Selborne

That this House takes note of the report from the Science and Technology Committee *A Time for Boldness: EU Membership and UK Science after the Referendum* (1st Report, HL Paper 85).

The Earl of Selborne (Con): The report *A Time for Boldness*, which is the subject of this debate, is a follow-up to the April report of the Science and Technology Committee on *EU Membership and UK Science*, which explored the principal links between EU membership and the effectiveness of United Kingdom science. I first thank our committee clerk Anna Murphy, our policy analyst Daniel Rathbone and our specialist adviser Professor Graeme Reid, who once more gave valuable help to the committee.

Our previous report noted that a large majority of the UK science community highly valued European Union membership, but with some important qualifications. They particularly valued the ease with which talented scientists could move between member states, thereby enhancing scientific collaboration, the advantages—in most cases but not all—of harmonised regulations and the ability to access substantial funding.

In the light of the referendum result, the core question we resolved to address in this follow-up report was what actions are needed to ensure that United Kingdom science continues to flourish as the United Kingdom negotiates its exit from the European Union and thereafter plays an ever stronger role in delivering international competitiveness for the United Kingdom, as well as further progress to enhancing our quality of life.

[THE EARL OF SELBORNE]

The Government have recognised the key role that science, technology and innovation must play. The White Paper on exiting the EU has a chapter entitled “Ensuring the UK remains the best place for science and innovation”. It highlights the funding commitments made in the Autumn Statement and the Green Paper published in January on a new industrial strategy which seeks to,

“put the UK and British companies at the forefront of innovation by developing the products and services that address the challenges of the future”.

The Green Paper stresses our dependence in future on becoming a more innovative economy and on the need to do more to commercialise our world-leading science to drive growth across the United Kingdom.

While our report predates both the White Paper on exiting the European Union and the Green Paper on a new industrial strategy, it can be seen as a contribution to addressing the agenda of these policy papers. Our report considers the following issues: the future funding of science and the need for scientists to continue to move between borders; the Government’s role in providing research infrastructure; and the potential opportunities offered by and after Brexit.

First, on funding issues from 2007 to 2013 the United Kingdom received €8.8 billion for research development and innovation from the European Union, while contributing about €5.4 billion to the European Union for research. So we were net beneficiaries in that respect. The Government gave welcome assurances that it would underwrite approved Horizon 2020 projects funding with new money, in addition to the science funding already committed for the period to 2021. Even more welcome in November, the Prime Minister announced a real-terms increase in government investment, with £2 billion a year by 2020 for research and development,

“to help put post-Brexit Britain at the cutting edge of science”,

and technology discovery. This money will be challenged through a national productivity investment fund and a new industrial strategy fund. This was an encouraging response to the implications of Brexit but the new money promised by the Government should not be seen as a replacement for European Union funding after the United Kingdom has left the EU. The EU funding should be replaced with new money.

There remain reports about discrimination against UK researchers post the Brexit vote in seeking EU funding and collaboration. Both the Minister, Jo Johnson, and the EU Commissioner have urged scientists to provide hard evidence. In paragraph 39 we suggest that for the sake of transparency, any evidence received of discrimination, together with an assessment on whether the concerns have been adequately addressed, should be published in “anonymised aggregate form”.

The White Paper states that researchers should continue to bid for competitive EU research funding such as Horizon 2020 while the UK remains a member of the EU, and that existing EU students and those starting courses in 2016-17 and 2017-18 will continue to be eligible for student loans and home fee status for the duration of their courses.

Once negotiations on the terms of our leaving the EU start, it will be highly desirable at an early stage to secure longer-term assurances both for European Union students in the United Kingdom and for British students in EU member states. In order better to refute any perception that we are less welcoming than before to students and researchers we recommend in the report that the Government should maintain the Chevening scholarships and create additional scholarships for the most talented career researchers at PhD and post-doctoral levels, expand the global challenges fund and the Newton fund and make additional resources available for international research collaboration.

In paragraph 69 we recommended that the Government initiate a search for “outstanding scientific leaders” from around the globe and attract them to the United Kingdom with compelling offers of research funding. It was therefore highly gratifying to hear in the Budget Statement from the Chancellor of the Exchequer that £100 million is to be used to attract best minds to the UK over the next four years to make us a world leader in science and engineering. I congratulate the Government on this welcome initiative.

I turn to the free movement of scientists. The committee’s report is one of many to draw attention to the idiocy of not treating student numbers separately for immigration purposes. Can the Minister say whether the Government will seek to reverse the amendment made in this House to the Higher Education and Research Bill last week, which would remove students from the immigration figures? The Government’s response to the committee says that the calculation of net migration statistics is in line with best practice around the world. I would refute that—it simply is not the case, as has so often been stated in this House.

The title of the report, *A Time for Boldness*, refers in particular to our recommendation in paragraph 76 that we identify opportunities for bold long-term moves to reinforce the UK’s global standing in science. This could include hosting, in partnership with Governments and funding bodies from other countries, one or more new international research facilities, subject of course to a rigorous review and appraisal of value for money. We already host six pan-European research infrastructures in the UK, about whose long-term future the Russell group expressed some concern in its evidence to us. We also host such major research stations as the European Space Agency and the European Centre for Medium-Range Weather Forecasts. I know that the noble Lord, Lord Krebs, in his intervention today will speak on the need to ensure that the European Centre for Medium-Range Weather Forecasts is retained in this country, although its data centre will be moved to Italy. I would very much support that.

The Committee recommended that the voice of the scientific community should be heard alongside the voice of business during the Brexit negotiations and in making future alliances. We need science at the centre of the negotiations. We urged the Government to assess in the short term the need for a chief scientific adviser in the Department for International Trade, bearing in mind the scale of scientific analysis that underpins the international trade regulations which will be required for trade negotiations. The Government’s

response said that the Department for International Trade is considering the case for appointing a chief scientific adviser. Can the Minister tell the House of any progress in this respect?

Lastly, I turn to such opportunities as might be offered for science after Brexit, in spite of the very obvious challenges. The Science and Technology Committee is currently taking evidence on the Green Paper, *Building our Industrial Strategy*. As I said earlier, this Green Paper gives encouraging priority to investing in science, research and innovation and recognises that our future ability to attract inward investment will depend heavily on the quality of our science base. The Green Paper furthermore says that the United Kingdom is fortunate to be a nation of science and technical progress. I would put it more strongly: without excellence in science, research and innovation, our prospects would be dire. We need to invest wisely and more generously in our science base to match the funding of our competitors, build on excellence, reform our public procurement to support innovative businesses, and expand the scale and scope of the research and development tax credit to cover a wider span of business innovation. Could Brexit be the catalyst that leads to continuity of policies for science, technology and innovation for more than just a few years at a time? I beg to move.

1.03 pm

Lord Winston (Lab): I first thank the noble Earl, Lord Selborne, for his extraordinarily good chairmanship of the Select Committee; I remember very well from when I was a member of that Select Committee some time ago his wisdom in leading our inquiries and debates. In response to the excellent report that the Select Committee has produced, the Government state that,

“a global Britain must ... be a country that looks to the future. That means being one of the best places in the world for science and innovation”.

It also goes on to assert:

“The Government made a series of announcements on EU research and innovation ... to provide assurance and certainty to stakeholders”.

But the Government's response to the recommendations to distinguish immigration statistics and student entries is, I am afraid, totally inadequate. Moreover, it gives no reassurance at all to the backbone of British science, the post-doctoral fellow—the first stage in a scientist's career when he or she is working independently, supervising students, publishing key scientific advances and making innovations. Often these post-docs are underpaid and naturally insecure, because they are really only good for as long as their grant income lasts, and they have a constant problem with that. The added insecurity under which they are now placed is a very serious threat to them indeed. I repeat: they are undoubtedly the backbone of British science.

In a powerful speech yesterday, Alice Gast, president of one of the country's leading scientific universities, Imperial College, pointed out the need for the Government to resolve the uncertainties that they have created and to demonstrate practically our continued welcome to this important science research force and not to use this research force as a tool for negotiation. I agree

with that completely. She also pointed out in her speech the richness of the collaboration that universities in this country have with the EU—I can testify to that in my statement.

I understand some of the evidence that the Select Committee received, but not all of it. It suggests that there had not been a downturn yet in EU doctoral students and postgraduates applying to work in the UK, but I do not find this evidence convincing. In many respects it is far too flawed. It is, in any case, far too soon after the referendum to make a judgment on the longer-term prospects. From our practical experience in our labs—for example at Imperial College, in my research building, which houses up to, I suppose, 100 scientists—we are hearing of many students who are increasingly reluctant to come to Britain to train and work here because of this longer-term insecurity. As we have been saying to the Home Office for years—particularly as the Science and Technology Select Committee has been saying—we need to have much better records from the Home Office of those entering the UK for study, exactly what they are studying and how they are contributing to our universities. But, yet again, I am afraid that the Government's response to what is a basic and important request has been totally inadequate.

I have worked in reproductive medicine; it may seem a trivial area, but it is not just about in vitro fertilisation and infertile couples, this research is important to human growth and development, the ageing process, regenerative medicine and stem cell biology, and genetic disease—there are some 6,500 gene defects that cause serious diseases, many of which are a result of thousands of different mutations. This research also involves cancer treatments, because how the early cell reacts, how you see apoptosis—cell death—and how you regulate cell growth is of vital importance in cancer research. Most importantly of course, reproductive medicine is important in public health, because of the epigenetic and environmental influences that affect all medicine. In my view—though as a reproductive biologist I would say this, wouldn't I?—reproductive biology is the very foundation of biological science.

At the height of my laboratory's international impact, we had scientists and doctors from France, Spain, Germany, Holland, Portugal, Belgium, Poland, Italy, Scandinavia and the Republic of Ireland, as well as from some eastern bloc countries. It is not an idle boast to say that we trained most of the Greek scientists here in Britain, at Hammersmith hospital at Imperial College. They are still in practice and their research is now starting to lead our research, as is happening generally across Europe.

Regrettably, the work that is going on in Belgium, and sometimes in France, has in my view a higher impact than the work we are doing in Britain. In a typical academic year, we might have once had some 15 global languages spoken in the laboratory, mostly European, of course, and usually 10 to 20 EU nationals working on research and clinical translation of research. Now things are beginning to look very different and the number of EU nationals in our laboratories has undoubtedly decreased. For example, we now need a new chair in reproductive medicine at Imperial College. We have been looking for a long time for this chair but

[LORD WINSTON]

we cannot find a single British candidate who is up to the standard that we need. The best chance we have of finding such a person is to look to Europe, but I do not think we will find a professor in Europe who will be prepared to come here, given the uncertainty I have mentioned. We cannot find sufficiently well-qualified candidates from Britain. The situation does not look at all hopeful. We need more people from the EU to apply. In excluding post-doctoral fellows who have received the best training and then refusing their access to continued research in the UK we are, I am afraid, further bruising UK science. They go elsewhere and become eventually not our collaborators but our competitors. We need to consider the effect that immigration policy is having, and will increasingly have, on British science.

1.11 pm

Lord Fox (LD): My Lords, I too thank the noble Earl, Lord Selborne, for his wise leadership of the committee, and I thank fellow committee members for their tolerance of my interventions. The advice we received and the support that we had from the team as well as the evidence that we received from the inquiry was all very helpful for the report. As the noble Earl pointed out, science and research are central to the economic future of this country. Its importance was recognised in the industrial strategy paper and I welcome the opportunity to debate it today.

As our chairman pointed out, a preceding report in April set out the challenges and some of the reasons why Brexit would be a problem for British science. The role of this report is to set out how we can address the challenge of Brexit and make it work for this country. The word “boldness” in the report’s title is an appropriate injunction. For that we have to thank the noble Lord, Lord Hennessy, for persuading us to adopt such stridency.

There is certainly complexity around this issue. There is Brexit, of course, but also the industrial strategy, as previously mentioned, and the Higher Education and Research Bill, to name but two elements of that. There are a lot of moving pieces. However, it is important not to let these moving pieces divert us from the scale of the task that we should undertake. The enormity of that is set out in the report. Therefore, I shall try to simplify my remarks around the themes of people, money and co-operation.

People are the cornerstone of science in this country, as the noble Lord, Lord Winston, set out very spiritedly, and the present situation is not good in that regard. The report is clear that,

“the Government should send repeated signals to the global science community that the UK remains”,

an exciting place for talented scientists. This patently has not been done as regards the response to immigration. People who are vital to our research and our scientific future are already making decisions. Some are leaving. Others are deciding not to come in the first place, and many more are mulling their options very seriously. I know scientists in this country who are confused, uncertain and hurt by the reaction they have confronted. Therefore the decision not to unilaterally offer the right to remain in this country to EU and EFTA scientists, and to include them in immigration figures,

is idiotic, as the noble Earl, Lord Selborne, put it. It hangs over science a bit like a foul smell in a fume cupboard and has a bad influence on our way forward.

The report is right: we need to continue to pursue schemes that attract people to this country, such as the Chevening scholarships, the Erasmus scheme and others. Far more ambitiously, we need to step out with the front foot and search for some of the world’s leaders in science. But how can that happen when the overall message is, “You are foreigners; you are alien”? Does the Minister agree with the approach to attract world leaders in science? If he does, why are the Government not working harder to make the leading scientists who we already have in this country feel more welcome?

My next theme is money. The noble Earl set out the huge amount of money that is at stake. Underwriting the approved Horizon 2020 funding was a good, reasonable first step and the Government should be commended for that. However, time moves on and the next programme is already being considered. We need to understand where we are going on that. The report raises those concerns. In today’s *Times Higher Education*, a leading German academic pointed out that the current confusion makes it very difficult to understand whether the United Kingdom will be part of the EU’s multibillion research funding system. How do the Government view our position within the funding system as regards Horizon 2020 and the other schemes? If they are not planning to be part of that system, what is the plan? Will all the money from which we benefit be replaced from somewhere else in the United Kingdom?

The additional funding set out in the Autumn Statement was welcome. Can the Minister confirm that this is additional funding and not the first down payment to replace money that we are going to lose? If the Minister could confirm that, it would be helpful. I also note that the first tranche of the industrial strategy challenge fund money—£270 million—was allocated to three important technology areas. However, I wonder whether the cart has not been put before the horse a little in that the industrial strategy itself is still just in the form of a consultative Green Paper and something of a twinkle in the Minister’s and the Government’s eye, and yet money has already been pitched into it. I hope that the Minister will explain how, without an industrial strategy, they plan to focus the industrial strategy challenge fund.

The report is strong on the need for continued and enhanced co-operation. I am sure that no one in this House would disagree with that. However, we have a very good example of where existing co-operation is already being threatened, which sends out a bad message. I am sure that other noble Lords will have their own examples, but that message and the speed with which we are dealing with the Euratom issue throws the future of Culham into full and stark relief. In the context of seeking future co-operation, will the Minister explain how we are going to deal with the current co-operation issues vis-à-vis this very important institute? More importantly, would he tell the House what is the position of the scientists at Culham today? What is their future and how will it be mapped out as we go through the disengagement process?

The report rightly calls for boldness. Boldness requires bravery on the part of the Government in unilaterally assuring EU and EFTA scientists that they have a place here as long as they want to stay, in stating how the European funding of British science will be managed in future, and in admitting that we are sending out the wrong signals through our handling of the Euratom issue, and changing the way we deal with it. I ask the Minister to see the report as a call for action to achieve the best ends. At the risk of sounding like the title of a South American soap opera, I urge him to be bold and brave.

1.18 pm

Lord Krebs (CB): My Lords, I add my congratulations to the noble Earl, Lord Selborne, and his committee on an excellent and timely report. As the noble Earl hinted, I intend to speak about the European Centre for Medium-Range Weather Forecasts—ECMWF—as an example of how co-operation with other European countries and hosting European science centres bring great benefit to the UK. I seek reassurance from the Minister, as the noble Lord, Lord Fox, has just done, that in spite of Brexit, we as a nation remain committed to hosting such institutions. The Minister of State for Science and Universities said in his evidence to the Select Committee:

“We are already host to a number of important research facilities and we are continuing to develop our networks ... We continue to analyse all the opportunities to make more such commitments when they present good value for money”.

The ECMWF was established in 1975 in the UK after an international competition to host a new European institution. It is an intergovernmental institution independent of the European Union. Today it has 22 member states and 12 co-operating states from Europe. Its budget is around £85 million a year, half of which comes from member states and the other half from competitively won research and service contracts. It employs around 300 people located in Reading.

The role of the ECMWF is to advance the science of weather prediction and provide operational weather predictions, out to two weeks ahead, to the national meteorological services of its member states and other weather service providers. It was created to have facilities, such as a supercomputer, that one nation alone could not provide. The ECMWF quickly established itself as the world leader—a position it still holds today, recognised by all in the field. Its forecasting skill is the best in the world. It has become a magnet for atmospheric scientists worldwide to come to the UK to discuss and develop the science of weather, atmospheric pollution and climate projection. It works closely with the Met Office and the two together are seen internationally as a powerful scientific axis in the field of weather and climate. The ECMWF’s supercomputer is the largest in the world devoted to weather science and prediction.

The ECMWF’s accommodation at Shinfield Park in Reading was fully provided by the UK Government as part of the deal to locate it in the UK. But its success and growth mean that it has outgrown the site in Reading both in terms of office space and the computer centre. The governing body—the ECMWF Council—decided that the priority was to rehouse the data centre. As the noble Earl, Lord Selborne, has

already said, on 1 March this year, the council made a provisional decision to relocate the data centre to Italy, with the final decision, after contract negotiations, coming in June.

The United Kingdom was not even second in the race to house the new data centre: Finland was the runner-up, with no third choice. Although the United Kingdom Government identified at least three possible sites in the UK for the data centre—near the University of Reading; at Harwell; and in Exeter near the Met Office—the financial input offered by the Government to provide the new facility was derisory and of a different order of magnitude from the Italian offer. I ask the Minister why the UK decided not to mount a competitive bid to house the one of the largest supercomputing facilities in the world for weather and climate. Why is something that was so attractive in 1975 no longer attractive in 2017?

Although it is clearly not ideal to have the computer in a different country from the scientists, it is workable from a purely technical point of view. So why is this a bad outcome for the UK? First, while we have housed the data centre, other countries have been investing in our infrastructure and engineering capacity; in other words, we get leverage. Secondly, this computing capacity enables us to be the hub of a global telecommunications network. Thirdly, it has given us technical know-how and experience in procurement, which has been valuable in the Met Office’s procurement of its new Cray supercomputer. Fourthly, it has been of benefit to the ECMWF to have the computer co-located with the scientists so that they can code in the most efficient way to get the most from the machine. But perhaps most worrying of all, in the longer run, the loss of the data centre from the UK may be a prelude to the loss of the ECMWF itself, if the UK is signalling, by its lack of willingness to invest, a lack of interest in the centre.

There could have been a good news story here for the UK. We could have demonstrated at the time of Brexit that the UK was still committed to collaboration with our European partners, whether in the EU or not. But by letting the ECMWF data centre go from the UK, the Government have given exactly the opposite message. I hope that the Minister will be able to respond by clarifying the Government’s position on the ECMWF and its data centre—either now or perhaps later in writing. I end by paraphrasing Oscar Wilde: to lose one centre may be regarded as misfortune; to lose both looks like carelessness.

