BIOSCIENCES FEDERATION

Putting science and engineering at the heart of government policy

A response to Innovation, Universities, Science and Skills Committee

January 2009

Introduction

The Biosciences Federation (BSF) is a single authority representing the UK's biological expertise, providing independent opinion to inform public policy and promoting the advancement of the biosciences. The Federation was established in 2002, and is actively working to influence policy and strategy in biology-based research – including funding and the interface with other disciplines - and in school and university teaching. It is also concerned about the translation of research into benefits for society, and about the impact of legislation and regulations on the ability of those working in teaching and research to deliver effectively. The Federation brings together the strengths of 45 member organisations (plus nine associate members), including the Institute of Biology which represents 39 additional affiliated societies (see Appendix). This represents a cumulative membership of over 65,000 individuals, covering the full spectrum of biosciences from physiology and neuroscience, biochemistry and microbiology, to ecology, taxonomy and environmental science. The Biosciences Federation is a registered charity (no. 1103894).

1. Whether the Cabinet Sub-Committee on Science and Innovation and the Council for Science and Technology put science and engineering at the heart of policy-making and whether there should be a Department for Science

i. The Biosciences Federation welcomes the creation of the Cabinet Sub-Committee on Science and Innovation, which was long overdue, and urges the Cabinet Office to ensure that the Secretary of State for Culture, Media and Sport is represented on this Committee in the future. It is too early to say how effective the Committee will be in ensuring integration across government departments.

ii. The Council for Science and Technology has produced some excellent reports in recent years. However, the mechanisms used to identify both future studies and the individuals/organisations from whom evidence should be gathered, remain unclear. The website needs a radical overhaul to allow sufficient engagement with stakeholders.

iii. The Biosciences Federation believes that creating a Department of Science is currently unnecessary and risks orphaning science, rather than integrating it across government departments. Focus should be given to ensuring that science is fully embedded in relevant departments, and that these departments have the capacity within them to put science at the heart of policy-making.

2. How Government formulates science and engineering policy (strengths and weaknesses of the current system)

iv. The installation of departmental Chief Scientific Advisers has seen a major improvement in the quality of scientific input into the decision-making process. However, we urge the Chief Scientific Adviser's Committee (CSAC) to be more transparent in its workings and outputs. We also strongly support continued detailed evaluation of departmental policy procedures under the Government Office for Science's Science Review Programme but wish to see more visible outcomes.

v. Good policy making depends on a strong scientific culture within Departments. Departments must ensure that they employ well-qualified scientific staff, and that these staff maintain and extend their competencies and their awareness of current scientific issues. We are not confident that any departments are fully developing capacity in this area. Anecdotal evidence suggests that examinations for entrance into the Civil Service Fast-Track Scheme put more value on economic knowledge and drafting ability than scientific literacy.

vi. The Biosciences Federation warmly welcomed the 2007 update to the Code of Practice for Scientific Advisory Committees, particularly the recommendation that Scientific Advisory Committees should aim to hold regular meetings in open session. The Food Standards Agency has given an exemplary lead in opening its proceedings to scrutiny.

vii. In its response to the former Science & Technology Select Committee's report on *'Scientific Advice, Risk and Evidence Based Policy Making'*, the Government claimed to directly seek advice from Learned Societies. We see little evidence of this which suggests that expertise is not drawn from a sufficiently wide 'pool'.

viii. The Biosciences Federation is concerned about skills shortages in specialist scientific areas and research funding for basic research. Government must strengthen its links with sector skills organisations such as SEMTA and recognise that much good and fundamental research does not drive economic growth in the immediate term. A long-term view is needed to develop the evidence and capacity that is vital to the formulation of sound policy-making.

4. The case for a regional science policy (versus national science policy) and whether the Haldane principle needs updating

ix. The Haldane principle remains sound and does not need updating, but rather adhering to! The principle still allows Government to ring-fence some monies for strategic overarching priorities, but scientists must be free to direct the detailed

research agenda. This is essential both for the protection of vulnerable areas of research and to allow the development on new research fronts, particularly in areas of basic research which may not be immediately applicable to the formulation of public policy.

x. The Biosciences Federation believes that there must be an overarching national science policy which is delivered on a regional basis in order to use local strengths to meet local needs. Regional science will also be important in reinforcing national policy. Our concerns over scientific literacy within the Civil Service also apply to the Regional Development Agencies (RDAs).

5. Engaging the public and increasing public confidence in science and engineering policy

xi. The current consultation procedures are largely passive in nature and do not actively engage the public in the decision-making process. Mechanisms of engagement should be implemented to ensure that public opinion is proactively sought, for example by making more use of citizen's juries. However public opinion alone must not be used to determine Government policy. The role of public engagement in policy making is discussed further in the BSF response to the DIUS consultation on '*A Vision for Science and Society*'[1].

xii. The recent RCUK/DIUS report 'Public Attitudes to Science' found that the public subscribe to the 'Haldane Principle', showing a preference for scientists and their professional bodies, rather than Government, to regulate science and engineering.

