

Written evidence submitted by the Adaptation Committee of the Committee on Climate Change (CCC)(FLOO0018)

14 May 2020

Introduction

1. The Committee on Climate Change (CCC) was established under the 2008 Climate Change Act. The Adaptation Committee of the CCC provides independent, expert advice on preparing for and adapting to climate change to the UK and devolved governments and parliaments.
2. The CCC's most recent analyses¹ of inland flood risk in England showed that the expected annual damages to property from river and surface water flooding combined (i.e. coastal flooding excluded) could **increase by a factor of 5** from £146 million per year in the present day to £743 million per year by the 2080s due to climate change and population growth.²
3. Given the current COVID-19 crisis, the CCC recommends that the Efra Committee considers how the inquiry outcomes can be framed in terms of building a resilient recovery. In our recent letters to the Prime Minister³ and devolved administrations, we set out the need to tackle the current 'resilience deficit' via strong policies in the medium-term COVID-19 recovery. Flood risk management is a key element of this deficit.
4. The following sections provide evidence from the CCC's recent work related to the six questions that underpin the Efra inquiry.

Q1: Are the current national and local governance and co-ordination arrangements for flood and coastal risk management in England effective?

5. There are many aspects of current arrangements for FCERM in England that are effective. However, the **lack of an overarching vision and/or strategy** for flood risk management in England was highlighted in the CCC's 2019 Progress Report (covering England only).⁴ At present, there are many actors and stakeholders that oversee a

¹ Sayers et al. (2015) Climate Change Risk Assessment 2017: Projections of future flood risk in the UK. This work is currently being updated for the 2021 Climate Change Risk Assessment with results being published in May 2020.

² This compares the combined present day expected annual damages (EAD) from fluvial and surface water flooding (£146 million) to a fluvial and surface water flooding EAD in the 2080s using a 4°C climate change scenario, a high population growth scenario and a low adaptation scenario (£743 million). Other combinations of these three scenarios show smaller increases in EAD but all scenarios show an increase regardless of the climate, population or adaptation scenario.

³ <https://www.theccc.org.uk/publication/letter-building-a-resilient-recovery-from-the-covid-19-crisis-to-prime-minister-boris-johnson/>

complex patchwork of plans, strategies and policies that cover very different spatial areas and time periods with no clear vision or lead organisation. This will hinder progress in managing increasing flood risk in the future.

6. The 2019 Progress Report also identified the adaptation priorities on 'surface water flood risk alleviation' and 'development in areas at risk of surface water flooding' as having **poor plans** to manage increasing risk and that **inadequate progress has been made in managing these two increasing risks**. These adaptation priorities are particularly hard to manage as they span the responsibilities of many stakeholders. Furthermore: the plans that do exist do not consider different climate change scenarios; there are no plans or processes that ensure new development in areas of surface water flood risk does not increase overall exposure or vulnerability; the capacity of the sewer network is limited; and there is no evidence to show that high quality (green) Sustainable Drainage Systems (SuDS) are being installed in the majority of developments.
7. The flooding related adaptation priorities that we assessed in our 2019 Progress Report scored did not score in the highest category for either quality of plan or for progress in managing risk. However, our report noted that the draft national FCERM Strategy, being developed by the Environment Agency that was then under consultation, would be a significant improvement if implemented. That strategy is still yet to be signed off by Defra Ministers.
8. The current national and local governance and co-ordination arrangements can be complex (especially for surface water flooding with the interacting responsibilities of MHCLG, house builders, Defra, the Environment Agency, water companies, Ofwat, Highways England and so on). As identified by the Committee and other bodies, these arrangements would benefit from consolidation.

Q2: What lessons can be learned from the recent floods about the way Government and local authorities respond to flooding events?

9. Whilst the emergency response appears to have been sufficient in recent flood events (we have done no analysis of this, though), there is anecdotal evidence that demand for some emergency response resources (e.g. pumps, generators) was near national capacity. The Committee recommends that a full assessment of the emergency response capacity required to cope with concurrent, consecutive, larger magnitude and/or higher frequency major events is undertaken.
10. The Committee recommends that objective criteria need to be put in place to determine when flood recovery grants are issued. At present, this decision lies with MHCLG and is usually only triggered following major events. This skews support towards major river and coastal flooding events and away from surface water flood events that often flood smaller number of properties yet do as much damage to each

individual flooded house. Providing criteria for the triggering of these grants would remove the uncertainty from the process.

Q3: Given the challenge posed by climate change, what should be the Government's aims and priorities in national flood risk policy, and what level of investment will be required in future in order to achieve this?