1.25 pm

Viscount Ridley (Con): My Lords, like others, I commend my noble friend—indeed, my noble kinsman—Lord Selborne for his very skilful chairing of this report. Like the noble Lord, Lord Fox, I thank the other members of the committee for putting up with my strange interventions from time to time.

I will focus on regulation and its impact on innovation; in particular, the first item of the Government’s response to our December report. The Government say in that response that, thanks to UK influence, “the EU has changed its approach to regulation”, and that, “Brussels is now more focused on reducing burdens for businesses”,

[VISCOUNT RIDLEY]
and,

“recognises the need for innovation-friendly regulation”.

I am sorry to say that I disagree with this and I see few signs of it. On glyphosate and neonicotinoids, on GM crops and GM insects, on data mining and digital technology, on snus and vaping, on great crested newts and long-eared bats, on stem cells and gene editing, on biomass burning and diesel—on many, many matters—I see Britain losing opportunities to bring in safer, cleaner and greener innovations because of our interpretation of rules promulgated in Brussels. As a result, we are not just unhelpful but counterproductive and are making things—environmental problems, health problems and economic competitiveness—worse. We are overzealous in applying the precautionary principle so as to effectively outlaw safer new innovations to the advantage of less safe existing technologies. We refuse to distinguish between hazard and risk, so that chemicals that are safer than coffee—even though they are never ingested, like coffee is—are banned. We are indecisive, slow, cumbersome and sometimes in hock to big companies and their desire to create barriers to entry.

I stress that I am not against regulation that makes the world safer, I am against regulation that makes the world more dangerous. My opposition is not ideological but pragmatic. I am calling for regulatory reform, not deregulation. For example, we are using more insecticides today in farming than we would have done if we had adopted genetically modified crops—that is undeniable given the evidence from the rest of the world about how BT crops have reduced the need for insecticides. Being in the EU, therefore, has been bad for bees and bad for birds.

The EU is about to make the same mistake, I fear, over the even safer and even more organic technology of gene editing. As *Nature* magazine put it in an editorial recently, the EU is,

“habitually paralysed whenever genetic modification is discussed. Two years ago the European Commission requested all member states to hold back on giving the all-clear on gene editing while it considered its options. Now its hand is being forced, ever so slowly, by the referral of the issue by France to the European Court of Justice ... last October”.

A decision on that case is not expected before 2018, while America roars ahead with this technology. If this is innovation-friendly regulation, we can do better.

Then there is data analysis, where EU red tape is handing a competitive advantage to other continents. Lenard Koschwitz, director of European affairs with Allied for Startups, recently said that,

“post-Brexit Britain could draw data analytics start-ups. We currently see countries including China and Singapore doing away with barriers for text mining. Why not the UK also?”.

More generally, we should listen to the wise words of Sir John Bell, the Regius Professor of Medicine at Oxford University. Writing in the *Financial Times* last August, he said:

“Britain is more inclined towards a relatively liberal risk-based regulatory environment that allows fields to move quickly—to reflect on ethical issues but not to over-regulate. The EU, by contrast, has a record of deep regulatory conservatism, attempting to legislate and control many aspects of science that are not deemed here in the UK to present a significant danger”.

He concluded:

“A failure to implement sweeping changes to regulation and its institutions in the UK would be to miss an important opportunity. We need light touch regulation similar to Switzerland so that Britain can become a global leader in life sciences, data, genomics, regenerative medicine and other innovation-based fields”.

In the hearings for this report we heard similar responses in evidence. Dr Beth Thompson of the Wellcome Trust told us that,

“we are discussing where we might be able to tweak legislation or look for advantages for the UK”,

so,

“there is real potential that we can use the UK as almost a testbed to try new regulatory approaches and within a more robust framework be more experimental”.

Sir Michael Rawlins of the Medicines and Healthcare Products Regulatory Agency said:

“We could be swifter than the EU. Right at the very end it is not the European Medicines Agency that gives marketing authorisation; it is the Commission en collège, and it takes 67 days on average. Someone I know very well in the pharmaceutical industry told me that each day of delay for a pharmaceutical marketing authorisation costs the company about \$1 million. That is \$67 million gone waiting for the Commission to decide to meet en collège”.

When we leave the EU we need an innovation principle, alongside a sensible version of the precautionary principle. It should state that all regulators must take into account whether the enforcement of a new rule would stifle innovation that could be beneficial. So in replying, I ask my noble friend to assure us that, in contrast to the message delivered by the response I quoted at the start of my remarks to our December report, he agrees this is a time for boldness, in regulatory reforms as well as in every other respect.

1.31 pm

Lord Hennessy of Nympsfield (CB): My Lords, I declare my membership of the Science and Technology Committee and add my tribute to the chairmanship of the noble Earl, Lord Selborne. I also declare my fellowship of the British Academy and my professorship of contemporary British history at Queen Mary, University of London.

When violence strikes, as it did yesterday, taking lives, injuring individuals and assaulting the central institution of our open society, it scarcely seems right, in the shadow of tragedy, to return to our disagreements over Brexit. Yet today we find ourselves on a significant patch of the post-referendum landscape, where I hope we can find more to fall in about than to fall out over. By this I mean the desirability—more than that, the powerful necessity—of our country remaining a world-class player in science, technology, the arts, humanities and social sciences; in short, the indispensability of continuing to think heavier than our weight in the world.

We may agree on this crucial shared purpose, but how best to sustain it—even to burnish it still further—in our new geopolitical circumstances, raises a host of questions, many of which are captured in the Select Committee report before us. Ours really is, as other members of the committee have said this afternoon, a time for boldness, not timidity, for building purposefully on past achievements and striving for an even greater national performance.

A powerful contributor to this cause will, I hope and think, be a knowledge of how we acquired our existing prowess—how it has been achieved over many decades. I am delighted to say that the British Academy, encouraged by your Lordships' Science and Technology Committee, is working on precisely this, analysing the singular and, I have to admit, rather baffling mixed economy that supports the life of the mind in the United Kingdom. I look forward to the results of that study with keen anticipation. We each have a kind of idea of the key factors in our prowess, ranging from the admirable Haldane principle, which helps keep the state an indispensable sponsor but not an unwelcome, overdirecting intruder into the free play of independent inquiry, right through to the dual support system for our university research.

Critical, too, I am sure, to past and current success is the scope given in the UK universities to young researchers to question orthodoxies and to open up new lines of thought; in other words, to not defer to their seniors. Crucial to this is the free movement of talent, not least to and from the nations of the European Union. There can be no tariffs on the exchange of knowledge. Nor should there be post-Brexit any barriers to the free movement of scholars who carry these ideas. The most precious of all common markets has always been the common market of the mind.

In the unfolding cartography of Brexit, the avoidance of boundaries on the scientific, technological and scholarly fronts is therefore a first-order question. Both the Department for Exiting the European Union and the Department for International Trade will need bespoke chief scientists of polymathic gifts to patrol the new rimlands, providing early warning of both problems and possibilities ahead and helping to ensure that our requirements and existing prowess are safeguarded during the great repositioning to come. For the free trade of the mind, in both people and knowledge, is as critical to our fortunes as the free trade of goods and services. Our intellectual and economic well-being depend upon it. It is a question of both funding and spirit—of recognising the sense of urgency required—and it links the uncertainties of Brexit with the wider industrial strategy that Mrs May has striven to make such a shining badge of her premiership so far.

Of all the eight previous industrial strategies since the Second World War, science and technology has more prominence in this one—if last January's Green Paper is a guide—than in any since the early 1960s, when Harold Wilson used the “white heat” of his wished-for technological revolution to illuminate his path to 10 Downing Street in the autumn of 1964 and his promulgation of Labour's *National Plan* a year later. Perhaps the noble Lord, Lord Prior, for whom I have the greatest respect, could promise us a bespoke debate on this, the ninth industrial strategy of his and my lifetimes. I hope he will forgive me if I make plain to other noble Lords that he and I have been engaged in a rolling conversation about what the magic ingredients of the 2017 version might be that were lacking in the previous eight. He might like to give us a little hint of that when he winds up.

What I am sure of is that when economic historians in the 2050s look back on the anxious, neuralgic politico-economics of the early post-referendum period

through which we are now living, they will notice just how much was riding on the UK's science and technology—on Britain as a knowledge power. If we do not get this aspect of our national life right this time, those historians will not spare us, and nor will our people, whose current and future needs this Parliament exists to serve. We have here a consensus in the making. We should act on it—and seize the hour.

1.37 pm

Baroness Morgan of Huyton (Lab): My Lords, I am pleased to take part in this important debate and particularly pleased to be a member of the Select Committee under the able chairmanship of the noble Earl, Lord Selborne. We are served by a strong team, and particularly by a specialist adviser whom we regard highly, who puts up with a great deal of trouble from some of us at times. He is truly an asset to us. I also draw attention to my relevant interests as outlined in the register, specifically that I am a chairman of the Royal Brompton & Harefield Trust and vice-chair of Council at King's College London.

The committee's report in April, ahead of the referendum, reflected the overwhelming balance of opinion we heard. The UK science community hugely valued the UK's role and partnerships within the EU, was concerned about the loss of strategic influence—including positions of leadership in important areas of research—recognised the significant funding advantages enjoyed by the UK, the harmonised regulatory environment, access to research facilities, and the easy movement of talented individuals and teams.

It was right to return quickly post referendum to this subject—and no doubt we will do so again repeatedly. Indeed, I suspect that we would all argue that support for science—in its broadest definition—has become even more important since 23 June and will be vital to the success of a post-Brexit economy.

There are real concerns about future funding beyond the period of funding guaranteed by the Government. I do not doubt that government, particularly the Treasury and BEIS, understands the need to fund science and research, but the reality of the financial pressures piling up makes me extremely nervous. Scientists have heard the reassuring confirmations from the Government about funding in the near future, but collaborations take time to develop and, as we know, they can last for very many years. There is no certainty at the moment for that sort of period.

However, in my brief contribution I will focus on the area that most concerns me: attracting, growing, retaining, valuing talent—in other words, people. In the end, they are the most valuable resource. International funding follows brilliant people, and they in turn create strong teams and attract more funding and talent. It is a sort of circle of excellence.

Throughout our hearings for the April and December reports, we heard repeatedly from academia and from business—from start-ups to large companies—that attracting talented, highly skilled people was top of their collective agenda. I am aware of, and was pleased to read about in the industrial strategy Green Paper, the drive for technical education, whether through new post-16 qualifications or apprenticeships. This reskilling and upskilling of our population both at

[BARONESS MORGAN OF HUYTON]

school and throughout life is essential to harness opportunities now and particularly in the future as it becomes, presumably, more difficult to attract workers from overseas and as jobs change fundamentally and require new skills. The report from the Digital Skills Select Committee, before the referendum, highlighted the priority that should be given to improving digital skills at all levels in our population and the need to enhance these skills throughout life, but digital is only a small part of the STEM story.

However, I am anxious that there is still a lack of proper “joined-upness” across government on all this. In particular, I am somewhat anxious about the involvement of the DfE in a coherent approach to STEM. One example is maths. Last year I chaired a commission looking at how to strengthen STEM teaching and outcomes for students in Haringey. Among a range of recommendations around attracting strong teachers, getting STEM into primary schools, creating new partnerships with the independent schools sector and greater specialisation post 16, we looked in particular at maths in schools. We were told very clearly by employers and economists—from Sir Roger Carr at BAE Systems through to very small local start-ups and local health employers—that they all were looking for a similar thing in young people. They were looking for strong basics, confidence and the ability to work in teams and to think and question—in other words, rounded, bright individuals—but they also all emphasised the importance of confidence around numbers, at whatever level these young people left formal education. That meant, they argued, that students should continue with maths for as long as possible to develop capability and confidence, whether or not it was to lead to a further qualification.

However, we found that there was a widespread under-the-radar approach, whereby only students with an A at GCSE were being allowed to take maths in sixth forms. This is obviously the negative effect of blunt accountability—I confess that I speak with history on accountability—where head teachers are anxious about their students not getting a high enough grade at A-level, affecting what is out there in the public realm, and so are not allowing them to take maths post 16, coupled with difficult finances in schools. The Institute of Physics, among others, said that it was aware of, and concerned about, this approach. It thought it was wrong and limited participants in higher-level STEM studies across the piece. Limiting students who take up maths to only those who get the top A-level grades goes against the stated government intention of increasing STEM skills at all levels. I hope very much that the maths review headed by Professor Sir Adrian Smith makes clear recommendations around this issue, and in particular I hope that the DfE recognises its responsibility to sort this out.

When our Select Committee heard from Sir Mark Walport this week about UKRI, we asked about the promotion of STEM in schools. His reply gave little comfort that his team had any links with the DfE. He said that it would produce a “narrative” about why STEM is important. That is not to criticise Sir Mark but, rather, to emphasise the need to understand the whole picture of education and training rather than

segment it according to government department. But of course the attraction of highly skilled individuals to university, post-doc and beyond, and to industry is crucial. We know that the intertwining of universities and industry is fundamental to the UK’s future success and in particular to less favoured, non-golden-triangle regions and sub-regions of the UK. The industrial strategy Green Paper is pretty weak on the attraction and development of high-level skills and I hope that it will be strengthened post consultation.

We know that EU students make up about 5% of the UK university population, with non-EU international students making up about 14%, the figure being particularly high in the postgraduate sector, but in leading research universities the proportions are much higher. I know that at King’s College London, for example, across the student body over 14% are from the EU and a further 22% are from countries outside the EU. Among academics, 28% are from EU/EEA countries. I have been involved in interview processes already where candidates are hesitant about either staying here or, in particular, moving here from another EU country, and even people outside the EU are now affected by the general uncertainty.

At the Royal Brompton and Harefield NHS Foundation Trust, I have had a look at the relevant figures. The starkest figures are that 52% of nurses and 20% of doctors are EU nationals, and in cardiology the figure rises to over 26.5%. The reason that that matters is obvious: the Royal Brompton and Harefield trust, like other highly regarded specialist trusts, is important both to the delivery of healthcare and to the standing of the UK. It delivers top-end, innovative treatment, and it works with its academic partner, Imperial College, to push the boundaries in respiratory and cardiac medicine. That needs bright and highly capable people. The UK needs such places and such people as beacons post Brexit.

However, when I talk to colleagues at the hospitals and at King’s College, they report insecurity, nervousness and instability. That is hugely damaging for teams that rely on each other to deliver results in research and treatment. Such reactions are not surprising. To be blunt, at its best, they are getting mixed messages from government and throughout the media. The cacophony is confusing: positive one day and negative another, depending on the Minister, the department and the press reaction. They read distressing personal stories about long-standing residents of the UK being ejected, and they wonder what that means for them.

The Government say that it is important to attract the brightest and the best but then say that they collect statistics on students so that local authority services can be planned. That really does not wash. We already know that existing visa arrangements for non-EU students and highly skilled employees from non-EU countries are cumbersome and at best unfriendly. I have talked personally to many post-doctoral students moving away from the UK. In other words, as we heard very elegantly from my noble friend Lord Winston, we train them and then we lose them, and these are our new trading partners of the future. It is crazy.

It seems to me that the real problem is this: people are not run by algorithms—even scientists. They are not 100% rational. They have emotional reactions and

are affected by stories and rumours and by someone saying something unpleasant on the train, in the supermarket or outside the school gate. They wonder whether their families will really be welcome here and whether they should take the risk of coming to the UK or of seeking their next post or promotion here. Should they limit the risk by seeking their next job in France or Germany instead of living with a level of insecurity? Crucially, they are asking whether the UK is the place they had understood it to be. There should be no more mixed messages and justifications, and no more concerns about *Daily Mail* reactions. This needs to be sorted out for our economic future but also for our collective values as a country. I look forward to the Minister's response.

1.47 pm

Lord Trees (CB): My Lords, I am not a member of the Science and Technology Select Committee but I have read its report with great interest—it provides a forward-looking sequel to the earlier report of July 2016. I join other noble Lords in congratulating the noble Earl, Lord Selborne, and the committee on the production of an excellent report and I welcome its conclusions. I should perhaps declare my interests as an emeritus professor at the University of Liverpool and as chair of Moredun Research Institute in Edinburgh.

I want to make a few brief points, some of which have been alluded to already. The first is about the international nature of our science and technology, on which the noble Lord, Lord Winston, spoke passionately. That internationalism undoubtedly contributes to the quality of UK science. In my own field of veterinary science, in the latest global rankings of quality, the QS World University Rankings, of the top five veterinary schools in the world, three are in the UK—a fact of which I am very proud. In our veterinary schools in the UK, nearly a quarter of our academic staff are non-UK EU nationals and they make a vital contribution to our academic discourse in teaching, in clinical teaching and research, and in bench research. It is essential that we retain such people for the future.

Especially in the smaller disciplines, the critical mass which so often fertilises and nurtures new ideas and innovation can be achieved only by interinstitutional and international contact, collaboration and exchange. That is why continuing participation in EU framework programmes, the latest of which is Horizon 2020, is so important. Yes, the research funding is valuable and UK scientists have been incredibly successful in winning EU research grants, as the noble Earl, Lord Selborne, mentioned in his opening remarks—but it is the collaborations that are intrinsic to those EU research grants that are so important.

I will mention a particular EU networking programme that I do not think was referred to in the report: namely, the European Cooperation in Science and Technology—COST—programmes. I have been a participant in a number of these. Funds are awarded specifically to support networks of scientists, funding meetings and laboratory exchanges and so forth on defined topics. They do not fund actual research, so the value of the awards is relatively modest: between about €100,000 and €150,000. However, as a catalyst for multicentric research co-operation, they give a big

bang for the buck. I hope that the Government can ensure in the forthcoming negotiations that the UK will continue to participate in the EU COST programmes. Will the Minister give the House that assurance? If we are not able so to do, I urge the Government to find the relatively modest budget from our future science budget to set up a UK-led equivalent scheme, which could be globally inclusive and would be real testament to the Government's global aspirations in science and innovation.

The other aspect of EU funding that I want to mention—I declare an interest as a beneficiary historically—is that the framework programmes have often funded what one might call “applied research”, bridging the gap between more basic research for which we can seek research council funding and the downstream R&D which industry may fund. Many researchers, particularly in the biomedical and health fields, recognise the so-called “valley of death” in funding, which can result in promising areas of research never getting to commercial application. It is essential for our country's economic success that we ensure in our future funding environment, with or without EU involvement, a steady continuum, progression and sequence of research support from basic science to ensure that ideas reach a finished outcome.

The last point I wish to make is on the report's recommendation that the Government, working with the UK scientific community and international bodies, seek to establish one or more new international research facilities; on the scale of the Francis Crick Institute, for example. That is a long-term aspiration with which of course I completely concur. However, could I make a plea on behalf of the UK regions? Let us please look beyond the golden triangle of Oxford, Cambridge and London in which to site such initiatives. Of course, a clustering of scientific industrial and commercial activities is important for the success of such ventures, but there are good universities up north and burgeoning high-tech industries in other parts of the UK. Our goal should be to foster several golden triangles.

1.53 pm

Lord Hunt of Chesterton (Lab): My Lords, this is an important debate for the future of UK natural and social science, technology, medicine and research in humanities—which I will loosely call “science” in my remarks. I declare my interests concerning scientific research in various organisations, including in Europe. I was an emeritus professor at UCL and I am a former director of the Met Office and chairman of a small environmental company.

