Met Office

Communicating Climate Information

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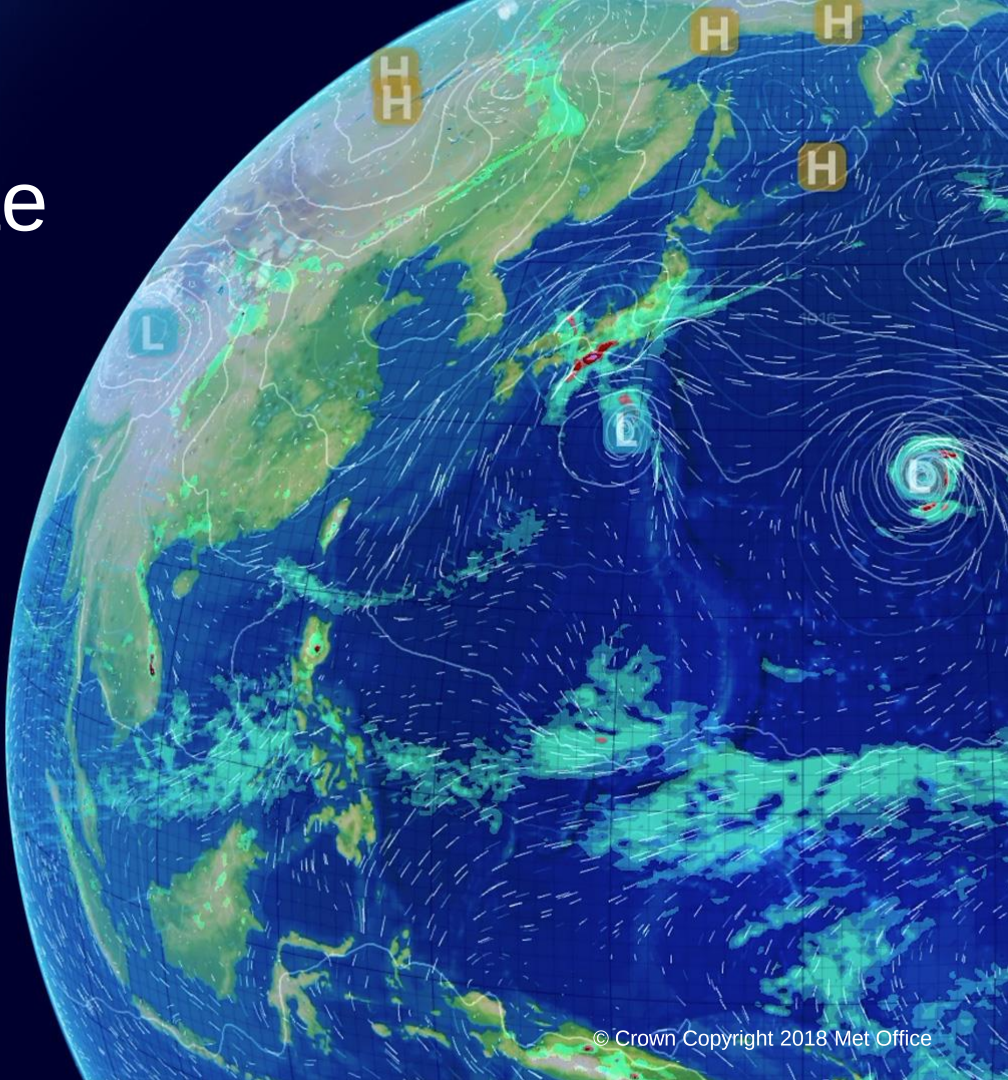
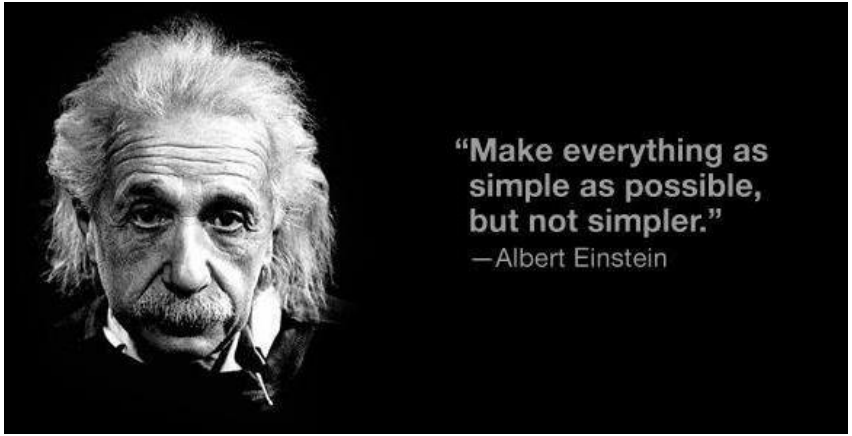


Aims for Session

- Discuss general principles and ground rules for good communication - based on practiced examples and academic research
- Explore good practice examples and discuss growing requirements of sectors and NMHSs in communicating long-term climate change information.
- Define principles of good practice for communicating long-term climate information for the Caribbean



