The Save British Science Society

SUPPORTING SCIENCE & THE APPLICATIONS OF SCIENCE

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SBS 02/02

The importance of underpinning research

SBS response to the House of Lords Science & Technology Committee's Inquiry into Systematic Biology and Biodiversity

1. SBS is pleased to respond to the consultation on systematic biology and biodiversity. SBS is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers.

2. SBS never offers opinions about the relative importance of different scientific disciplines or areas of research, or on the breakdown of funds among different disciplines. Nothing in this response should be interpreted as implying that SBS believes that systematic biology is more important than other areas of biological science, or that we believe the current distribution of funds ***among subjects*** to be flawed.

3. Our points are of a general nature, using systematic biology as an example. We do offer strong opinions about the distribution of funds ***among funding routes.*** This response seeks to emphasise deficiencies in current funding policies that affect many, if not all, scientific disciplines.

The importance of underpinning science

4. Systematic biology is an underpinning subject, which is often unexciting in its own right, but the results of which feed into a wide variety of other scientific activities.

5. As such, it is not the kind of work that Research Councils will look to fund, because they are charged with finding and investing in the most exciting scientific breakthroughs. Their resources are precious, and they cannot divert them towards more routine descriptive work. Nor is systematic biology likely to attract private funding, or funding from government departments and agencies, because its outcomes are rarely of immediate relevance to wealth-creation or policy development.

6. Systematic biology is by no means unique in this regard. Astronomy, for example, relies on long term, routine monitoring of the skies, and unexciting description of newly discovered stars, planets and other objects.

7. Indeed, all of the most important scientific endeavours rely to some extent on the large body of routine descriptive work associated with each discipline.

8. Even in the field of biodiversity and ecological science, systematic biology is not alone in being undervalued because its worth is evident in the long rather than the short term – routine monitoring of populations and ecosystems suffers the same lack of esteem.

The relative decline of the Funding Councils

9. Public funding for long-term underpinning research is, in the main, supposed to come from the Higher Education Funding Councils. Its funds were, traditionally, supposed to create a "well-found laboratory". Although the phrase is rarely heard today, it represents the basic needs of research institutions.

10. Research Council grants are awarded to universities to pay the direct costs of a particular piece of research, but there is a tacit understanding that the university already has (or can acquire from its Funding Council resources) all of the necessary underlying infrastructure, including technical support and routine scientific functions, necessary to carry out the individual cutting-edge project.

11. Investment in research via the Funding Councils has not kept pace with the budgetary expansion of the Research Councils. By 2003, the budget of the Research Councils will have grown in real terms by 90% against a 1986 base line, while that of the Funding Councils has risen by only 8%.[i]

12. In other words, in 1986, every £1.00 of targeted grant money was underpinned by £1.27 of reinforcing investment that provided the necessary basic infrastructure and supporting science, such as systematics and long-term monitoring. In 2003, each £1.00 of grant money will be underpinned by only 55p.

13. SBS has repeatedly welcomed the increase in the budget of the Research Councils, but, under the UK's system of funding science, the nation can maximise the benefits of research (including meeting obligations such as policy objectives in the field of biodiversity) only if either the underpinning investment via the Funding Councils is increased at a roughly similar rate.

The decline of research in Government departments

14. In Public Sector Research Establishments, a similar situation has been brought about by continual cuts in research funding, and a series of reviews and privatisations that have created an ever-greater emphasis on work of immediate consequence, and an ever-diminishing capacity to carry out long-term and routine work that may be of value at a later date.

15. According to the latest figures, in 2001-2002, total government investment on research and development via the Department of the Environment Food and Rural Affairs will be £124 million lower in real terms than the combined resources of the predecessor Departments in 1986. This shocking result cannot be attributed to the redistribution of responsibilities among Departments, including the changing place of transport and local government with respect to the environment. If all of these areas are included, the fall in funding remains at more than £80 million between 1986 and 2001.

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[i] ***Forward Look 2001: Government-funded science, engineering & technology,*** The Stationery Office London (2001).