Broadly, UK science has become more integrated with European science over the past 40 years. Indeed, the science programmes and associated technology programmes of many countries outside Europe have become more European, as the *New York Times* has sometimes commented, with most leading countries taking up European scientific and technical standards and regulations. I agree with the noble Viscount, Lord Ridley, that improvements are needed. But surely, if you want to make improvements, you do not walk away, you walk in there and make the improvements—so I have a different attitude from his, which seems to me too pessimistic.

[LORD HUNT OF CHESTERTON]

Many UN agencies are also influenced by the European lead, yet the UK is walking away from this global trend. Examples of this global scientific integration with Europe are the major facilities such as the CERN hadron collider and the ITER fusion, with strong US and Japanese involvement. Major international companies also have research establishments in Europe as well as in the UK.

This global Euro trend is reflected in our House of Lords Science and Technology Committee report, under the able chairmanship of the noble Earl, Lord Selborne. However, it is not reflected in the rather insular approach of the Government's response. The European dimension has greatly helped the UK develop its science since it joined the EU. To start with there was reluctance among many UK scientists to apply for EU grants that had to involve many European countries—jokes were made about having always to have somebody from eastern Europe or Cyprus—but that idea has now gone. As European science funding increased, so too did the recognition that EU research projects were generally of the highest international standard and rigorously refereed; indeed, sometimes the refereeing of these EU projects has been higher than in the UK, as has been commented by our European colleagues. The UK recognised that the excellence of its research was intimately linked with UK researchers being involved in EU projects.

Our committee heard evidence that the EU dimension of UK research has also enabled humanities research to expand greatly and that, with Brexit, there will be probably much less funding for this area of research. That is despite the fact that creative and humanities research is now recognised as an essential part of the UK's industrial strategy, which we welcome. The EU, however, will not be left behind because, as I saw in some emails this morning, it now has an expanded programme on the funding of creative research, with some interesting new openings. The quote that guides its programme on this creative research and economics is that of Steve Jobs of Apple.

The first point for a future strategy should be partnering in research excellence with EU programmes, as the noble Lord, Lord Trees, commented. One way will be to provide funds to UK research groups, centres and networks to enable this to happen. Again, that is not referenced in the government response. The leaders of EC programmes are already putting out feelers to see if the UK will continue participation, as they do with other non-EU countries such as Israel, north Africa, Norway and Switzerland. These programmes are for all areas of technology and science.

An example of how collaboration might develop in future is the fact that, in my own area of fluid mechanics, the EPSRC has an excellent UK network which is now considering how it can organise in collaboration with the European-wide network of special interest groups, which UK scientists took a lead role in setting up in 1989 in the great Henri Poincaré lecture theatre in Paris. This will be important for keeping Europe and UK industry in the lead, for example with new aircraft design for the 2020s.

Our committee recognised that a central component of European research is the intergovernmental science, technology and regulatory agencies and laboratories, such as—as was mentioned by the noble Lord, Lord Krebs—the medium-range forecasting centre, the space centre, the drug regulation centre and others. Some of these were set up before the UK joined the EU and they have, in all cases, been very successful in their specific technical role. For example, the ECMWF forecasts are now generally superior to those of the USA. It always talks about tomorrow's weather being defined in Europe as this, and defined in America as that—and we usually see what the result is.

We also have to stimulate Europe and UK business. For instance, Tim Peake's involvement with the European science agency part-funded space station was hugely successful as a stimulus to UK science—as are the Christmas lectures at the Royal Institution and school events at the Science Museum.

The committee did not also point out that there is now a very close working relationship between the research and development commissions in the EC, which leads to the applications of much of the research of these intergovernmental agencies. The UK will not be involved in directing future EU research programmes—which, as I say, will be increasingly important for these intergovernmental agencies in which the UK is participating. We need to think about finding a diplomatic way to lead in this role in future.

There is considerable concern, therefore, about future UK involvement in these European agencies. Although it is likely that the UK will continue its membership, there is concern as to whether the research and computer centres will continue to be located in the UK. The recent decision about the European centre has already been mentioned. However, I emphasise that this kind of centre is an example of how science is applied. The centre is now working on energy and environmental applications of atmospheric and ocean science, showing the value to the UK and to the consulting company of which I am chair in Cambridge. We also work with the European centre and this leads to practical benefits.

Similarly, the UK Government should affirm their commitment to the recently established data and modelling centre at Harwell for the European Space Agency. Will the UK continue to support it? Now there is a possibility that these centres may leave the UK, it will be very important for the Government to affirm their continuation.

The report of the House of Lords Science and Technology Committee went further than just calling for the UK's continued involvement in Europe, it called for the UK to consider setting up new major R&D institutes where opportunities might arise. These should be located where the UK already has strengths and be planned to contribute to the UK's new industrial strategy. As the noble Lord, Lord Trees, says, they should also be in locations where there are no such centres at the moment.

I suggest—the committee is considering this—we should establish a world centre for nuclear energy and nuclear waste. This would obviously be in Cumberland, an area that is not well supported in science. This is the kind of thing we need to have. That would certainly be bold.

2.02 pm

Lord Mair (CB): My Lords, I speak as a member of this House's Select Committee on Science and Technology, chaired by the noble Earl, Lord Selborne. I declare interests as a fellow of the Royal Academy of Engineering and of the Royal Society. I am also professor of civil engineering at Cambridge University, where I lead a large research group, many of whom are non-UK EU nationals.

My principal point relates to the Select Committee report's recommendations regarding people, the subject of chapter 3. One of those recommendations is:

"In the short term the Government should send repeated signals to the global science community that the UK remains a welcoming place for talented scientists".

This recommendation could not be more important. The continued success of our science and technology research is absolutely vital for the economic growth of the country, and it is the people who are crucial. At present, UK research is world-leading, second only to the USA. It is worth noting that in 2015 half of the UK's research output was a result of international collaborations. About a third included EU partners. Losing this ability to collaborate freely would be very damaging.

The noble Lord, Lord Winston, referred to post-docs being the backbone of research teams. I fully agree. In my own Department of Engineering at Cambridge, we have over 300 post-doctoral researchers, most of them employed on research grants. This community of young dynamic scientists and engineers from all over the world is the engine room for the research that underpins the university's world-leading reputation. One-third of these people are non-UK EU nationals. The picture is similar across the whole of Cambridge University and for other leading UK science and technology universities.

Perception is most important here. Since the referendum, young researchers around the world have the perception that they are no longer welcome in the UK. We have a huge cohort of young scientists and engineers currently in the UK contemplating their futures, who, to put it bluntly, are looking elsewhere, and the generation just behind them will not choose to come to the UK in the first place. This perception is also damaging for young UK academics contemplating their future. I am seeing this with my own eyes. Let me give an example. Only last week, a bright young British Cambridge scientist told me that, faced with a choice of applying for a position at Durham University or Trinity College Dublin, he was minded to go to Dublin. For him, the key questions were access to EU funding and freedom of movement of academics around Europe. Key non-UK EU nationals in my research group are already looking for positions outside the UK for the same reasons. The story is the same everywhere.

It is not only universities that are affected. According to the Royal Academy of Engineering, 25% of UK start-up technology companies were founded by non-UK EU nationals, and 45% of UK start-up employees are non-UK EU nationals. A clear message is urgently needed from the Government if these vital start-ups are to remain and thrive in the UK.

Many of these start-up employees are engineers. At the very time when our country faces an engineering skills crisis—with an estimated 186,000 new engineers

and engineering technicians needed per year until 2024, according to recent figures by Engineering UK—we risk making recruitment and retention difficult. Engineering in the UK is highly dependent on non-UK nationals. We cannot afford to lose them or to deter new ones from coming.

Speedy removal of uncertainty is clearly of paramount importance. The Government should act now, without delay. There needs to be a reconfigured immigration system which promotes academic and researcher mobility, enabling UK universities to continue to attract and retain these talented individuals, both now and post Brexit. Such a system should be simple and not a deterrent. It should be designed to support the dynamic nature of research by facilitating mobility for academics and innovators of all nationalities.

I have concentrated on the crucial importance of people because without people there will be no research, and, of course, without funding there will be no people. The noble Earl, Lord Selborne, referred to the announcement in the spring Budget that the Government will invest over £100 million over the next four years to attract the brightest minds to the UK to help maintain the UK's position as a world leader in science and research. This is a welcome announcement.

The Select Committee report recommends that the science and research budget will need to be adjusted at an early opportunity to compensate fully for the reduction of funding from the EU. The Government must ensure that there is no decline in overall public funding for UK science and technology.

The proposed industrial strategy has already been referred to by the noble Earl, Lord Selborne, the noble Lord, Lord Hennessy of Nympsfield, and others. The development of an industrial strategy during the UK's departure from the EU is a major opportunity for the Government to strengthen their support for UK science and technology and to increase its role in the economy. The recent Green Paper on industrial strategy identifies 10 pillars, two of which are "Investing in science, research and innovation", and "Developing skills", both requiring the brightest minds and fully adequate public funding. As the committee report notes, the Government have the power to mitigate many effects of Brexit. They could use the industrial strategy not only to compensate for Brexit but to further increase the attractiveness of the UK as a place to pursue science and engineering careers.

In summary, the Government should take decisive steps to promote the UK both as a first-class location for research careers and an attractive partner for international collaboration. As soon as possible, the Government must provide certainty and stability for those researchers and innovators who are non-UK EU nationals. This is needed both for those currently working in the UK and for those contemplating a future here. This is indeed the time for boldness and I hope that the Minister will agree.

2.10 pm

Baroness Walmsley (LD): My Lords, the tone of our debates at Question Time this morning was more subdued than usual for obvious reasons, but in this debate we have rightly returned to a considerably more

[BARONESS WALMSLEY]

forthright tone. We have heard words such as “idiocy”, “derisory” and “carelessness”, so if I continue in that forthright tone, I hope the Minister will accept it in the spirit of returning to business as usual as soon as possible.

No scientist in her right mind would think of Brexit as being anything other than the worst challenge we could impose on UK science. Why would we want to lose access to major sources of funding, put at risk valuable international collaborations, deter top scientists from coming here and leave our biggest market for the outputs of science that make our lives better, healthier and longer? The committee’s report does its best to be optimistic, but it expresses very clearly the serious downsides of the choice this hard Brexit Government have made. As someone who is particularly concerned about the effect of Brexit on our life sciences, UK patients’ access to cutting-edge medicines and treatments, and the survival of our health and care services, I welcome the committee’s report, which highlights many of the concerns I have felt ever since 24 June last year, and it proposes some solutions to mitigate the worst of them.

One of the first effects I heard about, within a week of the referendum, concerned a research scientist I know who was in the early stages of a collaborative research funding application to the EU with scientists from elsewhere in Europe. He was asked to withdraw on the basis that his presence in the team would reduce the chances of the application being successful. So, while the committee states that there is a scarcity of hard evidence for this effect, it accepts that there is anecdotal evidence of discrimination in ways that may never be documented. I know that to be true.

A great many of our research projects are funded by the EU. The UK has benefited more than any other member country from EU money for science, partly because we are very good at spending it well, so the Government’s commitment to underwrite Horizon 2020 funding with new UK money is very welcome. However, what happens when Horizon 2020 comes to an end? It would be better if the Government tried to negotiate continued access for UK scientists to Horizon 2020, its successor and other EU funding, given that other countries outside the EU already have such access. The Prime Minister may not have the stomach to try to negotiate continued access to the single market, but surely our negotiators can have a try at this one, given its importance to our economy.

Harmonised regulations are particularly important to the development of medicines and medical technologies. While I agree with the noble Viscount, Lord Ridley, on the issue of GM crops, I find myself more in agreement with the remarks of the noble Lord, Lord Hunt of Chesterton, about regulation. Regulation is not necessarily a burden, and if it was faulty we could have tried to improve it from within rather than walk away. We have the freedom to sell and the confidence to buy when our regulations are identical to those of our major customers. It is therefore not surprising that most of the submissions to the committee called for UK regulations in the scientific domain to remain harmonised with the EU.

In the medical domain, UK scientists have played a major role in the European Medicines Agency, and we have here in London a great deal of the expertise in medicines licensing and regulation. Where will that expertise go after Brexit? Professor Dame Jocelyn Bell Burnell pointed out that if we wish to trade with Europe, we are going to have to abide by the European regulatory system. But of course, that system will not remain static; it will change over the years, so I ask the Minister, how are we going to keep up? If the Government decide to set up our own system it will be very expensive, as pointed out by Mr James Lawford Davies, a solicitor and partner at Hempsons, in his submission to the committee. The UK would have to set up its own infrastructure and administration, with no additional benefit to us. It looks to me like a classic example of shooting yourself in the foot. The Government tell us that it will be all right but I am afraid that, based on their record to date, I doubt it.

Have the Government assessed the cost of setting up such a system, and if not, why not? The Government appear not to have heard of the phrase “plan B”. Will the increased trade we are supposed to be expecting post Brexit be in excess of the costs of this system? The committee recommends that such an assessment be made and published prior to the introduction of what my noble friend Lady Ludford calls, “The not so great cut-and-paste Bill”. Can the Minister assure us that that will happen so that we can assess the damage? Of course, the costs of an independent system are a fact, while the potential for increased global trade is speculation. No sensible business person exchanges facts for speculation, and neither do they take on unnecessary costs. That is why much of business is against Brexit, although as we know, big business is very flexible and resourceful and will survive.

UK science depends not just on international collaborations but on attracting top-flight scientists and student scientists to the UK. Here, the committee expresses serious concerns in its report about the Government’s approach to immigration. On the one hand, Jo Johnson MP stated:

“We remain fully open to scientists and researchers from across the EU”,

while on the other hand, the Home Secretary, Amber Rudd, told the Conservative Party Conference that she would,

“look again at whether our immigration system provides the right incentives for businesses to invest in British workers”—

a not so veiled threat that is to be followed up by action. In two weeks’ time the immigration skills charge—a charge of £1,000 per year for workers brought in from abroad on a tier 2 visa—will be implemented. There are exemptions for PhD chemists, physicists, social scientists, research and development managers and so on, but there are no exemptions for health and care employers bringing in essential doctors and nurses to fill the gaps in our health service. When we discussed the regulations two days ago, I demanded an exemption for the NHS and social care, and I repeat that demand today. The tax will cost front-line services £7.2 million per year and add to the black hole in funding, at a time of severe Brexit challenge to the health workforce. It is a very short-sighted thing to do. The committee pointed out that the Government are also being “less than

helpful” in refusing to exclude international students from their immigration targets, rightly described as “idiocy” by the noble Earl, Lord Selborne. The financial viability of many of our universities depends on being able to attract international undergraduate and graduate students and staff, so no wonder they are concerned about the Government’s intransigent attitude.

There are other avoidable threats. When the Health Service Medical Supplies (Costs) Bill went through the House, we passed an amendment to ensure that when the Government use their new powers in the Bill, they have to take account of the need to promote a thriving life sciences sector and access for UK patients to new medicines. Considering the challenges outlined by the committee in the report we are debating today, I am surprised that the Government overturned the amendment in another place. I hope that noble Lords will stand their ground on this when the Bill comes back to your Lordships’ House in a couple of weeks’ time.

I end by congratulating all members of the committee on their forensic examination of the threats of Brexit to British science, and I congratulate them on their valiant effort to be optimistic. I hope the Government will accept the committee’s helpful recommendations.

2.19 pm

Lord Mendelsohn (Lab): My Lords, I start by declaring my interest as an investor in the UK science and research base. I congratulate the committee on an outstanding report. Its extraordinary strength is only complemented by its remarkably few pages. It is extremely well judged. It makes all the right points with tremendous force in a very brief summary. I have recommended it to far more people to add to their papers and to what they read from this House. It is one of the greatest summations of where we are at the moment and a very good road map of where we need to be. I thank all the members of the committee who helped to add some colour to the discussions that they clearly had and for giving us the benefit of the particular perspectives. I also thank those from outside the committee with a keen interest in this for adding their words to it.

It is an extremely important report because it not only deals with the perils we are facing in a future outside of Europe but provides a freedom to think again and to inject a new sense of ambition. It is certainly true that we are at a moment of reflection—a tipping point, if you like—on what we do with our science and research base. UK science is a global force. It plays a fundamental role in the success of our healthcare, agriculture, manufacturing, technology and much else besides. We have won a prodigious number of Nobel prizes and our universities are well renowned. Our business and research institutions generate work of quality and influence far beyond competitors of similar populations and funding. We are a large economy, which can always support a strong base, but we have benefited hugely from our EU membership. It has given us a tremendous platform and we have excelled in it. Coming away from it will require an additional sense of purpose and an additional effort.

Of course opportunities will stem from leaving Europe, but there can be no doubt that the significant risks at this stage outweigh the potential benefits.

We have to turn our mind to how we address those. As the committee’s report shows, we have received more in EU research, development and innovation funding than we have put in. The Government have rightly committed to underwriting the funds approved for Horizon 2020 projects that were applied for before the UK leaves the EU, but we need the Government to provide more certainty for the long term, including on future access to funds that would have been otherwise available through EU grants.

However, this is about more than just plugging a funding gap. There remains a corrosive level of uncertainty in other areas, not least the status of EU nationals working in our universities, research institutes and industry. The committee cites evidence of European scientists abandoning plans to come to the UK. The introduction to the debate from the noble Earl, Lord Selborne, was an incredibly impressive summation of the report. He has clearly done an outstanding job leading the committee. He referred to the problem of evidence and came out with a very well-judged and balanced sense of how we have to try to devise the right level of evidence. As I go round talking to people, I cannot believe that—since, on every single occasion, they cite particular cases and examples—we do not already have a significant base of evidence. Just recently a professor of medicine told me of his research team: all those who are EU nationals—almost 80% of them—have already made plans to leave. The only timetable difference is that they are waiting for the next school year for their children to move. As for businesses in particular centres, I heard of a chief technology officer who is now looking at moving back and delaying funding rounds. The noble Lord, Lord Mair, made a very good point about technology companies and start-ups here that are moving to other areas—even our big technology companies. Other countries that have centres here use them as a base to recruit EU nationals to come and live in London to add to their base. The strong engineers—the ones who go off and create start-ups—are reporting the same problems.

This is extremely important. We do not just have a drop in university applications from the EU; we have huge uncertainties and perceptions that we need to deal with. It is crucial that we look to expand scholarships. It is a very important recommendation to look at how we have a recruitment fund. I consider that we may well end up having to spend quite some money on retention. The noble Lord, Lord Mair, made a very important point when he said that our British-born academics who would otherwise live here are being attracted to other places. My son has recently gained entry into an American university he applied for. It is reporting that applications from UK academics have tripled since the Brexit vote. That is in one institution. Retention will also become a significant problem and the quality of the research projects we have will continue to be an issue that we will have to place some focus on.

As for the notion of using students in the net migration numbers, I very strongly agree that it is entirely incorrect to say that this is best practice around the world—it is more best fiction. It has always struck me that we put them in the net migration figures and

[LORD MENDELSON]

then we put their economic contribution in tourism. That is a huge duality I have never been able to figure out.

