

Committee on Climate Change
7 Holbein Place
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Joan Walley MP
Chair, Environmental Audit Committee
House of Commons
London SW1A 0AA

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Dear Joan

Written evidence from the Adaptation Sub-Committee

On behalf of the Adaptation Sub-Committee (ASC), I am pleased to submit written evidence to inform your Committee's inquiry into climate change adaptation.

We very much welcome this inquiry, which we believe is timely for two reasons. Firstly, last winter's storms and floods illustrated the costs of a lack of resilience to extreme weather. Many thousands of people were forced to leave their homes and the country's transport and energy infrastructure suffered significant disruption. We can expect these types of extreme weather events to become increasingly frequent and severe with climate change, along with more gradual shifts in average temperature, patterns of rainfall and sea level rise. As such, there is a clear imperative for the Government to work with all sectors to actively consider how to increase the nation's resilience to a range of possible futures.

Secondly, your inquiry is timely as it comes near the end of the first cycle of the adaptation policy framework established by the Climate Change Act. This requires the Government to assess the risks and opportunities from climate change and produce a National Adaptation Programme (NAP) to address those risks every five years. The first NAP was published in July 2013.

Having such a programme in place is, of course, to be welcomed. However, the test will be whether the NAP is actually making a difference. Is it driving action to increase resilience, and is it ensuring that decisions being taken today are accounting for the possible pace and extent of future climate change, which remains uncertain? The ASC was created by the Act to answer these questions. We provide independent scrutiny of the progress being made by the NAP in addressing the risks, as well as realising the opportunities, from climate change. Our first statutory report to Parliament is due in summer 2015.

Since 2012 we have been developing an evidence base to inform our first statutory report. We have assessed the country's preparedness for the primary risks, and opportunities, identified by the Government's Climate Change Risk Assessment. In 2012 we considered flood risk to people and property, and the potential for water scarcity. In 2013 we explored

the ability of England's natural capital to continue to provide food, timber, clean water, carbon storage and coastal protection, as well as support wildlife, in a changing climate. Our most recent report, that you helped launch in July, considered the resilience of England's infrastructure, businesses, health care services and the emergency response system.

Our report in summer 2015 will combine the evidence from these previous reports to assess the effectiveness of the NAP in addressing climate vulnerabilities. We will also be requesting updates from the owners of the various actions listed in the NAP, including Government departments and agencies, local government, infrastructure providers and businesses, to help us assess the extent to which the NAP is being implemented.

The evidence gathered by your inquiry and the conclusions you reach will be extremely useful in informing our statutory assessment due next July. The combination of your inquiry and our report will provide a thorough assessment for the next Government to consider in how adaptation policy might be strengthened.

Our written evidence to inform your inquiry is enclosed with this letter. We will, of course, be more than happy to provide further evidence as the inquiry develops.

Yours ever,

PROFESSOR LORD KREBS Kt FRS
Chair, Adaptation Sub-Committee

Written evidence submitted by the Adaptation Sub-Committee of the Committee on Climate Change

Structure of submission

- Role of the Adaptation Sub Committee.
- The National Adaptation Programme.
- ASC's approach to assessing the NAP.
- Key findings and policy advice from ASC's previous reports.

The Adaptation Sub-Committee to the Committee on Climate Change

1. The Adaptation Sub-Committee was established by the 2008 Climate Change Act to provide independent, evidence-based advice to the UK Government and Parliament on preparing the UK for climate change.
2. Under the Act, the ASC has two main duties:
 - To advise the Secretary of State on the preparation of the Government's assessment of the risks and opportunities to the UK from climate change.
 - To report to Parliament every two years with an assessment of the progress made towards implementing the objectives, proposals and policies of the Government's National Adaptation Programme.
3. The Act put in place an adaptation policy cycle where the Government first assesses the risks and opportunities facing the UK from climate change, and then produces a policy programme to address those risks. The first UK Climate Change Risk Assessment (CCRA) was published in January 2012, and the first National Adaptation Programme in July 2013. This process will be repeated every five years, with the next CCRA due in 2017 and the second NAP in 2018.
4. Recognising that adaptation to climate change is a long-term process, the Act also requires regular, independent scrutiny of the Government's programme. The ASC is responsible for reporting to Parliament every two years with an assessment of progress under the NAP.

The National Adaptation Programme

5. The National Adaptation Programme set out for the first time the Government's objectives in preparing for climate change. It describes the range of actions that will be taken to address the risks whilst exploiting the opportunities identified in the CCRA. The NAP is primarily for England but also covers on a UK-wide basis non-devolved matters.
6. There are in total 31 separate objectives across the seven chapters that make up the NAP. An annex contains a detailed register with over 370 specific actions, together with owners and, in some cases, timings. The actions in the NAP are primarily for central Government departments and their agencies, although other bodies also made commitments including local government, infrastructure providers, research councils, industry bodies and non-governmental organisations.

