

Towards a well adapted UK – insights from policy, research and practice

Swenja Surminski, Member of the Adaptation Committee,
UK Committee on Climate Change

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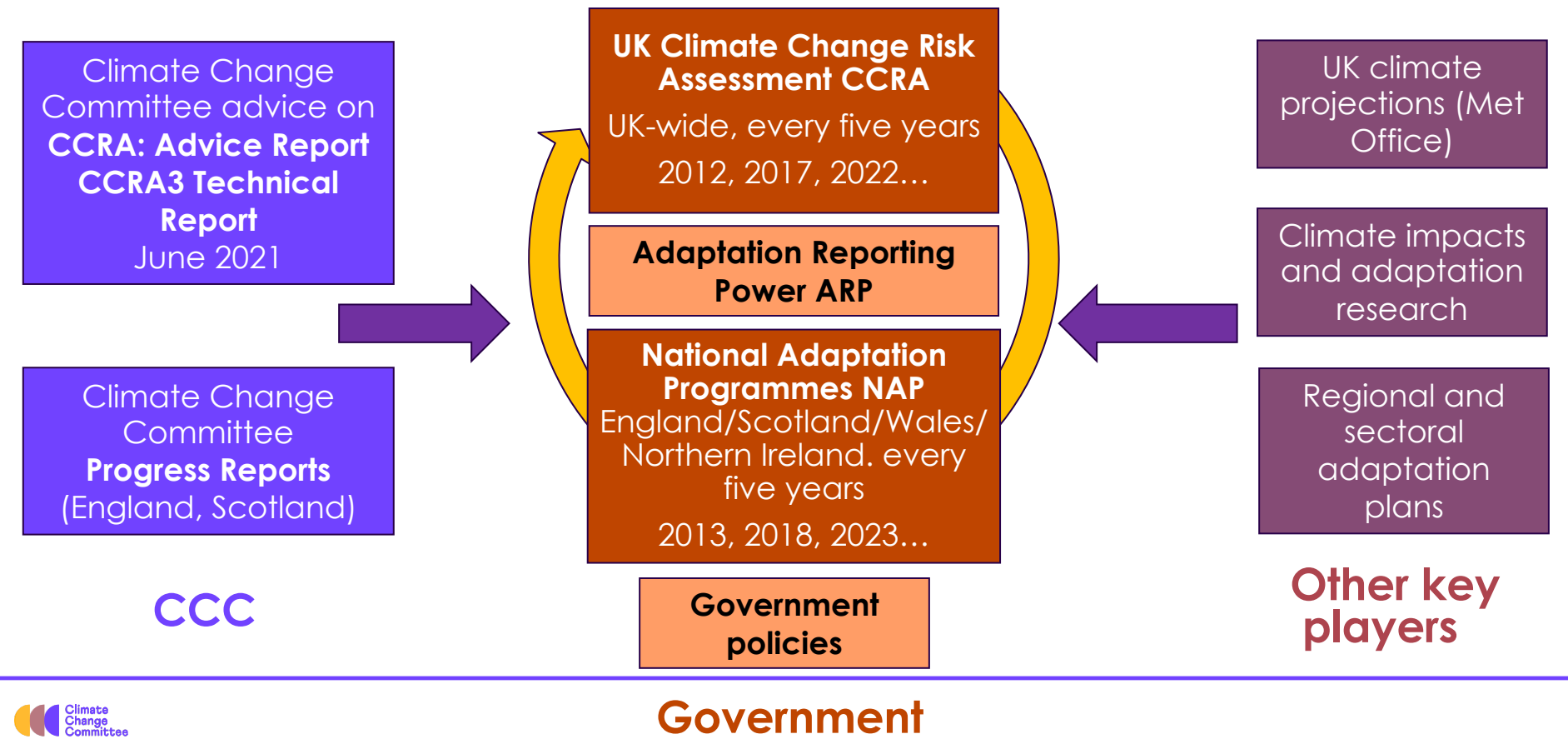
Swenja Surminski, Managing Director, Climate and Sustainability, Marsh
McLennan Advantage

