



House of Commons
Science and Technology
Committee

**Government Response
to the Committee's
Fifth Report: The Work
of the Natural
Environment Research
Council**

**Seventh Special Report of Session
2002–03**

*Ordered by the House of Commons
to be printed 20 October 2003*

HC 1161
Published on 29 October 2003
by authority of the House of Commons
London: The Stationery Office Limited
£0.00

The Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Office of Science and Technology and its associated bodies.

Current membership

Dr Ian Gibson MP (*Labour, Norwich North*) (Chairman)
Mr Parmjit Dhanda MP (*Labour, Gloucester*)
Mr Tom Harris MP (*Labour, Glasgow Cathcart*)
Mr David Heath MP (*Liberal Democrat, Somerton and Frome*)
Dr Brian Iddon MP (*Labour, Bolton South East*)
Mr Robert Key (*Conservative, Salisbury*)
Mr Tony McWalter MP (*Labour, Hemel Hempstead*)
Dr Andrew Murrison MP (*Conservative, Westbury*)
Geraldine Smith MP (*Labour, Morecambe and Lunesdale*)
Bob Spink MP (*Conservative, Castle Point*)
Dr Desmond Turner MP (*Labour, Brighton Kemptown*)

Powers

The Committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No.152. These are available on the Internet via www.parliament.uk

Publications

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at www.parliament.uk/parliamentary_committees/science_and_technology_committee.cfm. A list of Reports from the Committee in the present Session is included at the back of this volume.

Committee staff

The current staff of the Committee are Chris Shaw (Clerk), Emily Commander (Second Clerk), Alun Roberts (Committee Specialist), Ana Ferreira (Committee Assistant) and Ms Simali Shah (Committee Secretary)

Contacts

All correspondence should be addressed to The Clerk of the Science and Technology Committee, Committee Office, 7 Millbank, London SW1P 3JA. The telephone number for general inquiries is: 020 7219 2794; the Committee's e-mail address is: scitechcom@parliament.uk

Seventh Special Report

On 16 July 2003 the Science and Technology Committee published its Fifth Report of Session 2002-03, *The Work of the Natural Environmental Research Council*. On 17 September we received a memorandum from the Government which contained a response to the Report. The Memorandum is published without comment as an appendix to this Report.

Appendix

INTRODUCTION

The Government welcomes the interest of the Committee in the work of the Research Councils and is happy to offer any assistance as may be required by the Committee in their examination.

In reviewing the work of each of the Research Councils the Committee has already made various recommendations relating to the provision of and access to information, both in the context of the formal planning and reporting process, and more broadly. The Office of Science & Technology (OST) will undertake to collate all the Committee's recommendations in this respect, and reflect these in the annual detailed Guidance to the Research Councils. This will help to ensure consistency across the Research Councils.

RESEARCH SUPPORT

1. We support the bottom-up approach adopted by NERC to the development of a strategic framework within which to take decisions on funding. (Paragraph 9)

The Government welcomes the Committee's support of the bottom-up approach adopted by NERC in developing its strategic framework. We are particularly pleased with the progress made by NERC, and other Research Councils, with respect to consulting their research communities. NERC will continue to engage in dialogue with its community in shaping science programmes and in developing future science priorities. The scrutiny process has highlighted science areas and particular stakeholders where NERC needs to invest more effort. NERC has indicated that it has already met with the Geological Society of London and English Nature to discuss the issues raised in their written memoranda to the Committee.

The Government is aware that NERC also looks forward to working with other stakeholders in discharging its new responsibilities for Earth Observation science, and in developing future priorities, such as environment and health.

2. We recommend that NERC publishes in its Annual Report or Operating Plan financial information so as to make funding under the new and old frameworks comparable. (Paragraph 10)

The Government notes the Committee's recommendation. NERC proposes to publish, in its 2003–04 Annual Report, financial information relating to both the new Funding Framework and the old funding model to ensure that readers can see where NERC's investments have been and will be made.

3. We recommend that NERC include in its Operating Plan a clear summary of the principles underlying the allocation of different categories of grant according to the identified strategic priorities. (Paragraph 13)

The Government notes the Committee's recommendation. The OST will consider this along with other related recommendations.