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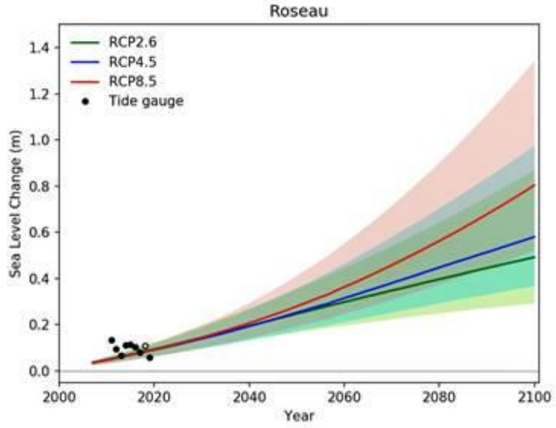
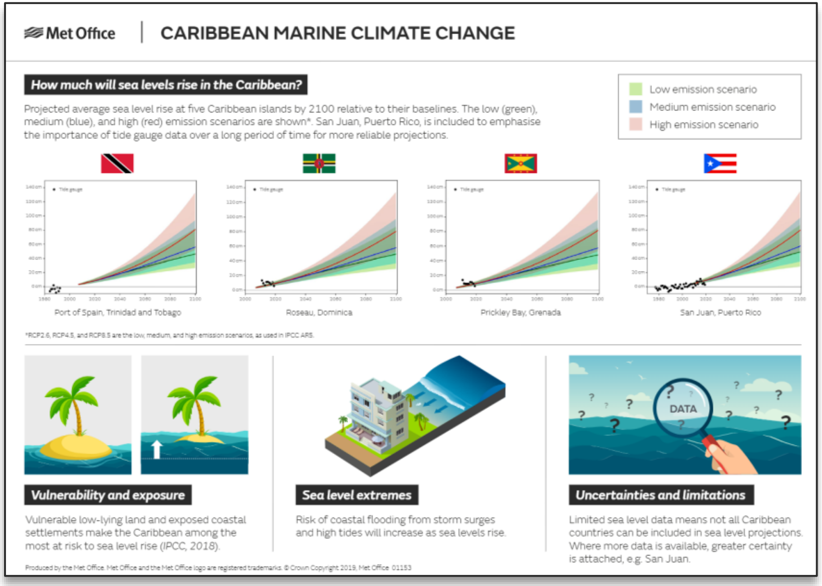
Good communication = Making the Complex Simple

- Throughout this workshop several different examples of communication methods will be showcased
- **Making the Complex Simple** is key!





General principles and good practice

Communicating climate information

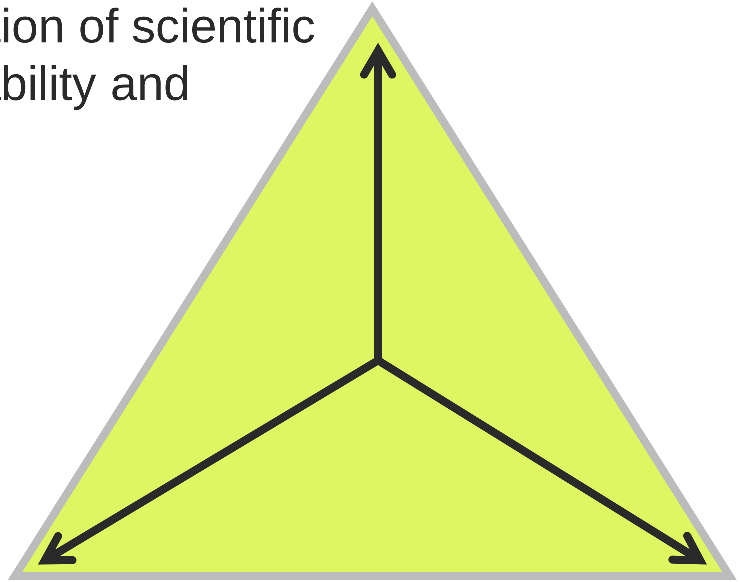
Communicating future climate information to non-experts has particular challenges.

- Maintaining scientific credibility
- Understanding and dealing with uncertainties
- Communicating to non-experts
- Dealing with different scenarios
- Translating information for decision-makers
- Providing sector relevant information
- Translating information into what that means in terms of climate risk
- Communicating a range of possibilities
- Understanding different climate risk thresholds for different sectors

Three-dimensional communication

Robustness

Appropriate reflection of scientific confidence or reliability and uncertainties.



Ease of which information can be applied and understood.

Saliency

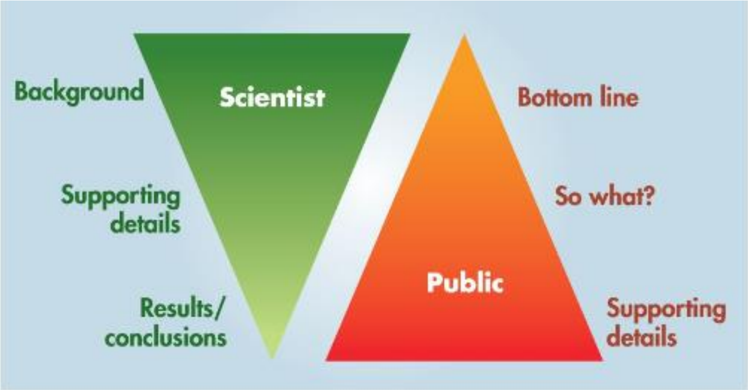
Greater detail of information communicated.

Richness

Communicating climate information

- Social scientists have shown that more science does not necessarily lead to better decision making (Corner & van Eck, 2014).
- Scientists simply present the facts through traditional academic routes, is not fit for the purpose of informing policy or effectively communicating science (Bowater & Yeoman, 2013).
- Scientists need to actively engage in the process of communicating their science through dialogue with their various audiences.
- We need to listen and understand those who can use our research (Reed, 2016).
- This takes time and requires developing sustainable concrete relationships and committing to a continual process of meaningful dialogue.