KEY MESSAGES

- Progress in risk assessment is not matched by progress in adaptation action, and there is no common method or metric for firms to assess adaptation or resilience efforts of their counterparties.
 - **UK needs standards and metrics for adaptation.**
- Although society has a portfolio of adaptation tools at its disposal, many of these tools are currently underutilized, underfunded or inefficiently implemented.
 - **UK needs integrated solutions: Net zero can not be achieved without adaptation, and adaptation needs intact ecosystems.**
- UK has world class adaptation research, but significant gaps in our understanding of adaptation remain and hamper progress in policy and practice, with danger of maladaptation and lock-ins growing.
 - **UK needs an adaptation research centre and more funding for adaptation research.**
- There are significant policy and private sector opportunities for adaptation in near to mid-term including next National Adaptation Programme, Green Finance and ESG investments commitment, new regulatory drivers, pressure to disclose and report, supply chain initiatives.
 - **UK needs to realize these opportunities, research, policy and practice need to be well integrated.**
- Significant skill gaps exist when it comes to sustainability and climate, including adaptation. The corporate and public sector are looking for experts – who is training them?
 - **UK needs good links between research and education.**

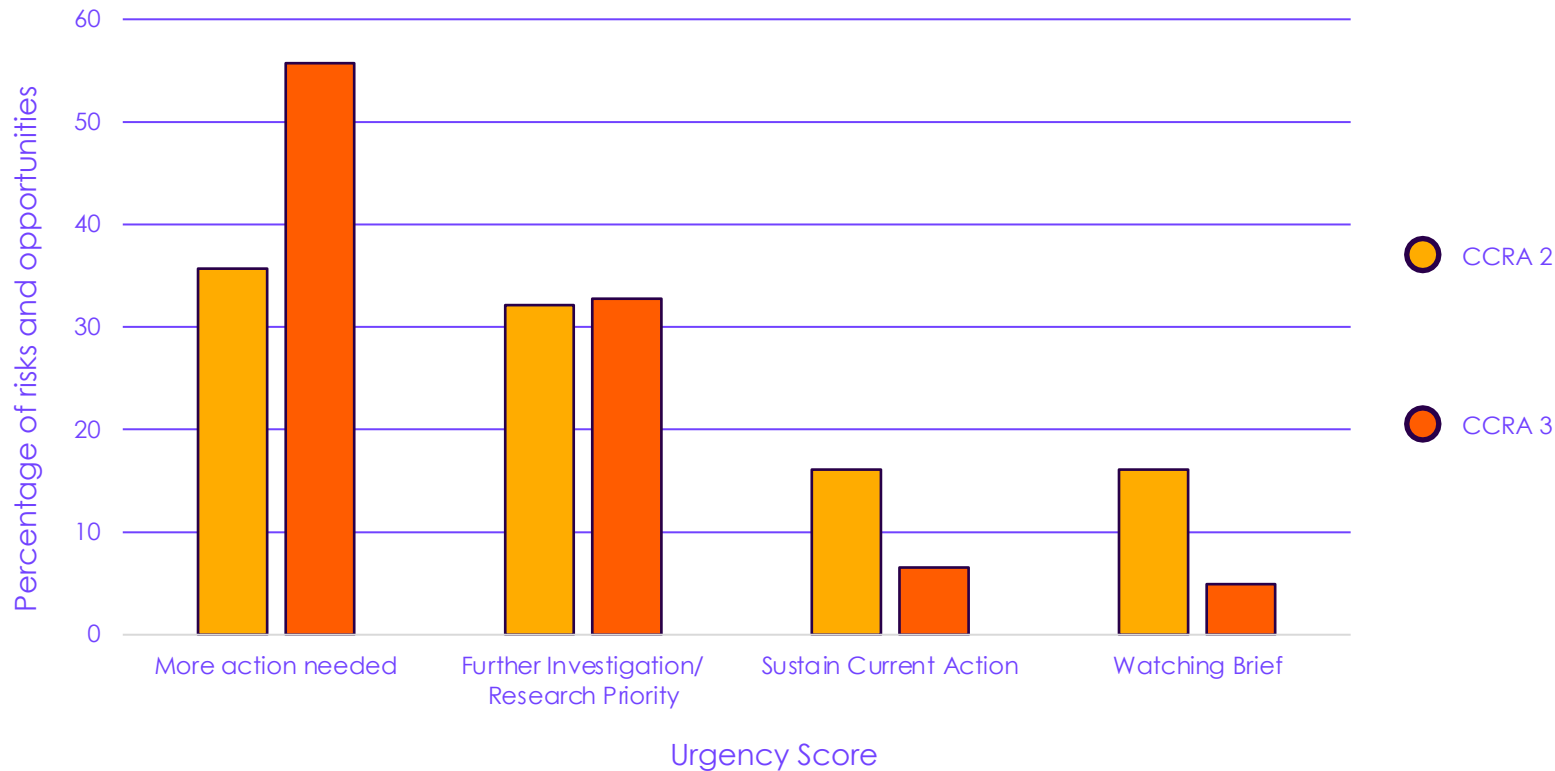
Adapting to climate change

The Climate Change Act 2008 introduces a robust reporting framework



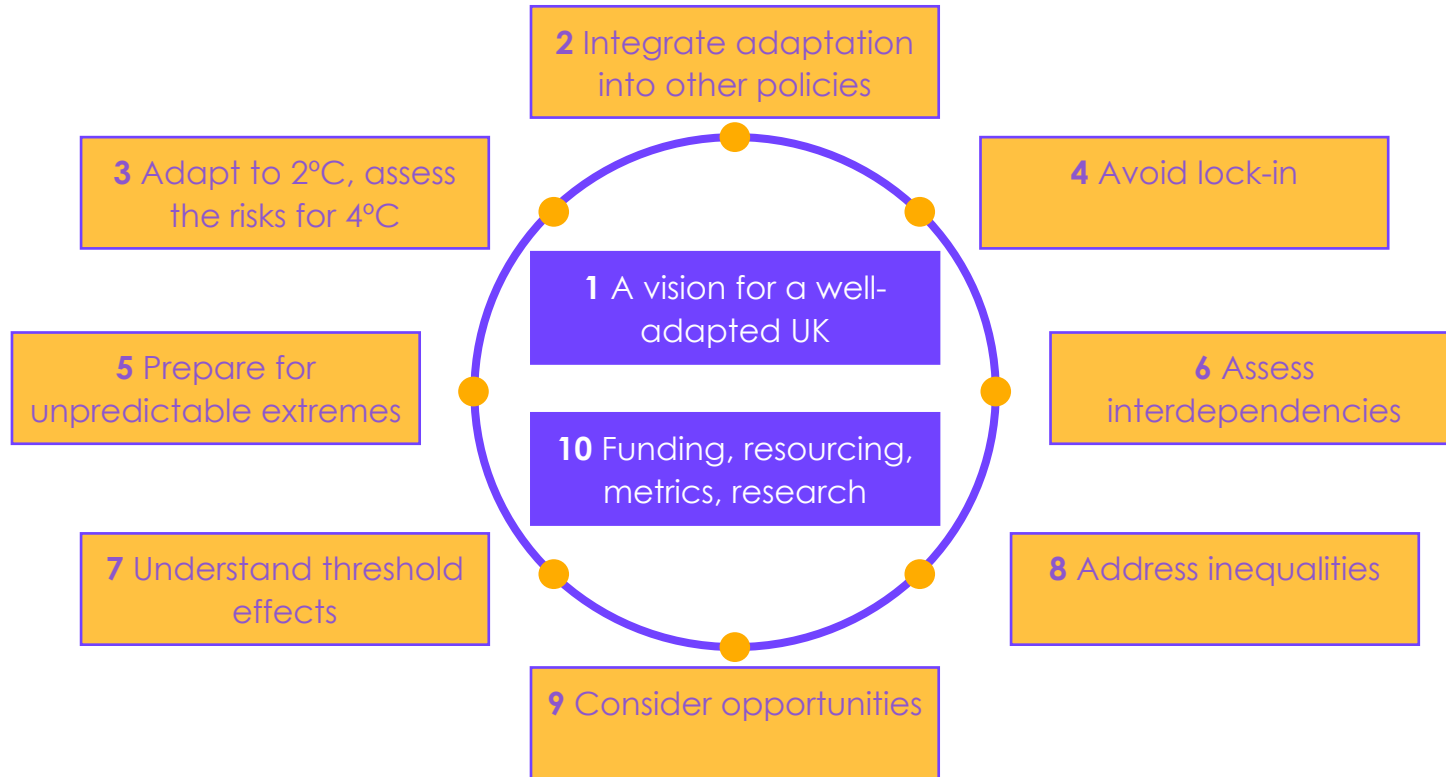
Urgency of adaptation has increased in the last 5 years

Changes in urgency score between CCRA2 (2017) and CCRA3 (2021)



Assessing progress of adaptation policy

Ten principles for effective adaptation - still largely missing from UK adaptation policy



Joint Committee on National Security Strategy

October 2022

“Perhaps the most damning evidence...is the Government’s abject failure to deliver on the CCC’s adaptation recommendations.”

