

Response to a Consultation on the Triennial Review of the Research Councils

The British Ecological Society

“advancing ecology and making it count”

February 2013

About the British Ecological Society

The British Ecological Society (BES) is the oldest learned ecological society in the world: we are celebrating our centenary in 2013. Our members, numbering close to 4,000, are drawn from the full spectrum of ecological research, reflected in the Society’s specialist groups on a variety of ecological research streams including forest, freshwater, tropical, agricultural, aquatic and conservation ecology.

For further information about the Society’s work, visit our website, at <http://www.britishecologicalsociety.org>.

The BES is happy for our response to be made available publicly. If you have any questions about the content of this response or about the work of the BES please contact the Policy Team (Policy@BritishEcologicalSociety.org).

Response to Questions

Q3: How closely are and should the Research Council research objectives be aligned with those of Government?

Individual governments can change every five years and political objectives are often short-term, compared with the longer term vision necessary to ensure that the UK remains at the cutting edge of excellent research. It would be undesirable for the objectives of the Research Councils to be driven by short-term government priorities (as per the Haldane Principle, under which decisions regarding what to spend research funds on should be made by researchers rather than politicians), but neither can the Research Councils be divorced completely from strategic issues that Government is addressing: there must be a balance between the two.

Research Council research priorities should continue to be a mix of long-term scientific objectives, focused on grand challenges such as climate change, energy and environmental sustainability, with other objectives for applied research more closely aligned with Government priorities. Aligned objectives are important to ensure the relevance and responsiveness of the Research Councils to more immediate scientific questions, such as those which have arisen recently with respect to tree health and Ash Dieback (*Chalara fraxinea*).

The Research Councils must also be prepared to make arguments to Government to defend both blue-skies and applied research which scientists perceive as valuable but which may not be favoured by politicians at the time. The research outputs related to these longer-term priorities may not

deliver an economic benefit immediately but in the longer-term have important benefits for the economy and for society.

Q4: How effective are the Research Councils in delivering their objectives?

On balance, the members of the British Ecological Society responding to this question consider that the Research Councils are effective in delivering their objectives and maintaining a high quality research base within the UK. One commented that 'as a researcher funded by NERC who is also in the NERC peer review college, I would consider NERC to be highly effective in delivering [its] objectives. It remains a prestigious opportunity for researchers to be funded by NERC or the other Research Councils and this is because of the high quality of research delivered by these organisations'.

Both NERC and the BBSRC have delivered work that has responded to policy needs, for example the delivery of the National Ecosystem Assessment and follow-up through the Living with Environmental Change initiative.

However, improvements are still required. NERC, for example, has been criticised for not being sufficiently light on its feet when needs emerge for co-ordinated research across funders. NERC is considered by some as having been extremely slow in delivering strategically important research because of onerous internal decision-making processes. Onerous application processes may also place burdens on researchers seeking funding and, despite changes that have been made, members of the BES suggest that there are still inefficiencies in the way that responsive mode funding is delivered.

Disciplinary divisions were also highlighted as compromising the delivery of individual Research Councils' objectives. For example, the aims of the BBSRC strategic priority 'soil science and agri-systems approaches' and NERC's priority research area on 'management of land and natural resources' clearly overlap. This is an illogical separation of components of the major research theme of 'sustainable agriculture'. Further comments on disciplinary divisions are explored in our answer to question five.

Q5: Are the current disciplinary divisions appropriate to allow the Research Councils to foster excellent innovation in the research base?

The current disciplinary divisions are appropriate for many of the core disciplines but fail in a number of areas such as agriculture, health, food, energy and conservation. The divisions fail to support multi, inter and trans-disciplinary science adequately. In particular, the divisions are unhelpful in areas where a systems approach is needed, as in the case of water, resource use and flooding.

Examples of other topics that fall between the Research Councils due to current disciplinary divisions include: pollinators (affecting wildlife and agriculture, involving disease and pollution – NERC and BBSRC); valuing and measuring natural capital and ecosystem services (NERC, ESRC, BBSRC); and the economic valuation of land-use change (NERC, ESRC, BBSRC).

Disciplinary divisions between the NERC, BBSRC, ESRC and EPSRC result in research into food security, in the context of land-use and novel agricultural approaches, falling between the cracks. As noted above, there is a need for the overlapping objectives of the BBSRC and NERC (along with the other relevant Research Councils) to be integrated to support research on agri-ecosystems and multi-functional land-use.

Researchers do not well understand how to address science questions that currently fall between the Research Councils. The mechanisms for writing cross-Council proposals, whilst known to exist, are far from obvious.