The crucial point at the moment is our level of ambition. With all our strengths and requirements, to stand still is not just to replace what we have done before and do as we have done before—to stand still takes a huge amount of effort. But I do not think that we need to do that. We have to forge a new future, understanding what our strengths have been and what they are. In many ways the plan has to be to double down on our support for science and research. I am particularly grateful to the committee for using the notion, “A time for boldness”—not really a word I expected to see in a House of Lords report, but it is entirely apt to use such a phrase. It sends an important message that we will have to change fundamentally our approach to our commitment to what we will do in support of our science and research base, using it as a key instrument of our future economic success.

It is also important that we understand the central need for us to expand international collaboration and co-operation. Part of that is the problem of risk. We are the beneficiary of 20 bilateral science and technology agreements between the EU and nations including Brazil, China, India, Japan and the United States. The EU has 850 joint research projects with 160 nations. These are important projects that we are keenly plugged into and agreements that we have benefited hugely from. To maintain that level of co-operation and connection we need to have a tremendous amount of force and resource associated with our effort. To get ahead will require even more.

It is important for us to understand that international co-operation is increasingly a prerequisite for world-class scientific research. More than half our research output is now internationally co-authored. Much of our international collaborations are with EU partners. I think that seven of the UK’s top 10 strongest collaborators are EU countries. It is also important to recognise that people’s perceptions of the nature of international collaboration have changed. In preparation for this debate I recently read a survey of students who were asked the question, “Which country is having the most significant scientific impact on the world?”. Number one was international collaboration. The future of outstanding science and research is about international collaboration. Our place is to ensure that we remain at the very heart of it. That is also important. I add my voice to the committee’s point on making sure that sufficient scientific expertise is drawn into the Government’s Brexit negotiations and appointing scientific advisers to key departments.

Connecting our research base to business and industry will also be key in the years ahead. Innovate UK and UKRI will play an increasingly important role related to these matters. It is also essential to ensure that that partnership with business and other areas accompanies our expansion of facilities.

I strongly endorse the committee’s recommendation that at least one major research facility be introduced in this country—to say “at least one” is a good indication of ambition. More would be better, but if we fail to introduce one, we will fail to do more than stand still.

I have been to Harwell and seen this tremendous new instrument, the Diamond Light Source, adding to the central laser facility and the ISIS neutron and muon source synchrotron. These are not the only facilities of this nature: others are being built across the world, in other continents as well as in other parts of Europe. We have to do more to centre more on such facilities and to back them more strongly.

On the importance of ensuring that our research base is connected with business, we need to do more to ensure a good circularity in our scientific and research application. It is especially important as we witness business investment, including R&D, falling for the first time since 2008: a drop of 1.5% in 2016 compared with 2015 according to the OBR’s most recent report. The OBR forecasts a further fall in 2017, citing,

“heightened uncertainty following the EU referendum”.

We will not return to 2015 levels until the end of the decade. Depressed private sector spending on R&D was a crucial factor in the economic slowdown that preceded the financial crisis. This is a dangerous and worrying sign and one we really have to address.

It is important in promoting our scientific and research base that we give some attention to the other sources of funds that are required—to being able to encourage instruments such as the Rainbow Seed Fund. I must declare that I have invested in companies that it has put money into as an early stage venture capital instrument. That was established by the department—I cannot remember its acronym at the time it was established, but noble Lords know the department I mean—and by the research councils in co-operation. It is a very small fund. It is an outstanding group of individuals who have backed an outstanding series of companies across the UK research base. It is exactly the sort of instrument we should be backing. There are also people such as Neil Woodford and foundations such as the Wolfson Foundation and the Wellcome Trust. Such places are where we look for new capacity. We must find new ways to encourage more to act like them and more instruments. This is a crucial time for us to take this challenge very seriously.

It has been an honour for me to participate in this debate and to reflect upon the committee’s outstanding report. As we focus on what we can do to benefit the people of this country and the world by expanding science and research, the particular importance of being an outward-looking nation, able to address other countries and other peoples is crucial. After a day such as yesterday, we have to show not just how importantly we treat our role as hosts to those people who unfortunately had their lives transformed by those events, but how much we value our place in the world. Science and research is one of our great contributions.

2.33 pm

The Parliamentary Under-Secretary of State, Department for Business, Energy and Industrial Strategy (Lord Prior of Brampton) (Con): My Lords, I add my congratulations to those of other noble Lords to my noble friend Lord Selborne on this extremely good report. I hope that his committee can build on that report and that it will form a very big part of our industrial strategy.

I do not think there is any doubt that research is one of the jewels in the UK's crown, but we should never take it for granted. The report is called *A Time For Boldness* and I agree with the noble Lord, Lord Mendelsohn, that while it may be an unusual title for something from the House of Lords, we do need boldness. I have heard, in talking to many other people about the industrial strategy, that the UK is incorrigibly incrementalist. When the noble Lord, Lord Hennessy, asks, "Where is the magic?" or "Where has the magic not been?", it is because we have been incorrigibly incrementalist. So it is a time for boldness. If Brexit does only one thing, if it acts as a catalyst for change and boldness, then it will have achieved considerably more than the eight industrial strategies that the noble Lord, Lord Hennessy, referred to. We should take Brexit as a catalyst for change.

As noble Lords have mentioned, of course there are risks, but I say to noble Lords who are naturally enthusiasts and naturally positive people that, if they become too pessimistic about the future, they will help create this perception that post-docs and younger academics to whom they referred have—the feeling that somehow things are not good. I say to the noble Lord, Lord Winston, for whom I have huge respect, that although I cannot comment on the state of current reproductive medicine at Imperial, if he walks down the corridor he will see one of his colleagues, the noble Lord, Lord Darzi, and what is being done on robotic surgery, for example. Imperial is at the absolute forefront of many technologies and the noble Lord, Lord Winston, should not forget that.

The noble Lord, Lord Mair, referred to issues at Cambridge. Again, if we take an area such as artificial intelligence, Cambridge is clearly among the world leaders. Look at robotics and go down to Bristol and see what Bristol University is doing in robotics. We have some world-class technology still in the UK. If we want evidence of recent investments, we can look at the £60 million Novo Nordisk investment around diabetes at Oxford University, or the new investments that GSK and Apple are making in this country. Google has made huge investments, through DeepMind, in artificial intelligence in this country. So let us not be too depressed about the future when a lot of very good things are happening.

It is not unreasonable that we have focused today on what I will call the consequences of Brexit rather than looking slightly more fundamentally at the causes of Brexit. Actually, the causes of Brexit, together with the consequences of Brexit, are what we should be looking at, because, if we are honest, many of our difficulties predate Brexit. They predate even our accession to the European Union back in 1972. I think we set these out pretty clearly in the industrial strategy. We have gone through various stages of industrial strategy. We have gone through big government, nationalisation after the war and the sort of tri-partite power-sharing of the 1960s and 1970s, with the CBI, the TUC and the Government sitting around trying to sort things out. We then went to the privatisation and markets of the 1980s and then, more recently, with the coalition Government, we had more of a focus on sectors, but the one common constant throughout that time is that we have had low productivity in this country. Today,

after all the iterations we have gone through, we are still 20% or maybe 30% behind the leading countries of Europe and the USA. The Green Paper is explicit about that, as indeed was Andy Haldane, the chief economist of the Bank of England, in his speech, if anyone saw it earlier this week. We have a productivity problem in this country.

It is not just a productivity problem. Since the 1980s—with the third Industrial Revolution, the information technology revolution and, as we move increasingly into what is called the fourth Industrial Revolution, with machine learning and artificial intelligence, as ever more cognitive skills get replaced by machines, rather than just manual skills—we have seen to some extent a hollowing-out of the labour market, as Andy Haldane put it, which is resulting in more inequality. In our country, we have not just societal inequality but geographic inequality. We have a hugely successful and productive area in London, particularly, and the south-east more generally, but that level of productivity is not shared in the rest of the country. That is why what we face today is a productivity question but also an inequality question. Those are the questions we really have to address and that is the context in which we should see the research and innovation strategy.

The emerging themes of the industrial strategy—some of the magic that I hope we will be able to identify—are, of course, around the vocational skills that the noble Baroness, Lady Morgan, mentioned earlier. It is clearly critical that we address that. Looking back, perhaps one of the great policy mistakes that successive Governments made was to encourage too many people to go to university at the expense of vocational training, apprenticeship training and the like. The work that David Sainsbury—the noble Lord, Lord Sainsbury—has done in that area is hugely important and I hope that it will be a critical part of our industrial strategy.

Then there is place: we have to address the fact that many parts of the UK have not done as well as they could. Look back at the history of towns such as Liverpool, Manchester, Sheffield and Birmingham: if we can rebuild those civic institutions, there is a chance that we can rebuild those clusters of technology and manufacturing that we used to have.

I turn to research, which is the specific issue that we are debating. In terms of the message and narrative, the Government could not have been more explicit that science and innovation are critical to our future. As noble Lords know, that was set out in the White Paper published in February this year, from which I will read a short extract:

"The Government is committed to building on the UK's world-leading science base—including more Nobel Laureates than any country outside the United States—and making the UK the go-to nation for scientists, innovators and investors in technology".

I appreciate that fine words butter no parsnips but look at the actions we have taken: the Treasury has underwritten all successful bids for Horizon 2020 funding and we have provided further assurance by confirming that existing EU students and those starting courses in 2016-17 and 2017-18 will continue to be eligible for student loans and home fee status. We have also provided assurance about

[LORD PRIOR OF BRAMPTON]
postgraduate support through research council studentships. These will remain open to EU students starting courses in 2017-18.

We have gone further to support a healthy science and technology ecosystem in this country than ever before. We are spending an extra £4.7 billion on research over the rest of this Parliament, with an extra £2 billion a year by 2020-21. That is the biggest increase in research spending since 1979, so we are putting our money where our mouth is. Our new industrial strategy challenge fund will direct some of that investment to scientific research and in particular to the development of a number of priority technologies, helping to address Britain's historic weakness on commercialisation and turning our world-leading research into long-term success.

I tend to look to the USA—just look at the work that DARPA has done over the years. The federal funding of research in the US is far higher than it is in our country. That country, which purports to have small government, spends on a per capita basis significantly more on research than we do. Through institutions such as DARPA, the USA has managed to turn that into huge commercial success. Just look at the iPhone, which is probably the most obvious success: nearly all the technology in the iPhone, whether it is the chip, the global positioning, the LCD or whatever it happens to be, came out of federally funded research. That was of course taken up by great entrepreneurs, backed up by deep capital markets to turn it into a huge commercial success. That is something we need to do but in many of these areas, whether in robotics, AI, machine learning or whatever, we still have some fantastic technology in this country.

I turn to the issue that I think concerns noble Lords the most: attracting people. Can we attract the world's best people into this country? I agree that if we cannot do that, then we have a serious problem. It has been said that perception is hugely important, but let me quote the Prime Minister:

“I want this United Kingdom to emerge from this period of change stronger, fairer, more united and more outward-looking than ever before. I want us to be a secure, prosperous, tolerant country—a magnet for international talent and a home to the pioneers and innovators who will shape the world ahead. I want us to be a truly Global Britain—the best friend and neighbour to our European partners, but a country that reaches beyond the borders of Europe too”.

David Davis also said that pulling out of the European Union does not,

“mean pulling up the drawbridge. That's also not in our national interest. We will always welcome those with the skills, the drive and the expertise to make our nation better still. If we are to win in the global marketplace, we must win the global battle for talent. Britain has always been one of the most tolerant and welcoming places on the face of the earth. It must and it will remain so”.

We should not confuse our rightful desire to have control of our immigration policy with a policy that is anti people coming into this country. The two are not in conflict with each other. It is perfectly reasonable for any country to want to have some control over levels of immigration. That does not mean that we are in any way against immigration or, in particular, against

encouraging people to come in with the skills and talents that we need to grow and maintain our research base.

I turn to what we are doing in that area. In terms of putting our money where our mouth is in that respect, we have announced a £250-million investment from the national productivity investment fund, which will include £90 million to fund 1,000 new PhD places. At least 85% of those will be in STEM disciplines and 40% will directly help to strengthen collaboration between business and academia through industrial partnerships. There will be a further £160 million to support new fellowships for early and mid-career researchers. We also announced over £100 million on global research talent over the next four years to attract the brightest minds to the UK and help maintain the UK's position as a world leader in R&D. This includes £50 million which will be ring-fenced for fellowship programmes to attract global talent in areas that align with the industrial strategy. For example, that could be in life sciences or battery technology. Over £50 million of existing international funds will support fellowships that attract researchers to the UK from emerging research powerhouses such as India, China, Brazil and Mexico.

Not only do we have a compelling narrative in this Government about wanting to attract the best of the world to this country; I also believe that we are putting a lot more resource and funding into research in this country. Yet there is a perception out there that we are somehow not doing either of those things. To some extent, that perception is built up by people in this House who are incorrigibly pessimistic. We have some great technology and research in this country and we should start to talk it up.

Lord Winston: I was going to be very trivial by wondering whether the Minister might care to apply for the vacant post of the reproductive professor at Imperial.

Lord Prior of Brampton: I may have many talents but I think that is one post that I am not qualified to do.

I did not address the particular issue that was raised by the noble Lord, Lord Krebs. I would like to meet him on that issue to understand more about it before I reply to him.

2.48 pm

The Earl of Selborne: My Lords, it remains for me to thank all participants for their positive approach to our report. I was particularly pleased to hear from the Front Benches that they rather liked our title, for which the noble Lord, Lord Hennessy, should take a bow. He had an even more exuberant title for a later report, which I am afraid I vetoed—but he got away with this one.

If there is a takeaway message from this, I think we accept that my noble friend the Minister is absolutely right: there is a compelling narrative from government and more resources have indeed been made available. But it is not just in this House that perceptions are created and what we have heard from the noble Lords, Lord Winston and Lord Mair, and others who could

be described as at the coalface is an accurate representation of perceptions which simply have to be changed. It is not just the Government who have a responsibility for doing this; I quite accept that academia will have to do its bit as well. We will all have to do our bit, including those of us like me who just sit on the sides and commentate or criticise.

This debate has given a lot of positive messages as to how the perceptions could change. We have unanimously recognised the internationalism of science and how critical international collaboration is. We need welcoming signals for both people and institutions. This has been a very helpful debate.

Motion agreed.

Brexit: Environment and Climate Change

Motion to Take Note

2.50 pm

Moved by Lord Teverson

That this House takes note of the Report from the European Union Committee *Brexit: environment and climate change* (12th Report, HL Paper 109).

Lord Teverson (LD): My Lords, as Members depart or come in and Ministers shuffle their seats, I shall note that I am a board member of the Marine Management Organisation, which has responsibility for the marine environment that might be covered to some degree in this debate.

It is important for us to remember that all the reports from the European Union Committee are looking at not just the challenges but the opportunities of Brexit, the pluses and the minuses, the good things that can happen and the things that we have to beware of and look out for. In this report, there is probably more that we have to look out for than benefits. Some of the benefits on the environmental side are probably better described in the fisheries report that the House has already debated and in the report on the common agricultural policy, for which my committee has finished taking evidence but which has yet to be published. Both those areas have important environmental aspects. There are a number of positives and opportunities in those areas, and in this report as well.

I will concentrate on some of the areas where we have to be careful. As recognised in the Conservative Party manifesto, looking 25 years or even further ahead, the environment is key in our quality of life as a country and as a continent. Opinion polls suggest that the environment is an area on which British citizens think that Europe has an important role. It did not figure greatly in the referendum campaign, but citizens have generally understood and believed that working together as nations is important in protecting and enhancing the environment for the future.

Those on the side of leaving the European Union were right that European legislation on the environment dwarfs UK legislation in all sorts of ways. The estimate is that something like 80% of all our environmental regulations emanate from Europe. We have a strong base of environmental legislation that springs from European regulations and directives and European

Court of Justice decisions. That creates a great challenge. When we wrote to Defra about a number of issues, part of the evidence it gave was that something like 1,100 instruments have to be translated into United Kingdom law. Over the next two years, the Minister is going to be very busy in effecting that.

The committee welcomed unreservedly the Government's objective of making sure that environmental standards do not go down in the process of Brexit, but there are huge challenges ahead in achieving that. Just think of the breadth of the area that we are talking about. It covers climate change, energy efficiency, standards for chemicals, biodiversity, migrating species, biosecurity, clean seas, the atmosphere, wastewater and the circular economy—the list goes on. I shall not go any further but that gives noble Lords an idea of the huge spectrum of issues that are vital to our future which we are talking about.

I shall highlight and headline some of the key issues. A number of them were not ones that I or the committee expected to be at the top of the list when we started this report. The first issue I shall go into, on which I could speak for many minutes but shall not, is the great repeal Bill. We welcome the Government's undertaking that they will transfer the current legislation into UK domestic law. One of the questions is what it includes. Findings and case law from the European Court of Justice have been particularly important in environmental legislation. I will be interested to hear from the Minister whether that case law will also be incorporated into how UK courts look at European environmental legislation post Brexit.

There are 1,100 instruments that need to be translated. One of the areas that particularly concerned us is that the Secretary of State said that one-third of environmental legislation is going to be quite difficult to bring into UK law. I welcome her candid openness about this. We pursued that further and asked her and her officials what that one-third is. We had a very flaky reply, which suggested to us that not only is that roughly one-third going to be difficult but we do not yet know what it is going to be. As in other areas, there is concern about how much will be in primary legislation or in secondary legislation, but I will leave that debate for other reports.

One of the strongest points that was made to the committee was that the key issue is not regulations or laws but implementation and enforcement. We can have lots of laws and lots of good intentions, but we have to have adequate enforcement. One of the key areas of success in environmental legislation in protecting and improving our environment has been that we have strong enforcement mechanisms. I am sure other members of the committee will talk about this. The Commission as an overseer of implementation and the European Court of Justice as a strong enforcement mechanism behind that legislation have meant that not only have Governments of all stripes been careful to make sure that environmental legislation is implemented but so have citizens and other organisations. There have been a number of instances where the UK has not been that keen on implementing environmental laws—I think back couple of decades ago on wastewater and more recently on clean air—and the role of the ECJ and the Commission has been particularly important. I know from experience that the threat of infraction by the

[LORD TEVERSON]

Commission is a strong motivator for senior officials of departments and Ministers and Secretaries of State to make sure that European environmental law is implemented, as it is not only a reputational issue for the nation but a financial one. Infraction means fines, which can be considerable, and departments do not wish to lose their budgets because they have not performed. It was the very strong opinion of our witnesses that enforcement in the UK as it is at the moment would not be sufficient. There is judicial review and other areas, but this is key and one that other members of the committee will wish to discuss.

The other area which I have not really thought about quite enough, which also applies to the agricultural reports that are due to come out, is that of certainty. One thing relevant to the environment and indeed to agriculture is the acronym MAFF. We always think of MAFF as being the old Ministry of Agriculture, Fisheries and Food, but in this instance I am talking about the multiannual financial framework from Europe, which lasts for seven years and gives a degree of financial certainty to programmes that cannot be changed year on year, or in domestic terms, Budget to Budget. It is also quite difficult to change legislation and update laws throughout Europe. That can be negative, but it does provide certainty and time horizons in which investment can take place. In the environmental area, that is important for flood defences, clean energy and all sorts of other areas where investment takes a long time. The challenge is going from a seven-year financial framework—legislatively perhaps sometimes even longer—to a framework where we have annual Budgets, and laws that can change maybe year to year but certainly Parliament to Parliament. So we have that greater uncertainty.

