

Good afternoon, everyone, and welcome to this Civil Service Live session on tackling climate change and delivering global Britain. I'm moderating this session today. And just to introduce myself, I'm Vel Gnanendran, I'm the Director of Climate Change and Environment at the Department of International Development. So I just wanted to take a few moments at the beginning to say a bit about this session and to introduce our speakers. What we want to try and do over the next 45 minutes is to discuss why climate change is such an important part of the UK Global agenda, why it's something that all of us as civil servants need to think about, and why COP 26 next November will be such an important moment for the UK. That's a lot to do in 45 minutes, but we are going to try and make this as interactive as possible using Sli.do to get your views. So, if we have time at the end, I do want to try and get in some questions. So please do submit questions on Sli.do and I will try and put those to the panel, at the end. So before we make a start, let me introduce our speakers. So that we will be starting with a video from Penny Endersby, who is the Chief Executive at the UK Met Office, we'll then turn to Sam Beckett, who is the acting Permanent Secretary at BEIS, Richard Clarke, our Director General for Policy Research and Humanitarian at DfID. Then David Hill, who is the Director General for Environment, Rural, and Marine at Defra, and we'll wrap up with Alison Campbell, who is the Deputy Director for International Engagement at the COP 26 in Cabinet Office. But to kick us off, we wanted to get a sense from you of how you feel about climate change. So if you could all use Sli.do, to answer this question; How do you feel about climate change? Are you not that concerned? Are you relaxed or do you feel okay about it or are you very concerned? So if I give you a minute or two to do that, and hopefully we'll see the answers popping up.

Oops, slightly different question here. But let's, let's go with this.

Oh, this is the question I wanted to ask.

Okay, well, I think that's I don't think we need to dwell on that question any longer. I think it's a quite definitive response there, so I will come back to that that question later on. But let me turn now to the panel and let's kick off straight away with this video from Penny Endersby at the UK Met Office.

Good afternoon. My name is Penny Endersby and I'm the Chief Executive of the Met Office. I'm excited to be with you today to share some of the ways in which we contribute to the global agenda as a thought-leader in climate resilience research, policy, and actions. We saw in the forecast from Aiden, what the world might look like if we don't start urgent mitigation now. We squeezed a lot of science into that short video. You may have seen some recent coverage of our latest research showing in the UK where we never get seen 40 degrees centigrade. This will be likely every three years by 2100 under a high emission scenario, and every 15 even, if we meet Paris emissions targets. It's therefore essential we listen to what the science is telling us and start to adapt to our changing climate to protect those most in need. For example, these slides show the potential changes to temperature patterns globally later this century. As you can see it present, the most extreme heat stress, which we really only experience in the tropics, will be far more widespread if we allow the climate to warm by 4C. And it isn't just temperature. Look how much the risk of flooding increases from the present day to the 1.5C rise, which is the best we can hope for. And again, if we foresee an increase for areas of the world already significantly impacted by day to day weather and extremes, the prospect of these changes in storms.

