



Department for
Business, Energy
& Industrial Strategy

OFFICIAL

SEA LEVEL RISE, UK & GLOBAL

A BEIS perspective



20 September 2021



Climate Science in BEIS

- Dr Sarah Honour is DD for Climate Change in BEIS SICE
- International (Dr Jolene Cook)
 - IPCC
 - UNFCCC
 - COP26 a particular focus
- Domestic (me)
 - Mitigation
 - Inventory
 - Capability
 - Climate science
 - Climate services





What I aim to say

- I am not an expert in the field of sea-level rise
- My understanding of likely UK climate impacts is ‘high level’ (i.e. limited!)
- Public policy on adaptation sits with Defra / EA
- BUT
- BEIS supports climate science, and our aim is to ensure that the science that underpins policy is the best it can possibly be, *and answers the difficult questions*
- This talk is about how Government works, how sea-level rise is perceived and what that means
- Short, lots of questions (I hope)



Own perceptions

- Sea level rise is slow
- And *likely* to be limited to <2m this century
- But there are very large uncertainties, and our understanding of ice-sheet dynamics is changing rapidly
- Not in my top 5 of “Climate things that keep me awake at night”
- but ... tipping points!



Public perception vs. “reality”

- Concern about climate change is v. high in UK
- Concern about flooding/sea level rise in next 15 – 20 years at 63% (BEIS PAT)
- But sea level rise may not be seen as a major issue of *personal* concern by most, even in costal communities (Thomas et al, <https://doi.org/10.1016/j.gloenvcha.2015.04.009>)
- In this study, participants recognised impact overseas (e.g. Maldives) but less so local
- And public highly uncertain about rate – which reflects the science!
- Public – and Ministers – v. exercised about *flooding* particularly following events in Germany earlier this year
- How the wider issue of flooding relates to public perception about sea-level rise is unclear



Governments largely rely on the IPCC

- We are generally not familiar with the literature
 - Not true of all my colleagues but v. much in a minority!
- ‘Experts’ use IPCC as frame of reference
- Ministers / SCS unlikely to have read SPM, likely to be familiar with certain lines from SPM as provided in briefings
- FAR: 10cm – 70cm (w/ mitigation) to 31cm – 110cm (BAU)
 - Antarctic was assumed to gain mass to 2100
- SAR: ‘Best estimate’ 49cm, lower than FAR
- TAR: (This is where I come in): < 40cm in majority of scenarios
 - Antarctica *still projected to gain mass*
- AR6: 62cm ‘best estimate’ at 3 degrees



there is a substantial
likelihood that sea level rise
will be outside the likely
range



Implications

- I also believe that the era of using IPCC reports to convince countries to *act* on climate change is largely over
 - We won the argument!
- The counterbalance to this is that the public – and (many) policymakers underestimate the level of uncertainty in impacts and their distribution
 - How confident is the audience that sea level rise will be <1m to 2100?



What does this all mean?

- Net-zero means resilience, impacts, adaptation are somewhat “2nd class citizens” in climate policy right now
 - Cf. CCRA3
 - The (poorly understood) risk “**Multiple risks to the UK from climate change impacts overseas**” made the top 8 areas for *urgent action*
- *Events*, particularly German floods, have salience
- From a policy user perspective *I do not care* what sea level rise will be in 20XX. *I care what the **direct and indirect** impacts on UK prosperity and security will be*
- Politicians and citizens alike unlikely to distinguish between inland flooding and sea-driven flooding. Floods are floods



Summary

- Public understanding of sea level rise actually quite aligned with the uncertainty in the literature, and (as a result?) the issue has limited salience in the context of UK impacts
- The IPCC estimates remain wide, slow and, in political terms, low salience
- But flooding has deep salience and is a real concern
- We need to better understand direct and indirect impacts on UK prosperity and security
- [Nothing about UK global security interests – not my area of expertise]