



Overcoming challenges to implementing and sustaining nature investments at scale

UK-Bangladesh Climate Partnership Forum

**#UKBDcop26
#ClimateAdaptation**

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UK-Bangladesh Climate Partnership Forum

A series of webinars and an ongoing, multi-stakeholder dialogue to promote collaboration and lasting partnerships at all levels between the UK and Bangladesh

Partnership is structured around four key COP26 themes

1

**Adaptation and
resilience**

2

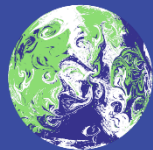
Nature

3

Clean growth

4

Finance



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#ClimateAdaptation



LinkedIn Group

UK-Bangladesh Climate Partnership Forum

[linkedin.com/groups/12485053/](https://www.linkedin.com/groups/12485053/)



Twitter

Hashtag: [#UKBDcop26](https://twitter.com/hashtag/UKBDcop26)



YouTube

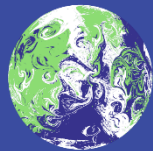
Recordings of the case study and keynote sessions on Adaptation & Resilience (24 and 25 November) are on Youtube

[youtube.com/mottmacdonald](https://www.youtube.com/mottmacdonald)

Nature-based Solutions

“Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”

— IUCN definition



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Programme

Moderators

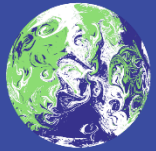
Saleemul Huq and Simon Maxwell

Opening remarks by John Warburton, Climate Change team Leader, FCDO

Four exciting and innovative approaches from the UK and Bangladesh

- NbS in humanitarian response: case study from Kutupalong, the world largest refugee camp
- Adaptation using NbS with traditional infrastructure - Leeds Flood alleviation scheme
- Effective law enforcement and improved community participation in natural resource management: Best practices and challenges in the Bangladesh Sundarbans context
- Making the business case for natural flood management

Panel discussion and Q&A



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Case studies

**NbS in humanitarian
response:
Kutupalong, the
world largest
refugee camp**



Raquibul Amin

Country Representative,
IUCN

**Adaptation using
NbS with
traditional
infrastructure**



Fiona Sugden

Senior Project Manager,
Environment Agency

**Effective law
enforcement and
improved community
participation in NRM**



Panchanon Kumar Dhali

Senior Technical Advisor,
GIZ / SMP-II project

**Making the
business case for
natural flood
management**



Paul Sayers

Associate Fellow, ODI
(Risk and Resilience)

Overcoming challenges to implementing and sustaining nature investments at scale

Panellists



Edward Davey
Director, Geographic
Deep Dives, Food And
Land Use Coalition



Sohara Mehroze Shachi
Environmental Journalist



Xiaoting Hou-Jones
Senior Researcher,
IIED



Prof. Mizan R. Khan
Deputy Director, ICCCAD
and Programme Director,
LUCCC

NbS in humanitarian response: Kutupalong, the world largest refugee camp

Raquibul Amin

Country Representative, IUCN

raqibul.amin@iucn.org



Context

- Rohingya refugees
from Myanmar

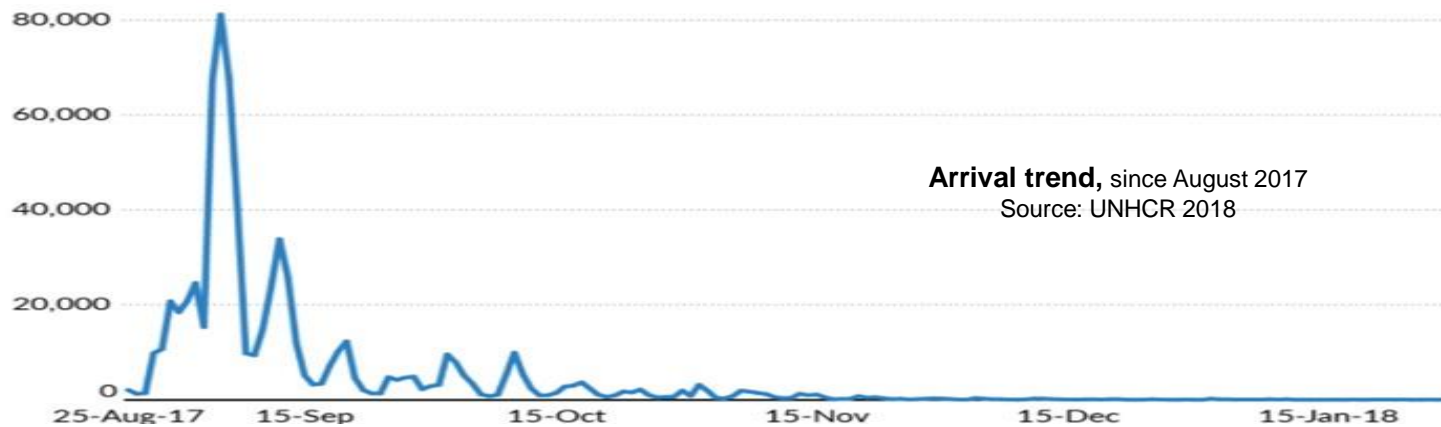


Consequence

- camps established in a forest
reserve

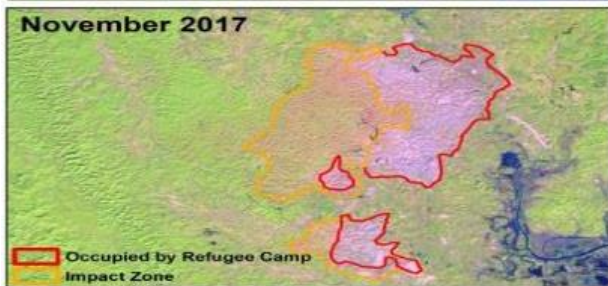
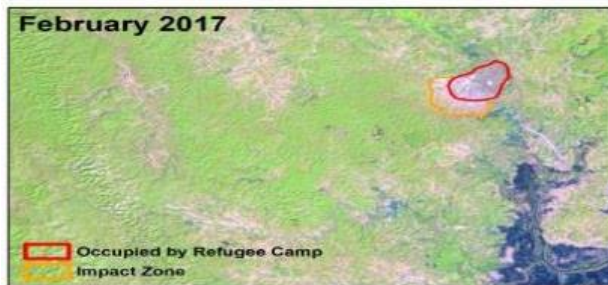
- triggered both humanitarian and
environmental crisis