So what can we do about it? Met Office research has made important contributions to the Intergovernmental Panel on Climate Change, IPCC. Without climate models, observational data sets and peer reviewed papers assessed extensive in all of the previous assessment reports, results from our two flagship models will also play a crucial role in the upcoming IPCC sixth assessment report. Met Office research has also underpinned the UK climate change risk assessments that inform the National Adaptation Programme. But research on its own doesn't enable action for those impacted to truly allow decisions to be taken, and for governments and people to be empowered to make changes. That information needs to be understood and used by those whose lives, livelihoods and homes are affected. This is where partnerships are essential. So we work closely with our counterparts across the globe. For example, in the DfID funded Wiser Programme in East Africa, we've worked with partners to develop early warning set of services on Lake Victoria saving lives and livelihoods for fishermen, particularly important this year as we're seeing record lake levels. We're very proud to be part of a UK government backed UN Climate Action summit initiative. The risk informed early Action Partnership, which brings together researchers humanitarian and development sectors. The aim is to make 1 billion people safer from disasters by greatly expanding early action financing, improving early warning systems and the capacity of decision makers to act on the risks being identified. I've spoken so far, mostly about the need for adaptations to prepare for climate change, but we also need urgent mitigation to limit emissions. And at the Met Office, we take our sustainability very seriously. We're already a zero single use plastic organisation, but we're determined to play our part in government's net zero commitment by developing a plan which is fully evidence based and that we know how we intend to implement. We've undertaken the first survey of all Met Office staff providing a baseline, but we also know about our elephant in the room. The Met Office is home are one of the largest supercomputers in Europe, and the energy this consumes dominates our carbon footprint. It's a big challenge to balance carbon neutral aspirations with the computing power and Global Connections of people needed to produce the vital climate projections discussed earlier. We've taken a big step by changing our electricity tariffs for Exeter, where the current computer is based to a carbon neutral one. We will not only reduce our carbon footprint, but there's a large consumer of power, we're also encouraging our supplier to consider expanding their available green energy. And considerations around our drive for net zero are already being factored into the procurement of our next supercomputer, and our plans for a future normal post COVID-19. And this brings me on to the MET Office STEM activities designed to inform, encourage, empower and guide the next generation on weather and climate science and impacts. In 2019, we celebrated 10 years of our education outreach programme, and we now reach thousands of people across the UK and around the world, including through our curriculum linked classroom resources launched last year. These have seen a 700% increase in downloads during lockdown, and if you're home educating your children, you might like to have a look at them too.

We also recognise the value in exploring partnership opportunities in education. And a recent collaboration with the Red Cross climate centre holds much promise. Through use Youth Adapt, or Y-ADAPT, we can hear the voices and see the inspiration from youth who are actively designing and implementing adaptation plans in over eight countries globally. The interactive game space curriculum explores key concepts of climate change, extreme weather, hazards and vulnerabilities relevant to the participants' communities, from cleaning out drains to preventing the risk of flooding in Haiti, and to advocacy for mosquito netting in school dormitories in Uganda. The results from the Y-ADAPT programme will be shared with countries around the world. I trust I've provided some insight into what

we do, over and above providing you with the weather forecast. Through our research, and how we put it into practice with our many national and international partners. At least I hope I've provided some food for thought for our panellists.

Hello It's the 15th of July 2015. And it's another hot and sunny day across the UK with widely temperatures higher than 30 degrees. Another muggy night to come as well. Tonight, yesterday's hot spot, 33 Celsius Porter Down in Northern Ireland. High pressure continues to dominate the weather and the heat around that high drawn up from the near continents at the moment, with Western Scotland, Southern Scotland, Northern Ireland and much of England and Wales, temperatures higher than 30 Celsius. Overnight those temperatures not dropping significantly, the heat stays with us, no lower than 18 degrees for many, with the combination of high daytime and nighttime temperatures, Public Health England's Heat Health Service's currently Amber and with no relief for those vulnerable to warmer weather, the advice is to look out for others, especially those in high risk groups. Close your curtains in rooms that face the sun during the day to keep it cooler. Temperatures rise quickly again tomorrow more than 30 degrees once more Southern Scotland, southwards, but a little cooler elsewhere as rain arrives into the Northwest, some heavy rain for a time, and that cooler air starts to spread elsewhere during Sunday and the start of next week, but the heat hangs on in the southeast, with temperatures expected to stay above 30 well into next week returning to average in the Northwest. Now if it stays hot in the south east next week, that'll be 10 consecutive days higher than 30 degrees. Such a prolonged heat wave can be a risk to the fit and healthy and not just vulnerable groups. Remember, drink plenty of fluids, dress appropriately for the weather and slow down when it is hot. If you travel on the London Underground, you'll know how hot it can get in weather like this. Of course this heat wave follows the drier and warmer than average year so far. And for those areas that are currently having hosepipe bans and afraid there's little sign in the forecast of significant rain. In global weather news, we are seeing the continuation of an extremely dangerous heatwave, in northern India. The combination of high temperatures and high humidity have led to the wet bulb globe temperature reaching 32 degrees for the fifth day in a row. This means there is a risk of heat stress, so the authorities are continuing their ban on outdoor working, all farming and construction remains at a standstill. Thankfully, this isn't a real forecast. But it is one possible scenario for how a summer heatwave could affect the UK in 30 years' time. Of course 'possible' and 'could' are words that express uncertainty, but don't let that load you into a false sense of security. Much of the uncertainty is because our climate in 2050 depends on how much we reduce greenhouse gases in the years to come. Since the Industrial Revolution, the world has warmed by more than a degree Celsius and if this rate continues another half a degree of warming is expected by 2050. In the UK Further warming is also expected if greenhouse gases continue to rise throughout the 21st century, well, this graph here shows the expected rise in temperature 1.7 degrees by 2050, more than four degrees by 2100. The shaded area represents the full range of likely temperatures. However, if stringent measures are taken to reduce greenhouse gas emissions; 1.3 degrees by 2050 or 1.4 by 2100. So, action now will make a subtle difference by 2050. But a significant difference by 2100. The July 2050 forecast was based on a worst case, high emission scenario, it's useful to illustrate how our weather patterns may change and what that could look like if we don't curb emissions. Of course, the UK's weather will continue to be highly variable but on average in a high emission scenario, winter rainfall will increase 7% higher by 2050. Summer rainfall will decrease 15% lower by 2050. Again, the shaded areas show the range of likely valleys. Warmer, wetter winters with an increased risk of flooding. Hotter, drier summers. We already have an idea of what this would feel