The Web based NERC Funding Guide, to be prepared later this year, will outline the intended roles for each of NERC's funding opportunities. The assessment and grading of Fit to NERC Priorities is made against the grading table in NERC's newly published pre-award assessment criteria (see annex I–B at <http://www.nerc.ac.uk/funding/preaward/criteria.shtml>). The NERC community was advised in early 2003 of plans to revise the assessment criteria, which were finalised in early June 2003 and will be included in the new NERC Funding Guide.

4. The Earth sciences are ahead of other disciplines in terms of the funding of Masters courses and fellowships and overall provision remains healthy. This no doubt reflects the fact that Earth science is the largest subject area. NERC has used this high level of support to play down the fact that support for training in Earth science has dropped in recent years and that the proportion of its Science Budget funding allocated to this area has also fallen. For a Research Council that prides itself on openness and transparency this is extremely disappointing. If support has been cut in order to support other areas of higher priority or because the quality of research proposals is below par, NERC should not be shy of acknowledging this; but it should be taking active steps to explain and justify this outcome to its user community. We recommend that NERC publishes figures in its Operating Report which indicate clearly the level of support given to each science discipline each year. (Paragraph 18)

The Government agrees with the Committee that the funding of Earth science Masters courses and fellowships remains healthy. The difficulty of making comparisons between science disciplines (e.g. marine versus Earth) is that as NERC takes on new funding responsibilities the overall size of the science budget will change and affect the proportion received by a single discipline. The recent transfer of the budget for Earth Observation science from the Department of Trade & Industry (DTI) will have such an effect. Where there are such changes, NERC will explain the reasons.

As part of NERC's policy on openness and transparency, it will report in the 2004 Operating Report on the level of support given to each major science discipline. The Government notes the Committee's recommendation concerning annual reporting against science disciplines. The OST will consider the subsequent requirement for this, along with other related recommendations, in the preparation of planning and reporting guidance to Research Councils.

In respect of PhDs, the largest numbers are allocated annually using an algorithm based on the ability of university Departments to attract open competition funding from NERC. This provides assurance that students will be placed within vibrant, research active groups. This process has been in operation since 1997. Recently, Earth science has not been as successful as other areas in attracting open competition funding and as a result studentships in this area have declined slightly. However, Earth science PhDs predominate in the annual NERC Industrial CASE competition.

5. We recommend that NERC takes immediate action to focus its support for Masters students to support those disciplines in which there are clearly identified and agreed shortages. (Paragraph 20)

Current support for Masters courses was established following a zero-based review conducted by NERC in 2000–2001, which included significant consultation with stakeholders. Assessment of applications for continuing or starting a course was based on a range of factors including identified priority areas and user requirements. To assist with this, NERC commissioned a survey from the Institute of Employment Studies, which gathered the view of a cross-section of employers of environmental scientists. Support for Masters courses was maintained in terms of the number of studentships, although a decision was made to concentrate on a smaller number of courses.

There is some early evidence that some NERC stakeholders are identifying areas which they believe should be given greater priority. These concerns have been discussed at Council, which concluded that NERC should not amend the outcome of the relatively recent 2000–2001 zero-based review, which was itself both carefully considered and sought to match available funding against the priorities of all users. In seeking to ensure a balance between some degree of stability within the funding system and responding to dynamic external forces, NERC operates a quinquennial cycle for reviewing its Masters provision.

In 2004–05 NERC will be commencing the next comprehensive review of this area and will ensure that all stakeholders again have the opportunity to shape future support.

6. We recommend that NERC, as a matter of routine, monitors the reasons for the take-up rates of PhD stipends in subjects and feeds the results into its funding strategy. (Paragraph 21)

The Government agrees that such information will become particularly important in monitoring the impact of its policy to support higher stipends in areas of recruitment difficulty (funding is being provided to increase the average stipend to £13,000 by 2005/06, with particular focus on problem areas) and OST will be encouraging all Research Councils to work together to determine what metrics can be used.

NERC has chosen, ahead of the post-Roberts timetable, to increase stipends to £12,000, and is keen to assess the impact this has had on potential applicants for PhD studies. NERC is discussing analysing applications both in terms of quality (e.g. as established by first degree) and quantity. It is also looking at the scope for using its annual survey of NERC students as a means of obtaining information. The results can then be fed into future funding decisions.