“...if we do not invest time, efforts and resources in climate adaptation—particularly to enhance the resilience of our critical national infrastructure—then there will be an enormous price to pay in future, and that price will not only be paid in money



House of Commons
House of Lords

Joint Committee on the
National Security Strategy

Readiness for storms ahead? Critical national infrastructure in an age of climate change

First Report of Session 2022–23

EMBARGOED ADVANCE NOTICE: This report is embargoed until 10.00am on 11 October 2022. It must not be published, in any form before 10.00am on 11 October 2022, or in part.

HC 132
HL 74

Clarify adaptation goals and roles for investment

NAP3 should set out a vision for a well-adapted UK, with specific targets.

Green Finance Strategy should clarify where adaptation will be publicly or privately funded. It should include funding commitments for departments over the next 5 year period.

Create markets that value adaptation outcomes

Government should create markets for adaptation outcomes, including carbon market integrity and ELM schemes.

Green Finance Strategy: clarify where adaptation will be publicly or privately funded. £ commitments over 5 years.

Industry regulators and implementing agencies should have resilience standards aligned to national objectives.

Regulators should have a duty to align with national adaptation objectives, create climate adaptation project pipelines and set out how they will realise the pipeline.

Public sector leadership

Office for Budget Responsibility (OBR) should do a full review of the impacts of climate change on UK macroeconomy and public finances

Government and implementing agencies should ensure a growing fraction of funds support pioneering projects to provide proof of concept for funding and delivery of adaptation actions through public-private partnerships.

Strengthen corporate disclosure regimes

NAP3 and Green Finance Strategy should set out steps to ensure the UK SDR initiatives help improve understanding of adaptation investment needs

Gov should build on the work of the Transition Plan Taskforce to define common standards for high-quality adaptation plans, including how physical risks are measured and managed, and how plans should contribute to wider societal adaptation.

Empower financial regulators to address risks

Financial regulators should provide directional guidance for financial institutions to measure physical climate risk and their contribution to climate adaptation outcomes across portfolios and loan books. Regular stress testing of financial system to climate change risks.

BoE should examine how capital requirements for banks should be adjusted based on climate risks.

UK financial regulators should collaborate with international counterparts to establish a cost of capital observatory for physical risk

Help unlock investment through public FIs

UK public financial institutions (UKIB, BBB, BII, UKEF) should create adaptation finance strategies, setting out how they will independently and collectively ensure no viable adaptation project fails due to lack of finance

UK public FIs should launch new sustainability-linked instruments tied to adaptation outcomes to help prime the market

11 The size of investment flows needed to build climate resilience depend on the resilience ambition but are likely to be significant this decade



Resilience
~£10
billion per
year

Net Zero

Additional ~£50
billion per year



**Nature
restoration**
multi-billion
pound per year



**Flood
defences**
£0.5 - 1 billion
per year



**Protecting homes
from overheating**
£0.5 - 1 billion per
year



**Climate-proofing
infrastructure**
Integrated into
existing funding



**Public water
system**
£0.5 - 1 billion
per year

Investing in technologies and selecting sites that could become stranded assets due to climate change

Risk insensitive site locations for new assets - not taking into account long-term conditions

Lacking information on the risks down the supply chains or supply chains that are locked to certain suppliers or countries

Hard engineering approaches to flood protection and lack of understanding of natural solutions

Planning on the basis of current flood protection levels for specific sites - these will change

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Disregard for physical climate risks is locking corporates into dangerous futures

Commentary on 16 June, 2021

Business decisions taken today will impact both the ability to transition to net-zero and the ability to cope with the physical risks from climate change. As the Third UK Climate Change Risk Assessment is published, Swenja Surminski, a lead author, reflects on concerns over businesses' level of preparedness.