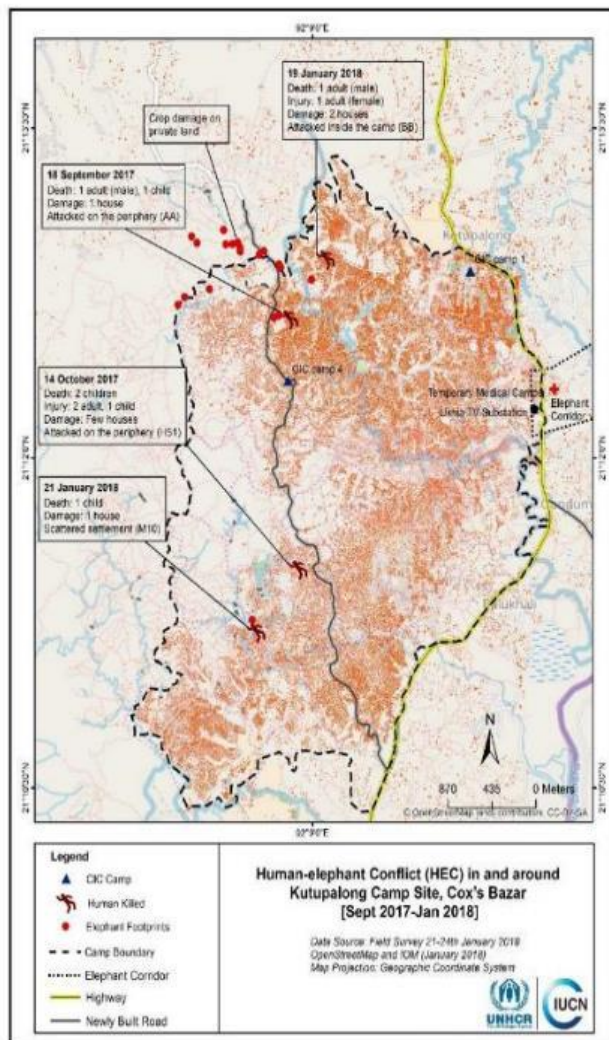




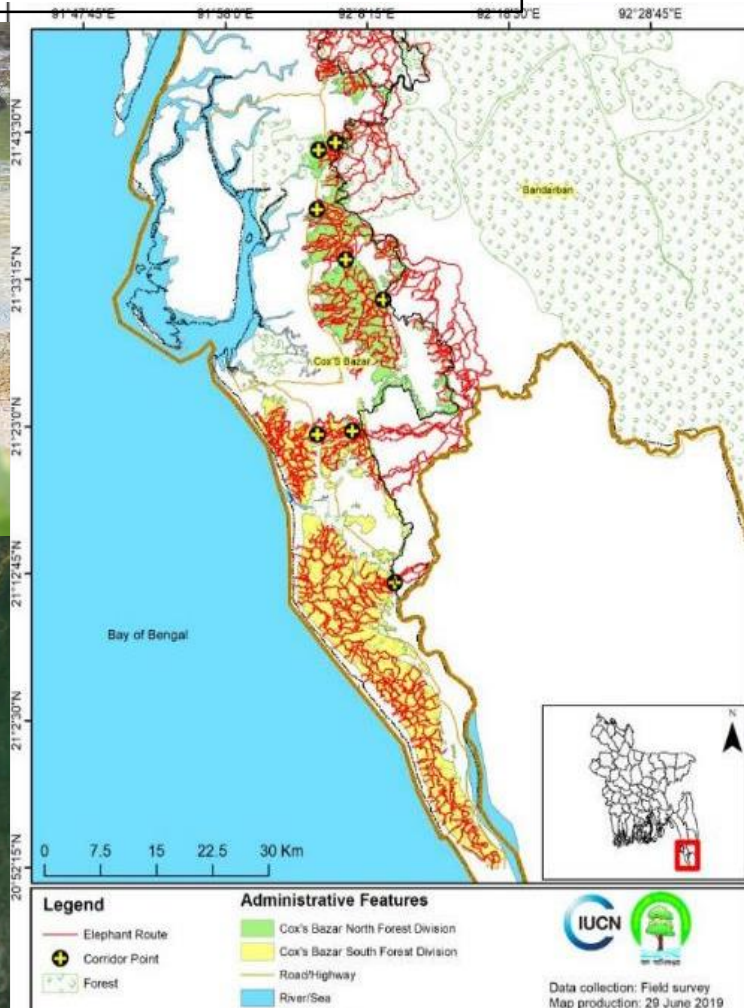
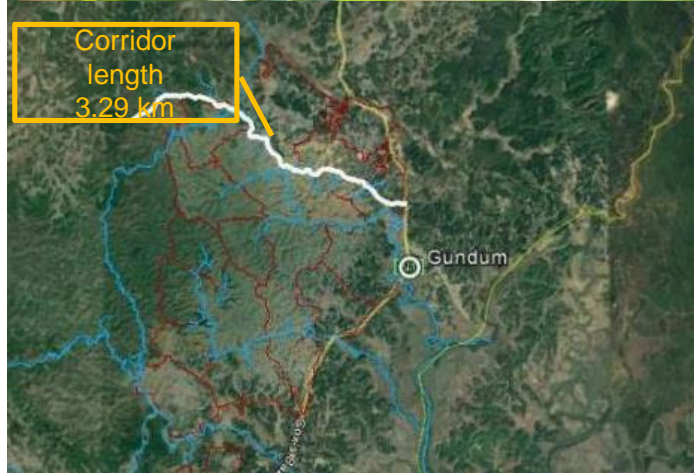
Arrival trend, since August 2017