There is even more uncertainty in financial areas and investment when it comes to the role of the European Investment Bank. This might seem not that important for the environment, but the figures show that something like €37 billion has been invested since 2000 in the environmental sector, particularly in energy. That is a huge sum. Since we have been a member of the European Union, particularly through the wastewater directive, some €12 billion has been invested in the water industry in the UK by the EIB. Yet we were unable to pinpoint where this sort of core foundation investment was going to come from in the future. Outside the EU, we are still entitled to European Investment Bank expenditure or investment, but it will be on a much lower scale than we have at the moment. So there are challenges there.

I will very quickly go through the other key areas. The first is trade and industry. We had a number of witnesses who I suspect we expected to say, “Great, let’s be buccaneering: let’s go ahead and deregulate and be successful without European red tape”. I am being perfectly objective in saying that that was not the case at all. Concerns were expressed that we should be able to enter the single market easily and that therefore our product standards needed to be the same, in terms of energy efficiency and similar areas. There was particular concern around chemicals, where there has been huge investment by companies that have had products approved by European agencies.

There was a great fear of having to go through another process if we have a bespoke UK system, which would not only be expensive but would not necessarily allow access through equivalence into European markets. On trade and industry, there was a concern that we should keep equivalence when it comes to standards.

I will leave the noble Lord, Lord Krebs, to talk about climate change. I conclude by saying there are two other elephants in the room, one of which is devolution. Like agriculture and fisheries, the environment is a devolved area of policy-making. How do we bring all of this legislation back into the UK and then distribute it among the nations and various parliamentary assemblies of the UK, while keeping some semblance of common ground within? That of course will also be the responsibility of Defra; given all the responsibilities that the noble Lord will have over the next two years, we are deeply concerned about Defra’s capacity and influence with the Brexit departments to make sure all this can be achieved. There is a huge and extremely challenging agenda here. It is regrettable in a way that we do not yet have Defra’s 25-year environmental plan, which we look forward to. We would also like to see this great repeal Bill and everything that needs to be done within that context. I would be interested to hear from the Minister when that will be produced.

The environment is one area where Brexit does not mean Brexit. We are inevitably tied to the European environment through our seas, our atmosphere, our migrating species and many other aspects. It is imperative that we continue to be strongly involved with our European neighbours. I would be interested to hear from the Minister how he would pursue, for the benefit of all our peoples, that co-operation into the future. I beg to move.

3.05 pm

Baroness Byford (Con): My Lords, it is my great pleasure to follow the noble Lord, Lord Teverson, and to thank him and his committee for producing this worthwhile report, *Brexit: Environment and Climate Change*. I follow his introduction by making three points. First, yes, there are challenges but I believe there are opportunities as well. The second is on the width and the span of issues that the committee looked at. In a way, we are missing the agricultural aspect. I know the committee is looking at that at the moment, which will perhaps slightly overlap with some of my comments—I apologise to members of the committee if I touch on things that they are dealing with currently. The third thing is the two reports we are awaiting, which the noble Lord just spoke about. To take that a bit further with the Minister, these two reports should be looked at together. It is not a question of, “This is the environment, that is climate change and that is farming and food production”. They are inextricably intertwined and should not be separated.

In following the previous debate, moved by my noble friend Lord Selborne—that committee’s report is headed *A Time for Boldness*, and the same is true of this report—we are reminded of how the issues of science and technology and those in this report are linked. Good things are happening and investment in the UK is still very high in both technology and

science, as we heard earlier today. One extra thing that I would stress in terms of both reports is that often we are full of ideas but do not necessarily see them through to the conclusion of a product. As a country, we are very good at the first part, but not so good at the final product.

Over the years, science and technology have transformed the way land is farmed. One example is GPS. Another is the technology which enables farmers to apply the relevant amount of dressing in different areas of a single field so that unnecessary applications are not made, which avoids spoiling soil quality. It is a win-win situation for the farmers themselves, but more importantly for the environment, as fields are not overdressed, avoiding the run-off and pollution that can otherwise result.

Caring for the environment should be at the heart of any farming business, and here I remind the House of our family farming interests in Suffolk, where we grow cereals but are also committed to enhancing the natural environment. The report, in its summary, rightly acknowledges that those seeking to preserve and invest in improving the environment require long-term stability in policy, to which the noble Lord, Lord Teverson, referred. The report states:

“EU environment and climate change laws do not stand alone”.

Their implementation, monitoring and enforcement by EU institutions, as has been mentioned already, have made a great impression so far. That is something we need to look at. The committee goes on to express concerns about what will happen post Brexit and questions the self-regulation that may be imposed by the Government, which it is a little concerned may not be adequate. Perhaps the Minister will come back to that later.

Later in the summary, the committee’s report states:

“The UK would need to comply with, or seek to adopt measures equivalent to, EU environmental standards in order to continue to trade freely with the EU”.

Chemicals regulations are highlighted, along with pesticides, greenhouse gases and many other aspects. I would have included GM and modern breeding techniques there as well.

Thirdly, the report reminds us that the environment is shared, referring to terrestrial, marine and atmospheric challenges. Finding a way forward will certainly require the UK’s devolved countries to come together in planning future policies. Nowhere will this be more challenging than within the common fishery policies, which we debated earlier this year. I would also throw into that how much the climate changes in our own nation in any case: there is a lot of rain on the west side of the country but we are very dry on the other side, in the east and south. So it is not just a pure question of the devolved countries themselves. At the end of the day, what matters for us as a country and for our environment is soil quality. That is the one item over which we have some form of control, and we need to give it greater thought. We cannot control the amount of water that falls, but looking after the soil is extremely important.

I turn now to some of the simple recommendations. Chapter 15 talks about shaping farm practices and the way the former CAP has included crop rotation and

green payments. Paragraph 57 says that the Secretary of State, Andrea Leadsom, reflected to the Environmental Audit Committee that two-thirds of the existing legislation can be translated straight away, and the noble Lord, Lord Teverson, highlighted the other one-third that still has to be brought forward. Paragraph 64 says that each department has been challenged to review how the legislation in their policy areas will be affected by Brexit, to ensure that environmental protection is maintained. Chapter 7 is entitled “Influence”. Here I refer to formal influence and the way in which informally we can continue to influence what happens outside these shores, in the European Union and in a much broader way. Within that I would include many of the NGOs and those involved in wildlife trusts.

The report poses many questions. I would add my belief that we can all individually make a difference. We can waste less food and refrain from dropping litter both on land and in the sea; the pollution in our seas is just horrendous at the moment, and we must tackle the commercial dumping of waste in the countryside and in our cities. We can belong to wildlife groups, and many do. We can belong to areas where they help and support our rivers and engage in work in the countryside. All this brings benefits to us individually and generally to the environment. Ultimately, it is the farmer, the landowner, the tenant or the contractor who cares for 70% of our countryside. As former president of LEAF and now a patron, I can say that we see and practise good farm-management systems and better terms for wildlife, alongside quality crops and good food production. It is not perfect, but we should use best practice.

Farming is simply a business like any other. At the end of the day we need to ensure that farms make a profit. I do not think they should necessarily be supported in the way that they have been, but farms have to be profitable or in the long term they will simply go out of business. Areas of the UK where profit cannot be made—there I would look to quite a bit of our upland area or small farms, where that is not possible—the challenge following Brexit will be what will happen there. What the majority of farmers need, and I think this has been highlighted by the report, is some long-term commitment. Their investment is long term, and without it we cannot produce the food that we so need.

A balance has to be struck between food production, the environment and climate change. Others will talk about climate change. All I would say from our point of view is that the pattern of climate has changed. I will not go into great detail; others will. There is a lot that we as individuals, NGOs, farmers and people who purely love the countryside and go into it can do, but financial uncertainty blocks investment—although I have to point out that at the moment the bank loans that have been given to the farming community have some of the highest rates, so the banks believe that there is a long-term future there.

The report is a good one. I am sorry I was not able to be a member of the committee, having enjoyed being one formerly, but I congratulate it because it has been drawn in a fairly short time. I look forward to hearing other noble Lords’ contributions.

3.15 pm

Lord Hunt of Chesterton (Lab): My Lords, I am speaking in what in the speakers list was my noble friend Lord Grantchester's spot, and he is going to speak near the end of the debate. We have just been castigated by the Minister in the previous debate for being so gloomy, so I will try to make one or two non-gloomy remarks. This is the second important debate today on issues of science and technology as applied to the environment and climate change. I declare an interest as an emeritus professor of climate change at University College, a fellow of the Royal Society and chairman of a small company that works on the environment.

This debate is not only about science and technology but about legislation, regulation and finance. We face big issues in improving the environment and dealing with climate change. How will the UK continue to work and collaborate with other organisations across Europe as the UK leaves the EU? Some of the organisations currently present in Europe, and with very important roles, are intergovernmental—such as those for the regional seas, pollution and nuclear energy—while some are specifically European organisations, such as the European Environment Agency. An important point to understand is that, whether these organisations are intergovernmental or regional, many of them are involved in programmes with the European Commission. They use a lot of their research programmes to help provide guidance, decision-making and data. We are going to leave the EU, so what is going to happen to our cross-involvement in the UN, regional organisations and so on? The EU currently involves non-EC countries and areas such as Norway, Switzerland, Israel and north Africa, and they are very effective on some of these environmental programmes. It would be useful to hear from the Minister how he sees the strategy. There needs to be consultation with all sorts of organisations. The research and environmental organisations of Britain are deeply involved in all these environmental organisations, which are proving very effective.

The other important point is that we need to evaluate the benefits of the different levels of these organisations. Some of them are involved in UK Government standards, but we need to understand exactly how Brexit will affect that. One of the consequences is that the UK will no longer have to maintain environmental standards, even though we should recognise that they have steadily improved over the past 40 years—for example, cleaner beaches and higher air quality standards. I am afraid the standards provided by the UK Government may well come under some suspicion because there have been some dodgy practices with air quality in London in the last couple of years. It is very important that we have clear verification of what is being done when we start out on our own.

Having Europe-wide standards has been very important in enabling local authorities and the Government to keep saying, "This is the reference standard against which we are working". How will this confidence be maintained in future? We should hear that from the Minister.

Another feature of the worrying future is the UK Government introducing standards and providing data which will be almost unchallenged. On what basis will those changes be made? Some standard analysis is necessary. We need to evaluate the economic, health and environmental factors in such studies.

The report reviews the EU climate change legislation and the EU Emissions Trading System, which currently guide UK investment in carbon and non-carbon energy systems. Even if the UK follows the EU and the Intergovernmental Panel on Climate Change agreements on reducing carbon emissions, that does not tell us how the UK will develop its future policy. It may be working on existing policies, but many of the standards—those run by the UN and those run by the European Commission—will change.

The question is how the UK will find a partnership to work with European and other major emitting countries and their organisations. Although the Prime Minister assures us that the UK will be in Europe, this general assurance needs to be explained. Will the UK focus simply on the IPCC, or will it develop some ad hoc discussions in, for example, the G20, and therefore rely on UN agencies to provide the standards?

Importantly, we must also ensure that we have extremely high standards of multilateral climate change research programmes. The UK has substantial and well-respected climate change research laboratories and centres, such as the Hadley Centre, Scott Polar and other arctic institutions. What future arrangements are envisaged for how those UK research institutions will work towards these practical objectives with other countries? I assume that Her Majesty's Government expect increasing involvement of the UK research institutions to guide them in their transition.

Finally, the noble Baroness, Lady Byford, just talked about standards in the countryside—for example, concerning rubbish—and how they are distributed. In Italy, there is widespread use of data on the state of the environment, and there is an excellent webpage called Q-cumber. There are a lot of innovative ways in which we can use IT, and we have a lot of interesting IT companies in Britain to help us monitor the environment much more closely, which will be an essential part of this new world in which the UK is out on its own.

3.22 pm

Baroness Sheehan (LD): My Lords, I start by thanking my noble friend Lord Teverson for his expertise in chairing the committee as it took evidence and discussed the diverse issues raised. I also take this opportunity to thank the clerks for their unfailingly high standards.

I aim to restrict my remarks to the enforcement of environmental legislation, which will be crucial to the successful transfer of the EU approach to environmental protection back to one under the jurisdiction of the UK. The report notes the importance of EU membership to UK environmental protection, with no less than 80% of UK environmental legislation being shaped by the EU. The overwhelming majority of witnesses to the inquiry believed that the UK's membership of the EU had improved the UK's approach to environmental protection and ensured that the UK environment had been better protected.

During the referendum campaign, environmental issues did not feature large, but a national poll conducted by YouGov for Friends of the Earth found that support for the same or better environmental protection with high even among those who voted to leave the EU. The fact is that a majority of the British public remember and value the impact of our membership of the EU in cleaning up our beaches and our drinking water.

In its evidence to the Environmental Audit Committee, National Parks England reported that most environmental professionals feel that EU legislation has proved to have more clout than UK laws. It stated:

“An important issue will be (if, as seems likely, the Habitats Directive no longer has to be applied) how the UK establishes equivalent fully independent administrative systems, to protect the most important wildlife sites. This seems likely to require some new legislative mechanisms if the current system for enforcing the Habitats Directive (ultimately, via the Commission and ECJ) becomes irrelevant”.

Although European law will be transposed to the UK, governance arrangements would not. We stand in danger of losing the stable policy environment that complex, well-enforced EU law has created—one that is resistant to change. The upshot of that has been higher investor confidence among businesses. This stability could be lost with the increased freedom of the UK to set its own laws.

The EU governance structure also allows the Government to be held accountable for their environmental actions—for example, through NGOs being able to challenge air quality policy in court. Professor Andrew Jordan told the committee that without the European Environment Agency, the European Commission and the European Court of Justice, there was a risk of legislation becoming “zombie legislation”—either no longer enforced or no longer updated to the latest scientific understanding.

The European Commission is a key player in the current enforcement of environmental legislation. Professor Lee said that, as things currently stand, we have,

“obligations to report on how we intend to comply, then to report on how we did comply, and to explain how we will come into compliance if we fail to do so. We report to a well-resourced, well-informed, named body—the Commission”.

The Wildlife Trusts noted that the Commission, “provides a great deal of support on environmental legislation, including sharing information, monitoring progress, facilitating reporting on progress across Member States, providing guidance and interpretation of legislation”.

None of that currently exists in the UK, and how will we continue to provide that level of expertise to organisations and businesses?

Environmental NGOs have welcomed the role of the European Court of Justice and its right to bring infraction proceedings against member states if they failed to comply with their obligations under EU law. This is a powerful adjunct to the role of the Commission. It has the clout to levy meaningful fines, and its rulings are attended to carefully by member states.

This is the crux of the matter. The European Court of Justice has the resources and information at its fingertips to bring member states to book. Following Brexit, it would be for the domestic courts to enforce public authorities’ and Ministers’ compliance with environmental legislation, typically by means of judicial

review. However, we heard evidence from Professor McCrory and Mr Andrews of ClientEarth that the cost of a judicial review could be prohibitive, as could its time-consuming nature. It was also pointed out that although the Commission can fine, the Supreme Court does not.

At the moment, the Government, spurred on by the Commission, drives a lot of thinking about how not to be infringed. Ms Mukherjee raised this fundamental question:

“If it is not the Government but a sector, or the Environment Agency in the any of the four UK Administrations that raises the question, would there be that impetus and that brainpower behind assuring an avoidance of infraction?”.

To conclude, the Committee found the Government’s confidence in its ability to hold themselves to account was at odds with the concern expressed by the large majority of witnesses. I therefore strongly endorse the words found in paragraph 84 of the report that,

“an effective and independent domestic enforcement mechanism will be necessary, in order to fill the vacuum left by the European Commission”.

I shall leave noble Lords with the words of the Game and Wildlife Conservation Trust:

“There is little use in having good legislation if there is limited means to enforce it”.

3.30 pm

Lord Rees of Ludlow (CB): My Lords, I should first crave the House’s indulgence for my delayed arrival this afternoon, and I apologise to the noble Lord, Lord Teverson, for missing the first few minutes of his speech. As his excellent report makes clear, we learn a great deal about the earth’s climate and environment by monitoring it from space, and I should like to comment on the highly sophisticated pan-European Copernicus programme, in which this country has a big stake.

We have become aware in recent months of unsuspected extra downsides to Brexit—those stemming from the EU’s pervasive involvement in high-tech activities that can be handled only on an integrated European level. For instance, there has been a disconcerting realisation that our membership of Euratom would lapse after Brexit, necessitating the hassle of somehow ensuring continuity in its essential activities.

Many had thought that our involvement in space activities would be unperturbed, because the European Space Agency—ESA—is governed by a separate convention, and we will remain part of it. That is fortunately true of the scientific parts of ESA’s programme, but it is not true of other space activities. The EU and ESA have a joint European space strategy and the EU is the biggest financial contributor to ESA’s budget. In consequence, our participation in Galileo, the European counterpart of GPS, will need some renegotiation. However, what is relevant to today’s debate is that the same is true for the Copernicus programme—a very ambitious European suite of satellites, important for monitoring many aspects of the environment and climate. Copernicus promises to be the world’s pre-eminent earth observation system.

Outside the EU, the UK will have a weaker voice in Copernicus programmes, and in Galileo’s too. It is unlikely that significant infrastructure related to these

[LORD REES OF LUDLOW]

programmes will be located in this country. The UK has so far invested around €860 million in the Copernicus programme—initially via ESA but latterly via our membership of the EU—through strong alliances with other EU member states, especially France and Germany. We have shared the costs of a system that would be unaffordable by any one country.

Copernicus has been enthusiastically utilised in the public and private sectors across the UK. Its use is growing rapidly, and it is highly diverse. For example, radar data from one of the Sentinel satellites are hugely important in cloudy countries such as the UK because it allows crop and habitat mapping and monitoring where optical data are often limited by clouds. The Copernicus programme is ambitious and wide-ranging. It provides data relevant to air-quality forecasting, flood warnings, early detection of drought and desertification, warnings of severe weather, oil-spill detection and drift, oil-slick predictions, seawater quality, crop analysis, forest monitoring, land-use change and so forth.

Scientists and engineers based at the Rutherford Appleton Laboratory in Oxfordshire have made major contributions to building and testing satellites for the Copernicus programme. The most recent was launched just this month. It will beam back images capable of tracking iceberg movements, illegal logging, and water pollution. The system is also designed to allow real-time monitoring of areas hit by natural disasters.

The current Copernicus programme provides data from four Sentinel satellites of three different types. The fleet will reach an operational state of eight satellites by 2020. Despite the UK's involvement in building the hardware and its great interest in the programme, it is now unclear what access British teams will have to Copernicus's observations if the UK loses its status as a full collaborator, which it now has through EU membership.

Before Brexit, UK industry was expected to win contracts for satellite manufacturers and providers of downstream services, valued at €350 million during the current programme and, we hope, adding up to €1 billion for the period up to 2027. All such pan-European projects will be in jeopardy, especially if we are not in the single market. So an exit from the Copernicus programme without mitigating measures would be damaging to UK industry and environmental projects—both the satellite construction industry and business operating in downstream services. Our scientific and industrial capacity has grown as a result of these investments and contracts. If the private sector is to continue investing, it needs long-term guarantees of data availability. But, of course—and this is what is most relevant to today's debate—it threatens the UK's full participation in a world-leading programme of huge benefit to our environmental and climate policies.