7. We welcome NERC's efforts to work in partnership with other Research Councils to provide a range of opportunities to scientists working at the cusp of different scientific disciplines. We would encourage OST and Research Councils UK to promote more such initiatives, particularly in the context of the cross-council programmes. (Paragraph 23)

The Government has recognised the important role that interdisciplinary and multi-disciplinary research has in addressing emerging science priorities. This is reflected in the allocation of funding under recent Spending Reviews for cross-Research Councils research programmes. It also features in the objectives set for the Science Budget of increasing the dynamism and flexibility of Research Council programmes to respond to changing requirements and opportunities, and to support effectively multi-disciplinary research, new researchers and higher risk research proposals.

NERC has a strategic objective to provide more integrated multidisciplinary and interdisciplinary approaches to the research challenges associated with improving understanding of the Earth System. This will be achieved through a mix of incentives (e.g. increased PhD stipends, support for training in transferable skills) and removal of barriers (e.g. discipline bridging, establishment of the Peer Review College). Whilst Research Councils are individually and collectively making progress, there needs to be equal impetus and commitment from the main research providers (i.e. the universities) and from the review and reward mechanisms (e.g. the Research Assessment Exercise) to recognise the importance of work at the boundaries of scientific disciplines.

8. We welcome the effort to fund all top quality research proposals but would view it as a very disturbing sign of the health of environmental science if it was quality of applications rather than limited funds that kept the success rate down at recent levels. (Paragraph 25)

NERC is committed to funding top quality proposals. It is NERC Council's aspiration to fund all proposals graded alpha 5 and alpha 4 following the Peer Review process. An alpha 4 application is considered to be "Excellent: at the forefront of the field; will advance understanding; top 20%". At present NERC is unable to fund all such proposals. In the last round of applications some 27% of alpha 4 graded proposals remained un-funded. This would suggest that it is not the quality of the proposals submitted that is restricting the overall success rate, but rather funding available.

9. We recommend that NERC sets itself challenging targets for both thematic and blue skies awards success rates and takes decisive steps to achieving them by improving its dialogue with the research community. (Paragraph 26)

The target adopted by NERC is to meet Council's aspiration to fund all of the highest quality (alpha 4 and above) proposals, whether in directed or blue skies modes. NERC believes that this is a more appropriate target than percentage success rates as it is focused on quality. In setting targets, an emphasis on quality is less susceptible to encouraging "perverse" behaviour. The establishment of the Peer Review College, NERC's commitment to provide feedback to grant applicants, and open discussion at NERC's three regional events each year, are ways in which it will continue to discuss these issues with the research community.

10. We recommend that Research Councils UK takes the lead in promoting compatibility and greater uniformity in the practices and procedures of the grant awarding process amongst the six grant awarding Research Councils. (Paragraph 27)

Research Councils UK has been developing and implementing an Administration Strategy that is the vehicle for addressing greater compatibility and uniformity in grant award processes. This strategy builds on successful joint working initiatives across the Research Councils and aims to identify further opportunities for harmonisation and convergence of administrative policies, processes and systems

The Research Administration Programme is an important component of this Administration Strategy. It encourages and supports convergence within both research organisations and Research Councils in relation to the business processes employed to support the submission, receipt, consideration and funding decisions for grant proposals. It includes the Research Councils' commitment to implement the underpinning Joint electronic Submission (Je-S) Framework. It is expected that research and training providers will benefit from better support for cross-Council initiatives, for example by experiencing time savings from more rapid familiarisation with the processes of the Research Councils. This is an evolutionary process that recognises the different starting points of each of the Research Councils. However, significant business process rationalisation is expected by mid-2005. The existing co-operation between BBSRC, NERC and PPARC in agreeing rationalised business processes, supported by a joint grants system implementation, is one example of where this approach is already operating successfully.

NERC is fully signed-up to the RCUK Administration Strategy and John Lawton, NERC Chief Executive, currently champions this task on behalf of RCUK. NERC has already implemented the Joint electronic Submission.