Inverting the traditional approach - focussing on the key messages and the 'so what'



Adapted from Somerville & Hassol, 2011

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Language used when communicating science

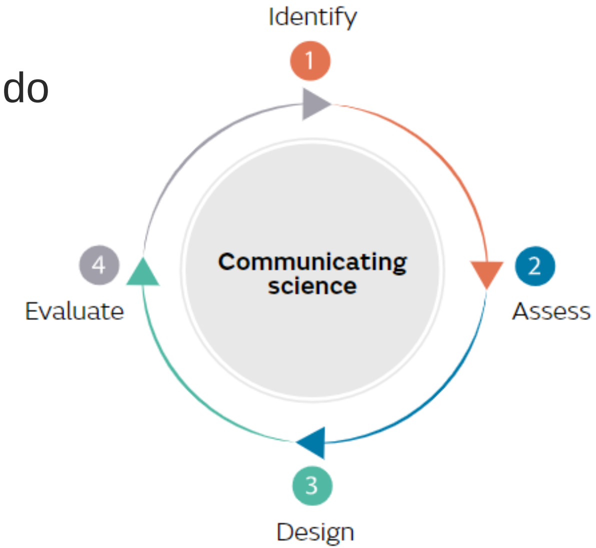
Terms that have different meanings for scientists and the public		
Scientific Term	**Public meaning**	**Better Choice**
Enhance	Improve	Intensify, increase
Aerosol	Spray can	Tiny atmospheric particle
Positive trend	Good trend	Upward trend
Positive feedback	Good response, praise	Vicious cycle, self reinforcing cycle
Theory	Hunch, speculation	Scientific understanding
Uncertainty	Ignorance	Range
Error	Mistake, wrong, incorrect	Difference from exact true number
Bias	Distortion, political motive	Offset from an observation
Sign	Indication, astrological sign	Plus or minus sign
Values	Ethics, monetary value	Numbers, quantity
Manipulation	Illicit tampering	Scientific data processing
Scheme	Devious plot	Systematic plan
Anomaly	Abnormal occurrence	Change from long-term average

Adapted from Somerville & Hassol, 2011

Communicating climate information

Effective science communication benefits from being clear and concise and focusing on what we do know rather than what we do not know (Fischhoff, 2013).

0. Listening to the audience to identify the decisions they face
1. Identify the science that is most relevant to those decisions
2. Find out what people already know
3. Design communications to fill the critical gaps
4. Evaluate the adequacy of those communications (repeat if necessary)



The science communication process, adapted from Fischoff, 2013

The essence of good communication could simply be seen as saying the same thing in as many different ways as possible so that as many different people as possible have the opportunity to learn and absorb what is relevant for them (Bowater & Yeoman, 2013).

People have many different learning styles so it is important to create opportunities for knowledge exchange with everyone.

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Voice: narratives and human stories

- Move from presenting the scientific facts towards telling relevant narratives and human stories.
- Communicating science accurately is essential, the key messages can be delivered in the context of a wider narrative of relevance to the audience
- Strong visuals, case studies and personal narratives can be useful tools for effective communication (Corner, Lewandowsky, Phillips, & Roberts, 2015).
- Evoking emotion can improve rational decision making (Neeley, 2015).
- Showcase the people behind the science, bring forward their personal stories and experience of their work is a way to bring narrative into science.

Climate Stories

Red Bell
The red bell curve
As it's pulled along
Louder, deeper, hotter
The sound all wrong

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A recent report on the Intergovernmental Panel on Climate Change (IPCC) process identified 7 key recommendations to improve the translation of climate science into policy (Corner & van Eck, 2014).

1. **Invest in communications**: use the scientists as the communicators by offering support, training and encouragement
2 .Embrace **video** content and **social media**
3. **Show the human face**: tell the personal stories of the scientists and their own passion for their work
4. Work with a **diverse range of partners**: who can lend cultural credibility to the science
5. **Tell human stories about climate change**: through partners such as NGOS and social scientists, show the impacts of climate change on people
6. **Test everything**: continually test your communication strategy with different audiences
7. No more assessment reports: deliver **science to order**

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Barriers to interpreting climate information

Kause et al. In Press

1. **Choice of wording:** Use a gain frame to describe climate change information and motivate behaviour.
2. **Verbally described probabilistic estimates:** Communicate lower and upper numerical bounds with verbally described probabilistic ranges
3. **Conflicting information:** Add content information about how uncertain finding relate to previous research from field
4. **Perceptions of underlying distributions:** Add a central estimate or a graph showing the underlying distribution of a range.
5. **Perception of climate science uncertainty:** Describe uncertain climate science by using analogies.
6. **Communicating change graphically:** Where possible, display individual model estimates with mean/median estimates.
7. **Differences between people:** Empirically test whether low-numerate audiences understand statistical information.

Key principles of communication

Education, Engagement, Enact Change

Key Principles:

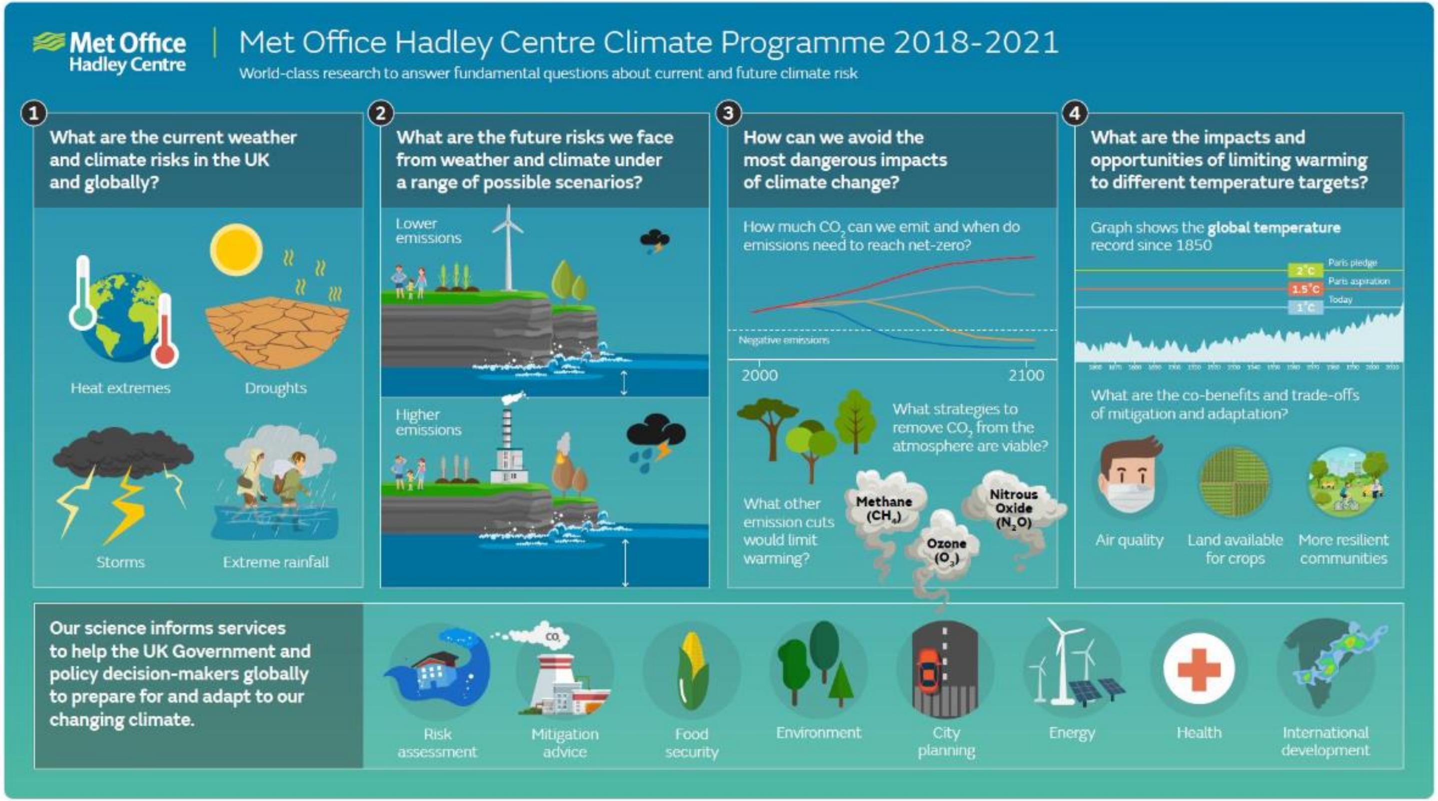
- Timescales – timely communication
- Relevance to audience – tailoring and co-production
- Transparency and trust
- Accuracy of scientific data and statistical info
- Communicate uncertainty
- Inspire and empower
- Making complex simple
- Use a range of communication tools
- Respect values, ethics and diversity
- Don’t assume

“It’s not what you said, it’s how you said it.”

Met Office Climate Communication Examples

Met Office Approach

Met Office Hadley Centre Climate Programme (MOHCCP)



Work with stakeholders to establish key themes for the general underpinning science.

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Knowledge Integration - The communications relay

Maximising the impact and value of Met Office Hadley Centre science and research

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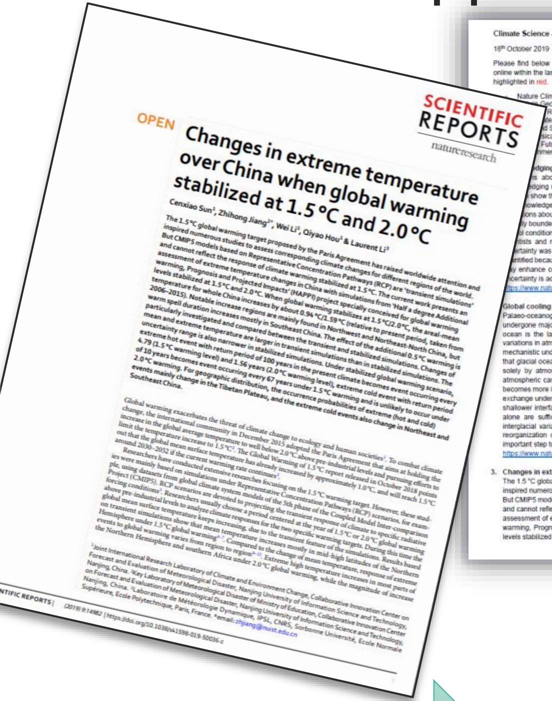
Met Office approach - Internal communications & planning



Climate Editorial → Climate Science PR Comms → Science Comms → Twitter

Knowledge Integration Team
Recommendations for improving the delivery of our science

1. **Relationships and dialogue** – moving towards a continual dialogue between scientists and policy-makers to ensure that we provide robust science that is relevant and useful to inform evidence based policy

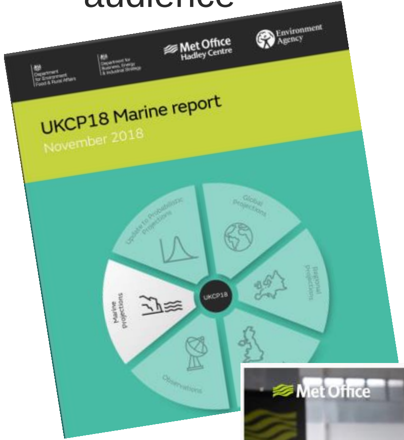
2. **Tiered delivery, recognising the need for varying levels of detail** – a dynamic responsive delivery approach that allows us to deliver policy relevant science in an accessible and timely fashion