The Copernicus data policy will be reviewed by 2020. Optimists would bank on the current free and open data policy continuing, thereby allowing continuing basic data access to most UK users, but this cannot be taken for granted. Constraints on the data portals and pipelines could render data and some instruments hard to access, or the relevant data may no longer be

collected over the UK in the first place. We may, as it were, go to the back of the queue. Even if data access continues, the UK would have less influence over the future evolution of the programme, and lose the ability to tune the satellites or services to our needs. This would inhibit our efforts to manage environmental issues, as well as eroding the benefits from the investments we have already made.

As I have emphasised, UK scientists and politicians have played important parts in developing Copernicus. This is a world-leading project that has given Europe a strong voice in international fora that address how we manage our planet better. This lead will be even more crucial if the Trump Administration carry through their threatened cuts to parallel efforts in the United States. The UK cannot do projects on this scale alone. If we leave the EU, some alliance with our European partners that allows continuing full participation in Copernicus will be needed if we are to foster our own environmental interests, and if our voice is to be heard in global environmental and climatic policy. Therefore, it would be welcome if the Minister could give some assurance that these concerns will be prominent on the radar when negotiations begin.

3.38 pm

The Lord Bishop of Leeds: My Lords, a number of questions have already been posed, and I pity the Minister for having to go through them in some detail. We heard earlier that we in this Chamber tend to be gloomy, and now we should be cheerful. I am neither; I am just puzzled—which is not a new experience.

From reading the report, which is a model of clarity, as are most of the Brexit reports that come from the various committees, it seems that, as we peel back the layers of the onion, we end up with more layers. I realise that that sounds paradoxical, but it seems to get more and more complex. The other night in the debate on Brexit and Gibraltar I tried to ask some questions about stress testing, to which I got no answer. So I shall try again, focusing very briefly on just one or two questions.

Is any stress testing going on in varying scenarios in relation to what happens when the legal and regulatory costs come away from the EU and have to be borne by the UK—for example, after the European Commission has lost its role and the European Court of Justice is out of the picture? Do we have to create other bodies? I ask the question because I do not know the answer—maybe everybody else does. Have these things been costed and, if so, what are the options for us likely to be?

If I were to press one point it would be derived from experience in my own diocese, which comprises the whole of West Yorkshire, a slice of South Yorkshire and a big chunk of North Yorkshire—particularly those upland areas and farming communities that were referred to earlier. Not only do they face challenges in relation to farming and the effective financing of that, but the problem of second homes, where local people can no longer afford to buy and the children of local people cannot afford to live in the same communities. Rural schools are being closed because the Government's definition of what constitutes a small school is about three times the size of many of the schools in that part

of my diocese. There are also areas within the diocese where broadband access is non-existent—so that is another challenge of top of those challenges.

When the common agricultural policy ceases to apply, what will be the impact on the land and on the countryside management that is so essential? You cannot just have farms closing down and abandoning territory. What happens to land management? Who will replace the subsidies that allow many of these farming communities to survive, if not thrive? There is an assumption among some farmers to whom I have spoken that the Government have promised to replace what is taken away. I am not sure that I have heard that—but maybe it is in addition to the £350 million that is going to go to the NHS. Is someone going to inform the farmers? As I also pointed out in the debate the other day, it seems that we get a lot of bland statements of optimism, and I keep asking myself in my puzzlement where all the realism is in this. It might be that the department is facing those questions, but it seems to me that those of us also involved in those communities need them to be addressed fairly soon.

We have heard that there needs to be policy stability, but I identified in the report a distinction that I thought was very helpful between technical and political questions. If some of the decision-making is being politically driven, what happens to the prioritising of the technical questions? This seems to add enormously to the complexity that we have already described. We have heard in a number of these debates that we need to be ambitious and to raise our ambition in the light of Brexit. This leads me to ask: will our ambition be diluted under the weight of the complexity that is being revealed as we go into the detail of these matters?

3.43 pm

Baroness McIntosh of Pickering (Con): My Lords, it is a great pleasure to follow the right reverend Prelate the Bishop of Leeds, and I thank him for leading Prayers today on such a poignant occasion; it was very appropriate indeed. I declare my interests as listed in the register: I give advice on the environment and work particularly closely with the water regulator of Scotland, the Water Industry Commission for Scotland, I am a member of the Rural Affairs Committee of the Church of England Synod, and I am honorary vice-president of the Association of Drainage Authorities. I particularly welcome the report before us today and warmly congratulate the noble Lord, Lord Teverson—I consider him my noble friend; we had the honour to serve together in the European Parliament—and his committee on the report and on securing this debate today.

I will focus my remarks on the impact of a changing environment, extreme weather events and climate change, in particular on farming. I have been closely associated with farming, originally in the Vale of York and latterly in Thirsk and Malton. I grew up in Teesdale, where I think farm incomes are probably the lowest in the country—they are often quoted as that. I echo the words of my noble friend Lady Byford regarding hardship; I know that many farmers are turning to welfare groups on a scale that we have not seen for a number of years. We should set the debate in that

context. I am mindful also that farming and fisheries are the two most dangerous industries, where people are working in significant peril.

Responsibility for damage to the environment, as my noble friend Lady Byford said, including run-off and even nitrates in the soil, is often pinned on farming practices whereas, in reality, farmers have a very positive role to play in shaping the environment and reducing the potential impact of climate change through adaptation and mitigation. Currently—we know that the moneys will be secure until 2019-20—farmers benefit through Countryside Stewardship and other schemes; they are reimbursed for the public good that they do, particularly through water management and flood alleviation schemes. It would be helpful to know from the Minister how this might continue in the future.

I will share with him and the House today one of the most imaginative schemes that I have heard about, which came from the Tenant Farmers Association, which argues for a flat rate of, say, £25,000 a year for all active farmers. I know that that would be significantly less than many of the larger farmers have earned, but it is significantly more than some of the graziers and smaller farmers in the uplands have received.

I also echo my noble friend Lady Byford on the very strong arguments in favour of having one 25-year plan, focusing on the mutual interests of farming and the environment. Farmers produce food and we all need to eat. Farmers in the hills and uplands play a very special role in food production. Ideally, eating more home-produced food could be one of the benefits which flow from Brexit. It could benefit the environment, make the UK more self-sufficient in food and boost food security. The Vale of York is home to one of the largest livestock producers in the land. If the hills and uplands were taken out of production in North Yorkshire, Cumbria, Northumbria, the Welsh hills and the Scottish hills, it begs the question of what would replace that. So it would be appropriate for the Government to consider merging these two programmes going forward. What impacts on the environment also impacts on farming and agriculture. Running them in parallel rather than as one is, I believe, a missed opportunity.

We have to give farmers and landowners the chance to plan their business at least two or three years ahead. They need to plan what crops to grow and what animals to stock on the land. Currently, many EU directives and regulations are policed by the Commission—a point that the noble Lord, Lord Teverson, set out. This is a strand running throughout the report. Any breaches are resolved on referral to the European Court of Justice. That begs the question: if we remove ourselves from the jurisdiction of the European Court of Justice and from policing by the Commission, what body will police any infringements committed in this country, and what dispute resolution mechanism will there be in those circumstances?

I will share with the House an example of the success of European environmental policy: namely, acid rain, which respected no boundaries and blew over from parts of central and eastern Europe, and probably the Soviet Union at the time as well, and wafted over parts of Scandinavia and Australia, and came close to our shores as well. The way that all the

[BARONESS MCINTOSH OF PICKERING]

European Union member states came together to defeat acid rain was a great success story. So European environmental policy, with Britain's contribution, has revolutionised the UK. Far from being the dirty man of Europe, as we were in the 1980s, we have now come to a stage where we have some of the cleanest rivers and beaches. Great steps are being taken to improve air quality but more needs to be done on that and to ensure that our water and our environment remain as clean as they are at present.

I would like to pose a number of questions to the Minister. As I have already mentioned, who will police the environmental acquis going forward? What will the dispute resolution system be if we remove ourselves from the jurisdiction of the Court of Justice? The Minister will be aware that many of the current directives are undergoing revision, notably the mother directive—the water framework directive—the drinking water directive, the bathing water directive and the urban wastewater directive. These will all be concluded exactly at the time that we leave the EU in 2019. So the question to the Minister is: will we sign up to and abide by those directives, as revised, or will we simply transpose them? Obviously, we cannot do that through the great repeal Bill as they are not in place at this time.

I echo other noble Lords' remarks about the role of the European Investment Bank. Water companies are less reliant on that at the moment because it is cheap to borrow money, but what will the capacity be for water companies or other firms involved in the environment to borrow or seek grants from the EIB post 2019? The right reverend Prelate the Bishop of Leeds asked whether any economic or regulatory impact assessment had taken place. If no such economic impact assessment has taken place, it would be a matter of great regret as it would be the first time that such a major issue for the country had been addressed without the backdrop of an economic assessment to inform the House and others.

I seek an assurance from the Minister that the department will have sufficient staff and resources to undertake all the work that we are asking it to do between now and 2019? I echo the importance of ongoing partnerships with others and to seek an assurance from the Minister that there will be scope for bodies such as the NFU to work with Copa Cogeca, and for water companies to work with the water regulatory association—WAREG—going forward.

We have had a wonderful opportunity to debate these issues today. I know that we will have other occasions to do so in the context of the great repeal Bill and the primary legislation that we anticipate with great interest.

3.52 pm

Lord Judd (Lab): My Lords, that was a very important and searching speech. I hope that the Minister and others will take it very seriously indeed. I am very glad that the noble Baroness mentioned the European Investment Bank, as did the noble Lord, Lord Teverson, and what will replace it. I am also glad that she mentioned the European Court of Justice because I believe there has been tremendous rhetoric and prejudice about that court. However, it is not only in this sphere

that its validity is becoming obvious. I serve on the Justice sub-committee. In the sphere of commercial and family law, given that there is so much trans-border activity, it is very worrying indeed to know what the final authority will be when we lose the jurisdiction of the European Court of Justice.

I declare an interest as I am vice-president of the Campaign for National Parks and I have been for a number of years president of Friends of the Lake District, of which I am now patron.

This excellent report—for which the members, and indeed the clerk and staff, of the committee deserve real praise and thanks from us all—brings home very clearly that we are flat-earthing if we believe we can have a future on our own. We live in a totally interdependent world in so many ways, and that interdependence starts very immediately with our relationship with our European neighbours. This is becoming very obvious in the issues that are raised in the report, and in so many other issues. We need some convincing evidence from the Government about the real, practical arrangements that are going to be put in place which face up to that interdependence. We cannot avoid it. The demand is there. In the interests of our people, it is absolutely essential to know what the practical arrangements necessary in an interdependent situation will be.

This is true of so many aspects of food production, but it is also true of fisheries. It is terribly important to have conservation in fisheries. It is terribly important to have sanity between close and adjacent neighbours in Europe about how they raise those issues. This is very obvious in the context of climate change: how on earth are we going to deal with the consequences of climate change on our own? It is just madness. We have to work together with others. So what will be the practical arrangements for working with others? We have yet to see any evidence of practical arrangements being put in place. Of course, this is true on the environment as a whole.

Some environmentalists recently put it very well when they said that clean, healthy, safe, productive and biologically diverse oceans and seas are essential for humanity. I endorse that conclusion warmly. We certainly need clean drinking water. Here, again, the reality—as against prejudice and rhetoric—is that our drinking water left a great deal to be desired and our membership of Europe has done a great deal to improve it. Indeed, on swimming in the sea, our membership of the Community has enabled us to see much more clearly how far short we are of the standards that we should have around our coasts.

Whatever happens in all this—and I cannot stress too strongly the need for evidence of what is going to be put in place; how can we come to a conclusion until we see that?—we are going to need, for the future of our society, the continued revitalisation of our countryside. We have to recognise the importance for the future of our nation of the relationship between farming and the countryside. That is very obvious in the area in which I live, in the Lake District, where all the joys, scenically and the rest, of Cumbria are intimately connected—as are farming and the countryside. This produces the character that we all appreciate so much. It will be essential to have arrangements to support

farming and farmers and, indeed, the wider rural communities of which they are a key part. There is a great deal of rural poverty in our country, which we are not beginning to face up to and deal with as we should.

All these things are going to be as pressing as ever. We keep telling the world how wonderful our countryside is. We all know how vital it is to our own values but how will we sustain that countryside without the arrangements that have been increasingly put in place within the European Economic Community? It is the evidence of what will really be there that is needed.

I conclude by applauding what the noble Lord, Lord Teverson, said. It is absolutely clear that our involvement with Europe and our dependency on that relationship with Europe are so great that it would be the height of irresponsibility if we did not stop using oversimplified, negative rhetoric. Instead, we must start to face up to the challenge of how we have continuing close co-operation with Europe, without which we cannot have a decent future.

4 pm

Lord Trees (CB): My Lords, as a member of the EU Energy and Environment Sub-Committee, I thank the noble Lord, Lord Teverson, for his excellent chairmanship of the committee and of this report, and I thank our clerks for their excellent hard work in producing it.

The Treaty on the Functioning of the European Union sets out, very early on, the objectives for its environmental policy. The main bullet points are:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change”.

I am sure that we would all agree that those are excellent aspirations. So it is no surprise that a huge proportion of our environmental improvements, brought about by the legislation underpinning them, has emanated from the EU, which the noble Lord, Lord Teverson, referred to in his introduction—some 80% of legislation. That is not to say that, irrespective of the EU, we might not have done these things ourselves—who knows?

However, the fact is that, according to Defra, there are something like 1,100 core pieces of EU legislation relevant to Defra, to which the noble Lord, Lord Teverson, previously referred. These comprise regulations, directives and decisions, but also guidance and case law. Therefore not only are there a large number of measures but a diverse range, comprising the EU *acquis* in this area. While the great repeal Bill will convert EU law into domestic law, the complexity of this environmental legislation—the number of different instruments involved—will present considerable challenges. As one of our witnesses said:

“There is a question over whether it will be, literally, all EU law, Treaties, Regulations, Decisions and Directives, or whether it is just EU law that currently finds its home in the domestic system through secondary legislation. If we do not do all EU law, then there will be an enormous gap because we will miss everything that has not already been put into secondary legislation”.

A second issue to consider is the long-term stability of environmental policy and regulation. Environmental policy is a long game—there needs to be consistency and stability in policy and execution which, it has to be acknowledged, the EU has provided. Once the custody of our environment is entrusted to a single Government with a five-year time horizon, there is intrinsically rather less long-term certainty. So there are challenges relating to transposition of EU legislation in its broadest sense into UK law, and challenges to the stability of environmental policy and law.

However, my major point concerns what I call the “governance gap”, which, without using that term, the noble Lord, Lord Teverson, and the noble Baroness, Lady Sheehan, have referred to briefly. Many witnesses expressed concern to us about the fact that, post Brexit, we will lose the oversight and enforcement potential of the EU Commission and the Court of Justice of the European Union. Much maligned as they have been in UK public opinion, these bodies have provided an independent refereeing system to reassure us citizens that the environmental improvements proposed and agreed by EU member states are indeed being enacted. They have had the power to hold member state Governments to account and to fine them for infringements. The loss of that potent external governance role is a matter that we need to consider carefully going forward.

It has been suggested that the UK courts can adequately fulfil this role, typically by judicial review, but I understand that there are limitations to the potential of the application of judicial review, particularly related to its costs. There are also limits to the power of our UK courts. Notably, as one of the witnesses commented,

“The Commission can fine. The Supreme Court does not fine.”

Although this vulnerability—this governance gap—may extend to all EU laws and their transposition into UK law in lots of areas, the environment is particularly vulnerable because, as one of our witnesses, Professor Macropy, told us, there is,

“no clear economic owner to protect it”.

Ministers reassured us that they want to leave a better environment than they inherited, and that is an undoubtedly sincere and commendable aspiration, but of course the current Government may not be the Government in five, 10 or 15 years’ time. We need to ensure that there are systems and mechanisms in place so that, whatever the ephemeral policies of different Governments dictate, they will protect our environment for future generations.

What are the responses to these challenges—to the governance gap? It has been argued that the electorate can hold Governments to account, and indeed this gives me some personal confidence that our current standards will be maintained and improved. We have in the UK a very high level of awareness of the status of our environment. We have very influential NGOs and charities, such as the RSPB, the Wildlife Trust, the National Trust and so on. They are very active lobbyists and their role in the future will be hugely important. We also have within Parliament the Commons Environment, Food and Rural Affairs

[LORD TREES]

Committee and the Environmental Audit Select Committee, which maintain scrutiny of the Government to hold them to account on environmental matters.

Notwithstanding that, given the governance gap that will follow Brexit, I suggest that there is a case for further strengthening the monitoring of the actions of future Governments in environmental matters, as the noble Baroness, Lady Sheehan, suggested. Perhaps this is an area where this House could play a valuable role, given the remarkable range of expertise that we have here. Ultimately, there will not be a need in the post-Brexit era for our EU Select Committee and its sub-committees, but maybe we should consider one or two new committees to deal with the regulatory deficits—the governance gap—that will arise post Brexit.

4.08 pm

The Earl of Caithness (Con): My Lords, I thank the noble Lord, Lord Teverson, and his committee for this report, but I would add how disappointed I am at the timing of this debate. We had a debate in October on exactly this subject and not much has changed since then. I am sure that the assurances that the Minister gave at that time have been implemented within the department, but I suggest that what we needed before we had this debate was the Government's 25-year plans. Those would have given us an idea and a focus for this debate, because there has not been much that is new over the last six months on which we can hang our hats. On those 25-year plans, I commend the speech of my noble friend Lady Byford. She is absolutely right that you cannot separate the environment and farming. Those two 25-year reports have to mesh into one report for the whole of our environment.

I agree with much of what the committee says. It will be difficult to transfer all the legislation from EU into UK law. It will be by no means impossible, although it may very well take longer than we thought. I agree with it on the enforcement of the environmental order that is mentioned in paragraph 85. It is right to suggest that there should be some sort of independent body as there is in Europe now; that would be very helpful. I agree that environmental pollution is no respecter of national boundaries, but that argues that we should be working at the world level and not an EU level—there is nothing to stop the pollution coming over the EU national boundary. We are members of certain world organisations and we have a very important role to play in the future of that. On air quality, we have been far too slow. It is a subject that I suggested the committee should write a report on some six years ago when I was a member. However, I was overruled, and we did another worthwhile report instead.

On the other hand, I cannot give unanimous backing to the report. We have been in the EU for so long that we think it is the holy grail of environmental legislation. When the noble Lord, Lord Teverson, introduced the debate, he said that there are difficulties and opportunities. However, the opportunities outlined in the report are as scarce as teeth on hens. It is a very negative report and, having read it, I came away very gloomy thinking that things are really bad.

I voted to remain in the EU, and one of the reasons for that was the environment. But then I asked myself

how we managed when we were outside the EU, and started to look at what we have done. There is the Public Health Act 1845. That was to do with the environment and predates the formation of Germany and Italy as national states. We have been at this for a very long time, as the Acts of 1866, 1875 and 1936 show. In 1907, we set up the National Trust without the help of the EU. The noble Baroness, Lady Sheehan, in her speech mentioned how important the habitats directive is. But in 1949, even before the European Coal and Steel Community, this House passed the National Parks and Access to the Countryside Act. In 2015, we created the world's largest marine nature reserve in Pitcairn—without the help of the EU. Yes, we can do it by ourselves; we did do it by ourselves; and I have no doubt that life will be pretty good in the future.