like. February this year was the wettest on record. Last summer, the UK recorded its highest temperature on record. And summer 2018 was the joint hottest summer on record. 30 years ago, the chance of seeing a summer like 2018 was very low. It's now higher, but by 2050. Under a high emission scenario, it's more likely than not. Hotter, drier summers may not sound like such a bad outcome. But as you saw in the example forecast, such widespread and long lasting heat with little relief at night can cause a significant health risk, especially for vulnerable people. If no action is taken now to reduce emissions. those problems will only increase in the future.

Thanks. Thank you. And so apologies that those videos were the wrong way around as you may have may have figured out, but I think quite a powerful visualisation of what will happen if we don't tackle climate change and don't take the sort of action that we need to. Before I turn to the rest of the panel, I did want to ask our second question. So having seen that video in the weather forecast of what what life could be like in 2050, do you think the UK is doing enough on climate change? And hopefully again, we will see the results popping up.

So another quite overwhelming set of responses there. So I think that is an appropriate moment to turn to our first panellist, Sam Beckett, the Permanent Secretary at BEIS, which, as many of you will know, is the lead department on climate change for government. Sam, many would say that we need a strong domestic climate position in order to have a strong international position. So could you say a bit about what we're doing here in the UK on climate change, even internationally, and also why you think this is an issue for all civil servants.

I'd be delighted, thank you. Thank you very much, Vel. I'm Sam Beckett. I'm acting Permanent Secretary at the Department for Business Energy and Industrial Strategy. And the first thing I really wanted to stress is that you know, netzero and reducing climate change is a whole of government effort in the UK. BEIS holds some important levers. We've got the energy sector, we've got large bits of business and industry and we hold a lot of the budget on research and development. But to achieve net zero means, you know, it means you have to transform the whole economy, bringing in transport, land use, buildings, and so on. So, you know, right across this panel, but also more widely, it's very much a team effort. And of course, as you've said, Vel, you need a global response. So we're also working, you know, with with departments who are focused internationally, and our international partners. So, you know, our job in BEIS is to keep us all coordinated and strategically aligned, but I wanted to get across the message that it's a whole of government effort. So what are we doing domestically? Well, actually, our our track record is gives us some cause for optimism; between 1990 and 2018, we reduced emissions in the UK By over 40%, that's faster than any other group G7 Nation. In that time, there was a real story of renewable electricity generation coming to the fore. We've got four times more of that today than we had back in 2010. And low carbon electricity gives us about 50% of our total. A lot of that's a really successful story about offshore wind capacity, and getting the price of that energy down to about a third of what it was over that period, gaining that competitiveness, which is an important part of the story. And the use of coal, as I'm sure many people will recognise we had, we had a coal-free two months over the recent past. That's something we haven't achieved since the Industrial Revolution, so coal is a much smaller part of the energy story. And of course, in 2019, we became the first major economy to actually legislate putting ourselves in a legally binding a binding arrangement to meet net zero greenhouse gas emissions by by 2050. And we've set interim legally binding targets as a part of