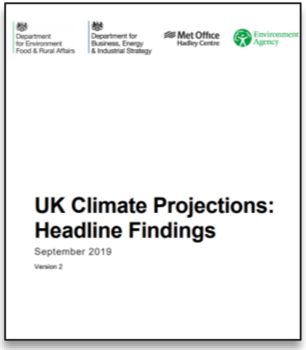
3. **Web-based delivery** – enhancing our website to enable the most effective and accessible delivery of our world class science

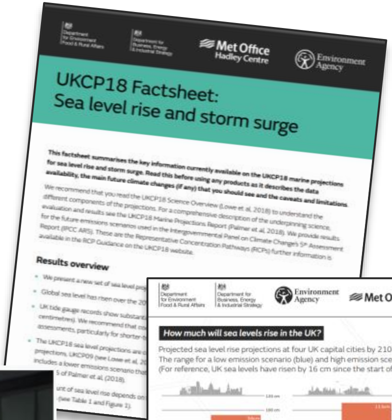
4. **Increased Hadley Centre based visualisation capability** – ensuring that the people who know our science best have the time, support and appropriate resources to visualise and translate our science

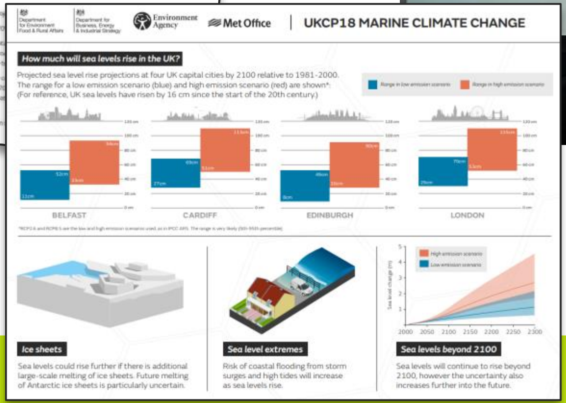
5. **Recognition of the increasing need for communication on behalf of policy-makers** – rather than primarily communicating our science to our government funders, a move towards us communicating to a wider audience as needed

- Worked directly with a user group throughout the project from inception to delivery.
- User group determined specific research questions, scope of work, delivery timeline and methods of delivery.
- A wide variety of communications activities were planned throughout the process for different types of audience









Joint Project Team

Department for Environment Food & Rural Affairs
Department of Energy & Climate Change
Environment Agency
Met Office Hadley Centre

