

Scottish Government Consultation - Draft Scottish Climate Change Adaptation Programme

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Response to set questions

1 Views on the Overarching Framework

Question 1a: To what extent does the overarching framework of the Programme outlined in Figure 1 set an appropriate long term direction for climate change adaptation in Scotland?

Response:

Fully. Comments: The thematic approach is appropriate and is an important advance on the sectoral approach used for the Adaptation Framework. This should ensure better development of cross-sectoral responses within the themes which is particularly important to adapt to the indirect risks and opportunities from climate change.

Question 1b: Does the overarching framework address the current and predicted impacts to Scotland identified in the UK Climate Change Risk Assessment?

Response:

Mostly. Comments: The thematic framework is appropriate to address the risks/opportunities identified by the UK CCRA, although some of these (e.g. flood risk and water resources) also cross themes and may require further development of the framework to ensure joined-up responses. It is important to note that the UK CCRA was based upon a risk-based approach rather than to predict 'impacts'. Unfortunately, the draft Adaptation Programme for Scotland seems to inadvertently confuse risk and impacts by referring to addressing impacts (which are the final unavoided consequences for society, infrastructure or the natural environment). This tends to reinforce adaptation as a reactive process in response to impacts, rather than a proactive process to address risks and avoid undesirable impacts (as the UK CCRA was designed to support consistent with the UK Risk Register). This should be corrected for the final published version of the Programme.

2 Views on the Natural Environment Theme

Question 2a: Do objectives **N1**, **N2** and **N3** collectively set an appropriate long term direction to ensure that Scotland's natural environment is able to adapt to our changing climate?

Response:

Fully. Comments: The three main objectives provide a suitable concise summary for a long-term strategy. It is particularly encouraging to see the importance of adaptive capacity recognised as a bridge between improved knowledge of risks to the natural environment and

the sustainable enhancement of both biodiversity and the multiple societal benefits that we obtain from a healthy environment. This allows N1, N2 and N3 to be combined together within a long-term adaptive management framework.

Question 2b: To what extent will the policies and proposals listed under objective **N1** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Partially. Comments: The listing under N1 is mainly sectoral and does not take advantage of the thematic approach advocated in question 1 to advance system-wide knowledge of climate change processes. A more integrated approach to knowledge exchange is required to achieve the long-term objectives. This may be promoted through regular initiatives to synthesise, share and communicate knowledge on the changing environment, including more co-ordinated approaches to change monitoring. The role of the Met Office in providing access to meteorological and climate data should be included.

Question 2c: To what extent will the policies and proposals listed under objective **N2** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Mostly. Comments: Although these initiatives provide an initial basis for action, they can again be criticised for being more sectoral rather than thematic. Although designated sites will undoubtedly be very important for nature conservation, the UK CCRA highlighted that by themselves they will provide an inadequate adaptation response and greater emphasis needs to be given to complementary measures in the wider landscape (also highlighted by the Lawton report in England). The Land Use Strategy provides a particularly important mechanism to deliver cross-sectoral adaptation. For agriculture, schemes to promote further regional awareness and proactive responses to the changing climate in vulnerable locations (e.g. water availability; soil erosion) will be necessary. These schemes should promote greater awareness of the interdependencies with the natural environment and consider the current level of resilience and preparedness for extreme events.

Question 2d: To what extent will the policies and proposals listed under objective **N3** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Partially. Comments: The above comments on the sectoral form of the responses also apply here. If an ecosystem-based approach is to be applied to guide adaptation responses for the natural environment, then measures need to be applied within that systemic framework, and the key relationships between services, goods and benefits considered together rather than in isolation. There is still a high risk that the long-term objectives will not be achieved because responses in one sector have inadvertent negative consequences for another sector. In this context, the current proposals for CAP/SRDPA would seem to require further attention in order to adequately include measures to enhance adaptive capacity, such as for example schemes to improve resilience amongst farmers through co-operation on agri-environment schemes or water sharing arrangements.