Let me use a personal experience to make a point. In 1988-89, when I was Minister for the Environment, I was very involved with work on the ozone layer. It was British scientific advice from the Antarctic Survey that convinced Mrs Thatcher that something ought to be done for the ozone layer. She was very good with the environment because she acted on scientific advice. She said to Nicholas Ridley and me, "This is so important, we have to have a world conference". So we organised a world conference in 1989, and we did that without the help of the EU, but the EU clung on to our coat-tails and came trundling along very rapidly behind. Just before we had the conference, the EU voted unanimously to phase out CFCs, not 100%, by 2000. We had a very successful London conference: 20 countries signed up to the Montreal Protocol and a further 14, including China, committed to sign up. What did the European Commission do? It decided to bring forward the date that we had just agreed, from 2000 to 1996. Mrs Thatcher gave exactly the right answer: it depends on innovation in science and the ability of industries to create the alternatives.

That proved one thing to me: it is terribly easy for countries in the EU to sign up to resolutions and directives when they have no industries that are going to be involved. As a developed, industrial country, we did have difficulties. It also proved to me that much of what the European legislation was about was emotion and capturing the public mood, rather than proper scientific innovation. That has not changed; it remains the situation. The impact on the environment and how we handle it is not down to some European regulation but to innovation, trade and planning rules. When we are outside the EU, we will be able to move much faster in those areas. I commend the previous debate today on science. We have to look forward and seize these opportunities, and Britain can be very good at that.

In 2000, the EU announced that its Lisbon strategy would make the EU the world's most advanced knowledge-based economy by 2010. What a load of rubbish. It has totally failed to do that. It is a sadness that the EU, far from being the leader and the important world player it was 20 years ago—when 30% of the world's economy was transacted in the EU; it is down to 15% now—has become a drag because it does not innovate and cannot respond quickly.

I could wax lyrical about that, but I shall move on quickly to two other matters. As the noble Lord, Lord Judd, said, the environment is international, national and local. I firmly believe that the environment is best protected at local level. If local people are involved in their environment, they will help look after it, especially farmers and people who live in the countryside. However, if you take away that responsibility for the environment and give it to a third party in a different country, the incentive to look after your home patch is diminished. We are lucky. We are an island nation and all our rivers are in our own country and we cannot blame pollution on anyone else. Unlike Holland, we cannot say that the pollution comes from Germany or, in the case of the Danube, that it comes from another country. We have responsibility for our own rivers, water catchment areas and water pollution, so let us do it ourselves.

I conclude with the issue of money. The environment comes down to money. The report refers to resources and how much we depend on Europe. Is that accurate? No. When we leave, the EU budget will be cut by 12%, so what will happen to some of this EU funding? The noble Lord, Lord Krebs, is right that no one country can fund a lot of this itself. When you take 12% out of the EU budget, many of its programmes will have to be massively cut and the incentive for it to work with Britain, with its financial strength, will be hugely increased. The EU will need our expertise in science and our funds in order to maintain its own programmes.

Who will win with Brexit? Both the EU and Britain will be losers to one extent, but it is far from all gloom for us.

4.18 pm

Lord Krebs (CB): My Lords, I join other noble Lords in thanking the noble Lord, Lord Teverson, for his excellent chairmanship of our committee. I am a member of the EU sub-committee whose report we are debating today. I pay tribute to our specialist adviser and our committee clerk. As my noble friend Lord Trees once commented, the committee clerk, in effect, writes a PhD thesis every week. She has an extraordinary facility.

As the noble Lord, Lord Teverson, has already hinted, I will say a few words about climate change and in doing so I declare an interest in that for eight years I was a member of the Climate Change Committee and chaired the Adaptation Sub-Committee. I stepped down from those roles at the end of January this year.

Noble Lords will be familiar with the Climate Change Act 2008 which passed through this House with all-party support. It commits us as a nation to reducing our greenhouse gas emissions to at least 80% below 1990 levels by 2050. As noble Lords will know, the role of the Climate Change Committee is to advise the Government on the cost-effective path to 2050 through a series of five-yearly carbon budgets and to report to Parliament annually on the progress that the Government have made towards those budgets. The first five carbon budgets have been legislated for, taking us up to the early 2030s.

In its 2016 annual report, the Climate Change Committee stated that so far the Government are on track to meet their legally binding commitments.

Emissions in 2015 were 38% below 1990 levels. This appears to be a good news story, and in some ways it is, but the good news has been achieved by a mixture of genuine progress through, for example, investment in offshore wind. The UK now has 40% of the world's offshore wind capacity, making us the global leader. It is also partly through plucking the low-hanging fruit and in part as the result of the by-products of changes in the country that are not to do with climate change policy, such as the decrease in livestock farming and the offshoring of some heavy industries.

However, when we look to the future, the picture is not quite as rosy. In order to continue to meet the legislated carbon budgets into the 2020s and beyond, significant new policies will be required. According to the Climate Change Committee, by the mid-2020s, about half of the required emissions reductions do not yet have any policies in place to achieve them. Furthermore—this brings me to Brexit—many of the existing and future policies are dependent on European legislation. The Climate Change Committee estimates that more than half of the policy space through the 2020s is dependent on EU legislation. I shall outline some of the key areas: energy-efficient product standards for household appliances, buildings and so on; vehicle fuel efficiency standards; controls on waste and F-gases; policy on biofuels; investment in R&D to develop the technologies to transition us to a low-carbon economy; the EU Emissions Trading System, which allows us to meet some of our emissions reduction targets by buying allowances, and the EU electricity market, which enables us to purchase electricity at the best price on any particular day.

Brexit will pose substantial challenges for this country in meeting its legally binding climate targets through the 2020s and beyond. I hope that in his response, the Minister will give us some indication of how the Government intend to meet this challenge. One answer might be that the great repeal Bill will ensure that all the relevant EU legislation is translated into UK law, but as we have heard, the Secretary of State for Defra has indicated that around a third of the legislation which relates to the environment cannot be translated in a straightforward manner. We also heard evidence from an expert in environmental law, Professor Richard Macrory—about whom we have heard quite a bit in the debate and with whom I play tennis in Oxford; I declare another interest—who noted that the words “as far as practicable” have been used by the Secretary of State and could be an escape clause. I look forward to the Minister reassuring us on these points.

More generally, can the Minister tell us how far his department—along with others because climate change policy cuts across departments—has got in deciding how the Government will meet their legally binding targets post Brexit? Will we retain the same environmental standards for products? Will we remain in the EU ETS? Will we replace lost EU funding for R&D? Will we continue to retain strict controls on waste? One can imagine pressure from some industry players to lower standards, so it would be useful to hear that the Government are committed to adhering to their own climate targets and that they will be completely clear

[LORD KREBS]

about standards so that there is a level playing field both within the UK and between the UK and the European Union.

I turn finally to the UK's position as a global leader on climate action. We were the first country in the world to pass a law requiring us to reduce our greenhouse gas emissions. As a result, we have been seen as a leader both in Europe and globally. A number of witnesses told us that our influencing role as a global leader could be weakened after Brexit because we will no longer be part of the EU negotiating bloc for international treaties. The Minister, Dr Jesse Norman, told us that he intended the UK to remain a global leader, but that it was premature to speculate how this might be achieved. I wonder whether it is still too premature or whether the Minister might tell us how government thinking has developed in the intervening months.

At the previous President of the United States said:

"We are the first generation to feel the effect of climate change and the last generation who can do something about it".

We should be proud of the fact that the UK has been a leader in formulating policies to do something about it. Brexit will pose new challenges for us. I seek reassurance that the Government are ready and willing to meet these challenges.

4.25 pm

Baroness Featherstone (LD): It is an honour to follow the noble Lord, Lord Krebs, who really made my role redundant as he has said everything I would wish to say. On Brexit, of which I am sure it is clear I am not a great fan, I think of the phrase, "How do you eat an elephant? One bit at a time". This is obviously the environment and climate change bit. I congratulate my noble friend Lord Teverson and the committee on beginning its gargantuan task identifying and categorising the issues and actions needed even to begin to address extracting ourselves from the EU in this regard. I sometimes think that everyone who works on this, whether a remainder or leaver, must have at some point thought, "Wow, it would be much easier to stay"—at least, that is what I hope they think.

I hope and trust that much of what we are about to do will be to recreate what currently exists. My particular portfolio is energy and climate change. I will confine myself to those aspects of the report and perhaps look at some of the compensatory actions that we will need to take. The report rightly says that we have established in UK law our commitment to those measures contained within the Climate Change Act, including the carbon budgets and of course the well-respected Climate Change Committee—thank goodness. As I said, I thought the speech from the noble Lord, Lord Krebs, covered beautifully all the aspects of climate change policy that need to come into play. But while the Climate Change Act protects us to a degree it goes only so far.

The Government have stated on many occasions, in this House and in the other place, that they will uphold their agreements, standards, targets, commitments et cetera, but I confess that I lack confidence in the Government. When we are not held to those standards or targets, when we are no longer monitored by the

EU institutions and fail standards enforced by the EU, I fear we will not meet our targets. I fear a decline and a rush to deregulation. I was a Minister in the coalition. I cannot forget those occasions when the Conservative part of the coalition went on and on about deregulation. It was almost a religion with them. Statements made on becoming a virtual tax haven and other comments in that direction do not encourage confidence in the maintenance of standards.

The emissions reduction plan was mentioned by the noble Lord, Lord Krebs. I ask the Minister: where is it? Is it ever disappearing into the future? Although I understand that the Government believe they can hold themselves to account, I do not share that optimism. Sadly, I prefer supranational oversight in this regard. We will need to set up new institutions to deal with compliance, infraction and additional enforcement. There will need to be biting sanctions on non-compliance. If we adopt EU regulations on energy efficiency into our own law, as I think we should, and if we keep up fuel standards for land vehicles and product standards for appliances, we will surely have to comply in order to trade. We need that alignment of standards. The report rightly says that the emissions trading scheme is not super-effective but it is very important. How and with whom will we trade emissions? What will happen about updates to EU regulations? They do not stand still, so even if we adopt them as they are, we will very quickly fall behind on, for example, the energy efficiency directive.

I do not want to just go through the report: it lays out well the areas and issues of importance. I trust that we will work towards reconstituting literally all of this. If this is the opportunity that we are encouraged and enjoined to support, then we have not only to reconstitute outside the EU what we subscribed to and benefited from in the EU but to go further. We need to change gear. There is no sense of urgency currently from the Government about meeting our targets or taking new actions and producing new policies to help us reach the level of emissions reductions that the Paris agreement committed us to. That was not an EU commitment but a world commitment. If the argument that there is a big, wonderful world out there with which to trade is to hold water, we need to capitalise on the economic opportunity that the clean economy offers us. We need to act faster and more urgently to make it clarion clear to the rest of the world that we are open for clean business and completely committed to decarbonisation.

Our future prosperity is going to depend on developing an economy that is innovative, entrepreneurial, internationally open and environmentally sustainable, and one where the benefits of growth are shared fairly across the country and with future generations. Our membership of the EU guaranteed our commitments to the climate change agenda and was a safeguard against this Government or any Government undermining our ability to deliver on our legally binding targets. Will the Minister say, outside the EU, what our guarantor of delivery will be?

We must improve the efficiency of resource use and decarbonise the economy. That will help create high skills and high value-added industries able to compete

in the new global markets for low-carbon and resource-efficient products, technologies and services and create jobs throughout the country. It is really as plain as the nose on your face that with the Paris agreement and the sustainable development goals, low-carbon products and services are the future, and that future is worth trillions to this country.

I have to say that the industrial strategy offered by the Government was virtually mute on climate change. We need to establish a clear and consistent commitment to policies that create long-term demand for low-carbon transport and energy efficiency, thus giving investors the confidence they need. And boy, do they need confidence, because thus far this Government have done their best to undermine investor confidence by changing the goalposts. They have taken away from wind and solar subsidies that everyone would agree were necessary to remove in the long term but which, done at a stroke, undermined all business plans—let alone the removal of the £1 billion carbon capture and storage manifesto pledge.

The Government need to strengthen their support for clean innovation and encourage the creation of clean financial products to bring consumer capital into these clean industries. As I am at seven minutes, I will simply thank my noble friend Lord Teverson and the committee for the vital work that they have done. I reiterate, however, that although reconstituting must be mandatory, it is but the minimum needed to drive both our economy and a clean planet forward.

4.33 pm

Lord Grantchester (Lab): My Lords, I am grateful to the noble Lord, Lord Teverson, and his committee for producing such a timely and authoritative report. It made the point clearly that the threads of EU environmental policy are woven through many aspects of the UK's relationship with the EU. Not only did environmental policy play little part in the referendum campaign; I would hazard that no one made the environmental case for leaving the EU. However, I am glad that the noble Earl, Lord Caithness, stressed that we must have the confidence to press ahead.

The report is not a very comfortable read. In every aspect of withdrawal from the EU that the committee considered, the challenges and pitfalls remain as daunting as initially feared. Since Britain was branded as the dirty man of Europe, participation in the EU has produced a comprehensive framework that Britain has embraced and improved upon to bring about favourable environmental impacts across our daily lives. Leaving the EU will affect nearly every aspect of the UK's environmental policy. That interdependence was highlighted by my noble friend Lord Judd, who asked several questions about what practical arrangements will come forward.

What is clear is that two years to resolve these daunting challenges is not very long if we are to provide answers on future policy direction and resources. It is also clear that Defra has had nearly nine months since the referendum and has not really laid out its thinking and approach to the task—other than to promise the great repeal Bill and underline certain fundamental basics, such as that the UK's climate

goals have not changed. The Secretary of State has explained that her department has eight different workstreams in its EU exit programme and is carrying out detailed analysis, ranging from market access and labour to trade and agricultural land use policy. She has also promised two Green Papers, on the future of food and farming and on the environment.

Perhaps the Minister can move forward from this position tonight and clarify at the outset the progress of this mapping exercise, when it will be finalised and whether it will be published. Has Defra been given the resources to deliver this and follow it through, with all its legislative implications, given that its budget was slashed by 30% by the previous Chancellor and it has been tasked with finding further savings of 15% by 2020? Has the Minister made any further request to the Treasury, beyond the meagre recruitment of 30 new posts?

If I have any criticism of the report, it is that it has been light on two important points: agriculture and climate change. However, I recognise that the noble Lord, Lord Teverson, said that agriculture will be the subject of a separate report, while the noble Baroness, Lady Byford, also referred to the interrelationship between farming and the environment. Paragraph 24 of the report mentions agriculture and fisheries in relation to the substantial environmental elements and significant cash-flow expenditure, signified in one bullet point in box 2 at paragraph 18. I draw attention to the significant role farming plays in managing the environment. After all, it has to look after its land resource for future generations. I declare my interest in a dairy enterprise in Cheshire which is in receipt of EU funds.

Agriculture is best placed to cherish the landscape and implement national priorities. The noble Baroness, Lady McIntosh, raised the importance of countryside stewardship in this regard. To do this, however, agriculture must be profitable. The Department for Business, Energy and Industrial Strategy has come forward with its industrial strategy, which was recently debated in your Lordships' House. Yet in that strategy document, there is no mention of agriculture. Can the Minister underline tonight the Government's commitment, beyond the statement that there is rural-proofing across all government departments?

I would also mention the importance of better regulation—not to be confused with deregulation—which will need to be constantly under consideration. My noble friend Lord Hunt spoke about all the organisations that need to co-ordinate and maintain standards through better regulation, while the noble Baroness, Lady Featherstone, also spoke strongly on regulation, especially in regard to energy considerations.

I mentioned that agriculture must be profitable, and I need not remind the Minister that much of agriculture would become uneconomic without subsidy. The Government have not yet come forward with proposals for funding agriculture post-exit, around 2019, a point underlined by the right reverend Prelate the Bishop of Leeds. This will be fundamental to food policy, the food chain and the food industry, which accounts for 6.8% of GVA and is the UK's fourth-largest exporting sector. Funding and food prices are intrinsically

[LORD GRANTCHESTER]

linked. Volatility in finance and extreme weather patterns were the subject of an interesting Global Food Security report on the resilience of the global food system and environmental tipping points. I was interested in the remarks of the noble Lord, Lord Krebs, given his perspective as chair of the adaptation sub-committee of the Committee on Climate Change. At the heart of the EU's environmental policy is the precautionary principle. When this is repatriated into UK law, the Government will face the challenge of whether it is to remain hazard-based or become risk-based. On this will depend the outcome of the great royal debate about whether the genetic modification of organisms will be permitted. This will have a significant impact on the environment regarding what sprays will be permitted and whether they can be incorporated into seed to save the environment altogether.

I underline the critical importance of climate change and its impact. Although it is mentioned in chapter 6 of the report, it is only really examined in paragraphs 134 and 135 with regard to the EU ETS. While the report is correct to underline that climate change is a global issue that transcends the EU and that the UK is a party to international agreements, the noble Lord, Lord Teverson, will appreciate that there are doubts about whether the UK is on track to meet the sixth carbon budget and the EU renewables energy directive, which requires the UK to reach an overall target that includes transport and heat as well as electricity. The noble Lord, Lord Krebs, and the noble Baroness, Lady Featherstone, also spoke eloquently on the challenges. The noble Lord, Lord Teverson, and the noble Baroness, Lady Featherstone, will remember that it proved extremely difficult to get the Government to set a decarbonisation target for 2030.

The debate this afternoon has highlighted the many concerns raised in the report. The Minister will know that there is widespread concern about the process of consolidation into the great repeal Bill. The House of Commons Library has identified 922 agriculture, 1,122 fisheries and 527 environmental instruments, regulations and laws which will need to be consolidated. Two questions arise. First, how will the Government define what is practical and appropriate and will this test be applied separately to each regulation? Several speakers have drawn attention to this in the debate. Secondly, as Labour has continually emphasised, the great repeal Bill is not a substitute for proper accountability and scrutiny, so will the Government commit to provide draft versions of the Bill as negotiations progress, so that we can be assured that current levels of environmental protection are at least being maintained?

The determination to pin the Government down on this issue sadly arises because they have not always lived up to their rhetoric on environmental issues. Their mantra is that they will leave the environment in better shape than they found it, but on issues such as air quality, they have failed to act, despite two court judgments. As a result, people being forced to breathe dirty air has led to an estimated 40,000 early deaths. The UK is still expected to have illegally high nitrogen dioxide levels in many areas in 2020. The Government still have some convincing to do regarding their real

commitment to environmental improvements. Leaving the EU could give Ministers leeway to set more lenient targets.

Our second area of concern is the weakening of enforcement mechanisms in UK law. Currently, as the report identifies, the EU Commission enforces the environmental legislation through its many functions, including by monitoring progress, providing guidance and interpreting legislation. A whole range of accountability mechanisms are potentially at risk as we leave the EU. Historically, both the Commission and the Court of Justice of the European Union have had a strong impact in ensuring the UK's compliance with EU legislation that affects environmental protection. Earlier this week, the Environment Agency brought a successful prosecution through Aylesbury Crown Court against Thames Water, resulting in a record fine of £20 million for six pollution incidents. Can the Minister say whether this sets any precedents for dealing with more general environmental issues? More importantly, will the Government, who are sometimes at fault rather than a company, face a similar course of action if they fail to meet their responsibilities? Does the Minister accept that the Government will need additional enforcement mechanisms to fill the gap left by the Commission? Does he accept that a clear framework has to be set while negotiations are ongoing to ensure that the UK's environmental standards are maintained?