There has been a seismic shift in corporate awareness and governance of climate risks over the last two years. More and more investors are demanding that businesses identify and mitigate their exposure to climate change, and regulators increasingly expect that firms quantify and disclose their climate-related risks. Under the reporting framework developed by the Task Force on Climate-related Financial Disclosures



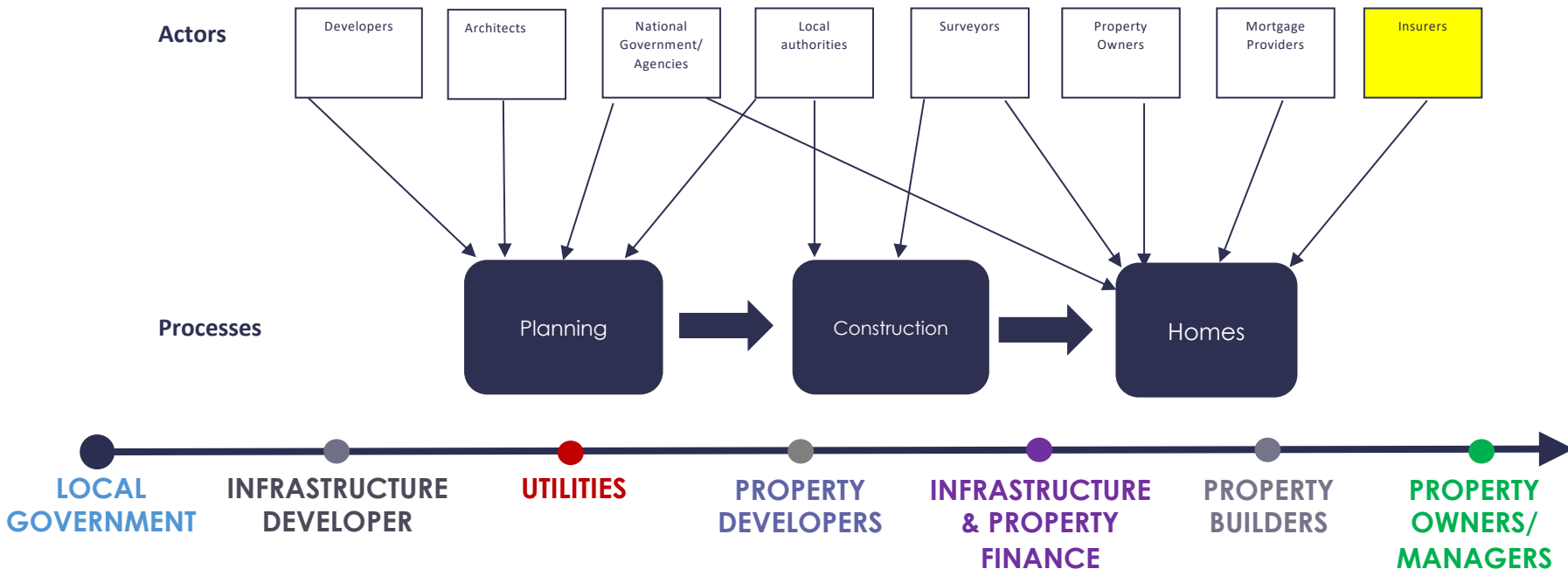
Between 2008 and 2018 a total of 7.82% of new business sites in the UK were built in high-risk flood zones – and climate change is expected to shift and expand these zones even further. Photo: Fowey, Cornwall by Prawny, Pixabay

The problem of **'lock-ins'**: many decisions today are not reflecting the risks we face tomorrow. This poses risk for financial stability and raises questions about fairness and responsibility.

Rözer, V. & Surminski, S. (2021) Current and future flood risk of new build homes across different socio-economic neighbourhoods in England and Wales, *Environmental Research Letters*, 16, 054021.

Are we engaging all who make relevant decisions?

In urban flood decision-making different group of stakeholders are involved with various interests, preferences and perceptions.



Stakeholder needs

- “The climate change signal is not captured in most of the analytics available to the industry; even for current risks we are at an early stage of quantification, and vulnerability functions are very limited.”
- “The loss scenario we find challenging is determining the risk to an ‘adapted’ asset that withstands the event, but now stands in the midst of impaired adjacent properties and infrastructure, exposed to valuation losses and downturn in sales and leasing.”
- “How can we integrate adaptation and resilience into climate stress testing?”
- “What metrics can be used to assess resilience of a counterparty?”