Source: UNHCR 2018

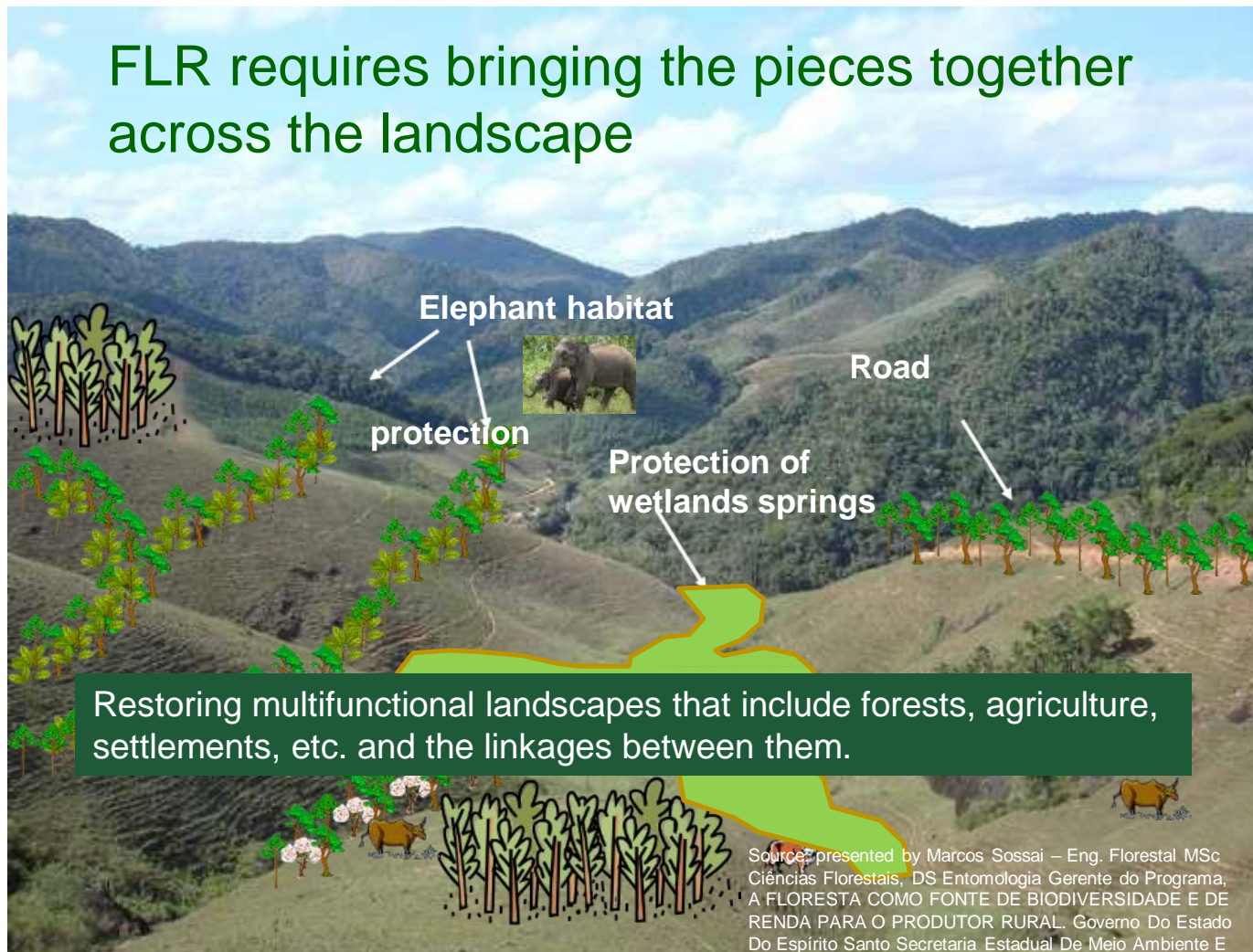




Elephants routes and corridors



FLR requires bringing the pieces together across the landscape



Forest and Watershed



Rohingya camps
in late 2017

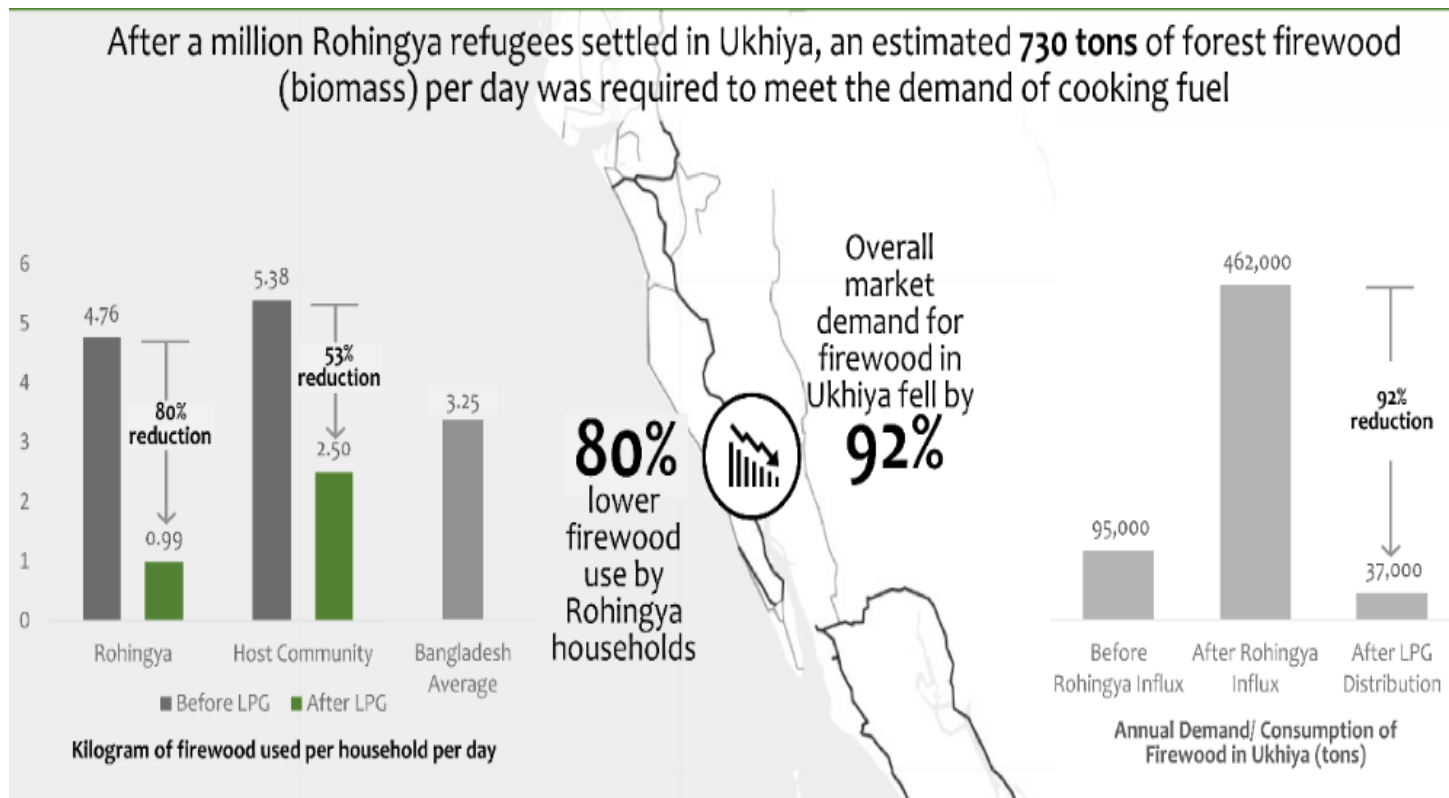


Rohingya camps
in 2020 (until July)



Footage courtesy: RRRC

LPG distribution to reduce firewood demand



People, cultural and resilience



Abu Ahmed

Farmer; Bamboo Craftsman

Abu Ahmed lives in Kutupalong refugee settlement in Cox's Bazar. He was a farmer by profession and an amateur craftsman. He used to make farming and fishing tools by using bamboo. He used to sell his products to his neighbours and also in the local markets back in Myanmar.

Work under the UNHCR-IUCN partnership project "Biodiversity Conflict Mitigation around the Refugee Camp of Cox's Bazar District" includes: carrying out elephant population surveys; capacity building of Elephant Response Teams (ERTs) and build watchtowers; awareness and capacity building to help protect the environment; forest assessment and restoration planning; feasibility assessments of opening a new elephant corridor through the camp.

Date : September 1-30, 2018
Venue : Bangladesh Shilpakala Academy

The Elephant in the room



Leeds Flood Alleviation Scheme – Natural Flood Management

Fiona Sugden

Environment Agency

Fiona.Sugden@environment-agency.gov.uk



“Climate Change is bringing more extreme weather, more frequent storms, more rain and more flood risk. So we need a new approach. And we need it quickly, because our thinking needs to change faster than the climate.”

– Sir James Bevan, Environment Agency

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Riparian
Woodland



Cross Slope
Woodland



Floodplain
Woodland



Catchment
Woodland



Soil and Land
Management



Runoff
Pathway
Management

Floodplain
Restoration



Headwater
Drainage
Management



River
Restoration



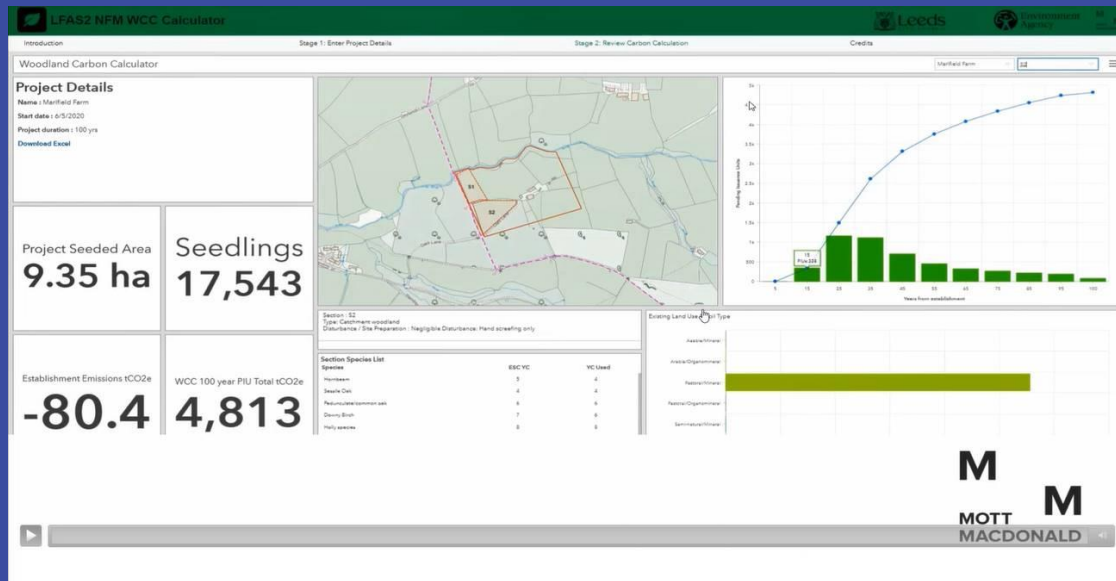
Offline
Storage



Leaky
Barriers



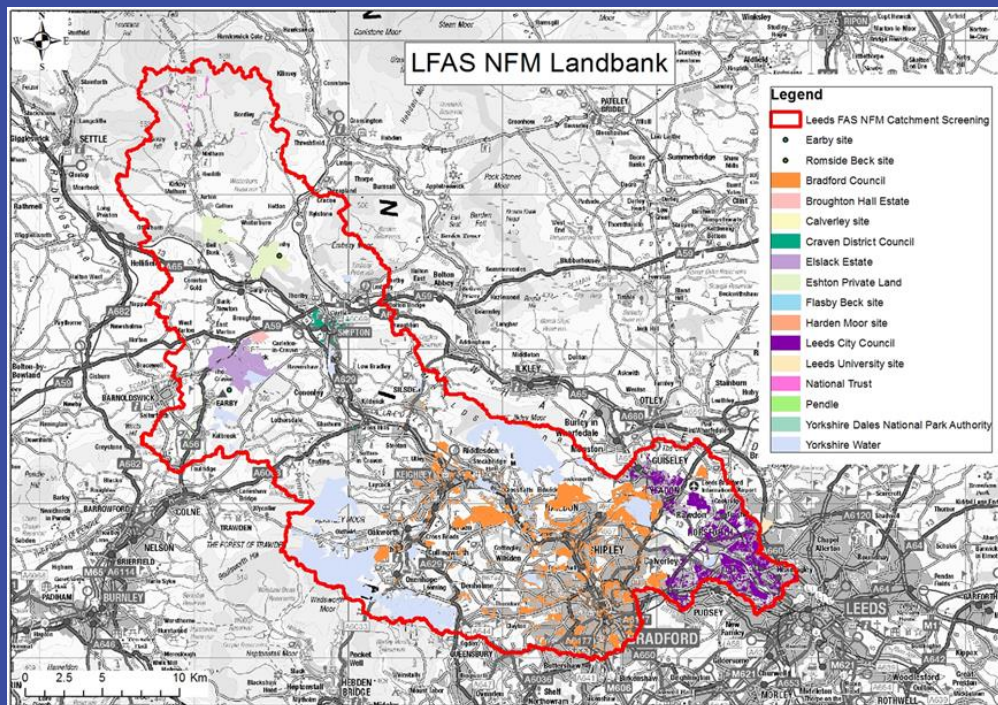
Data Management



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Land Owners



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Research



“Resilience as well as protection.

Not just hard defences: they will no longer be enough on their own. We will need a broader range of actions to ensure climate resilient places.”