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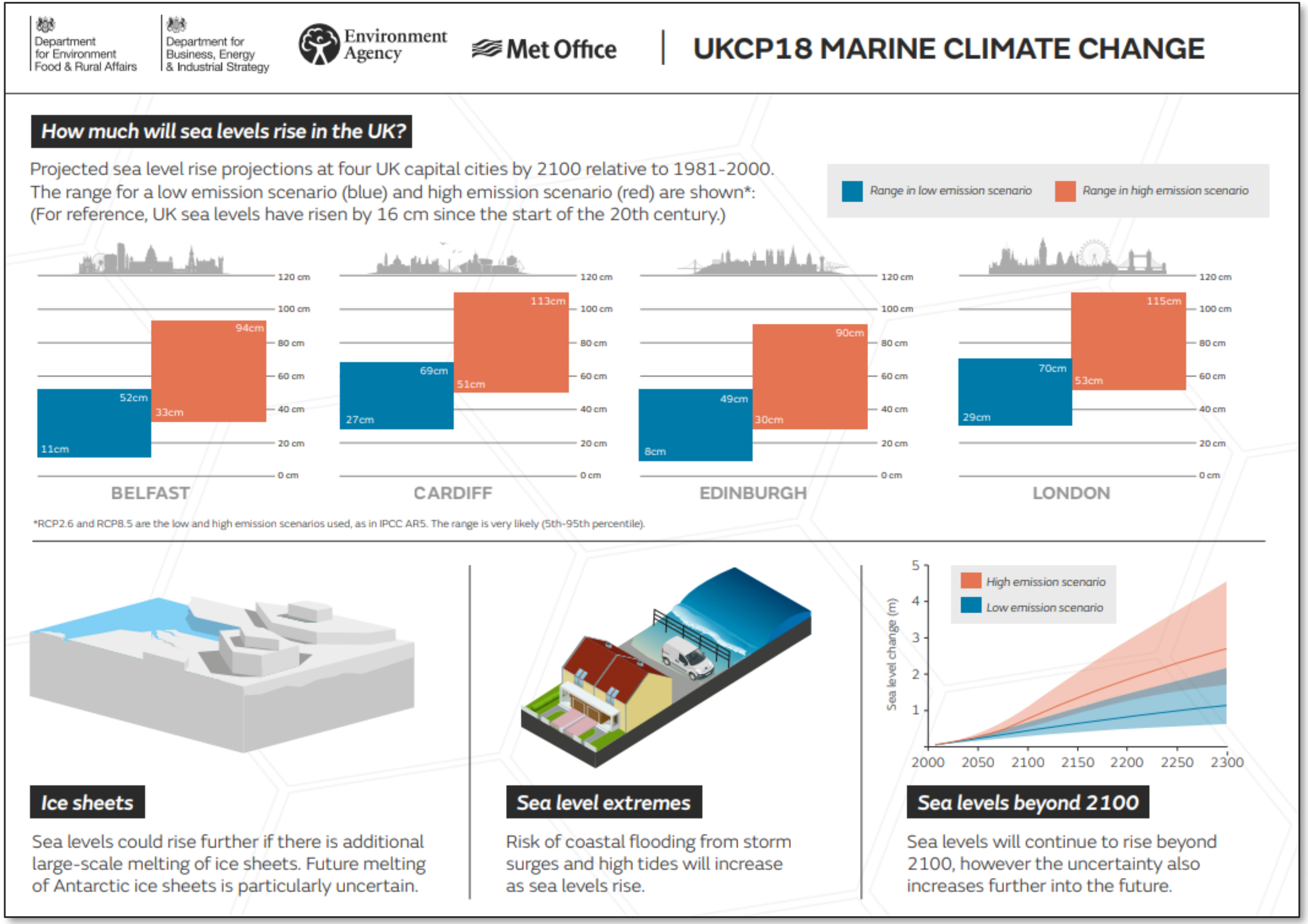
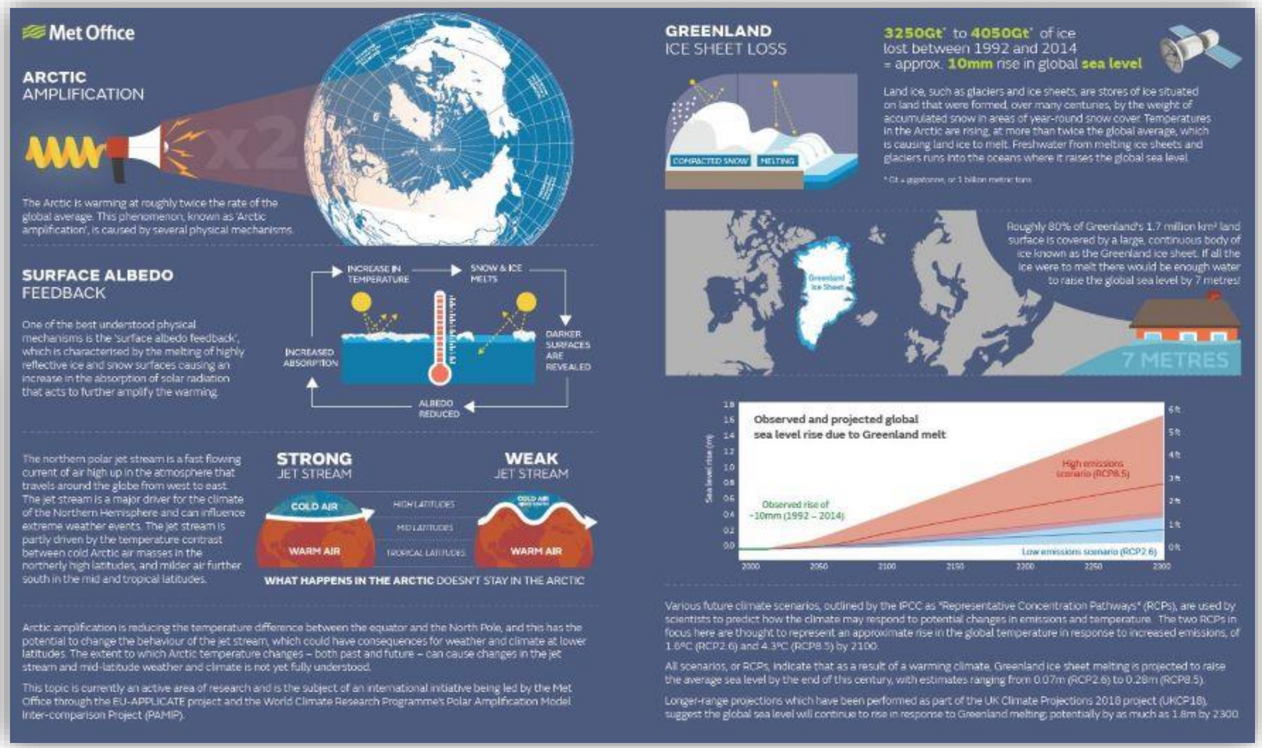
State of the UK Climate 2018