11. A first crucial step is to assess risk against future scenarios; we recommend planning for 2°C and considering plans for 4°C. Plans should also take a long-term focus, include goals and associated actions and have associated monitoring and evaluation proposals in place.
12. The Committee recommends that the government's priority should be to set a long-term, quantitative, evidence based outcome for flood risk management in the context of a changing climate. This should be in terms of a metric (or group of metrics) that captures as many of the costs of exposure and vulnerability that society faces and the benefits of resilience measures as possible i.e. it should include measures of properties at risk as well as physical and mental health impacts, loss of productivity, infrastructure assets exposed, regeneration opportunities from resilience measures and so on.
13. The level of investment should be based on government's assessment of tolerable levels of risk in terms of the holistic measure described above and should consider place-based standards of resilience, as discussed in a recent joint letter sent to the Defra Secretary of State from the National Infrastructure Commission, Flood Re and the CCC.⁵ As a minimum, though, a level of funding in line with the Environment Agency's Long Term Investment Scenarios would have significant merit.

Q4: How can communities most effectively be involved, and supported, in the policies and decisions that affect them?

14. This is an important area as climate projections imply that some difficult decisions will need to be made where the sustainability of properties or communities is in question (the Committee has published a report into this in the coastal context). The Committee recommends that significant investment is allocated to support long-term engagement activities and to undertake further research into effective engagement practices.
15. Further to point 11 on a national flood risk target and metric, methods are also required that would allow the benefits of engagement activities to be assessed so that they can be valued accurately, and resourced correspondingly, in relation to other flood risk management approaches.

Q5: With increasing focus on natural flood management measures, how should future agricultural and environmental policies be focussed and integrated with the Government's wider approach to flood risk?

⁵ <https://www.theccc.org.uk/publication/letter-flood-and-coastal-resilience-standards/>

16. Appropriate management of the natural environment can play an important role in managing the risk from flooding and therefore agricultural, environmental and flooding policies should be synergistic.
17. Natural flood management interventions can provide wider co-benefits. However, evidence from practical examples of the use of land management as a tool for natural flood management are poorly recorded, especially in the context of long term climate change.
18. Natural flood management and environmental land management can be incorporated into a holistic approach to flood risk management (i.e. point 11 on a quantitative target) if their costs and benefits are appropriately valued. It is, therefore, important that future agricultural and environmental policies consider flood impacts and management.

Q6: How can housing and other development be made more resilient to flooding, and what role can be played by measures such as insurance, sustainable drainage and planning policy?

19. Flood Re, Defra and the Environment Agency should develop a strategy to accelerate the uptake of property level resilience measures or alternative adaptation measures for high risk properties. This is essential in light of the withdrawal of Flood Re.
20. Present day flood risk maps and spatial projections of future flood risk accounting for climate change and population changes, particularly for surface water flooding, need to be developed and/or continuously improved (i.e. higher resolution, incorporate most up-to-date climate data, update representation of hydrological processes). These products need to be made freely available to planners and developers.
21. The consultation processes for planning applications in areas of flood risk need to be tightened. In particular: planning applications in areas of surface water flood risk require a statutory consultation process; and the recommendations developed from consultations in all areas of flood risk need to be implemented more rigorously.
22. Data relating to the outcomes of all planning application consultations in areas of flood risk need to be published. We also require better information on the deployment and efficacy of property level resilience measures and the location and standards of SuDS and NFM schemes.
23. Schedule 3 of the Flood and Water Management Act (2010) should be commenced in England. In particular, the automatic right to connect new development to the existing sewerage network should be made conditional on national SuDS standards being met and/or by water company agreement.
24. The Planning Guidance for England must be updated urgently to maximise the multiple benefits from SuDS in all developments, to better coordinate other aspects of planning related to green infrastructure, and to help address skills and knowledge gaps to ensure

flood and climate change resilience is at the heart of all future planning and development.

25. Defra should update the non-statutory standards using latest evidence on the full costs and benefits of SuDS. To promote water company adoption of SuDS, Defra should consult with Water UK to ensure that standards are aligned to the most up to date 'Sewers for Adoption'.

Further information

The CCC's 2019 progress report can be found [here](#), where Chapter 4 covers People and the built environment and Chapter 5 of the report covers the Infrastructure.

<https://www.theccc.org.uk/publication/progress-in-preparing-for-climate-change-2019-progress-report-to-parliament/>

The CCC's 2017 CCRA Evidence Report can be found [here](#), where Chapter 4 covers Infrastructure, and Chapter 5 covers People and the built environment.

<https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-climate-change-risk-assessment-2017/ccra-chapters/>

The CCC's recent [coastal report](#) includes further discussion of some of the points raised here, particularly on the value of long-term community engagement.

<https://www.theccc.org.uk/publication/managing-the-coast-in-a-changing-climate/>

The CCC's recent [housing report](#) includes some further discussion of the value of property level resilience measures.

<https://www.theccc.org.uk/wp-content/uploads/2019/02/UK-housing-Fit-for-the-future-CCC-2019.pdf>

The CCC's joint letter to the Defra Secretary of State can be found [here](#).

<https://www.theccc.org.uk/publication/letter-flood-and-coastal-resilience-standards/>

The CCC's letter to the Prime Minister on building a resilient recovery to the Covid-19 crisis can be found [here](#).

<https://www.theccc.org.uk/publication/letter-building-a-resilient-recovery-from-the-covid-19-crisis-to-prime-minister-boris-johnson/>