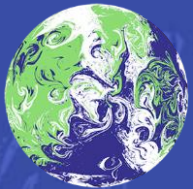
– Sir James Bevan, Environment Agency

Effective law enforcement and improved community participation in NRM

Panchanon Kumar Dhali

GIZ / SMP-II project

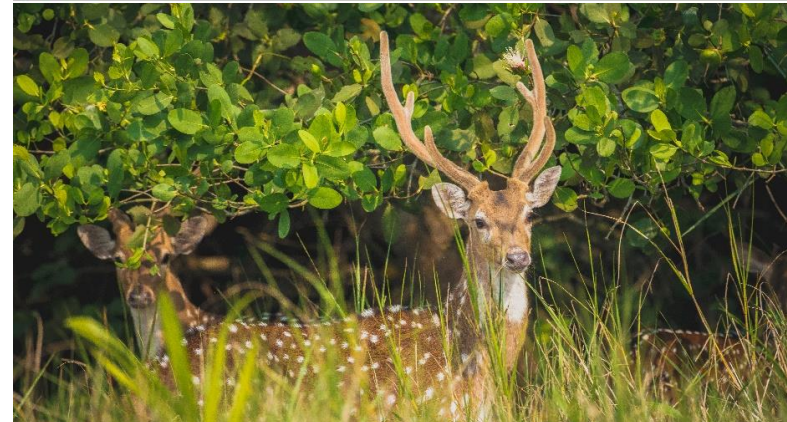
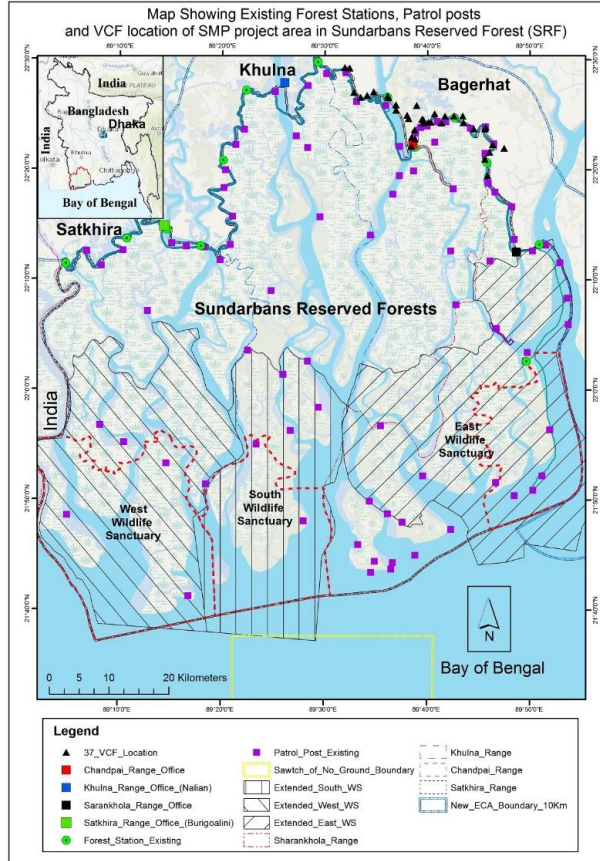
panchanon.dhali@giz.de



Sundarbans Mangrove Forests



Implemented by:
giz
German Technical
Cooperation
Development Cooperation (GIZ) GmbH



Support to the Management of the Sundarbans Reserved Forest Project (SMP II)

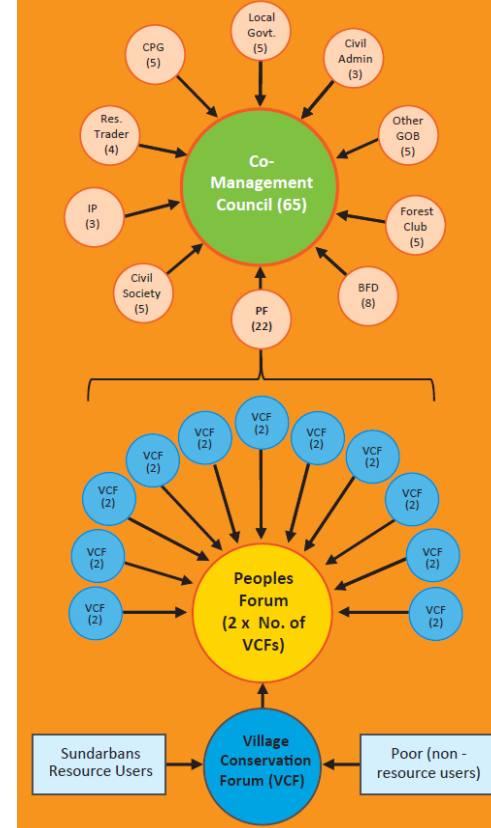
Further development of the capacities of Co-Management Organizations in the Sundarbans.

Conservation law enforcement and monitoring by further building the BFD's capacities for the **Spatial Monitoring and Reporting Tool (SMART)**

Introducing a Long-term Ecological monitoring in the Sundarbans



Co-Management in the Sundarbans



Co-Management in the Sundarbans





SPATIAL MONITORING AND REPORTING TOOL

Data collection

Debriefing

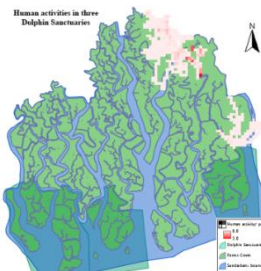


How does
SMART Work?

Data entry



Planning patrols



Generating maps & reports



Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

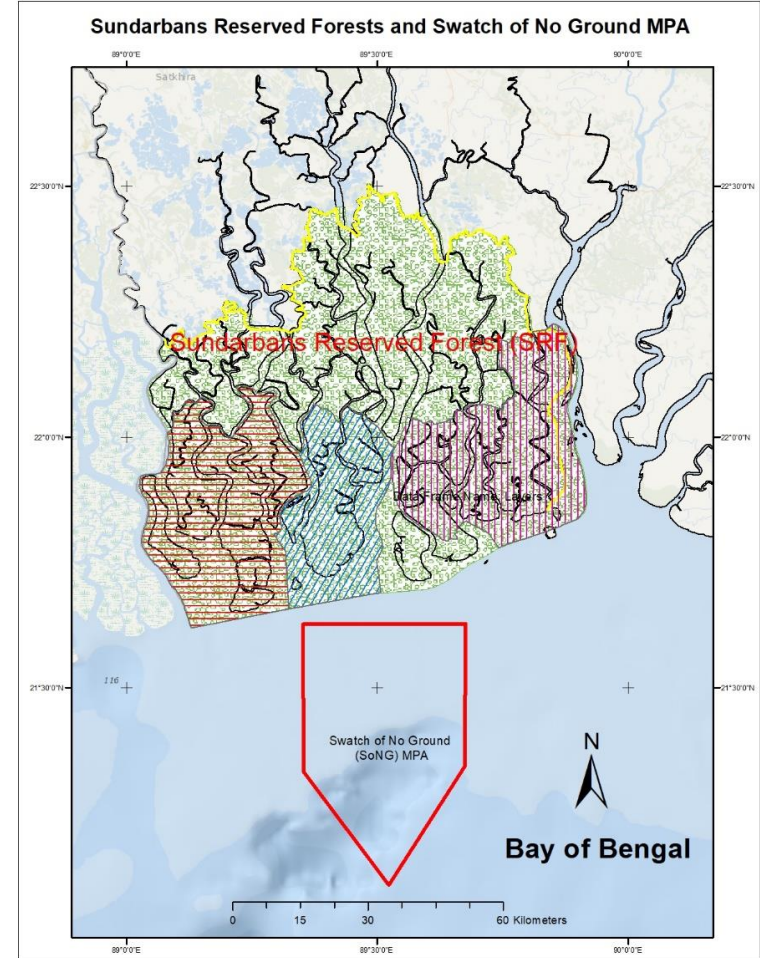


SPATIAL MONITORING AND REPORTING TOOL



Sundarbans and Beyond: Future German Technical Cooperation

Integrated management of the Sundarbans
Mangroves and the Marine Protected Area
'Swatch of No Ground' (SoNG) supported by
the German Federal Ministry for Economic
Cooperation and Development (BMZ)