Co-production of communication with national partners



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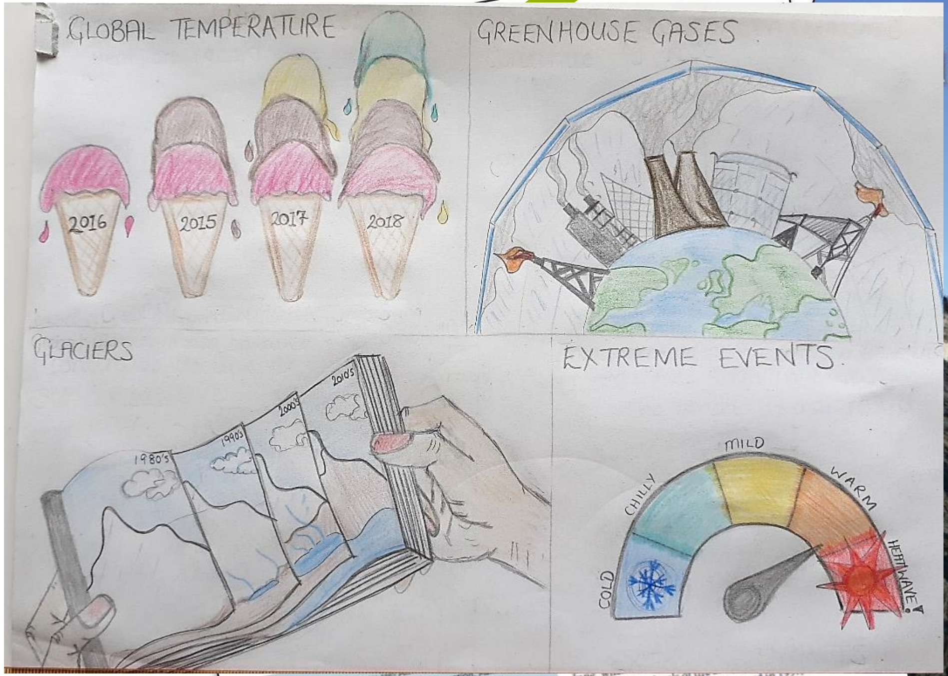
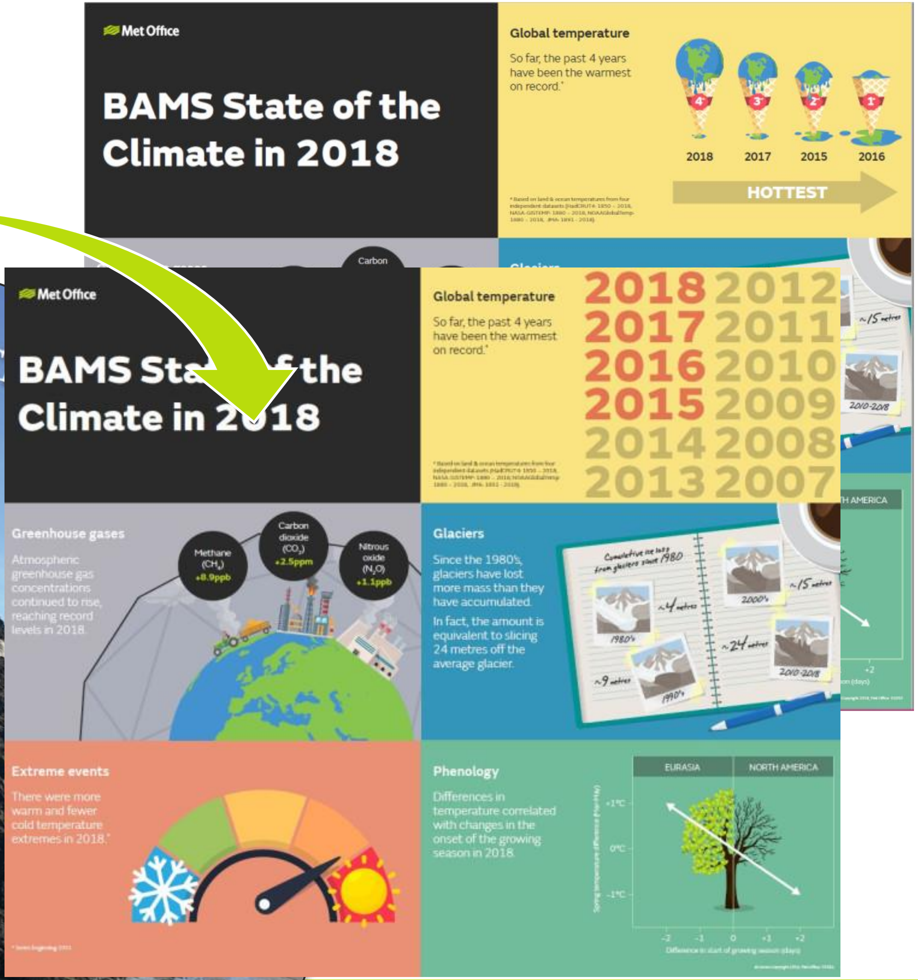
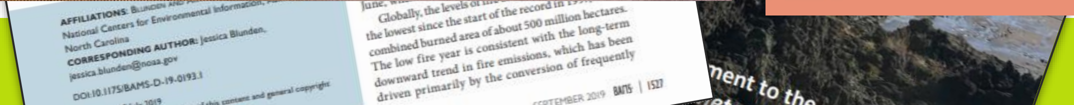
The Bulletin of the American Meteorological Society (BAMS) State of the Climate