ASC's approach to assessing the NAP

7. Our 2015 report will assess the progress made to date with the implementation of the NAP and the extent to which it is addressing the priority climate risks and opportunities identified in the CCRA. To do this, we have developed a set of indicators to provide evidence of the progress being made.
8. Since 2012 we have been collating evidence and identifying indicators we can use to assess preparedness for each of the priority CCRA risks and opportunities:
 - Our [2012 report](#) considered flood risk to people and property, and the potential risks to water availability for public water supply.
 - Our [2013 report](#) explored the ability of England's natural capital to continue to provide food, timber, clean water, carbon storage and coastal protection, as well as support wildlife, in a changing climate.
 - Our most recent report in [July 2014](#) considered the climate risks to health and wellbeing and the current state of resilience of England's emergency services, infrastructure and businesses.
9. We recently published a [call for evidence](#) on our draft indicators to gather feedback on their appropriateness and seek additional datasets that we could use. Later this year, we will also require those organisations responsible for the NAP actions to provide evidence of whether they are complete, what has been achieved to date, and any further steps planned.
10. We will interpret the trends from our indicators and the updates we receive on the NAP actions to evaluate the extent to which the NAP is addressing the risks identified by the CCRA. Based on this evaluation, we will make recommendations to Government on where further action may be necessary or justified.

Key findings on England's resilience from previous ASC reports

11. Our analysis since 2012 has identified a number of key issues for adaptation that we will bring together in our 2015 report (summarised in Table 1 below). For each of these issues, we advised Government on the steps that need to be taken to enhance resilience. However, the Government has not been formally required to respond to our advice to date, as our reports have not been statutory. As our 2015 report is required by law, the Government will have to respond.

Table 1: Headline findings and advice from ASC reports to date

CCRA risk	Relevant ASC report	Headline findings and advice
Increased flooding	<p>2012 (<i>Chapter 2</i>) – Adapting to flood risk</p> <p>2014 (<i>Chapter 2</i>) – Update on 2012 analysis</p> <p>2014 (<i>Chapter 3</i>) – Infrastructure</p> <p>2014 (<i>Chapter 6</i>) – Emergency planning</p>	<ul style="list-style-type: none"> Continuing development on the floodplain is increasing reliance on defences. Under-investment in these defences is storing up costs and risks for the future. Government and the insurance industry should take action to ensure the Flood Re scheme incentivises and supports additional flood mitigation by householders. Rules to limit the loss of front gardens to impermeable surfacing are not being enforced. Provisions to require sustainable drainage in new development should be introduced without further delay. The electricity distribution sector and Network Rail are monitoring weather-related disruption, assessing future climate risks, investing in resilience and reporting on progress. Similar approaches should be taken in other infrastructure sectors. Current national capability for flood rescue is not clear, nor what may be required in the future. The Government should review current capabilities and future requirements.
Reduced water availability	<p>2012 (<i>Chapter 3</i>) - Public water supply</p> <p>2013 (<i>Chapter 2</i>) – Agriculture & forestry</p> <p>2014 (<i>Chapter 4</i>) – Business</p>	<ul style="list-style-type: none"> The Government and water companies should take further steps to increase efficiency in water use, including through metering and pricing. Increased uptake of meters will be particularly important in locations with current and future risks of supply-demand deficits. Much of the cropland in England is located in areas where water resources are already over-stretched. If current

CCRA risk	Relevant ASC report	Headline findings and advice
		<p>trends continue, a gap could emerge between supply and demand for irrigation.</p> <ul style="list-style-type: none"> • Reform of the abstraction regime must ensure that the price of water reflects its scarcity in order to incentivise improved irrigation efficiency and investment in on-farm water storage. • Nearly half of water abstracted by paper manufacturing industry and over one-third by the chemicals sector is from water-stressed catchments. Reform of the abstraction regime should help manage demand and share available water between businesses and other users more efficiently.
Overheating	<p>2014 (Chapter 5) - Well-being and public health</p> <p>2014 (Chapter 6) – Emergency planning</p>	<ul style="list-style-type: none"> • Heatwaves are likely to contribute to more deaths in the future, due to climate change combined with an ageing population. • Further action is needed to adapt the existing building stock and design new buildings to counter the impacts of high temperatures without having to rely on air conditioning.
Changes in climate space	2013 (Chapter 4) – Wildlife	<ul style="list-style-type: none"> • The condition and extent of wildlife habitats could be improved through fuller implementation of existing regulations and providing stronger incentives for habitat protection and creation. This will give wildlife the best chance of surviving in the face of the uncertain impacts of climate change.
Degradation of ecosystems	<p>2013 (Chapter 4) – Upland peat</p> <p>2013 (Chapter 5) – Coastal habitats</p>	<ul style="list-style-type: none"> • A tripling of the area of upland peat under restoration could be delivered through enforcing existing regulations and putting a price on the benefits provided by restored peatlands. This would help secure carbon stores worth

CCRA risk	Relevant ASC report	Headline findings and advice
		<p>billions of pounds against the risk of loss due to climate change and damaging land use practices.</p> <ul style="list-style-type: none"> Increasing the rate of coastal realignment in undeveloped locations will help to reduce risks of coastal flooding and habitat loss due to sea level rise.
Reduced soil productivity	<i>2013 (Chapter 2) - Agriculture & forestry</i>	<ul style="list-style-type: none"> Current farming practices may be depleting the productive capacity of some of the country's richest soils. Advice to farmers should be strengthened to ensure that they are able to make the most of the latest research findings on preparing for climate change.
Business opportunities	<i>2014 (Chapter 4) - Business</i>	<ul style="list-style-type: none"> The UK appears to have a comparative advantage in some adaptation products and services, but recent sales growth by UK companies has been slower than that in other major producing countries. The Government should explore the reasons for this and consider if more can be done to promote exports of adaptation products.