that, progressively limiting our carbon emissions. So far, we've met our first two carbon budgets. And we're forecasted actually to overachieve. A little on our third, but the fourth and fifth carbon budgets are more challenging, and there is still a gap to fill on those. Another point I was keen to get across was really that I think it's a bit of a misconception that there's a trade off between climate change and growth. In fact, you need growth and investment, to make progress on climate change and new technologies. And we actually grew the economy by 75% over that period where we were reducing carbon emissions by over a 40% but we do need to keep keenly focused on where the UK's economic strengths and advantage is, so as we can continue this as part of a positive story economically as well. It's estimated that the low carbon economy could grow four times faster than the rest of the economy between now and 2030. And support up to 2 million extra jobs. And it's keeping that a climate change and economy story in step and connected that I think is, is a really important part of our work. And we, I mean, we've obviously got to come out of the COVID crisis and build back greener as the Prime Minister said back in his speech at the end of June. He was announcing new funding for cutting edge technologies like direct air capture, but also much more, much more mainstream but effective mitigations like planting trees and also in his economic update last week, the Chancellor announced a 3 billion pounds worth of investment in cleaner homes and buildings, improving energy efficiency in homes and in public sector buildings too. So that's another real vote of confidence and commitment to building back greener. But just just moving very quickly on to the the global piece. We've got to take action internationally. We have pledged to double our international climate finance, providing over 11 billion pounds to help mitigate against climate change and species loss but I'm sure Richard Clarke from DfID will talk a little bit more about that in a minute. And next year, as Vel said in the introduction, we will host the vital COP 26 climate negotiations and our Secretary of State in in BEIS, Alok Sharma, is going to be COP President for that, and we really want to use that to drive global climate ambition and try and limit warming well below the two degrees level. We've also got a G7 presidency, which gives us a real opportunity through both those routes to drive sustained international climate agenda over the next couple of years. But very importantly, we will need to be setting the ambition from the UK's perspective and just to wrap up, I do really believe it's it's something that every civil servant has got a role to play in the department's representatives on this panel, and many others have been in the climate change game a long time. But we're bringing more people into the family day by day; the Treasury's conducting the world's first review by a finance ministry on how the transition to net zero is going to be funded. And I'm sure more departments will be joining in these efforts in the months and years ahead. So think about how your department can play a role in all of this, include climate impacts in the analysis that you do as you're developing policy. And you know, if in doubt, do get in touch with us in BEIS to understand more about how you can help the combined efforts of the UK Civil Service against this national and global challenge. Thanks very much.

Thanks, that was a really great way to kind of give us all something to think about. And I think your message that this is a whole of government effort is a really good one. And it really, really struck with me your point that the UK we've managed to grow the economy by 75%, while reducing emissions by 40%. I think that's quite powerful set of statistics. And you started to talk on the international side. And so let me turn now to Richard. Richard, it's often said that the poorest countries are the ones that will suffer the most from climate change, but have actually done the least to cause it. So could you tell us a bit about what the UK's doing to support them to support those countries. But also, I know firsthand that you have done quite a lot to champion climate change within the Department for International

Development. So, so just say a bit about what motivates you to do that, and why have you taken this issue up in particular?