Making the business case for natural flood management: UK CCRA

Paul Sayers

Associate Fellow, ODI

p.sayers@odi.org.uk

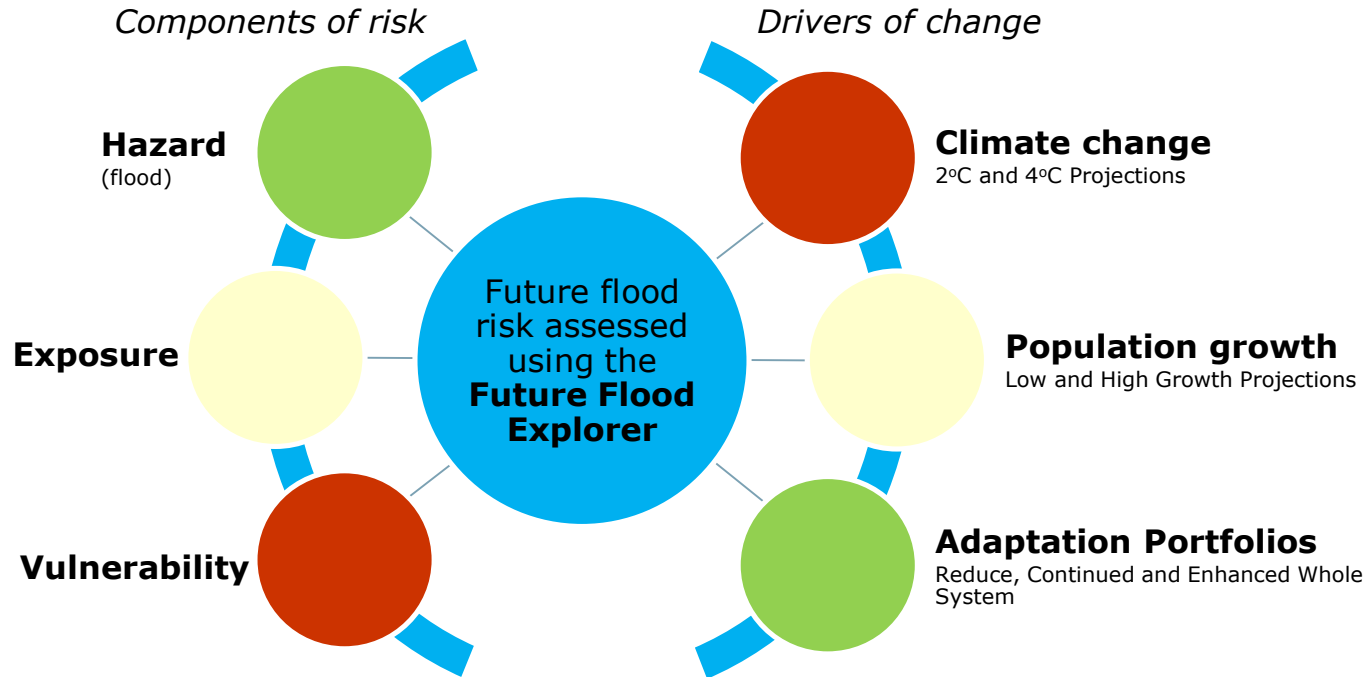


Contributions

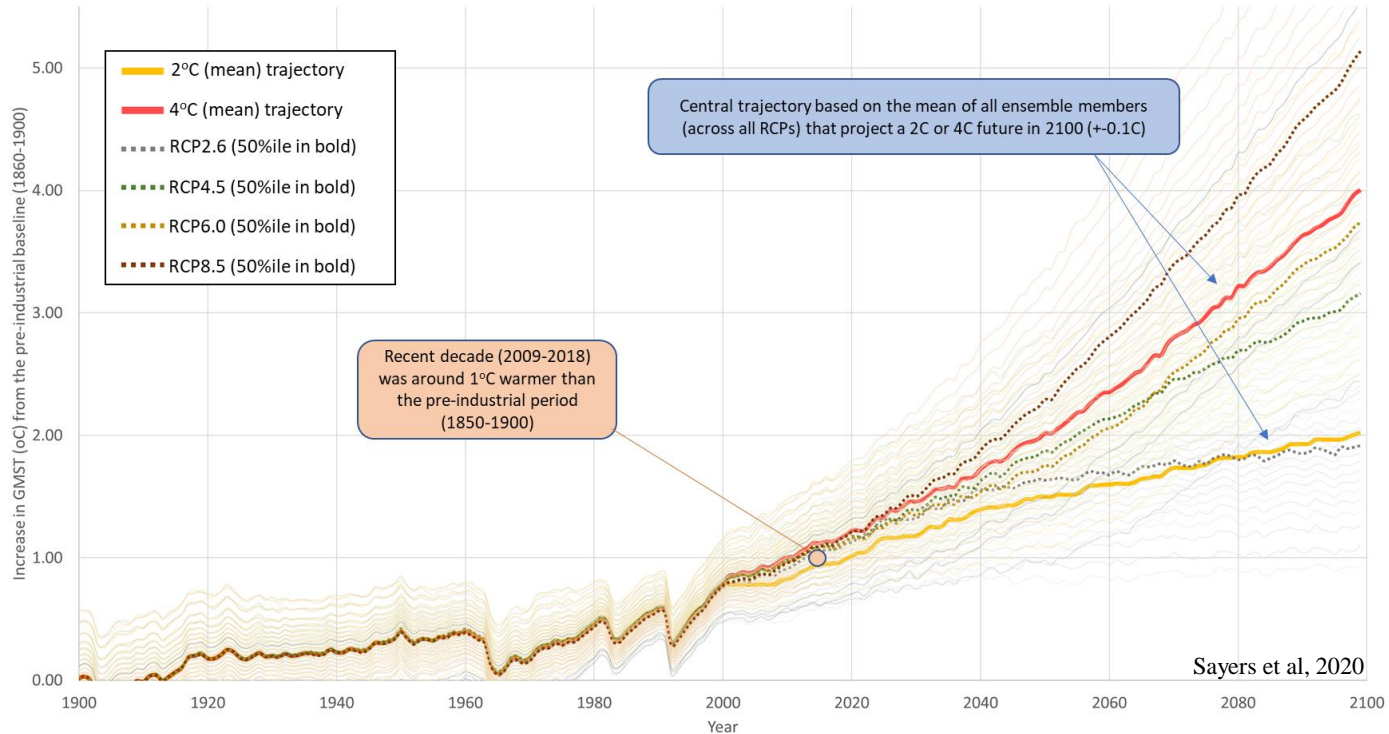
Sam Carr, Matt Horritt, Alison Kay,
Lisa Stewart, Jane Mauz

Under the **UK Climate Change Act 2008**

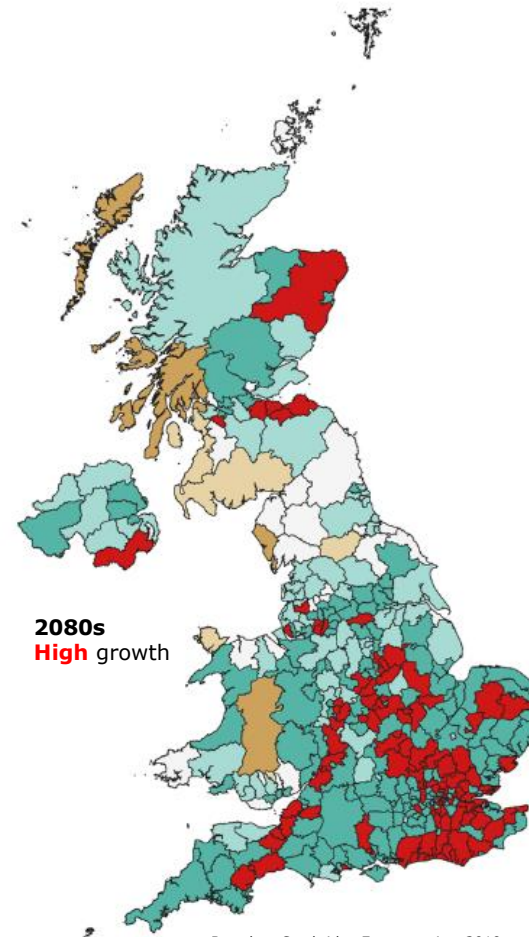
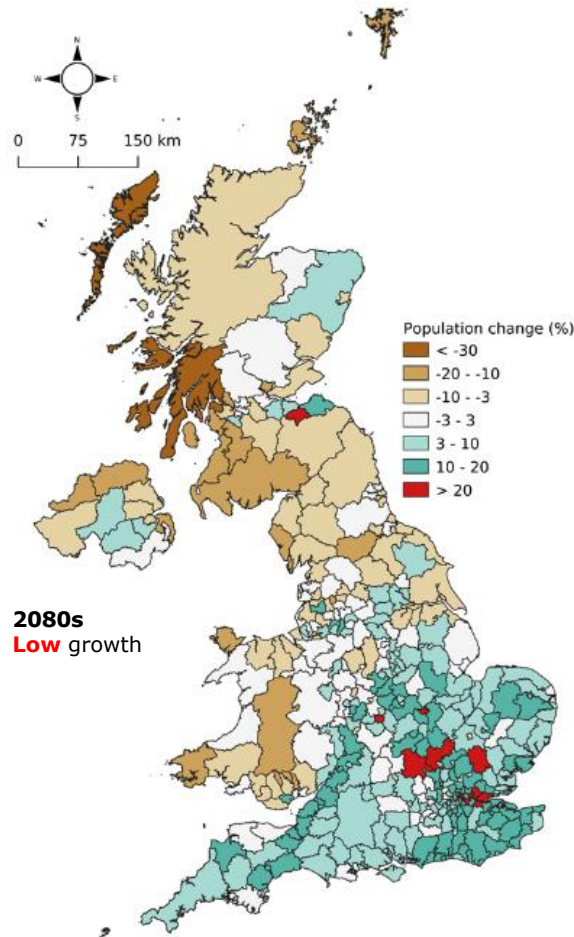
- The **Committee on Climate Change** are required to undertake a **Climate Change Risk Assessment** (the CCRA) every 5 years
- Government then has to produce a **policy programme** to address those risks (**National Adaptation Programme**)
- The **Adaptation Sub-Committee** advises on this assessment and scrutinises the implementation of the policy programme
- The first CCRA was completed in 2012, the second in 2017 and the third is due for publication 2022
- **The findings from the latest flood projections assessment are the focus here** (Sayers et al, 2020)

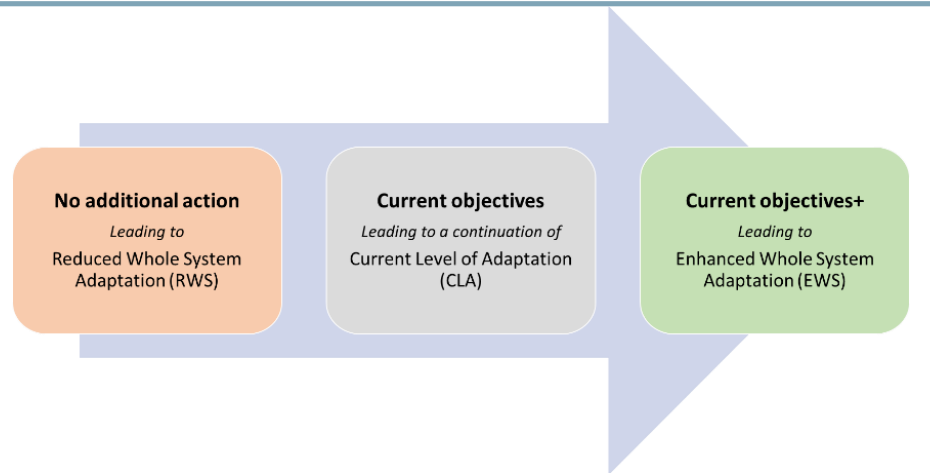


Basic framework: Climate projections



Basic framework: Population projections





Portfolio of flood risk management activities	
Enabling environment	
<ul style="list-style-type: none"> Governance and organisation capacity 	
Reducing the chance of flooding	
<ul style="list-style-type: none"> River and coastal defence assets Shoreline management 	<ul style="list-style-type: none"> Catchment management Urban flood management
Managing the exposure to flooding	
<ul style="list-style-type: none"> Development control (spatial planning and building regulations for new build) 	
Reducing the vulnerability of those exposed	
<ul style="list-style-type: none"> Receptor resilience (residential, business and infrastructure) Forecasting, warning and response Insurance 	

