## Climate change and creating a resilient economy

Thank you.

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We still don't know the full devastating impacts of hurricane Dorian which tore through the Bahamas last week. The latest death toll is now 50. The International Red Cross estimate that 45% of homes on Grand Bahama have been either severely damaged or destroyed. That's 13,000 properties. 76,000 people displaced and in need of emergency food and shelter. Estimates of insured losses are between \$1.5—3 billion.

Was it the result of climate change?

Scientists can't say definitively if climate change increases the number of hurricanes, but it is likely to make them more powerful and destructive. Higher sea temperatures means stronger winds and more rain for hurricanes to dump. Rising sea levels means greater risk from storm surges and coastal flooding.

What I can tell you with certainty is that investing in climate change adaptation will make us more resilient to the impacts of events like hurricane Dorian. And if we think globally and act innovatively when making those investments, we can make a difference around the world — for people, for the environment, and for economies.

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There are three essential points I want to make today:

First — Storms, floods, droughts and heatwaves are getting worse. The science tells us this, and we can see it with our own eyes here in the UK and all over the world.

Second — We have a moral responsibility to act. As policy makers, investors and business people, it is our responsibility to protect the assets that are entrusted to us and ensure that they are resilient to all kinds of risk — including climate risk.

Third — It is in the economic interests of governments and businesses to act. Failure to do so will be disastrous for our economic interests all over the world, and acting now will help businesses to prosper.

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Today, the Global Commission on Adaptation is launching its flagship report — 'Adapt Now'. Led by Bill Gates, Kristalina Georgieva and Ban Ki-moon, the Commission is calling on heads of state, government officials, community

leaders, business executives and investors — that means everyone in this room! — to take action.

The UK agreed to be a convening country of the Global Commission because we know this issue is central to every country around the world. Climate change is essentially unfair. It tends to be economies that have contributed least to the climate crisis that suffer the most, and have the least resources to put into resilience and recovery. But the devastating impacts of climate change are not going to be felt in the global south alone — they will be felt right here in the UK.

As the UK's representative on the Commission, I'm here today to bring you this message: prepare for the effects of climate change with urgency, determination and imagination. We need to invest in adaptation and resilience, to save lives, to protect our homes and communities, and to safeguard the economy.

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The resilience of the UK's infrastructure and the networks that connect communities and form supply chains are being tested. July's record heatwave saw trains cancelled and work disrupted as rail tracks sagged and buckled. Since then, there has been flooding across the north of England and people were evacuated from their homes following damage to the reservoir at Whaley Bridge.

These events do not feel normal, but we need to get used to them. They should be viewed as "the new normal" in terms of the nation's economic and security planning.

Last year, the Intergovernmental Panel on Climate Change said the world now has 12 years to hold global warming to 1.5°C above pre-industrial levels, and even if we do, impacts like floods, heatwaves, storms and droughts are still set to increase.

This is because the impacts of climate change are already locked in. Take sea level rise, for example. The drivers for rising sea levels — such as melting ice sheets and the thermal expansion of ocean water — have a delayed response to today's atmospheric warming. Even if we achieved global net zero carbon today, sea levels would continue to rise for hundreds of years.

Reducing carbon emissions will make a difference to how much they will rise — so it is essential that we transition to a low carbon economy. But it is also essential that we get ready for the already unavoidable impacts of climate change.

Because what is the point of investing in new carbon-neutral homes and green tech businesses if they are going to be washed away in a flood or melted in heatwave?

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So we need to invest in resilience — and make sure our investments are

resilient - to climate change.

It's a no-brainer.

Adapting now is in our economic self-interest: it is typically much cheaper than recovery and rebuilding. And when we do have to rebuild, we need to build back better.

Here's an example on a micro scale. If you are flooded, you are likely to be out of your business premises for an average of 5 months. That could be game over for a lot of businesses in this country.

Does it need to be that way?

A toyshop in Cockermouth was forced to close for six months after it flooded in 2009. But thanks to a £5,000 Government grant for property level resilience, when it flooded again in the winter of 2015/16 it was able to reopen again within 24 hours.

We all need to be making those kind of investment decisions for our businesses, for our communities, and for our national and international interests too.

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The Environment Agency tackles climate change by regulating industry's greenhouse gas emissions and enhancing the nation's resilience to physical impacts. In May, we launched our draft Flood and Coast Risk Management Strategy which says we need to move from a system that focusses on protecting individual structures from flooding, to a system that looks at managing the resilience of communities, supply chains and infrastructure whether there is too much water, or indeed too little water.

Both the Environment Agency and the National Infrastructure Commission have proposed developing resilience standards to manage future flooding and coastal change. Resilience standards would empower communities and improve our capacity to live with climate risk.