Great. Thanks very much indeed. Well, welcome, everybody. It's great to be able to join you, at least virtually. And we've got I've got a couple of slides, I'm just going to talk through in response to Vel's question. But let me start by saying on answering that specific question that Vel just asked. So I've been in DFID now for just under two years, having come from a career as a non development professional and one of the things that really struck me early on in arriving in the department was how fundamental it felt climate change was going to be to the future of development over the coming years. And as I'll say more about in a moment, the risk that the, the great gains that the world has made in relation to development, increases in the number of children who are living beyond five, reductions in infant mortality, improvements around maternal health, things like that around the world, all of those things are made more vulnerable as a result of climate change. And from a personal perspective, I suspect like lots of people joining us virtually and from around the UK and around the world today, and this feels like the biggest issue any of us could be working on right now, particularly if like me, you've got children, and you're worrying about what their future might be like so, so let me just turn to the slides. And if we can go to the next slide quickly, so I'm not going to try and do I'm not gonna try and repeat the brilliant job that the Met Office weather forecaster did, of showing the potential implications of warming over the coming years. But it's this slide is really just to do a couple of things. The first is to an emphasise quite how grim the situation could be, in the coming years if we don't take immediate action. But the other thing and really if there's, if there's just a couple of things that it'd be great if you take away from my few minutes, from my perspective, one of them is that and this is climate change is already impacting people in the countries with whom we work most closely in DFID. So I was speaking in with Alison, who's coming up slightly later in the session, I was talking in Madrid at COP25. With the agriculture minister from Botswana, he was talking about the fact that he is already seeing changes to seasonality effects. So crops, farmers are already seeing crops maturing later than they would have done prior to the warming effects of climate change. We're already seeing more frequent, more damaging extreme weather events. It's really important, I think, to emphasise that this is not just about pure heat, although the people that again, the people that we work with in DFID are among the people who are on the front line. I'll say more about this in a moment, on the front line of the likely implications of pure heat, particularly when combined with humidity. But it's important to stress that it can be as much about extreme weather events. So the flooding in Mozambique was for example, hurricanes in the Caribbean, are all things that are more likely to happen in higher temperatures scenarios and more likely to be more severe, so we'll get more of them and they'll get more severe. Coming onto the next slide.

So there's a famous statistic that we use a lot; 100 million people are at risk of being pushed into poverty by climate change, and 720 million by 2050, that's by by 2030. It's worth saying that that's an estimate made prior to COVID. So that combined, the combined impact of COVID depending on the scenarios that we're likely to see in the developing world over the coming months and years combined with this could be absolutely horrendous for communities around Africa and Asia in particular. But unfortunately, that's the in some ways the tip of the iceberg because we also see implications in a range of other areas of life, notably reduced agricultural productivity. And if I can just quickly hop on to the next slide, by the way, for those of you who are wondering what these numbers are, these are the

SDGs the Sustainable Development Goals and there are a number of them and each of them refer to a different part of human life if you like. And so we're also expecting unfortunately to see increases again this is prior to cut. This is net of COVID, if you like of key diseases like malaria, diarrhoea and heat stress, and a lot of these, of course are because of the changing environmental circumstances. So the level, the latitudes, if you like, I'm trying to move back to my geography GCSE, the latitudes in the UK, at which the most virulent forms of disease vectors, mosquitoes and others are able to survive, will start to creep northwards over coming years and we will see diseases that have, broadly speaking been eradicated in parts of the world, starting to return. And then finally unabated climate change has been estimated as the size cost the equivalent of between five and 20% of GDP per year in perpetuity. So the same the same kind of challenges and the same implications for the economy that we're facing in the UK if we don't abate this, I found in the developing world as well. Just to move on to the next slide. But of course, while most countries would be effective, we know that the poorest will be hit hardest, they're countries that are least prepared to deal with future climate change, are often the countries who are the lowest contributors to the problem, and yet are forecasted to be the worst affected and I haven't really mentioned conflict so far, but and if we just quickly skip to the to the final slide, while I'm talking, this shows the vulnerability to climate change around the world, and if you layer over the top of that, the the map or the matrix that we produced of conflict, you'll see an incredibly strong correlation. So countries that are either in conflict at the moment or at severe risk of conflict, which is one of the biggest unfortunately, one of the biggest causes and drivers of extreme poverty nowadays. If you layer that over the top of climate change, you can see that it's a very strong correlation between the two, unfortunately. So lots of bad news, what are we doing about it? Well, there are two or three key things I want to highlight. I guess we've, we've spoken a lot about mitigation, or we will speak a lot about mitigation as part of these sessions, talking about driving down the temperature of the earth. But we're particularly focused at the moment in DFID, around adaptation and resilience. So what can we do to help countries to prepare for the inevitable implications and those things that we're really seeing? So we're doing we're putting lots of investment of the 11.6 billion pounds of climate finance that we're and contributing over the coming five years we've we've already spent almost 5.8 billion we're on track to spend almost 5.8 billion will be doubling that to another 11.6 billion as the Prime Minister announced at the last UN General Assembly. A lot of that money right now is going towards a combination of adaptation and resilience programming. And with a particular emphasis, and I know people have been asking about this in the chat on what we call in a slightly techie way, nature based solutions, which is things like mangrove swamps, and other things that can can have a positive impact in terms of resilience and adaptation to climate change, while at the same time, of course, improving the biodiversity of countries in question. But I wanted to leave you with one quick thought that I had for a hand back to Vel, which is, there's a very strong, very, very important issue from from my perspective, and I think I speak for my colleagues and DFID when we when we consider carefully how best to focus on making sure that we are not seeing the environment and climate and development as opposed issues. And there are definitely ways in which we could improve, which we could improve adaptation, resilience and help to mitigate the implications of climate change, that would not be pro poor, they would not help development and would not be in line with the grain of what we're trying to do around development. And so thinking of this as an effect two sides of the same coin and thinking about if we're talking about re-wilding for example, how do we do that in a way that doesn't involve the mass movement of pastoralists off areas that they have been farming for generations. So, so lots of things we're doing positive activity, including with in partnership with the Met Office, you heard about the Reed