However, the answer to the issues raised above is unlikely to lie in reorganisation. Rather it is in developing joint initiatives or programmes that can pick up areas that are neglected or that are currently falling between disciplines. Cross-Research Council programmes should be developed as a priority. The Rural Economy and Land Use (RELU) programme provides a useful model that could be followed, with funding devolved to and dispensed by strategically important programmes, such as this, that span funders.

Q7: What is your view on whether seven Research Councils is the right number?

Reorganisation from seven Research Councils to fewer would undoubtedly take a great deal of time and cause a great deal of disruption, whilst savings in money and efficiency are uncertain. Engagement with a single Research Council, encompassing the remit of the current seven, could be problematic for external bodies, including learned societies such as the BES, unless the decision-making structures were transparent and not overly- bureaucratic.

As we note in our answer to question five, as research becomes ever more multi-disciplinary and focused on 'grand challenge' areas, the Research Councils must develop continually cross-Research Council programmes to bring different communities together.

Q10: Where do the Research Councils need to work in partnership and how good are they at doing this?

The Research Councils need to work together with one another in the areas identified above as being constrained by disciplinary divisions. These cover significant national and international challenges facing society and areas fundamental to economic success where humans and the environment interact: food, energy, water and environmental change. Cross Research Council initiatives do exist in these areas, but the ideal model for cross Research Council and cross Government working, particularly with the private and third sectors, has yet to be found.

At present it is very difficult for the Research Councils to create common pots of money to address specific issues such as tree health or insect pollinators, meaning that it is challenging for scientists to conduct systems-level research. When interdisciplinary communities are created, such as RELU, researchers tend to resort to their disciplines to secure funding following the end of these initiatives. Long-term interdisciplinary partnerships are therefore not created. Researchers may be reluctant to put forward proposals for interdisciplinary projects under responsive mode funding as they feel that these are treated unsympathetically by the systems currently in place at the Research Councils.

The Research Councils need to work in partnership too with the end-users of research. With respect to conservation, for example, practitioners and researchers are often described as 'speaking different languages': there is a need to bridge the gulf between these two communities and foster knowledge exchange. The efficacy of this varies between the Research Councils at present. The onus cannot be solely on the end-users to seek out the research and translate this; this is a joint responsibility with the Research Councils and researchers themselves.

Q14: How well do you think the funding mechanisms are understood by applicants, existing and new?

On balance, the members of the BES responding to this question consider funding mechanisms to be generally well understood by applicants. However researchers do struggle to understand how cross-Research Council programmes operate.

One member commented that the forms used to apply for funding could be much better designed to improve clarity for reviewers, panel members and for applicants. The process of applying for funding can be burdensome. In particular, consortium grants are very hard for reviewers to judge. At present information on costings for the project and the details of team members need to be assembled from a number of component applications, making it difficult for reviewers to assess the overall proposal.

Q20: How easy is it for UK businesses, individuals and policy-makers to access the research base?

It is not easy for businesses, individuals and policy-makers to access the research base in the UK. Many end-users will lack adequate time to make the effort to find relevant scientific research. Businesses, policy-makers and the public will also struggle to make sense of the ever-growing scientific literature without this being translated into an accessible form.

Yet it is also challenging for researchers to access business. Business needs to better understand how research proceeds and should also be open to become more involved in research. If businesses were prepared to co-fund research to a greater extent there may be greater opportunities for them to benefit from the outputs. Targeted 'clubs' that bring together researchers and users in particular areas could be beneficial to building mutual understanding and fostering partnerships. Initiatives are taking place in some Research Councils that should provide useful models for others to follow. For example, the UK Water Research and Innovation Partnership is opening up dialogue with interested and innovative companies.

However, as we noted in our response to question 10, knowledge exchange is patchy between Research Councils and could be improved to ensure better translation of research outputs to different communities. Increased spending on knowledge exchange may help, but researchers should also be encouraged to make use of the routes that currently exist for communicating with lay audiences.

Researchers tend to assume that publishing in a respected peer-reviewed academic journal, such as the BES's own Journal of Applied Ecology, is sufficient and that those who need to make use of these results will access the information here. This is how research quality is judged, yet very often these publications have a low readership amongst practitioners, policy-makers and other users of research. Researchers do not gain the same academic acclaim from publishing in, for example, British Wildlife, Farmers Weekly and Country Living, which may actually reach a far greater audience and have greater impact amongst users.

Greater use should be made of technologies such as the internet and social media to improve public engagement with research. The public, who through taxes have paid for data gathering, should have access to databases, such as meteorological records, through the web. There are some instances of good practice, such as the River Flow Archive provided by NERC. Providing access is not enough however. The Research Councils must support researchers to translate the outputs of their research into clear and accessible formats, whilst assisting researchers and end-users with opportunities to meet one another, exchanging ideas and information.