

Committee on Climate Change
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Dear Aileen

Update on the work of the Adaptation Sub-Committee for Scotland

Congratulations on your appointment as the Minister for Environment, Climate Change and Land Reform. I look forward to working with you as the chair of the Adaptation Sub-Committee (ASC) of the Committee on Climate Change. The ASC has been commissioned to prepare an independent assessment of the Scottish Climate Change Adaptation Programme (SCCAP), and also an Evidence Report to inform the next UK Climate Change Risk Assessment (CCRA). I promised your predecessor that I would write with initial advice at these points.

Since July this year, the ASC secretariat has been reviewing the data available in Scotland to deliver both the SCCAP assessment and the CCRA Evidence Report. Your officials have provided valuable assistance, working constructively and facilitating our engagement with expert bodies such as SEPA and Scottish Natural Heritage. The ASC secretariat has also worked closely with ClimateXChange (CxC), who are developing a set of indicators to inform the SCCAP assessment. CxC are proving to be an invaluable resource, and it is to Scottish Ministers' credit that such an organisation has been created.

Our scoping exercise has identified that there is a wide range of data available regarding many of the climate risks we intend to consider, for example related to agriculture, forestry and fisheries, and the natural environment. However, there are notable gaps with respect to both flood risk and the potential for water scarcity in Scotland. The first CCRA, published in 2012, did not include a comprehensive assessment of these risks for Scotland due to similar data limitations. I am keen to address this in the CCRA Evidence Report, and also that our assessment of the SCCAP reflects the latest evidence in both areas.

Flooding

I am pleased to inform you that SEPA will be providing us with their detailed flood risk data in January 2015. This is excellent news, as it means we can provide a comprehensive assessment of how this risk may change for Scotland over the next few decades. I would like to place on record my gratitude to SEPA for making this data available to us at a time when they are busy meeting Scotland's obligations under the EU Floods Directive.

However, to conduct a full assessment we also need evidence to assess changes in exposure to flood damage in Scotland. The emerging CxC indicators do not appear to include key data, such as trends in development on the floodplain and the provision of flood defences. Furthermore, we have found limited evidence of the role that SEPA plays in advising on planning applications on flood risk grounds, and of how local authorities account for future flood risk in their local development plans.

We are working closely with CxC and SEPA to identify ways in which the flooding indicators can be improved so they provide the data we require. We have also proposed to your officials that we commission an evaluation of the extent to which local development plans and recent planning applications have accounted for future flood risk, expanding on analysis done by the James Hutton Institute. These tasks may involve additional cost, for your approval. If taken forward the data would allow our assessment of the SCCAP to include crucial evidence on the effectiveness of Scottish flood risk management policies.

Water availability

We have commissioned research for the CCRA to create projections of future water availability across the UK. So that Scotland can be included in this exercise we requested relevant datasets from SEPA in early October. We now have a licence for this data, but will need to have the relevant files by mid-January at the latest and have been working with your officials to try and ensure that the data is released in time. This project provides an opportunity to fill an important knowledge gap for Scotland at no additional cost. However, there would be cost implications if the data have to be incorporated later.

The accompanying annex provides more detail on the points above. I would be pleased to discuss these issues with you if you would find that helpful.



PROFESSOR LORD KREBS Kt FRS
Chairman, Adaptation Sub-Committee

Annex: additional flood risk and water availability evidence required by the Adaptation Sub-Committee

This annex presents further information on the additional evidence required to support the work of the Adaptation Sub-Committee (ASC) in Scotland. The cost implications of sourcing this additional evidence have been shared with Scottish Government officials.

Indicators of flood risk

The ASC has worked closely with ClimateXChange (CxX) to provide feedback and advice on the development of indicators for all the themes in the Scottish Climate Change Adaptation Programme. Whilst CxX has acted upon most of the ASC's suggestions, some key gaps remain. These primarily relate to assessing flood risk in Scotland.

Ideally, CxX should develop indicators for Scotland that can monitor trends regarding:

- The nature and scale of new development in flood risk areas.
- Progress in reducing the likelihood of flood damage amongst households and businesses in flood risk areas using flood defences.
- Households and businesses located in flood risk areas registered to receive flood warnings.

These indicators can be developed with the datasets currently held by SEPA, but would require some additional processing and specific software (GIS) skills. CxX does not currently have the capacity to do this in-house, but is exploring options with SEPA for how this analysis could be delivered at no additional cost. If necessary, the ASC could commission these indicators externally but this would have cost implications.

Analysis of development control in flood risk areas

In addition, the ASC wishes to commission research regarding the implementation of land-use planning policies. Decisions concerning the location and design of new development are relevant to a range of climate hazards, particularly flood risk. Land use planning decisions can reduce exposure by avoiding inappropriate development within the floodplain and other areas at risk of flooding or coastal erosion.

Where development is considered necessary, the land use planning system can reduce vulnerabilities by requiring new buildings to be designed in ways that minimise the consequences should flooding occur, and do not increase risk elsewhere.

Recent unpublished research by the James Hutton Institute's Centre of Expertise for Water (CREW) for SEPA¹ provides useful analysis on the implementation of the planning policy at the local level. The CREW study looks at local development management by analysing the outcome of the 528 Scotland-wide planning applications on which SEPA offered advice during the 2012 calendar year. It also looks at local development planning by analysing how SEPA advice is used by one sample authority (Perth and Kinross Council) when producing its Local Development Plan.

¹ Assessing the Effectiveness of SEPA's Flood Risk Advice in Planning Decisions (2014), unpublished.

The evidence base on land-use planning policy could be strengthened by building on this study. Additional research could cover the following:

- scrutinise the four applications that were granted against SEPA's maintained objection, to understand the circumstances and check whether Scottish Ministers were notified;
- understand if there are trends between years by developing a longer time series (the CREW study only looks at applications in 2012);
- extend the analysis to a greater number of Local Planning Authorities, particularly those most vulnerable to flooding (the CREW study only looks at the Perth & Kinross Local Development Plan);
- verify whether Local Planning Authorities have consulted SEPA for all the development proposals in areas which may be at risk of flooding, in line with regulatory guidelines.

We therefore propose a review of planning policies in local authority development plans, along with an assessment of local authority decisions in a sample of planning applications. The costs of this study have been shared with your officials.

Conducting this survey will provide a baseline against which the implementation of the new Scottish Planning Policy in relation to flooding can be evaluated. The new planning policy was published on 23 June 2014.

Data on water availability and abstraction

The ASC has commissioned HR Wallingford to model future projected water availability across the UK. This research is a key input to the next Climate Change Risk Assessment, to address an evidence gap highlighted by the previous CCRA, including for Scotland. Requests for the relevant datasets were sent to each of the devolved administrations in early October. The project team now have all of the necessary data for England, Northern Ireland and Wales, but are missing some key data files for Scotland relating to locations of rivers and catchment boundaries. We have been granted a licence for these datasets by the Centre for Ecology and Hydrology (CEH), but will need to have the data transferred by SEPA by mid-January at the latest. We are also waiting for authorisation to use abstraction location data that is held by SEPA and Scottish Water.

Whilst not ideal, it would be possible to incorporate Scottish data at a later stage of the project but this would require amending the contract with cost implications, again discussed with your officials.