Change

Climate change

2°C and 4°C Projections

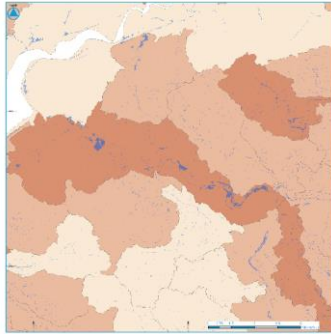
Population growth

Low and High Growth Projections

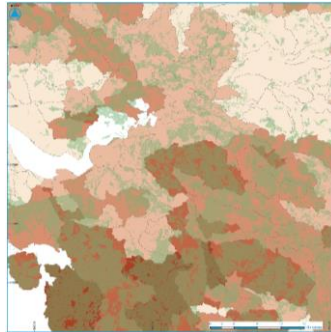
Adaptation Portfolios

Reduce, Continued and Enhanced Whole System

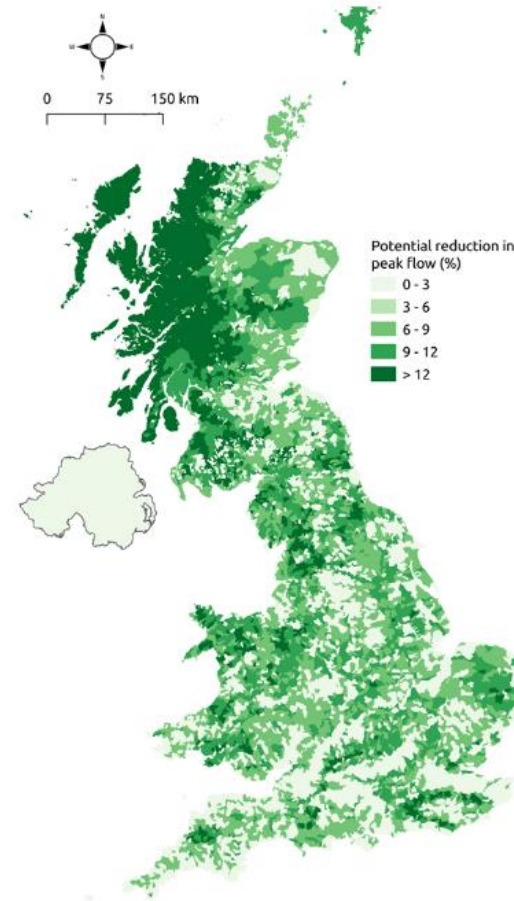
Storage



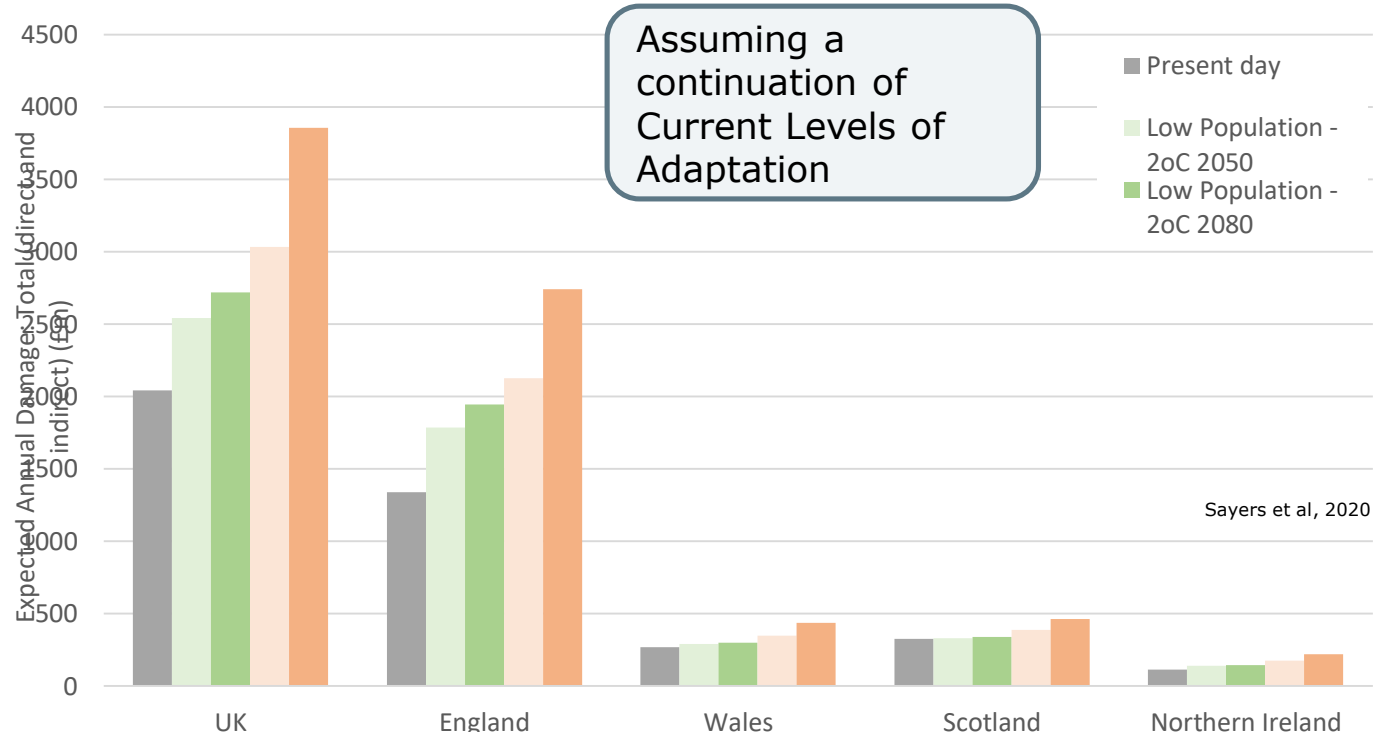
Run-off



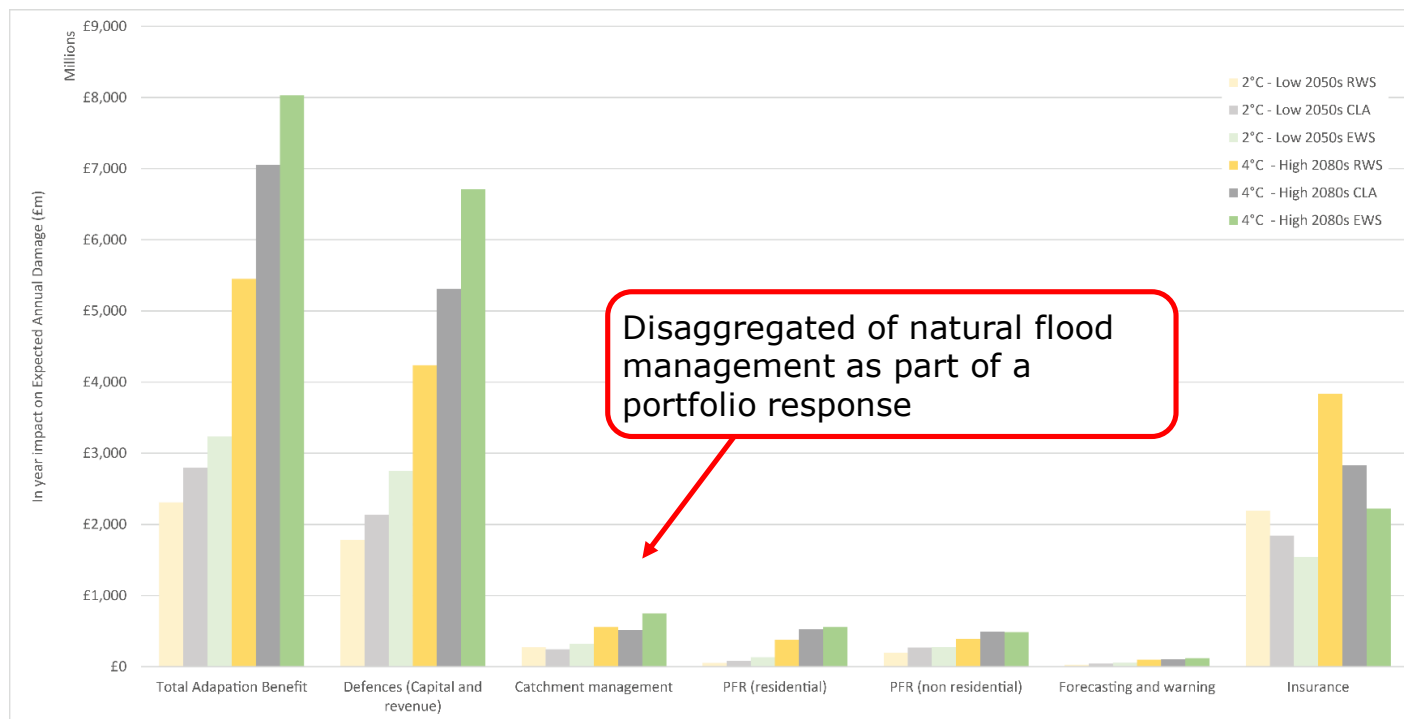
Natural flood
management
Opportunity
map



Future flood risk: By country



Contribution to reducing Expected Annual Damages



Flood risk (expected annual economic damage) in the UK – 2050 and 2080s under a 2 and 4°C Future

Sayers, PB., Horritt, M, Carr, S, Kay, A, and Mauz, J (2020) Third UK Climate Change Risk Assessment (CCRA3): Future flood risk. Research undertaken by Sayers and Partners for the Committee on Climate Change.