Question 2e: Taken together, do the policies and proposals listed under objectives **N1**, **N2** and **N3** address the current and predicted impacts to the natural environment in Scotland identified in the UK Climate Change Risk Assessment?

Response:

Partially. Comments: The fact that there are currently undesirable impacts of climate change on the natural environment highlights that more action is required than the present suite of policies provide. As identified by the UK CCRA, the risks are highly likely to increase in the future as the magnitude of climate change increases, therefore the consequences will be significantly larger unless further measures are developed. This is particularly an issue for biodiversity because natural responses and resilience are often constrained by current policies and plans, or impacts from other sectors. More emphasis should be placed on flexible measures which can enhance both natural and societal adaptive capacity, including the recognition of multiple benefits from adaptation rather than just initial costs (requiring also that current tools for economic assessment are reworked to better incorporate long-term benefits). Examples include buffer zones, managed coastal realignment, floodplain/wetland restoration, natural flood management, restoration of soil organic matter and peatlands, ecological networks etc. Small-scale exemplars of such measures already exist and they provide a good platform for understanding change and designing effective response.

3 Views on the Infrastructure and Built Environment Theme

** Comments: No detailed comments, except to note the very important synergies with the Natural Environment Theme (e.g. on integrated catchment management).

Question 3a: Do objectives **B1**, **B2** and **B3** collectively set an appropriate long term direction to ensure that Scotland's buildings and infrastructure networks are able to adapt to our changing climate?

Response:

Comments: See above **

Question 3b: To what extent will the policies and proposals listed under objective **B1** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Comments: See above **

Question 3c: To what extent will the policies and proposals listed under objective **B2** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Comments: See above **

Question 3d: To what extent will the policies and proposals listed under objective **B3** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Comments: See above **

Question 3e: Taken together, do the policies and proposals listed under objectives **B1**, **B2** and **B3** address the current and predicted impacts to Scotland's buildings and infrastructure networks identified in the UK Climate Change Risk Assessment?

Response:

Comments: See above **

4 Views on the Society Theme

Question 4a: Do objectives **S1**, **S2** and **S3** collectively set an appropriate long term direction to ensure that our communities are able to adapt to our changing climate?

Response:

Poorly. Comments: S1 (understanding the effects) and S2 (increasing awareness) seem to be very similar. It would be more conducive to achieving the objective if S2 was also focussed on delivering necessary actions through increasing adaptive capacity and community-level preparedness. Increasing awareness alone is unlikely to be effective, as some of the existing actions in S2 recognise. S3 is particularly based upon emergency and health services which is obviously very important, but again support for community-level proactive responses seems to be neglected. The role of local authorities and local communities in adapting to change seems to be understated, particularly as we know effective adaptation actions are strongly related to local contexts.

Question 4b: To what extent will the policies and proposals listed under objective **S1** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Partially. Comments: See above.

Question 4c: To what extent will the policies and proposals listed under objective **S2** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Partially. Comments: See above.

Question 4d: To what extent will the policies and proposals listed under objective **S3** provide an appropriate focus for the lifetime of the Programme in order to progress towards the long-term objective?

Response:

Partially. Comments: See above.

Question 4e: Taken together, do the policies and proposals listed under objectives **S1**, **S2** and **S3** address the current and predicted impacts to Scottish society identified in the UK Climate Change Risk Assessment?

Response:

Partially. Comments: See above.

5 Views on the Role of Others in Delivering the Programme

Question 5a: What support will public bodies require in meeting their duties to help deliver the programme?

Response:

Comments: It is likely that public bodies will require considerable support, including communication of relevant information and skills training. Climate change is a complex process and combines with the considerable natural variability in weather that we already have in Scotland. This means that the risk of a reactive response against short-term events that undermines long-term strategic responses is likely unless adequate information and advice is available.

Question 5b: Are the arrangements for ensuring public engagement and for involving employers, trade unions and other stakeholders in meeting the programme objectives sufficient?

