

2022: The Year of Climate Adaptation

Thank you for inviting me to speak at this year's Coastal Futures conference.

In 1953, 307 lives were lost on land and more than 177 people were lost at sea in the east coast surge.

Caused by a mixture of high spring tides, low pressure and strong northerly gales, it led to significant developments in flood protection, forecasting, and warning and informing systems.

The effectiveness of these improvements means that today, many people do not realise they are artificially shielded from disaster.

For instance, halfway through COP26, millions of people were protected from the highest tide of the year because we operated the Boston Barrier, the Hull Barrier and the Thames Barrier.

It's self-evidently a good thing that people can live without fear.

But, lack of awareness compounds future risks.

Last year, 200 people died in Germany's floods.

It was reported that people did not know what to do when they heard warnings.

Following that tragedy, we reviewed the situation in England.

Here, 61 percent of people living at flood risk do not understand that they are.

In November, Storm Arwen hit the coast leading to waves over 10 metres tall.

Had these waves coincided with a high or spring tide, impacts could have been worse than in 1953.

We cannot put this down to luck.

At the Environment Agency we analyse the data and see that climate change is making it harder to hold weather-related shocks at arm's length.

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9,000 kilometres of open English coast is currently at risk from sea flooding, erosion and landslips.

Even if we reach net zero by 2050, sea levels will continue to rise well into the next century.

By 2100, once-a-century sea level events are set to become annual events.

Climate change is taking existing risks and it is increasing their severity,

frequency and duration.

In some places, the pace and scale of change means some risk management authorities will need to support communities to move away from the current coastline.

But, it's in everyone's interest to make coastal communities more resilient.

The technical, social and economic opportunities – not least in job creation – can help usher in a new era of climate prosperity for the whole country.

Just before COP26, the Environment Agency published our third Adaptation Report under the Climate Change Act, describing the need for a step change in the national approach to adaptation.

COP26 left no doubt about the scale of action needed to tackle the climate emergency globally.

Now, we need more focus on how communities will survive and prosper locally.

With COP27 in Africa this year – a continent with many communities on the “front line” of climate change...

...2022 must become The Year of Climate Adaptation.

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The United Nations Office for Disaster Risk Reduction recently said “There is no such thing as a “natural disaster”; “The risk of disaster is more likely as a direct result of human activity.”

For example “failure to implement building codes results in many more deaths from earthquakes” and “the destruction of mangrove forests is making storms more deadly.”

“Good disaster risk governance saves lives, reduces displacement and economic losses” and “That means having a national strategy in place to reduce disaster risk”.

Last week, a report written by Helen Jackson for the think tank Bright Blue, found that since 2007:

- At least 15 hospitals have experienced flooding which caused disruption or imminent risk of disruption to patient services or hospital support services;
- At least 68 schools have experienced flooding which disrupted lessons or school transport;
- There has been flood damage to at least 31 supermarket branches;
- And, at least 12 instances of flooded electricity substations.

This shows that climate change endangers societal as well as environmental risks, increasing the vulnerabilities of schools, hospitals and energy supplies.

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The government has given the Environment Agency a record £5.2 billion capital programme to deliver flood resilience in England.

It will ensure a further 336,000 homes are better protected from flooding and coastal erosion.

And, avoid over £32 billion of further damages.

But, I would like to look at the wider economic context.

The 2021 National Infrastructure and Construction pipeline sets out nearly £650 billion of public and private infrastructure investment by 2030.

The Infrastructure and Projects Authority has analysed over £200 billion of this, up to 2024/25.

This includes national investments in schools, transport and utilities.

Compared to IPA's overall £200 billion figure, the £3 billion we have for flood and coastal defences by 2024/25 looks like a thin green line of defence.

That is not a criticism of the flood programme, which is significant and ambitious.

Rather, its size, compared to other areas of the infrastructure and construction pipeline, highlights that worryingly few people are considering the impacts of climate change in their investments.