Programme that Alison and I were both cheering in the background, because we help found that last year, it's already starting to have a really positive impact around the world. So lots we can do a huge challenge, unfortunately, made more challenging by COVID. Thanks. Well, back to you,

Richard, thank you. I'm very conscious of time. So I'm going to dive turn over to David. David, Richard mentioned that nature based solutions. And I think, you know, with COVID, a lot of us have rediscovered sort of the importance of nature. But I still wonder whether it really is as essential to government policy as it needs to be. So could you just say a bit about that? Should it be a larger part of what we're up to sort of government policy on climate change and also, you know, more generally about biodiversity and our approach to biodiversity. There has also been, sorry to put you on the spot, David, there's been a question in the chat about whether all departments should be required to have an environmental policy. So if you are able to respond to that, that would be great.

Great. Thanks very much, Vel. And afternoon, everyone. I'm David Hill, DG Environment, Rural and Marine, in Defra, which leads on domestic climate adaptation for the UK, but I also am here because we lead on the nature aspects of our international work. I might just quickly address the question you just posed me Vel, about whether all departments should have an environment plan. And I think actually, I would argue that we have that coming together. So 18 months ago, the government published a 25 year environment plan across a range of environmental outcomes, so we want to see action, quality, resource efficiency and so on. That's the whole government plan. That's not just a Defra plan. And we're legislating at the moment through the environment bill, which is in the current session of Parliament, to bring in legally binding targets and environmental principles that will guide the actions of all parts of government. So I think the point's been made already about the importance of strong domestic leadership to maximise our international influence, and I think we are getting all of those building blocks in place. And turning now back to the subject we're discussing this afternoon and the contribution of nature to tackling climate change globally. And I'm just gonna say a little bit about nature based solutions. And what I mean by nature based solutions are the way we embed the sustain sustainable management and use of nature to attack a range of environmental challenges, including Climate change. And on your challenge now about should this be more prominent part of our of our global toolkit? I think I would argue strongly that it should. We know that nature based solutions could deliver potentially up to around a third of the cost effective mitigation action required by 2030, to meet the Paris Agreement's, two degree goal. And nature based solutions offer multiple benefits, they are a natural carbon sink, but they're also a vital harbour a nurturer of biodiversity. Let's move on to my next slide. Nature based solutions also offer really strong adaptation benefits. And Richard referred earlier to mangroves well, mangroves, restoration of mangroves can help.