The effectiveness of the EU regulatory regime is due in no small part to the deterrent effect of the power of the EU institutions to hold member states to account and to levy fines for non-compliance. In addition, every year, Defra faces challenges of disallowance and even infraction should it not implement the policies correctly. An effective and independent domestic mechanism will be necessary to ensure compliance by government, public authorities and farmers in undertaking their environmental obligations. The noble Baroness, Lady Sheehan, underlined these concerns in her remarks, which were echoed by the noble Lord, Lord Trees.

Our third concern is the future funding of environmental and climate change initiatives and institutions. Although the Government have committed to continuing research funding until 2020, this is a short-term commitment in research planning terms, and so far there has been less of a guarantee of continued funding beyond 2019 for other crucial projects. There is a real danger that bids for government funding post Brexit will be competing for a shrinking pot and that the environment will not be deemed to be a priority. There is a real concern that Defra will not have a seat at the top table when some of these difficult choices are being made. I hope the Minister can confirm that Defra will establish clear objectives for future environmental protection in the UK and will be determined and committed to delivering the level of resources necessary to deliver this. The noble Lord, Lord Rees, made a powerful speech on the Copernicus programme and the UK's continuing participation in it.

Fourthly, the report identifies the complexities of managing future environmental planning in the context of the devolved Administrations within the UK. Currently, there are differences in environmental and climate change policies between them: for example the

Administrations have either legislated their own climate change targets or created their own Act. This difference is likely to increase once we have officially left the EU, and the requirement to act in conformity with EU law is lifted. It is therefore vital that the devolved Administrations and the Government should achieve an appropriate level of policy co-ordination, while still allowing for some distinction to reflect local or regional circumstances. Can the Minister reassure us of the department's intentions to meet with the devolved bodies frequently during the Brexit negotiations to ensure that the demands of each devolved Administration are properly reflected?

Finally—your Lordships will be glad I have said that word at this late time, and I am sorry I have taken so long—it is crucial that we have a coherent plan to combat climate change once we leave the EU. Up till now, the UK's contribution to the global debate has predominantly been as an EU member, and historically the EU has provided leadership in shaping the mechanisms that it has introduced to meet collective targets. The report rightly recognised that we will lose our place in the EU negotiating team, and we run the risk of being sidelined unless we can ally with a new bloc.

Several questions arise as the UK will no longer be required to meet all the EU's targets for renewable energy. Once outside the EU, the UK will not be compelled to report to it on its annual emissions or to submit plans to the EU for corrective action if the UK misses the 2020 targets for reducing emissions. The withdrawal process will need to establish the UK's obligations under international law, separate from the EU. Can the Minister outline what the Government's intentions are in this respect?

The election of President Trump has raised the stakes on this issue. The noble Lord, Lord Rees, has argued that the UK needs to find a way to play a continuing role of influence. While the US Administration have yet to provide clear policies on climate change, the President has threatened to remove the US from all international climate treaties. This puts a renewed onus on the UK to set out clear policies and be a leader in combating climate change. I would be most grateful if the Minister could outline how the Government intend to respond to this challenge.

This has been a very well-informed debate. It has highlighted the importance of certainty and consistency for institutions, businesses and investors. It is clear that there is a great deal of interest in the progress of discussions both inside and outside this House. Parliament will want to continue to play its part in shaping the outcome. I hope the Minister is able to confirm that all sides of the House will have a full and meaningful role as negotiations commence. I look forward to hearing how he thinks this will best be achieved.

4.51 pm

The Parliamentary Under-Secretary of State, Department for Environment, Food and Rural Affairs (Lord Gardiner of Kimble) (Con): My Lords, I thank the noble Lord, Lord Teverson, and the sub-committee for holding this inquiry, and for the opportunity for this thought-provoking debate today. Although this has predominantly been an environment and climate change debate, I should declare my farming interests as set out in the register.

There have been a number of questions that I would like to reflect upon and, given the hour, write a more detailed reply to. Any questions that I am not in a position to attend to, I shall of course respond to in writing to your Lordships.

The committee highlights the scale and complexity of repatriating environmental policy as we exit the EU. This is not something that the Government underestimate—and the noble Lord, Lord Teverson, elaborated on the range of issues at large. As the committee's report indicates, it is of vital importance that policy stability is provided as we leave the EU and that no legislative gaps or uncertainties are created. To provide this stability, as noble Lords know, the Government have set out our plans for a repeal Bill that will convert current EU law into domestic law. We will ensure that the environment is properly protected in law and that—I emphasise this—the whole body of existing EU environmental law continues to be given effect in the law of our country, either as it stands or in a manner that ensures that it works as a UK regime.

The department is continuing its work on the operability assessment of EU legislation following exit. This is a matter of process—and I understand the issue, which has arisen before, about one-third and two-thirds. I emphasise that this work is to ensure that the whole body of EU environmental law continues to be given effect in the law of the UK. As I say, it is about ensuring the manner in which it works as a UK regime.

This is also in conjunction with our manifesto pledge to leave the natural environment of this country in a better state than we found it. We want to design an effective approach to driving environmental improvement, tailored to the needs of our country. We will continue to explore the scope for new approaches to regulation which deliver better environmental outcomes, in the context of our commitment to developing a 25-year plan for the environment.

The noble Lord, Lord Teverson—and perhaps the majority of your Lordships—found this more a challenge than an opportunity, but I do think that there are opportunities that we should grasp. We should be positive about our joint determination to improve the environment of this country. That is a great opportunity for us all to work on.

The committee considered the role played by EU institutions in ensuring effective enforcement of environmental protection and standards—I listened very carefully to what the noble Baroness, Lady Sheehan, said—but the UK has always had a strong legal framework for environmental protection which predates our membership of the EU and the oversight provided by its institutions. I was going to refer to the Clean Air Act 1956 as a first example, but my noble friend Lord Caithness took us as far back as the 19th century, when we gave a lead.

I say to the noble Lord, Lord Grantchester, in particular, that we were the first country in the world to introduce legally binding emission reduction targets through the Climate Change Act 2008. Our commitment to the environment can be seen through our action in extending the blue belt: 23 new areas were designated as marine conservation zones only last year. The blue

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belt now covers more than 20% of English waters, and our record for waters around our overseas territories is also impressive.

In considering the future enforcement mechanism for environmental law, we should recognise the fundamental roles of Parliament, the UK courts and, indeed, the electorate. Parliament is the UK's supreme law-making body. As we have seen, particularly in this Chamber, it holds Governments to account by questioning and challenging the laws they seek to make and amend. Parliament in turn is accountable to the electorate. Our system of judicial review and its body of public law enables any interested party to challenge the decisions and actions of the Government through the UK courts.

I very much regret the lack of confidence of the noble Baroness, Lady Featherstone, in what I believe are our exceptional UK institutions. The noble Lord, Lord Grantchester, referred to the Thames Water case and the fine of £20 million. I listened very carefully to the commentary of the Environment Agency spokesperson. It shows exactly that such environmental issues are taken with extreme seriousness and rigour in our domestic courts.

Countries that are not EU members are well capable of driving environmental improvements in their countries. Many countries around the world with strong environmental records would think it extraordinary if we were to say to them, "By the way, you need a supranational body and court to ensure that you behave yourself". They would feel extremely insulted. I will give way, but time is short.

Baroness Featherstone: My view was that I prefer the supranational authority to our Government here; I was not referring to other countries. Sadly, my confidence is lacking in this Government.

Lord Gardiner of Kimble: I am sorry that the noble Baroness does not have confidence in our institutions, our Parliament and our courts, because that is in effect what she is saying. She is saying that other countries around the world are well able to look after their own environment. In fact, in many cases, as I have described, we are already leading and are recognised as a leader of the world.

The committee is also anxious—rightly—for the Government to make clear what a free trade agreement with the EU will entail, arguing that this will have implications for future environmental policy. We will negotiate for an ambitious free trade agreement that allows the freest possible trade in goods and services with the EU. Trade and environmental considerations are closely related.

We want to ensure economic growth. Development and environmental protection go hand in hand. More trade does not have to come at the expense of the environment, and a healthy environment is in everyone's interests. We will explore all options in the design of future bilateral trade and investment agreements, including environmental provisions within them.

In respect of the committee's specific recommendations to review and evaluate the common agricultural policy and the common fisheries policy, I can assure your

Lordships that we are assessing all the opportunities for agriculture and fisheries outside the EU. A number of noble Lords raised this, including my noble friend Lady Byford, who particularly raised the importance of a successful agricultural sector, and my noble friend Lady McIntosh of Pickering and the right reverend Prelate the Bishop of Leeds. It is absolutely clear that a successful agricultural sector in this country is compatible and has traditionally, in so many parts of our country, been compatible with a good environment.

The noble Lord, Lord Judd, has always been not only an outstanding champion of Cumbria but also of the national parks, for which it is my great privilege to be responsible at the moment. Farming, landscape, environment, and the agricultural system of the Lake District are absolutely hand in hand and entwined. It has been created by generations of farmers, and it is that agricultural system that has enabled the very designation that we granted to that wonderful part of our countryside.

There is much on which the Government will be working. I would say to the right reverend Prelate the Bishop of Leeds that it is my privilege to sit on the ministerial taskforce on broadband and we are absolutely clear about the need for increasing the rate of superfast broadband in rural areas. We have deliberately trialled the free childcare of 30 hours in rural areas, specifically because we think it is important that everyone in this country has those advantages. We are absolutely clear that, as I say, a great and improved environment and a strong agricultural sector are compatible with each other.

The committee points out a shared interest in maintaining cross-border trade with the EU. The Government agree with that. It highlights the need to co-operate with the EU on environmental pollution—of course, due to its transboundary nature. It is our neighbour and our friend and we should do this.

The committee also expressed some concern that withdrawal from the EU may impact on achieving climate change targets. I can assure noble Lords that we will continue to work closely with EU member states and international partners to tackle environmental issues which demand multilateral co-ordinated action. We will continue to co-operate with the EU on those policy areas where it is important for us to do so, including those issues which have effects across borders.

In relation to achieving carbon targets, I would say to the noble Lord, Lord Grantchester, that the Government remain committed to tackling climate change and to low-carbon, secure and affordable energy and clean growth. While we cannot know at this stage what our precise future participation in EU climate measures may be post-exit, the EU will remain an important partner and we are considering how best to continue to work together.

The committee also urged the Government to engage fully in negotiating and influencing EU environmental proposals for the full term of its membership. It expressed concern about the UK's influence post-exit at both EU and international level. It also stressed the importance of ensuring that the UK adheres to its international commitments. As long as we remain a member of the EU we will continue to play a full part in its activities

and to represent the interests of the British people. My ministerial colleagues and officials continue to play an active role in the EU institutions.

I want to emphasise, particularly because it has been emphasised by three noble Lords—the noble Baroness, Lady Featherstone, the noble Lord, Lord Rees of Ludlow, and the noble Lord, Lord Hunt of Chesterton—that, after our exit, the UK will continue to honour its international commitments. We are party to multilateral environmental and climate change agreements and are bound by their obligations.

We are signatories, for instance, to: the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the Paris agreement, which set binding emissions targets; the Convention on International Trade in Endangered Species; the Montreal protocol, with its ban on most ozone-depleting substances and requirements to reduce hydrofluorocarbons—I was particularly grateful to my noble friend Lord Caithness for reminding your Lordships of the London conference, and the advances and all that followed on from that conference; the Convention on Biological Diversity; the Berne convention; the OSPAR Convention on the Protection of the Marine Environment of the North-East Atlantic; and the Basel, Rotterdam and Stockholm conventions, with their restrictions on the movement of hazardous waste and commitments relating to chemicals.

More than just honouring our international commitments, the UK will remain an active country at a global level. The UK has always played a significant role at the international level, whether this be in combating acid rain, or the role that we played last year in extending the Montreal protocol. We have led Europe on issues of environmental protection, let us remember. The Wildlife and Countryside Act 1981 provided protection in UK law for vulnerable species more than a decade before the EU introduced the habitats directive. The committee—I particularly draw the attention of the noble Lord, Lord Grantchester, to this—acknowledged, I believe rightly, the UK's position as a global leader on climate change. The UK's acknowledged skills and expertise have been a major factor in developing our influence in international climate and environmental policies. These skills and expertise will stand us in good stead for continuing to influence environmental policies. We will not step back from the international leadership that we have given on climate change.

My noble friend Lord Deben, the noble Lord, Lord Krebs, and the noble Baroness, Lady Brown of Cambridge, are all Members of your Lordships' House who have been keen leaders in ensuring that, through all our efforts, we are better with our mitigation and our adaptation. I thank the noble Lord, Lord Krebs, who has recently handed over to his very worthy successor, the noble Baroness, Lady Brown of Cambridge, the chair of the Adaptation Sub-Committee.

The noble Lord, Lord Krebs, mentioned the UN Framework Convention on Climate Change, and we will continue to remain a very strong partner in that. We are now considering how best to take forward that continued engagement. The UK remains committed to international efforts to tackle climate change, and working with the EU will remain as important as ever.

We will also continue to strengthen our relationship with other partner countries and work through multilateral groupings such as the G7, G20 and the Commonwealth.

The noble Lord, Lord Rees of Ludlow, referred to the Copernicus project; I think that this country has had a proud history of leading and supporting cutting-edge research, and the noble Lord knows more about that than almost anyone. As we exit the EU, Her Majesty's Government welcome agreement to continue to collaborate with our European partners on major science research and technology, so this is very much on the radar as we move into the negotiations.

A number of your Lordships, including the noble Lords, Lord Grantchester and Lord Teverson, and my noble friend Lady McIntosh of Pickering, asked about resources, particularly for my department. The committee identified the resource pressures associated with maintaining environmental legislation. The Government are absolutely aware of the implications of EU exit for, in particular, my own department's work programmes. I can assure your Lordships that Defra's work programmes and recruitment plans are kept continually under review to ensure that we are staffed to deal with the tasks at hand. We have set up an EU exit programme to help co-ordinate, plan and assist several key work streams and are identifying and filling vacancies on a rolling basis—it has been my privilege to work with many of the officials; their commitment has been 110%, they are working extremely hard and effectively, and I congratulate and thank them.

The committee also raised concerns about the potential risk of divergent approaches to environmental regulation across the United Kingdom. I assure the noble Lord, Lord Grantchester, and all your Lordships that it is absolutely clear that Defra must work closely with the devolved Administrations, as it is doing. We will work in partnership with the devolved Administrations as we form our negotiating strategy for exiting the EU. It will be important to ensure that no new barriers to living and doing business within our union are created. That means maintaining the necessary common standards and frameworks for our own domestic market, empowering the UK as an open, trading nation to strike the best trade deals around the world and protecting the common resources of our islands.

A number of questions were raised. Time is pressing but I wish to respond to my noble friend Lady McIntosh of Pickering, who mentioned the EIB. The Government are in the process of assessing the contribution that the EIB makes. However, we are clear that the future relations between the UK and the EIB will be a matter for the Article 50 negotiations. Again, this is very much on the radar. The actual form of a dispute resolution in future relationships with the EU will also be a matter for the negotiations as they proceed.

A number of other points were raised and I will need to reflect on a considerable number of them and get back to your Lordships. I look forward to the debate on agriculture when your Lordships' committee brings that forward. However, we have made sure that the current levels of funding for farmers are assured until 2020. Existing environmental stewardship and countryside stewardship agreements are fully funded for their duration. Clearly, we will have a

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major task in bringing forward our proposals for ensuring that our farmers have a vibrant future in an enhanced environment.

I hope that this has not been an unnecessarily pessimistic debate and wish to emphasise some of the significant gains that this country has achieved in improving its environment. The water environment is in its healthiest state for 25 years, with otter, salmon, sea trout and other wildlife returned to many rivers for the first time since the Industrial Revolution. We have had successful reintroductions of species such as the large blue butterfly, the red kite and the short-haired bumble-bee. We have seen many declining species such as curlew, stone curlew, chough and bittern start to recover, although clearly there is very much more to do. We have an opportunity to develop an environmental policy that is bespoke to our country. We must grasp that opportunity, whatever our opinion of what happened last June. We can unleash the full potential of this country and develop innovative and efficient policies that will enable us to continue working globally on environmental protection.

I again commend the noble Lord, Lord Teverson, and his committee on producing this report. It will continue to be of great value as we proceed in securing our objective to enhance the natural environment of our country and leave it in a better state than the one in which we found it. Working together—I emphasise “together”—let us ensure that there is a better environment for all. We should address with clear purpose the adaptation and mitigation of climate change—causes on which we can all unite.

Baroness Sheehan: I wish to comment on the remarks about enforcement. This is a very important area. The Minister mentioned the Clean Air Act 1956. I remind the House that that was enacted on the back of the great smog—the catastrophic pollution event in London. Going back to the 19th century, in 1858, London had the great stink, when Parliament had to be evacuated as the sewage that had been dumped in the Thames stank so much. That event led to the London sewerage system being built. My point is that we must be mindful that we have to interfere in a timely manner and we cannot, judging by the events here, wait far too long before it is necessary to act.

5.14 pm

Lord Teverson: My Lords, I thank noble Lords for their contributions. I will be as brief as I can. I will not be long. The right reverend Prelate referred to this

as an onion. The more the committee looked at this, the bigger and more complex the challenge was. I say to the Minister: the report is not meant to be pessimistic. It is supposed to help find a way through to the other side, and to show what a challenge that is. We are very concerned that the Government have the resources to do it. The Minister’s reassurances tell us that they do.

I thank the noble Earl, Lord Caithness, for adding an element of opposition to the debate. Yes, we are leaders and that is one of the things we say. As the Minister said, Britain has been a leader on climate change. In fact, our concern is that the rest of Europe might backslide without us being there, to our prejudice. I thank the noble Lord, Lord Krebs, for time-sharing with me in looking after the climate change side.

I will just say something about the institutional side. The point here is that Lords committees get evidence from as wide a range of people as possible, who are not nutters and do not have a single agenda. The biggest message that came through was about how the ECJ and the Commission do not have a role at the moment. We may not like that but that is the message that was given to the committee. Just as the noble Lord, Lord Trees, said, however good the wish of the present Government—I believe completely in their environment side—that is not necessarily true of future Governments. It would be great if somehow we could solve this institutional thing with the present Government to make sure that future Governments also have to pursue that agenda properly.

I thank everybody for their contributions. I particularly thank Celia Stenderup-Petersen, our clerk; Jennifer Mills, our policy analyst; and David Baldock, our special adviser. We have had an hors d’oeuvre for the agricultural debate that we will have in due course. We look forward to that. Yes, agriculture is integrated but so are energy and transport in terms of the environment; I am sorry we could not do the whole thing.

Motion agreed.

Intellectual Property (Unjustified Threats) Bill [HL]

Returned from the Commons

The Bill was returned from the Commons agreed to.

House adjourned at 5.18 pm.