On Monday, the UK Climate Change Risk Assessment 2022 was laid before Parliament.

Informed by the valuation report for the Climate Change Committee's evidence it estimates that economic damages could exceed many billions of pounds every year by 2050 even under 2 degrees of global heating. It points to other sources of evidence that suggest, by 2045, the cost of climate change to the UK could be at least 1 percent of GDP.

The report said: "The evidence shows that we must do more to build climate change into any decisions that have long-term effects, such as in new housing or infrastructure, to avoid often costly remedial actions in the future."

Get this right and:

- we'd be better prepared for shocks,
- we'd create jobs,
- we'd level-up, ensuring key industrial areas are at the heart of the transition to net zero,
- and, we'd reverse the decline in nature by 2030.

But, to realise these benefits, and set goals that are both achievable and

ambitious, we need both leadership and legislation.

This needs to be informed with thorough economic projections.

The Treasury commissioned the Dasgupta review to look at the economics of biodiversity.

We need a similar review to assess the true cost of climate impacts and the value of investing in resilience.

The Coalition for Climate Resilient Investment – which I co-Chair – can help.

The CCRI currently has 120 members, featuring both governments and investors, with over \$20 trillion in assets.

By pricing climate risks, particularly for infrastructure, and including them in upfront financial decision-making, the CCRI is showing how to incentivise a shift towards greater climate resilience.

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On the coast, the Environment Agency is taking action:

- Shoreline Management Plans offer a framework for adapting to a changing climate over 100 years. By 2024, we will have revised and extended our assessment of risk from coastal erosion to properties and infrastructure.
- Our updated National Coastal Erosion Risk Map will use new research on rainfall, storm surges and the impacts of accelerated sea level rise on erosion rates, and improved monitoring data.
- And, the national Flood and Coastal Erosion Risk Management Strategy sets out how we (alongside risk management authorities, partners and communities) will build up the resilience of millions more homes and businesses.

To deliver this we need to innovate.

In March, we launched the £150 million national Flood & Coastal Resilience Innovation Programme.

What we learn will inform our approach to the climate crisis in the coming decades.

One example will make space for sand dunes on the Cornish coast to defend existing coastal settlements and economies from coastal erosion and sea level rise, delivering planting, saltmarsh restoration and the protection of community infrastructure.

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It's a good example of how resilience measures in infrastructure create multiple interlocking benefits.

For instance, the saltmarsh habitat that fringes the coast provides over £1 billion in flood defence benefits.

It stores carbon equivalent to nearly 40 million people's annual domestic emissions.

It also improves water quality, recreation and wellbeing.

With billions spent on seaside visits every year, we know good water quality helps coastal towns prosper.

Yet, over 85 percent of this saltmarsh has been lost since the 1800s.

We are ensuring £120 million is invested over 5 years to compensate habitat losses.

Along with partners we are leading a restoration initiative that aims to restore at least 15 percent of our priority estuarine and coastal habitats by 2043.

The Environment Agency's River Basin Management Plans show we must do more to prevent deterioration and improve ecological health.

We have proposed a measure in the plans to restore estuarine and coastal habitats.

After listening to stakeholders, we have identified opportunities for better join up and action, but these need the right investment.

While Government can provide some of that funding, we need more investors to see the potential of nature-based projects on the coast.

Those with proven ability to generate revenue can be scaled-up at speed.

You can help by responding to our River Basin Management Plan and Flood Risk Management Plan consultations.

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To conclude:

Prosperity in a maritime nation requires resilient infrastructure on the coast, and that needs long-term investment.

We have come a long way since 1953.

But, climate change should obliterate any sense of complacency.

We must adapt to the present storm as well as those in the offing.

We need to plan, adapt and thrive to save lives and livelihoods.

To ensure the success of the UK's COP26 Presidency...

...and drive the ambition of the Green Industrial Revolution...

...2022 must become The Year of Climate Adaptation.

Thank you.