<inaudible> ...coastal area

<inaudible> ...is conserved. Nature based solutions can help reduce community viability to climate disasters, and an investment in sustainable agriculture and nature based solutions is vital also to improve the livelihoods of some of the world's poorest and most vulnerable people. So, I think biodiversity nature very much part of the climate solution, but there are some barriers we need to tackle. We do need to strengthen our evidence base and to improve uptake and awareness of nature based solutions globally. We need the political will to be there. We need stronger political commitment

globally and citizens to buy into nature based solutions. We need to strengthen governance we need to strengthen technical skills and capacity capabilities. And crucially, we need to increase finance both public and private funding sources and nature based solutions. So moving on to my next slide, what does that look like for the next 18 months in the run up to COP 26 which the UK is hosting and the UK will be campaigning globally on nature. It's one of the key themes, underpinning our work in preparation for COP 26, we'll be trying to develop that at the UN General Assembly later this year through our presidency of the G7, as well. And we've also got some really important milestones coming up,

which have the <inaudible>

potential...

<audio delayed> ...to really change the debate internationally, dealing with the economics of biodiversity being led by Professor Partha Dasgupta who we expect to publish later this year. And it's well worth a look. If you Google it, looking at the interim report from Professor Dasgupta. But moving on to my final slide. I guess the theme I just like to end on is this is this is really only good if it's a partnership between governments between citizens, between NGOs and with business and industry and just to give a couple of examples of what I'm talking about. So really big priority for us to drive deforestation, illegal deforestation out of our supply chains. And we know agricultural commodities are one of the main drivers of deforestation. So we're doing a lot of work to think about how we can change the incentives, so that between consumer and producer countries to realise more sustainable production, but also ensure secure long term livelihoods for those who rely on forests in agriculture. And the final point I'd close on, is nature currently only receives around 3% of climate finance, despite the potential as I say, to provide up to 30% of mitigation action and contribute to adaptation. So our campaign around finance for nature will be a really important part of the work that we're leading over the next 18 months. Back to you Vel.

David, thank you. I'm super now conscious of time. And I've chaired this really badly. So I want to go to Alison, Alison, we've heard a lot about kind of the domestic position, the UK's netzero legislation, all the all the kind of things we're doing domestically, we've heard about the impact on developing countries, the kind of powerful potential of NBS, there's also been some questions in the chat on Sli.do around, you know, what's the point of the UK doing this alone? Shouldn't we be persuading China and the other big emitters to bring down their emissions too, so perhaps you could kind of bring all this together for us and how we're how we're approaching this going into to the big moment next year with COP 20.

Thanks, Vel, I will do my best to do that. And I'm Alison Campbell. Hi, everyone. I'm the Deputy Director for International Engagement in the COP 26 unit. And it might not surprise you that I'm going to focus now on that question that Vel raised on on the importance of driving change at the global scale. And climate change is such a complex geopolitical issue. And as Richard said, you know, it's a development issue. It's fraught with imbalances in fairness and equity given that those who suffer most often did the least to cause it. And it requires really big structural and behavioural changes of the client, you know, that Sam outlined for the UK, you know, across the world, and, and, you know, often in countries that are not being hit as hard. So if there's ever been an issue that really embodies the need for coordinated international action it is climate change. And, and if you can go into my first slide, please. And if you