Response:

No. Comments: Although awareness of adaptation issues is increasing, further work is required to improve engagement, such as by highlighting the lessons learned from recent extreme events. Further emphasis could also be placed upon customising key messages based upon the audience rather than just providing general information

6 Views on the Environmental Report

Question 6a: To what extent does the environmental report set out an accurate description of the current environmental baseline?

Response:

Poorly. Please give details of relevant sources: This needs to be more clearly explained. The draft Adaptation Programme as presented here consists of existing policies and potential further proposals. The 'baseline' is presumably based upon the existing policies already in place but not the potential further proposals. The report highlights the fragmented approach to adaptation that would occur if sectoral proposals were not unified into a consistent programme of action, which would be accurate.

Question 6b: Do you agree with the predicted environmental effects of the draft adaptation programme, set out in the Environmental Report?

Response:

Yes. Comments: These provide an acceptable summary of some of the headline issues.

Question 6c: Do you agree with the recommendations set out in the Environmental Report?

Response:

No. Comments: The report states that 'most of the predicted climate change impacts on the natural environment will be addressed directly or indirectly through the draft Adaptation Programme'. This wording is not totally clear here and it is highly likely that there will still be significant impacts that are not currently addressed, particularly for medium or high scenarios of climate change, and for extreme events. This is particularly the case for indirect effects of climate change because the current policies are mainly sectoral. These issues do not just apply to soils although that is an important example.

Regarding the recommendation on water quality/quantity, issues should not only be considered in terms of low flows but also during high flows (again requiring a more systemic approach linking the Water Framework Directive and Floods Directive).

Regarding the longer-term impacts on landscapes and communities, these need to be considered in the shorter term also by recognising those elements that are particularly

valued, and by planning to ensure transitional rather than abrupt changes (consistent with the Ecosystem Approach).

Further work to future-proof current climate mitigation strategies (e.g. renewable energy, peatland restoration) is required to ensure that they are sustainable in a changing climate.

Further work is required to future-proof critical infrastructure, particularly against extreme events.

Question 6d: Do you agree with the proposals for monitoring of the environmental effects of the draft programme set out in the Environmental Report?

Response:

Yes. Comments: Current monitoring networks are a legacy of past initiatives or regulatory requirements and are not necessarily best designed to measure the effects of present and future climate change.

Question 6e: Are you aware of any further environmental information that will help to inform the environmental assessment findings?

Response:

Possibly. Please give details of relevant sources: This is difficult to substantiate as the SEA does not provide references to its sources of evidence.

Question 6f: Are you aware of other 'reasonable' alternatives to adaptation programme and its content that should be considered as part of the SEA process?

Response:

Yes. Please give details of relevant sources: It would have been useful if the SEA process had evaluated the potential benefits of a more cross-sectoral Adaptation Programme that took full advantage of its thematic structure to develop adaptation policy.

7 Additional Comments

Question 7a: Please provide any additional comments you would like to make on the draft Scottish Climate Change Adaptation Programme.

Comments: In the associated Annex it appears that not all the risks from the CCRA are matched to adaptation policies correctly. It would be very useful here if a statement could be provided on how the policy is aimed at addressing and reducing the ADAPTATION DEFICIT identified by the CCRA. This need for clarity is particularly the case where risks are included for Scotland that were not defined as a priority for the UK as a whole. Grouping several risks together and linked to a policy rather gives the impression that it is the general risk which is being addressed rather than the specific risk which may result in important issues being overlooked.

There also seems to be misinterpretation of some of the risks in terms of their exclusion from the Programme. A notable example here is BD10 which is stated as being a 'prediction' which does not make sense from a risk-based perspective and there is available evidence that is already occurring. It is unfortunate that this is excluded because it does provide a link to existing initiatives including translocation and the importance of riparian woodland for shading (water cooling) and other benefits.

Similarly, BD6 provides the most appropriate risk to link to N1 -13.