Response to the Office of Science and Technology Consultation on Guidelines on Scientific Analysis in Policy Making

British Ecological Society
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Introduction

1. The British Ecological Society (BES) is the learned society for the science of ecology in the UK. The BES's aim is to promote the science of ecology worldwide. The BES represents ecological scientists in the UK, with a membership of 4,000 people worldwide.

2. Views from the BES's members were sought in preparing this submission. The BES maintains a membership expertise database and all those who ticked 'UK' and 'Science into Policy' were emailed for their views. The BES Public and Policy Committee prepared the final submission. This submission complements the submission made by the Biosciences Federation, of which the BES is a member.

3. The BES welcomes the Office of Science and Technology's consultation on the Chief Science Adviser's Guidelines on Scientific Analysis in Policy Making and hope that revisions of the Guidelines help Government departments use science more effectively.

Consultation Question 1 – Departments' use of types of evidence

4. Peer reviewed science is the best way to ensure quality in the process of disseminating scientific knowledge and therefore should be best practice.

5. However, peer reviewed journal articles are not the only way for publishing scientific evidence. Government departments and agencies, as well as many other organizations publish the results of the research they fund or carry out as reports. Although in many cases the quality of the science is reliable, the results are not published in peer-reviewed journals. Research published in this way should have appropriate levels of quality-assurance built into the project and external review prior to publication. Evidence published in sources outside of peer reviewed journals, should explicitly state the quality assurance and/or review processes that were undertaken and results should be analyzed with regards to this. Results should be presented subsequently for peer-review publication where appropriate.

6. There needs to be a clear distinction between the direct use of a piece of peer reviewed science and scientific assessments of a range of scientific results. There are many scientific issues with high levels of uncertainty, so it is important that assessments are clear about the level of uncertainty based upon current scientific evidence. Systematic reviews are a rigorous tool for assessing the state of the

evidence base and its findings. Scientific assessments should be peer reviewed by experts in the field.

7. The OST, in collaboration with Government departments and the scientific community, should consider the best way in which a transparent and publicly accessible peer review process can be used by Government departments for their internally funded research and assessments. It is important that stakeholders and the public are able to weigh the strength of the evidence underpinning policy and its related decisions.

8. Government departments should treat breaking news that has not been peer reviewed very carefully. If the 'breaking news' has been peer reviewed than acknowledge that it challenges conventional scientific evidence. The 'breaking news' will have to be assessed to identify whether the news is genuinely of general application or a special case. The new scientific evidence will need to also be assessed within the context of existing ideas, to point out possible weaknesses and strengths of the study.

9. Scientists and others responsible for the 'news' should also be responsible about how they present their research to the media. Scientists are often encouraged to go for the dramatic sound-bite and press release, but this may be counter-productive in the long run if the news turns out to be less than 'ground breaking' on further examination. Policy makers may feel under pressure to respond to 'breaking news' before the scientific community has had time to assess and respond to the new research in the headlines. It is therefore appropriate that there is an open dialogue between the scientific community and policy makers when 'breaking news' hits. Government scientific advisory committees or learned societies could act as good sources of advice for Government during these times.

10. Scientists and policymakers need to have open discussions about the implications of radical evidential change. It is better to be cautious, and insist on peer review and follow up reviews, then to over react and get it wrong. Scientists and policymakers need to be open about new ideas and begin an initial follow through of implications. This should involve experts in the field to discuss how to phase-out of the previous advice and implications if there is a radical change in the state of the evidence.

11. The OST or individual departments might find it worthwhile establishing a mechanism for fast tracking a high quality peer review in issues of great importance only. There is a risk that more findings may still come out between the initial identification of an issue and the time when fast track review/replication is available.

Consultation Question 2 – Evaluating departments' use of guidelines

12. Guidelines should provide confidence to those involved in decision-making and not be an obstacle. A clear 'audit trail' should be in place for when someone asks why a Government department recommends an action or a policy based upon scientific evidence. They should be able to show how they selected the evidence and how they evaluated it. This will be important for both internal and external assessments. The Freedom of Information Act should allow people outside of Whitehall and Westminster to investigate the decisions of departments.

13. The OST could use the Science and Innovation Strategy Assessments to review departments' implementation of the Guidelines. One measure that the OST might investigate is departments' relationships with relevant learned societies, research councils and other sources of external scientific advice. The Guidelines rightly state that learned societies should not be underestimated as a source of expertise especially those whose authority is constitutionally enshrined by Royal Charter or, as in the case of the BES, formally affiliated to a Royal Chartered scientific body. Encouraging departments to develop concordats with learned societies relevant to their areas of work might help them to utilize their expertise more fully.

14. Sampling policy documents could be useful. However, sampling policy documents/publications are an outcome – they do not normally explain the reasons behind a decision. Scientific evidence needs to be there to help Ministers make a decision, but the final decision will often be political. Therefore, the 'audit trail' approach mentioned above might be a more useful than sampling policy documents. Whichever way the OST reviews Government use of science, analysing past cases that went well and not so well should be helpful to identify and support best practice and future revisions of the Guidelines.

Openness

15. The BES is pleased for this submission to be made publicly available. The submission will be published on the BES website in due course.

Further Information

16. Should the Office of Science and Technology have any questions regarding this response then please contact:

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