take the UK as an example, so we make up about 1% of global emissions. So although our domestic action is incredibly important, and particularly to kind of give us credibility, internationally, you know, the impact that we can have through leveraging action internationally is much bigger. And if you look at this chart on the first slide, it shows that five countries plus the EU make up well over 50% of emissions. But as we know, the impact will not only be felt in these countries, and as Richard has already said, you know, not only are the countries most affected by climate change some of the world's poorest, but wherever climate change hits, it's the disadvantaged that that suffer the most. And that is really the main thing that's motivated me to lead on climate and government. And I really strongly believe that climate change is something that requires every single country in the world to act not not just to act, but to support each other and to put pressure on each other. And for that, you need a multilateral response. And I actually joined the Civil Service because I wanted to be a climate negotiator and I spent four years working on COP21, which was the UN climate conference where we delivered the Paris Agreement. And what that agreement did was fundamental because it set legally binding framework for action. So for the first time, all countries committed to reduce their emissions and to put forward what we call that nationally determined contributions or NDCs out to 2030, we agreed that we would aim to keep temperature rise below 1.5 degrees. And that was a big thing because it recognised that we would, that would require carbon neutrality in the second half of the century. And by 2050, for the big emitters, we agreed that developed countries would step up their financial support for developing countries, including to help them to adapt to the impacts. And we acknowledge that we are not yet on track to achieve these goals, and that we'd have to come back in five years time to increase our ambition. So Paris didn't solve the problem or even get close to it. So the commitments that were made in Paris would actually see a temperature rise of three degrees, which as you could see for the Met Office presentation, would be would be very damaging. And but what it did do was set out a blueprint for action and it sent a signal to the markets. That's that's driven real change. And because back then, actually, the politics was ahead of the real economy. So the clear moral and scientific need to act together with the evidence that it was too costly to do nothing, led to the political commitment we saw in Paris. The renewables market was only just emerging. But if you can flip to the next slide, please, the world looks very different now. The real economy is well ahead of the politics. And as you can see from this slide in the price of renewables has been falling steadily over the last decade, for two thirds of the world's countries, renewable energy is the cheapest source of energy. And this has allowed us to make the economic argument and particularly now in terms of a green recovery from from COVID-19, that not only is it too costly not to act, it's actually you know, beneficial to do so in the short term as well as for for long term sustainability. But despite this, you know, the politics is really difficult, and it's lagging behind. And countries are not yet making commitments anywhere near the level needed. So, by way of illustration, we need our collective ambition to be three to five times greater if we're going to achieve our Paris goals. And you might have noticed from the slide with the with the big emitters up there. That the biggest emitters of some of the most difficult countries to influence and the likes of China, US India, and I think it's been some questions in the chat around, you know, how do you go about influencing those, and you know, you're never going to get anyone to shift on climate change by telling them that they should. And it's about showing that it's in their interests. It's about engaging in a conversation based on our domestic experience, and to show that there is a pathway through this, and it's about talking about our collective responsibility and how we all need to work together to, to fix this. And in some cases, it's about it's about finance as well, especially for the likes of India and other countries. So you know, at the same time, you've got African countries and small island states who are feeling

cheated and left behind. So it's massively important that we use COP 26 in Glasgow to deliver a step change. This is the COP five years on from Paris at which we agreed that we would come back together and increase our ambition. So it's a crucial test of the international response on climate. And it's a crucial test of multilateralism. And it's a crucial test of global Britain, because we have a huge responsibility as COP presidents to deliver. And we want to use the court to show that the transition to a netzero and resilient economy is the growth story of the future, that it's irreversible, that is accelerating and that it will be fairly inclusive. And to do that, we're going to need all countries and especially the major emitters to increase their ambition at a national scale through these NDCs. And we're going to need businesses and countries to make commitments in key sectors like energy...

...to move away from coal

So we may have lost Alison there.

So I think we've lost Alison. But we are we are out of time anyway. And so I wanted to move on to just revisit the first question we had, Alison, if you come back then I'm afraid I've now cut you off, for which apologies and I will apologise in person when I see you next. And that is I wanted to come back to the first question, but I think the question I asked at the beginning around how concerned we there was such an overwhelming number. I think this our panellists have spoken to us about some of the great things and the opportunities that are coming our way. But still, I think, as we've heard from the Alison, we may still would be hearing from Alison where we just can't hear her, the challenges ahead are enormous. And COP 26 is the is the big opportunity, we have to bring that together. And I, I think that is, for me at least, why climate change should absolutely be central to what global Britain means to both ourselves and civil servants but also to the world. So I'm afraid I didn't manage to get through all the questions at all. But there will be a forum where we have a team of people from DfID, BEIS and Defra, who will attempt over the next couple of days to answer as many of those questions as possible. So apologies for that, apologies for not managing to keep up the time and being able to put those questions directly to the panel. But let me just wrap up by saying a huge thank you to our panellists for giving a bit of their time today, to speak to us and to talk us through what each of them are doing on this important agenda. But also, just to thank all of you for attending and for joining and for engaging, as I say, I hope we will also by the way, have your questions to take around, I'll make sure the panellists will see these. So thank you very much and hope you have a good day.