Example: The Rethinking Flood series



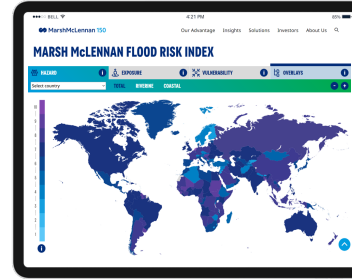
June 2021

- Implications for national-level stakeholders and policymakers
- Rising flood risk and costs
- Flooding as a driver of inequality
- Existing flood insurance programs and challenges



December 2021

- Brief explores flood implications for corporates and presents strategies to effectively build flood resilience in enterprise risk management practices



July 2022

- Online interactive presents flood risk at the national level according to hazard, exposure and vulnerability under multiple climate change scenarios
- Users can visualize data made available by multiple research institutions to view urban & rural exposure to flooding



February 2023

- Key impacts of rising flood risk and points of failure of current flood risk strategies
- Tools and principles guide a transformation in risk management
- Innovative solutions and strategies to build resilience and enablers to mobilize action

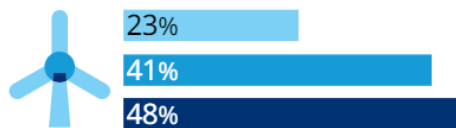
Rising flood risk increasingly places key infrastructure under threat

- Findings from the Marsh McLennan Flood Risk Index reveal key vulnerabilities in global power infrastructure, international airports and international ports. Even under a 2°C global warming scenario, the percentages of these three infrastructure classes at risk are set to approximately double.
- Failure of critical infrastructure prolongs and exacerbates flood impacts, such as business interruptions, disruptions to supply chains, and recovery costs.

Infrastructure at risk under present and under 2°C and 3.5 °C warming scenarios

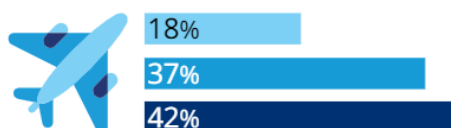
Power infrastructure

Generation capacity



International airports

Seats



International ports

Trade outflows



■ Present day ■ 2°C warming scenario ■ 3.5°C warming scenario

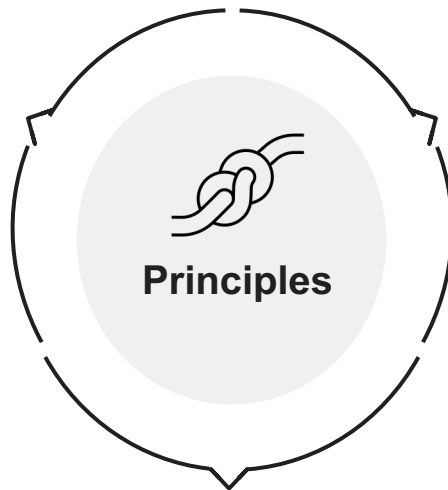
Source: [Marsh McLennan Flood Risk Index](#)

Three principles to guide adaptation strategies

1

Embrace current and forward-looking trends

Strategies need to incorporate information on climate change projections and evolving risk drivers to minimize the risk of maladaptation, blind spots, and lock-ins.



2

Coordinate the implementation of tools through new modes of collaboration

New models of participation can coordinate action and align incentives among a wide range of stakeholders, such as corporates, households, communities and governments.

3

Harness co-benefits by taking a systems-level approach to resilience

Leveraging the broad range of social, economic and environmental co-benefits can strengthen the business case for resilience and unlock investments.

Bold action and strong leadership are required to scale and fund these transformative changes.

There is a narrowing window of opportunity to drive transformative changes. To break the climate risk cycle, critical enablers across governance and risk culture, land use and infrastructure planning, and finance and insurance are required.

1



Build a risk culture that balances fairness and individual responsibility

- Replace protection goals with resilience objectives
- Integrate resilience and forward-looking considerations into existing risk models
- Inform about risk trends and the effectiveness of risk management

2



Transform land use and infrastructure planning

- Switch to innovative governance mechanisms
- Ensure the enforcement of building standards
- Establish statutory requirements for the combination of gray and green infrastructure
- Offer financial incentives for rural land management

3



Mobilize financial capital for climate resilience

- Standardize co-benefits assessments and integrate them into ESG frameworks
- Strengthen the role of resilience ratings in awarding contracts

4



Shift to a resilience-focused insurance system

- Remove regulatory barriers and transform regulatory frameworks
- Create innovative insurance models

To conclude:

- **UK needs standards and metrics for adaptation.**
- **UK needs integrated solutions: Net zero can not be achieved without adaptation, and adaptation needs intact ecosystems.**
- **UK needs an adaptation research centre and more funding for adaptation research.**
- **UK needs to realize policy and market opportunities - research, policy and practice need to be well integrated.**
- **UK needs good links between research and education.**