Map: PV Benefits: A portfolio of adaptations

Decision basis: **Utility** (Max NPV)

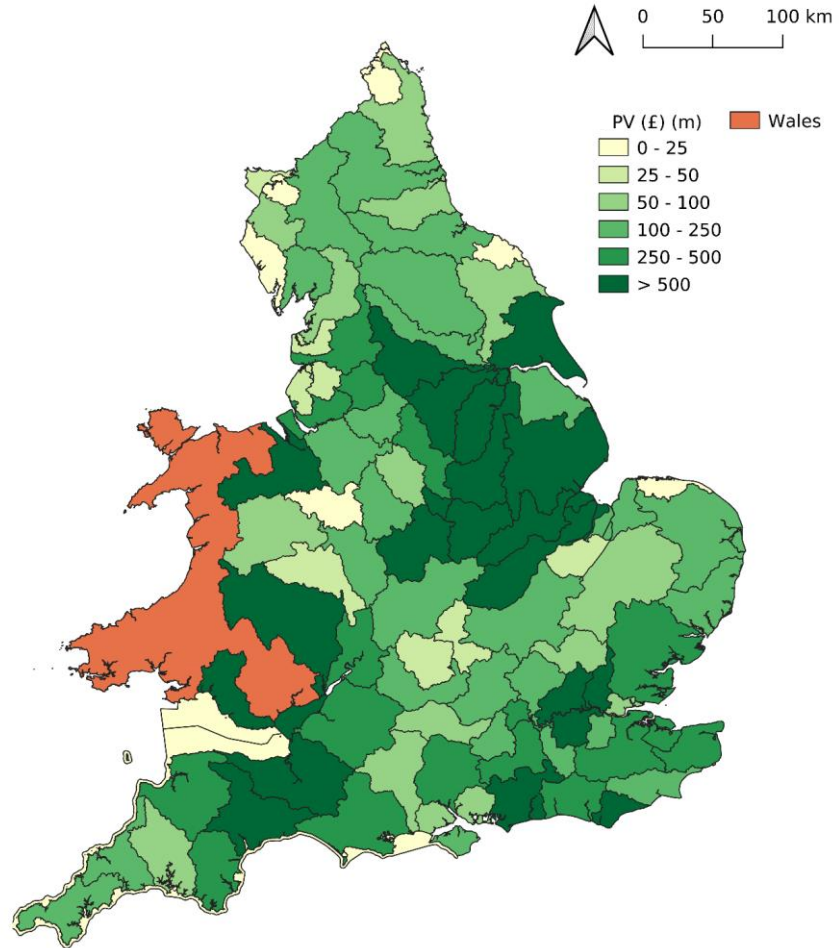
Appraisal period: Present day to 2080s

GMST: **4°C**

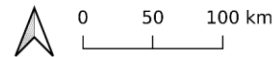
Population: **High** growth

Note:

Residential and non-residential only



Map: PV Costs: A portfolio of adaptations

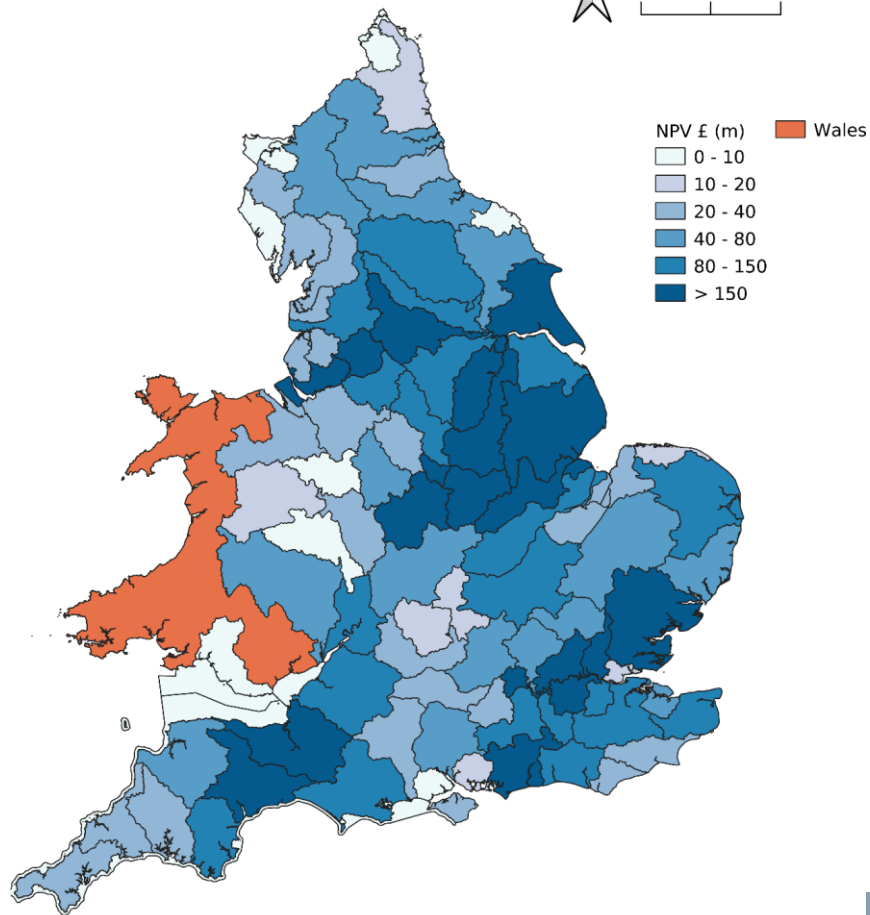


Decision basis: **Utility** (Max NPV)

Appraisal period: Present day to 2080s

GMST: **4°C**

Population: **High** growth



Map: Selected portfolio: PV Benefits: Defences

Decision basis: **Utility** (Max NPV)

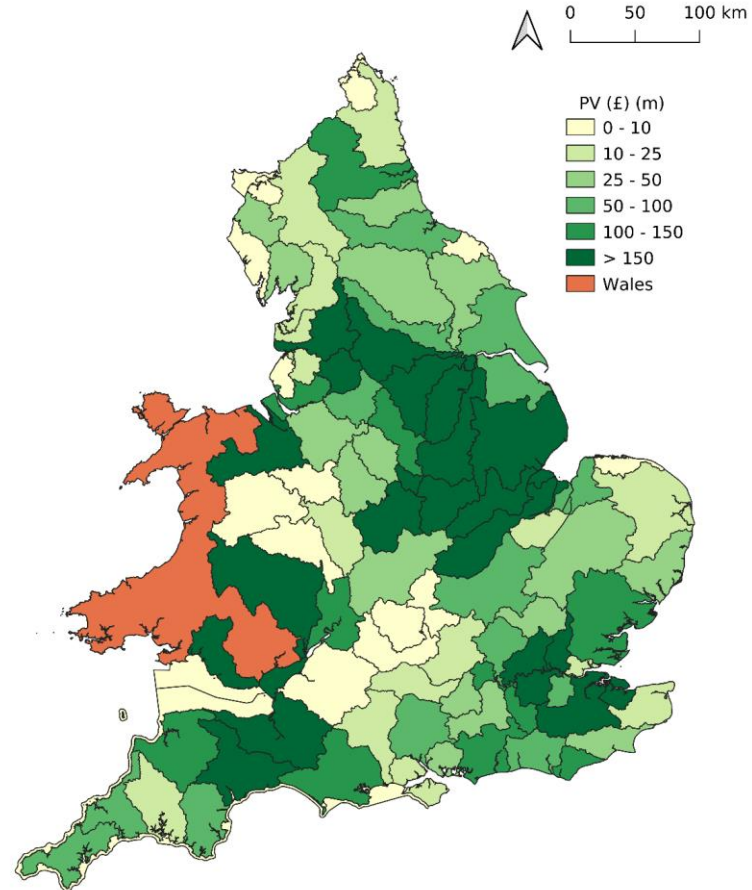
Appraisal period: Present day to 2080s

GMST: **2°C**

Population: **Low** growth

Note:

Residential and non-residential only



Map: Selected portfolio: PV Benefits: NFM

Decision basis: **Utility** (Max NPV)

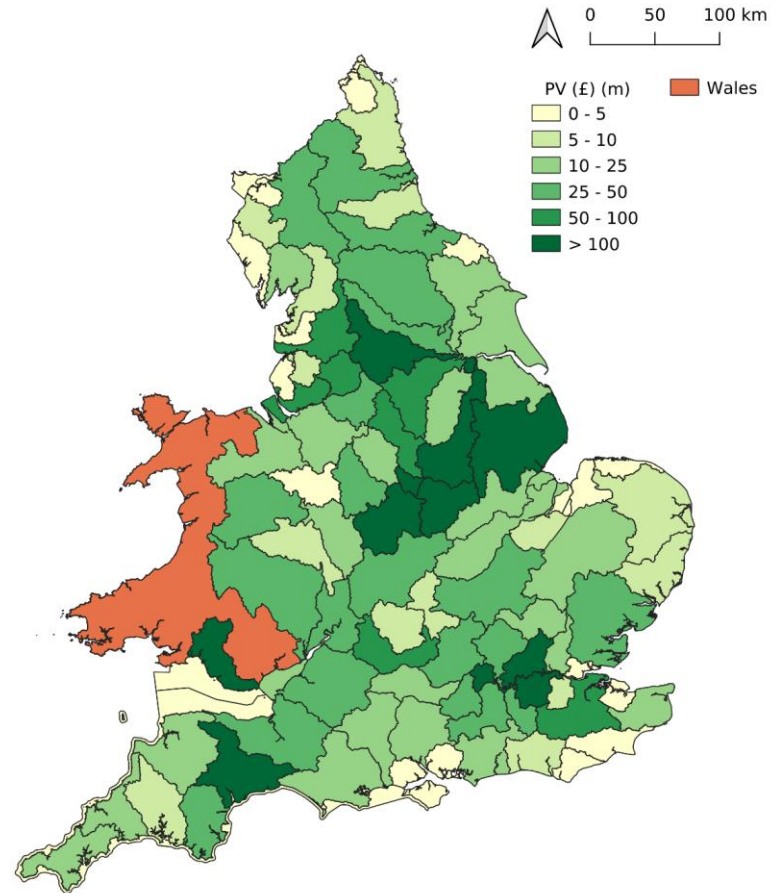
Appraisal period: Present day to 2080s

GMST: **2°C**

Population: **Low** growth

Note:

Residential and non-residential only



Regional assessments

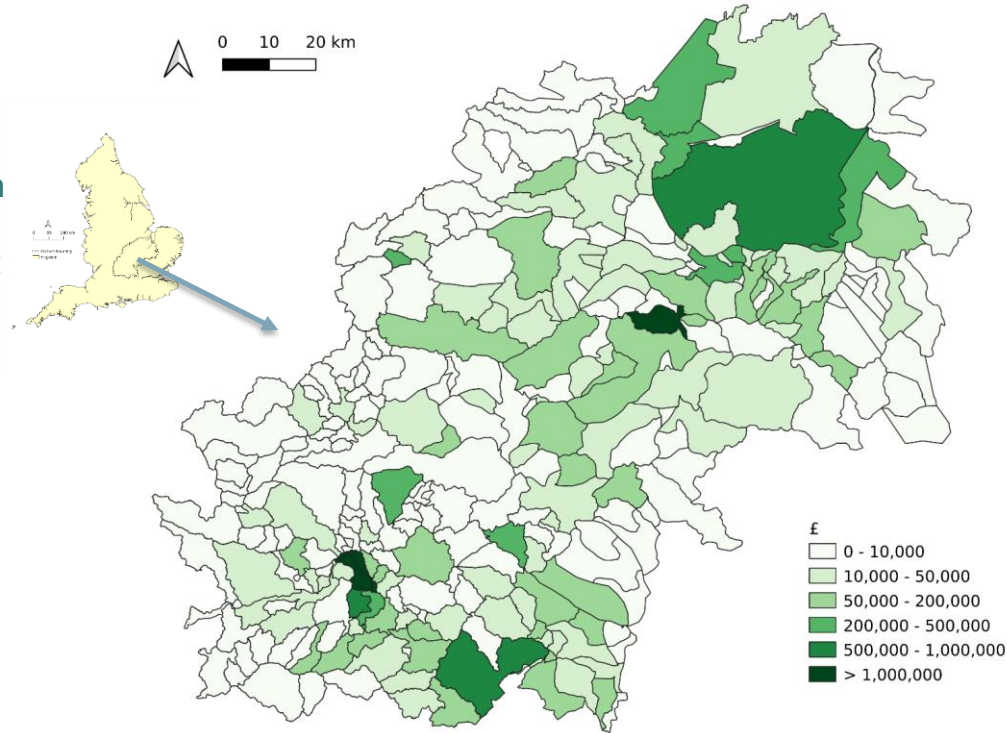
Determining the flood risk reduction benefits of Natural Flood Management (Oxford-Cambridge Corridor – UK)

Reduction in Expected Annual Damage

2050s

4°C future

Sayers et al, 2020



Regional assessments

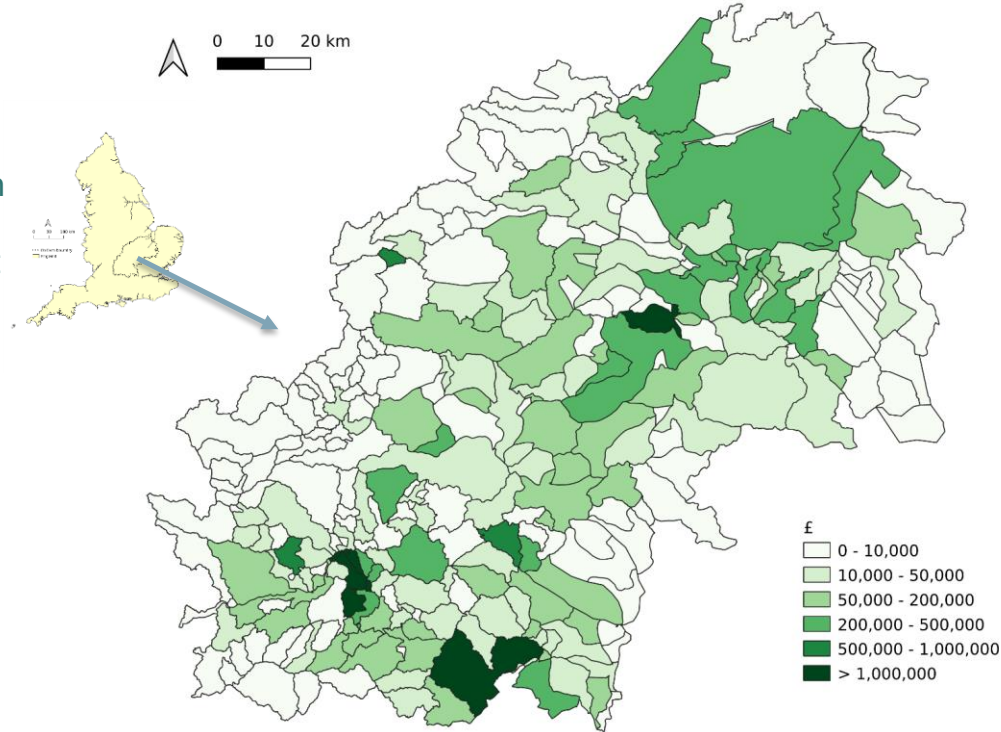
Determining the flood risk reduction benefits of Natural Flood Management (Oxford-Cambridge Corridor – UK)

Reduction in Expected Annual Damage

2080s

4°C future

Sayers et al, 2020



Adaptation and the approach is important

- In the absence of any adaptation a combination of a 4°C climate change and high population growth future drives an increase of £9.2bn in EAD

Catchment management (natural flood management)

- Investment in catchment management provides significant returns when combined with good spatial planning choices and conventional flood defences (as assessment here) across the UK.
- The Benefit to Cost Ratio (BCR) of the catchment management measures is strong regardless of the other measures taken.

Nature-Based Solutions

- Have been promoted in policy for some time
- The investment 'will' exists to transition policy to act
- The tools exist to support the investment case

To make this transition required:

- Adopt whole system long-term strategic planning approaches to make the case
- Be willing to innovate

- **Contact**

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Telephone: 01865 600039

- **Acknowledgements**

Committee on Climate Change support for the CCRA3 undertaken by Sayers and Partners
Time supporting the development and delivery of this presentation has been supported
by EC C5a Programme – Cloud to Coast Adaptation

- **More information:**

Sayers, PB., Horritt, M, Carr, S, Kay, A, and Mauz, J (2020) Third UK Climate Change Risk Assessment (CCRA3): Future flood risk. Research undertaken by Sayers and Partners for the Committee on Climate Change. Published by Committee on Climate Change, London

Acknowledgements



WWF *for a living planet*

Colleagues WWF and ODI



Collaborators at

Horritt
Consulting