3 & 7. Whether the views of the science and engineering community are, or should be, central to the formulation of government policy; how government science and engineering policy should be scrutinized and how the success of any consultation is assessed

xiii. It is the knowledge of the scientific community, rather than its views, that should be used to inform government policy decisions. We are not confident that government departments build up their contact base sufficiently to allow them to draw on a broad pool of expertise. The importance of Learned Societies to science and engineering policy formulation should be better recognised by Government. Our organisations offer a wealth of expertise, through our members, who work at the forefront of research and innovation. Learned societies are well placed to deliver impartial, non-partisan, advice to Government based on the best available scientific evidence.

xiv. The former Science & Technology Select Committee was well placed to scrutinise science-based policy across all Government departments. Its new siting risks that the Committee's recommendations will only apply within DIUS. The Government Office for Science must strengthen its role in scrutinising science policy with more visible outcomes.

[1] Available at http://www.bsf.ac.uk/responses/ScienceAndSocietyOct08.pdf

xv. Although the evidence gathering process is clear, it is not often clear how this evidence has been used in policy formulation. For example, the analysis of the 2007 consultation from the FSA on the options to increase folate intake in young women was conducted in 'tick box' manner and so nuanced positions were lost. Government departments and agencies should look to the Environment Agency as a model of good practice where detailed responses, showing how and why evidence has been incorporated or rejected, are routinely provided.

xvi. Where new evidence has a radical impact on existing bodies of evidence, it is essential that this evidence is shared with, and replication sought by, experts in the relevant knowledge base. Changes in policy should only occur after thorough consideration of all the evidence and a detailed risk assessment.

Contact

We should be happy to provide additional information to the IUSS Committee. Any queries regarding this response should in the first instance be addressed to Dr Caroline Wallace, Policy Coordinator, Biosciences Federation, 3rd Floor, Peer House, 8-14 Verulam Street, London WC1X 8LZ email: cwallace.bsf@physoc.org.

Taskforce Members

This response was written by a BSF Task Force comprising Dr S Ahmed (Institute of Biology), Dr E Bell (Physiological Society), Dr F Bhatti (Royal Society of Chemistry), Dr R Dyer (Biosciences Federation; Chair), Dr L Fielding (Society for Applied Microbiology), Dr C Kirk (Biochemical Society), Dr B Knowles (Institute of Biology), Ms C Margerison (British Ecological Society), Dr R Prince (British Pharmacological Society), Dr E Thomson (Royal Society of Chemistry), Dr C Wallace (Biosciences Federation) and Dr J Wilbraham (AstraZeneca).

Appendix

Member Societies of the Biosciences Federation

Association for the Study of Animal Behaviour
Association of the British Pharmaceutical Industry
AstraZeneca
Biochemical Society
Bioscience Network
British Andrology Society
British Association for Psychopharmacology
British Biophysical Society
British Ecological Society
British Lichen Society
British Mycological Society
British Neuroscience Association
British Pharmacological Society
British Phycological Society
British Society of Animal Science
British Society for Developmental Biology
British Society for Immunology
British Society for Matrix Biology
British Society for Medical Mycology
British Society for Neuroendocrinology
British Society for Plant Pathology
British Society for Proteome Research
British Toxicology Society
Experimental Psychology Society
Genetics Society
Heads of University Biological Sciences
Heads of University Centres for Biomedical Science
Institute of Animal Technology
Institute of Biology
Institute of Horticulture
Laboratory Animal Science Association
Linnean Society
Nutrition Society
Physiological Society
Royal Microscopical Society
Royal Society of Chemistry
Society for Applied Microbiology
Society for Endocrinology
Society for Experimental Biology
Society for General Microbiology
Society for Reproduction and Fertility
Syngenta
Universities Bioscience Managers Association
UK Environmental Mutagen Society
Zoological Society of London

Associate Member Societies

Association of Medical Research Charities
BioIndustry Association
Biotechnology & Biological Sciences Research Council
GlaxoSmithKline
Medical Research Council
Merck, Sharp & Dohme
Pfizer
Royal Society
Wellcome Trust

Additional Societies represented by the Institute of Biology

Anatomical Society of Great Britain & Ireland
Association for Radiation Research
Association of Applied Biologists
Association of Clinical Embryologists
Association of Clinical Microbiologists
Association of Veterinary Teachers and Research Workers
British Association for Cancer Research
British Association for Lung Research
British Association for Tissue Banking
British Crop Production Council
British Inflammation Research Association
British Marine Life Study Society
British Microcirculation Society
British Society for Ecological Medicine
British Society for Research on Ageing
British Society of Soil Science
Fisheries Society of the British Isles
Freshwater Biological Association
Galton Institute
Institute of Trichologists
International Association for Plant Tissue Culture & Biotechnology
International Biodeterioration and Biodegradation Society
International Biometric Society
International Society for Applied Ethology
Marine Biological Association of the UK
Primate Society of Great Britain
PSI - Statisticians in the Pharmaceutical Industry
Royal Entomological Society
Royal Zoological Society of Scotland
Scottish Association for Marine Science
Society for Anaerobic Microbiology
Society for Low Temperature Biology
Society for the Study of Human Biology
Society of Academic & Research Surgery
Society of Cosmetic Scientists
Society of Pharmaceutical Medicine
Universities Federation for Animal Welfare

Additional Societies represented by the Linnean Society

Botanical Society of the British Isles

Systematics Association