At the Environment Agency we're also working to create green finance opportunities for resilience. We're developing new mechanisms to increase investment opportunities for business and government.

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A new normal means new extremes. We need to ensure the UK's interests are protected at home and internationally, and that requires a coordinated response from the heart of Government.

There is a lot of good work on climate change going on across the UK's public and private sectors already, but it needs better coordination to make existing efforts become more than the sum of their parts.

Last year, the Green Finance Taskforce recommended the UK Government set up a

National Climate Resilience Unit to "coordinate and champion climate resilience and ensure Government investment is 'future proofed' to climate change".

It's a good idea. A coordinated approach that puts adaptation at the centre of decision-making across all Government departments, and which could develop a strategic plan for managing climate risks now — to protect people, economies and the environment.

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Coordination is key.

In 2012 when hurricane Sandy hit New York the building housing Bloomberg's servers for its global financial transactions was flooded. Bloomberg has now said that in a 2 degrees warmer world it will need to increase capital expenditure at key facilities by 10%.

Meanwhile, while 8 million New Yorkers were plunged into darkness, thanks to 25,000 sandbags Goldman Sachs held the waters at bay. It kept its building lit up like a beacon of resilience ... which its employees couldn't reach. The lights were on but no one was home.

So we need resilience at a systems level too. What if your supply chain and the services and infrastructure you rely on aren't as resilient as you are? What if your offices can't open because they don't have running water, or the transport network is disrupted and your people can't get to work? What if your workforce or customer base is displaced entirely?

Imagine if we could get all the business interests in a community or a city to work together with Government, to pool their investments in resilience, and to make sure that all investment was future proofed for climate risks.

Imagine the cities and communities we could build.

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That kind of coordination on adaptation is needed globally.

That is why the Global Commission on Adaptation is today launching an ambitious agenda to galvanise international action in 2020. And this is why the UK is supporting that push, and taking a leading role on adaptation and resilience at the UN Climate Action Summit later this month. We are making a global call for action to change the way we plan and invest in a warming planet — to put climate risk right at the heart of our decision making.

The Global Commission has found that investing in climate adaptation can deliver high rates of return for investors, as well as bringing multiple benefits to people and the economy.

The benefit-cost ratio for investment in adaptation ranges from 2:1 to 10:1, and even higher in some cases, not just through avoided losses, but through the economic, environmental and social benefits that can accrue. It makes

climate adaptation one of the most cost-effective investments a country, city, or company can make.

The Commission found that investing \$1.9 trillion globally in five areas from 2020 to 2030 could guarantee \$7 trillion in total net benefits.

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One of the best examples of the positive return on investment is early warning systems, which can save lives and assets worth at least ten times their cost. As little as 24 hours' early warning of a storm or heatwave can cut the ensuing damage by 30%.

At the Environment Agency we know about the benefits of early warning systems first hand — and you are reaping the benefits all around you whether you realise it or not.

Our flood forecasting service provides people, businesses and the emergency services vital time to prepare for flooding. It helps us decide when we need to operate our defences which protect people up and down the country — including the Thames Barrier which protects central London from tidal surges.

What's the return from that investment? £200 billion worth of assets are better protected in London when we close the Thames Barrier. That includes:

- 500,000 properties;
- 400 schools;
- 16 hospitals;
- London's financial and business centre; and
- The Houses of Parliament.

And let's not forget the 1.25 million people living and working within that flood risk area.

Now think globally. If we invested \$800 million in warning and informing systems in developing countries we could help avoid losses of anywhere from \$3–16 billion a year. We could save lives and livelihoods. These are the kinds of urgent actions we need to take, and this is one of the areas the UK will be focusing on at the UN Climate Summit on the 23rd of September.

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This is not just about managing risk.

Investing in resilience doesn't only avoid future losses, it creates new economic opportunities by increasing productivity and driving innovation.

Sir John Armitt, Chair of the National Infrastructure Commission, said:

With our expertise in engineering and technology, Britain is well placed to become a serious global player in sustainable infrastructure.

Let's act now and seize the moment. Seek out those opportunities to invest in adaptation and embed resilience in our economy.

At the end of next week, on the 20th of September, young people are going to take to the streets and strike, calling for tangible action on the climate emergency. That call is absolutely justified, and we shouldn't dismiss it. The climate emergency was a foreseen crisis and has been overlooked for too long. We must meet the climate strikers with answers.

The Global Commission on Adaptation calls on us to pursue unusual partnerships among governments, businesses and communities to create resilient economies.

Let's not compound the climate emergency with a failure of the imagination.

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Thank you very much.