Defra Science Advisory Council (SAC)

Minutes of meeting, 10th February 2022

Actions arising

Action number	Action	Owner
February (22) 01	Workplan: The secretariat to ensure a land use system discussion is tabled at the March meeting.	SAC Secretariat
February (22) 02	Workplan: The SAC secretariat to add schedule a future discussion on Landscape Recovery objectives.	SAC Secretariat

1. Welcome and apologies

The Chair welcomed attendees and introduced the new SAC member Professor Felix Eigenbrod, and the new Scottish Government Observer Matthew Williams. There were no declarations of interest in relation to the agenda items. Apologies are recorded at Annex A.

2. Systems research

The discussion was an opportunity for Defra to present their thinking on a systems approach to support the development of insights and integrated analysis on complex, cross-cutting issues, emerging trends, and new innovations. The discussion would help to frame and identify issues that would be brought to the March 2022 SAC meeting. Defra provided an overview of past and present projects and internal published material.

In response, the SAC confirmed that systems thinking is useful for understanding what might be simplified with aggregation or the framing of externalities to help resource allocation. This could be done through estimating the impact of an interaction compared to the overall trend, if the fractional contribution is small (<10%) it could be omitted. The simplification of systems maps with too much information and/or complex systemic relationships can also be guided by examining spatial and temporal extents of some outputs, with effects lasting a short time over a small area considered less important and potentially removed. Also, if two aspects have a quick dependent relation relevant to the time of observation or decision making then they can be aggregated. The SAC could advise on different software solutions for systems mapping and simplification.

The SAC sought to understand how systems thinking operates across government, how it is informed by the process of policy evolution and changes, how it works when under time and political pressure and how this could limit the scope of analysis. The Chair of the Social Science Expert Group (SSEG), a subgroup of the SAC, confirmed that SSEG would be interested in meeting the systems team for further discussion on aspects of social science.

The SAC asked about the methodologies that might have influenced the Defra team and raised potential bias in analysis. Potential bias could be mitigated if all stakeholders were identified at the start and provided with an opportunity to influence mapped connections. The process would need to be iterative and mapping revised should new stakeholders be identified.

The SAC would like to feed into the systems mapping on land use change. The ability to model the effects of synergies and trade-offs between different land use options under net zero would be very useful. Additionally, the SAC would like to know more about how the systems thinking aligns to the environmental land management schemes (ELMS) landscape recovery process. The SAC also recommended that land use change in England and Wales could risk moving activities abroad that effectively offshores carbon emissions.

Looking forward, Defra confirmed its collaboration with the Department for Business, Energy & Industrial Strategy (BEIS) to develop a Net Zero System Tool which could be considered for a future SAC discussion. The land use model would support discussion of systems thinking on current issues; looking at how it works, and synergies particularly given the cross-government collaboration and potential differences in current goals.

ACTION February (22) 01: The secretariat to ensure a land use system discussion is tabled at the March meeting.

3. ELMS - Landscape Recovery pilot first round evaluation panel

This was an opportunity for the SAC to be updated on the Landscape Recovery Scheme (first round) following its launch on 1st of February 2022. The discussion sought the SAC's thoughts on the learning plans for Landscape Recovery and priority areas (criteria) to test for future round adaptions.

In relation to the assessment panels, the SAC recommended that cross over (between parallel assessment panels) would provide benefits, for example, sharing of perspectives which would help inform decisions and develop reviewer

experience/knowledge from the outset. Although, the SAC noted it would be important to consider conflicts of interest.

In terms of scoring the assessment criteria the SAC discussed the benefits of not adopting a numerical scoring system owing to the potential difficulty in aggregating scores between the twelve unrelated categories. Instead, a qualitative system could use judgement and deliberation to discuss the merits and avoid the risk of staking project criteria to achieve higher scores. The scoring criteria might be aggregated and simplified to allow a developed approach to assessor deliberation, allowing for more qualitative assessment while maintaining a quantitative ranking process. It would be important to maintain an audit trail on how decisions were informed. Furthermore, to encourage transparent scoring, the first round of scoring could be undertaken individually (by each assessor) and subsequently, a second round would enable a comparison of scores prior to assigning final values. Further, in relation to evaluation – to what extent is the criteria based on success rather than learning – there needs to be a balanced approach between criteria.

The SAC noted how the Landscape Recovery criteria could include a spatial element, potentially utilising an interactive web browser geographical information system (GIS), where applicants could map on the locations of their interventions. These interventions could then be correlated to spatial datasets to quickly apply weighted scores based on spatial interaction with data sets such as agricultural land classification. Defra is exploring an interactive web browser GIS internally.

In terms of future SAC interaction, it was suggested that the SAC could provide thinking on environmental and social objectives for future rounds. It would be important for the SAC to reflect early to ensure their advice informs at the initial development stage.

ACTION February (22) 02: The SAC secretariat to add schedule a future discussion on Landscape Recovery objectives

5. Work plan and any other business

The SAC regularly reviews the work plan to ensure it remains focussed and relevant to Defra's business. The SAC was encouraged to submit any thoughts to the secretariat. No other business was raised.

Science Advisory Council

Annex A: Attendees and apologies

SAC Members

Louise Heathwaite (Chair)	Rosie Hails
Richard Bardgett	Nick Hanley
Peter Cox	Rowland Kao
Lin Field	Rosie Hails
Felix Eigenbrod	Susan Owens

Defra's Chief Scientific Adviser's Office
SAC Secretariat

Devolved administration observers
Caryl Williams – Welsh Government Observer
Mattew Williams – Scottish Observer
Alistair Carson – Northern Ireland Observer

Defra officials in relation to specific agenda discussion
Systems research
Head of Systems, Innovation and Futures; Chief Scientific Advisor's Office (CSAO)
Team Leader, EU Exit Priority Evidence Funding; CSAO

Environmental land management schemes (ELMS)
Deputy Director for Food and Future Farming Evidence
Head of Science, Monitoring & Evaluation, ELM Team; Future Farming and
Countryside Programme
Head of Natural Science Delivery and Monitoring, ELM Team
Policy Team Leader, Landscape Recovery; ELM Team
Head of Social Science, Strategic Science and Modelling team; ELM Team
Principle Natural Scientist for Local Nature Recovery; ELM Team
Defra official; ELM Team

Apologies
Gideon Henderson – Chief Scientific Adviser
Rob Bradburne – Deputy Chief Scientific Adviser
Lisa Collins – SAC member