

# Science and Technology Select Committee Consultation

## ● Science and Research budget allocations: Response from the Royal Geographical Society with IBG

1. The Royal Geographical Society (with The Institute of British Geographers) welcomes this opportunity to comment on the inquiry into the science and research budget allocations for 2011/12 to 2014/15 and Spending Review 2010.

2. The Royal Geographical Society (with The Institute of British Geographers) is the learned society and professional body for geography. Formed in 1830, our Royal Charter is for 'the advancement of geographical science'. The Society is a charity that seeks to develop, promote and support the discipline of geography and its practitioners in the areas of research and higher education, teaching and fieldwork, policy and wider public engagement. The Society has more than 15,000 Fellows and members, of whom a substantial number are academics and other researchers whose work we support through a range of activities. These include holding the largest geographical research conference in Europe, publishing three of the leading international peer-reviewed geography journals in the world (including Transactions of the Institute of British Geographers which is often ranked first), co-ordinating twenty seven specialist research groups, and providing small grants for researchers at all career stages. We work very closely with all Higher Education (HE) geography departments in the UK.

3. Within BIS's spending allocation<sup>1</sup>, as highlighted in evidence given to the committee from the Science Minister, David Willetts MP, "the learned societies and the academies [are] getting £100 million"<sup>2</sup>. The Royal Geographical Society (with IBG), in common with most of the single subject-based learned societies, receives no Government funding from this budget, and no other core Government funding from elsewhere, to support any of our activities. Any changes in levels of funding within these budgets therefore have no direct impact or influence on the Society.

4. This Society makes four main points in this submission:

- 4.1. We strongly endorse the dual support approach to funding, and the principle of keeping the balance between the Research Council and the Higher Education Council for England (HEFCE)'s Quality-related Research (QR) streams broadly as they are.
- 4.2. Research funding should not focus overly on STEM (Science Technology Engineering and Mathematics) subjects. Other disciplines across the social sciences, arts and humanities make significant contributions to both pure and applied research and these must not be marginalized. In terms of geography, it is time that HEFCE's formal recognition in 2010 of its (50%) part-STEM status for teaching funding is followed with the appropriate allocation of 50% ring fenced QR funds at the STEM level; the remaining 50% being at social science QR funding levels.
- 4.3. The important need to fund both science and social science is well illustrated by geography, which is special in bridging the natural sciences, social sciences and the humanities and unique in being the spatial discipline, illuminating differences 'on the ground' at national, regional, local and community-based scales. Many of the nation's and the world's challenges, such as climate change, natural

<sup>1</sup> Department for Business Innovation and Skills (BIS) 2010 The allocation of science and research funding 2011/12 to 2014/15: Investing in world-class science and research pp45-54

<sup>2</sup> House of Commons Science and Technology Committee (2010) Spending Review 2010 - uncorrected evidence - 24 November 2010 HC 618-i Evidence given by Rt Hon David Willetts MP, Minister of State for Universities and Science. 5/21 lines 12-13

resource security and migration, demand an integrated understanding of the scientific processes, of human and behavioral (social science) perspectives, and of spatial differences and interconnections. Geographical research lies at the heart of such work and is important therefore in terms of its contribution to government and Research Council priorities, as well as to the UK economy and business.

- 4.4. Research funding should not lose sight of the importance of funding high quality 'blue skies thinking' across all research areas, including STEM and the social sciences. There must be a balance between research tailored to assist with government policy priorities and the need for blue skies research.

### **The approach and balance taken to funding research**

5. We strongly endorse the current balance of research funding, with QR allocations from HEFCE providing a baseline funding across qualifying institutions on the basis of RAE assessments, and funding on a peer-reviewed proposal basis through the Research Councils. These two streams serve two different, and important, purposes and each does it well. We are pleased to note in the Minister's statement to the committee, the commitment to "*having these separate two flows of money, one for university research via the RAE, the REF, and a separate one via the Research Councils*"<sup>3</sup>. We see no benefits at all in placing all funding with the Research Councils.
6. We welcome the government's commitment to, and clarification of, the *Haldane Principle* that '*decisions on individual research proposals are best taken by researchers themselves through peer review*'.<sup>4</sup>

### **Looking beyond STEM funding**

7. In linking research more directly to benefit the nation's priorities – whether economically, environmentally, socially, or in terms of individual quality of life – the sciences, social sciences and the humanities all have important and complementary roles to play. It is essential that this pluralism is properly recognized and funded by government. The needs extend far beyond, for example, a simplistic view of public or policy engagement with science; it reaches to the core of understanding, for example, peoples' motivations, behaviours, values and identities, their engagement with the processes of governance, the work that they do, where and how they live, and the communities, neighbourhoods and places that people are affected by, and engage with and shape.
8. With regard to Geography specifically, it has long been regarded as a part-laboratory subject, with a part-STEM status accepted by HEFCE on the grounds that almost all research-active Departments of Geography maintain scientific research laboratories, often highly sophisticated, with technician support in order to deliver departmental research agendas and meet the needs of both research and teaching staff in physical geography. This status is reflected too in the research papers submitted to the past RAE exercise and in the research funding, and infrastructure grants, received by geographers.
9. These essential science infrastructure costs are further augmented by field equipment, costs of undertaking research 'in the field', as well as by Geographical Information Systems (GIS) and Remote Sensing computer-based needs. These are especially important elements of both research and teaching at a time when