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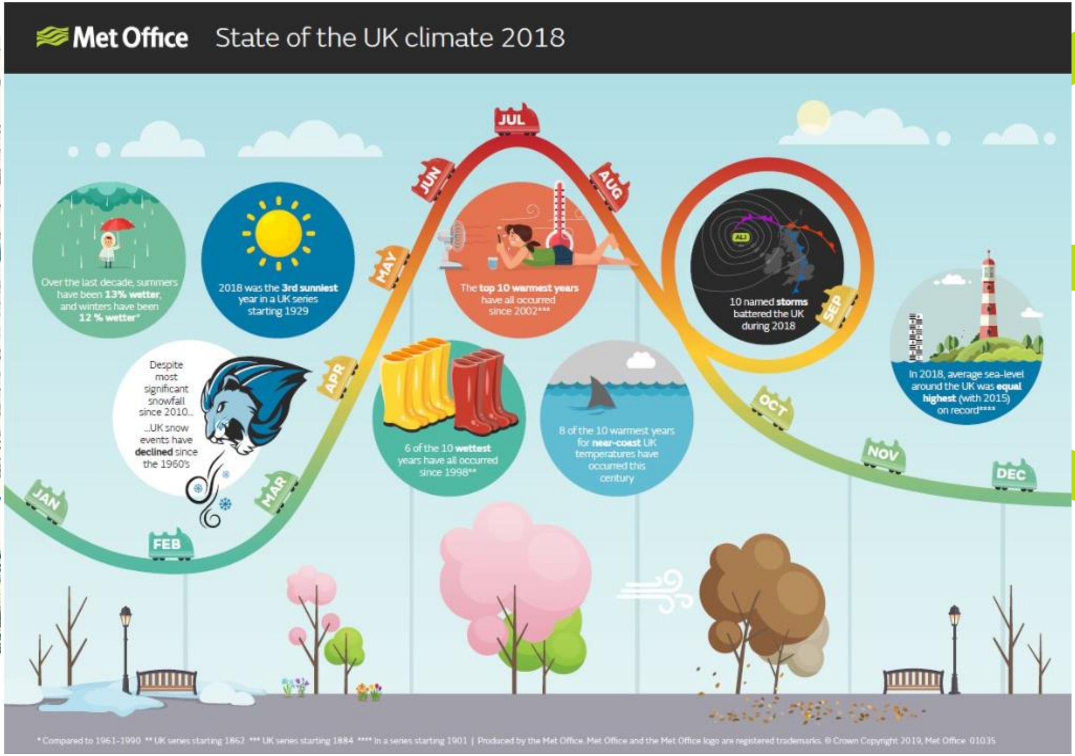
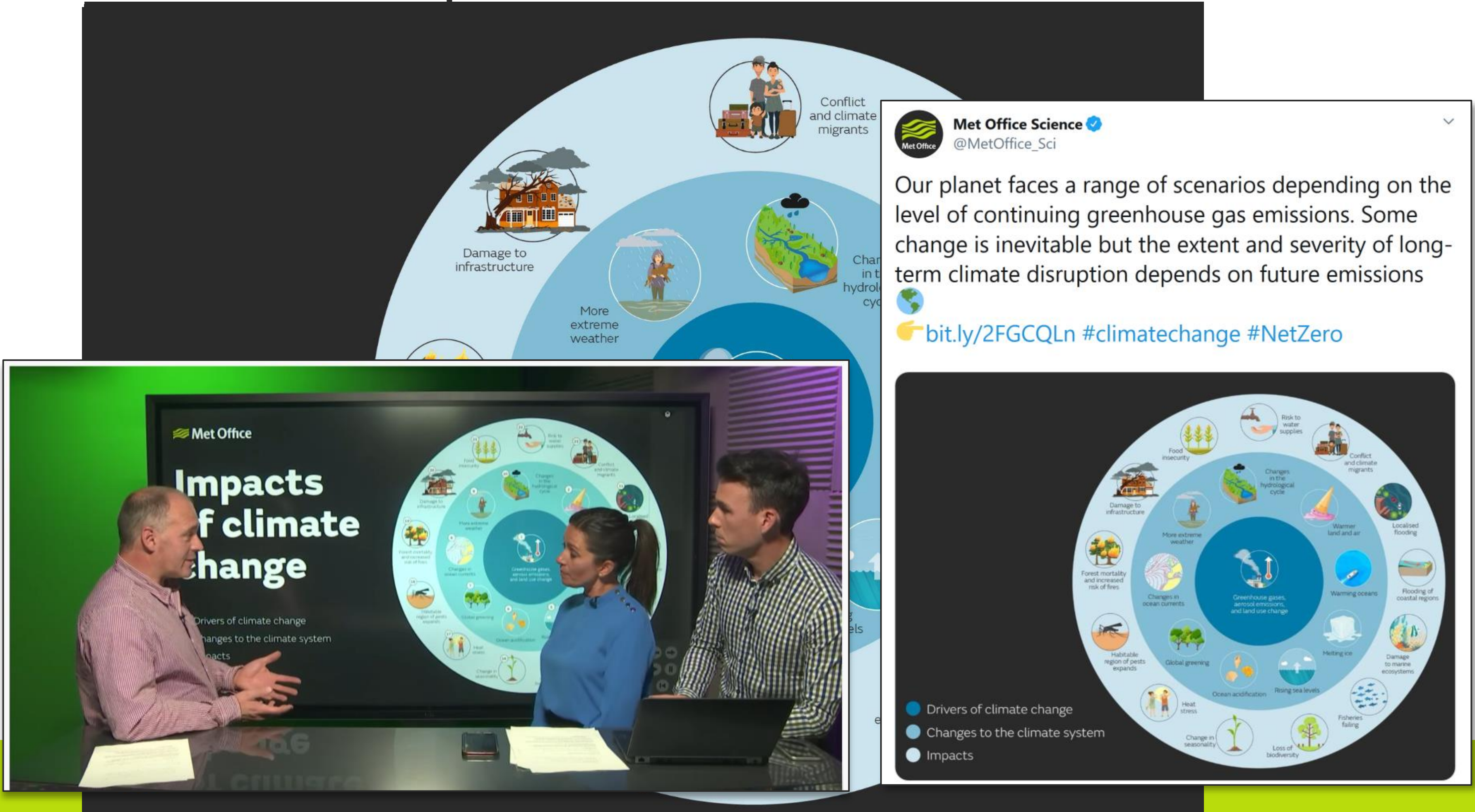


Impacts Communication



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Break-out group exercise

1) **What are your organisation's requirements/challenges for communicating long term climate information** - draw on examples from information providers (NMHSs, regional bodies), and climate information users (sector representatives, ministry representatives)

2) **Principles of good practice for communicating long-term climate information for the Caribbean** - list 6 key principles after group discussion, rank them if you feel there are priorities

3) **Examples of good communication methods/approaches that have worked well in the Caribbean** - please draw broadly from what has worked well in seasonal comms, from other disciplines, sectors and wider initiatives. **Consider whether they could be adapted/extended for climate communication**

Things to bear in mind…

- What may seem obvious to you may not seem obvious to a decision-makers
- Put yourself in the position of those receiving the information (or better still, co-produce with those receiving the information)
- Different sectors have different thresholds of climate risk
- Communicate uncertainties and limitations as clearly as possible
- Draw from a variety of different communication approaches. Different people take in information in different ways.
- Make the complex simple! “Make every thing as simple as possible but not simpler”