<sup>3</sup> Department for Business Innovation and Skills (BIS) 2010 The allocation of science and research funding 2011/12 to 2014/15: Investing in world-class science and research pp13

<sup>4</sup> House of Commons Science and Technology Committee (2010) Spending Review 2010 - uncorrected evidence - 24 November 2010 HC 618-i *Evidence given by Rt Hon David Willetts MP, Minister of State for Universities and Science.* 6/21 lines 44-46

environmental issues of concern to physical geographers (for example, climate change, fluvial processes and flooding, sustainable development) are some of the most pressing ones facing society and government. Indeed, these priorities are recognised within BIS's Spending Review 2010 document on research funding allocations, as being among those most important for research funding priorities<sup>5</sup>.

10. Early in 2010 the Society made the case successfully to the Higher Education Funding Council for England (HEFCE) for geography to be designated as part-STEM in the context of HEFCE teaching funding. While teaching funding levels have risen slightly to reflect this, HEFCE is aware that the 50% ring-fenced allocation, that should rightly follow the designation, has not been met by a long way. They have committed to reviewing this in 2014.
11. The Society re-affirms that, as the Research Councils and HEFCE acknowledge, the part-STEM 50% of geography needs to be fully funded at STEM levels within future streams of QR funding, as well as in teaching allocations.


### **The important role of geographical research**

12. There are many different ways in which research by geographers has economic and/or policy impact through its applications in the private and public sectors, and how geographical research can enhance quality of life. In doing so, geographical research contributes to the priorities set out by both government and Research Councils. Given that economic, social and environmental processes and their effects will continue to be differentiated spatially across the UK and the world, geography will undoubtedly continue to be essential to policy, practice, business and to the public. We cannot plan and manage future challenges without properly-funded geographical research.
13. The relevance and measured impact of geographical research in areas relevant to current policy and practice is exemplified by a selection of case studies developed by the Society (see [www.rgs.org/makingthecase](http://www.rgs.org/makingthecase)). The case studies illuminate some of the ways in which geography contributes to policy, building on its disciplinary character (section 4.3). For example, three of the featured case studies relate closely to the areas of research outlined by BIS<sup>5</sup> as priorities: the first on *Maintaining the capability to respond to emergencies, including flooding*; and the latter two linked to one of the cross Research Council priority areas *Lifelong health and well-being*. These include:
  - More cost-efficient approaches to flood management: research by Professors Colin Thorne, Nottingham University, and Edmund Penning-Rowsell, Middlesex University.
  - Helping the public and private sectors get the most from the census: research by Professor David Martin, University of Southampton.
  - Improving urban environments and well-being by developing ways to revitalise degraded rivers: research by Professors Angela Gurnell, Queen Mary University of London, and Geoff Petts, University of Westminster.

Other exemplar 'impact' case studies include the development and sale of new technologies for predicting ice on roads; better understanding of internal migration in the UK; and the creation of new methods of spatial analysis to help local authorities optimise the provision of services and to identify areas of greatest financial need for assistance.

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<sup>5</sup> Department for Business Innovation and Skills (BIS) 2010 The allocation of science and research funding 2011/12 to 2014/15: Investing in world-class science and research pp5-9



The importance of geographical perspectives and research linked to other priority areas, for example *Living with Environmental Change and Energy; and Global food security* were recently illustrated during a policy seminar “*A perfect storm ahead: Geographical perspectives on food, water and energy security to 2030*”, held by the Royal Geographical Society (with IBG) in February 2011. Geographers contributed research evidence from major research programmes on energy, water and food security. The Secretary of State for Energy and Climate Change, Rt Hon Chris Huhne MP, and the Director of the Living with Environmental Change programme both spoke at the event<sup>6</sup>.

### **Funding ‘blue skies thinking’**

14. The impact of all research cannot be foreseen, which is why research funding should not lose sight of the importance of funding high quality ‘curiosity-driven research’ across all research areas, including STEM and the social sciences. One often-quoted example was the critically important role of measurements in Antarctica undertaken by the British Antarctic Survey (BAS) over decades, which led to the documentation of the ozone hole.
15. It is worth noting that in almost all of the geographical research impact case studies drawn together by the Society, the research topic was pursued independently by the scholar and funded as ‘curiosity-driven’ research.

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<sup>6</sup>See [www.rgs.org/perfectstorm](http://www.rgs.org/perfectstorm) for further details