11. In principle, we welcome the establishment of the new peer review college. We recommend that NERC publishes guidelines on how it will operate, establishes targets for the processing of applications and monitors the cost of the new system. We also recommend that the process is made as transparent as possible, with the publication of the names of referees in respect of each grant application. (Paragraph 29)

NERC has already published, via the Website, the composition of the new Peer Review College, terms and conditions of membership and how it will operate initially within the context of the new NERC Funding Framework and NERC's 5-year strategy *Science for a Sustainable Future*. With very few exceptions, each member has attended one of four regional training events. College members will play an important role in a new Initial Review stage in the assessment of "blue skies" standard research grants aimed at identifying the limited number of applications that should proceed to external, mainly international, review. The target is to accept between 50% and 65% of applications received at this Initial Review stage. The establishment of the new college, costs associated with running it and the need to refine or optimise its operation, will be the subject of an internal review, the outcomes of which will be reported to the NERC Executive Board (NEB) in November/December.

NERC does not have any plans to publish the names of reviewers of individual proposals. Peer review is a crucial mechanism for all Research Councils in providing assurance of quality of the research which is funded. It is essential that the Councils can call upon the best qualified scientists in the community to provide an impartial assessment. Under the Code of Practice on Access to Government Information individuals are entitled to have their identity protected and the current policy of leaving it to reviewers to indicate whether they are content to have their names revealed to applicants will remain for the foreseeable future. Under the new system applicants now have the opportunity to respond to the reviewers comments. NERC would not wish to lose reviewers who were not prepared to have their names disclosed.

12. NERC should not turn a blind eye to the impact on environmental science departments in universities of its policies but should instead make concerted efforts, in conjunction with the Department for Education and Skills, to support the development and maintenance of a strong environmental base across the university system. (Paragraph 32)

The majority of NERC–funding to universities does not go to the Environmental Science departments as such, but to more traditional departments such as Biology, Oceanography, Geology, Chemistry etc. The Government fully accepts the Committee’s view that NERC has a role to play, together with other stakeholders, in ensuring that a strong environmental science base is maintained in the UK, across the whole spectrum of NERC–funded university departments. NERC, along with other members of ERFF, wishes to see a thriving and diverse community and is working with bodies such as the Department for Education and Skills (DfES) to achieve this.

13. We recommend that NERC seeks to establish on a bilateral basis arrangements with universities to monitor the quality of grant applications. Where such arrangements are satisfactorily established, NERC should relax its rules to permit post–doctoral research assistants to apply for funding in their own right as Principal Investigators. (Paragraph 33)

The Government is committed to developing clear career paths for young researchers. This requires a combination of efforts from Government, research funders and the employers themselves.

Currently, NERC provides feedback on grant applications through the Peer Review College, and open discussion at annual Regional events. NERC has in fact already taken the first steps towards permitting post–doctoral research assistants to apply for funding in their own right as Principal Investigators and does not see a need to move to bi–lateral arrangements. From 1 July 2003 the rules pertaining to those eligible to apply for NERC research grants have been changed to allow post–doctoral research assistants to apply to be Co–Investigators on research grants. NERC will pay the salary of a post–doctoral research assistant acting as a Co–Investigator on a research grant, but as yet do not allow Principal Investigators to claim salary costs. This allows for greater diversity of applicants and aids career progression for younger investigators. The Government will encourage NERC to continue to monitor the effects of this change in policy.

14. NERC institutes will have to demonstrate that they can compete effectively in the changing research environment if they are to maintain their value (Paragraph 38). We applaud NERC's efforts to monitor closely the performance of their institutes and centres and support the policy of rationalisation, where this can be justified on grounds of costs and where reasonable guarantees can be given that there will be no detrimental effect on environmental research. (Paragraph 38)

The Government welcomes the Committee's comments on NERC's efforts in monitoring the performance of its Research and Collaborative Centres. Each Research Centre, Collaborative Centre and University Unit funded entirely or in part by NERC is subject to a Science & Management Audit (SMA). The role of these Audits is to carry out an external and independent evaluation of scientific and management performance. Audits are undertaken every five years as recommended in the 2001 Quinquennial Review of Research Councils.

The Government allocated additional capital investment under Spending Review 2002 to ensure that Research Council owned institutes remain internationally competitive. These institutes often undertake research and services which have characteristics (such as scale and duration) which make them unattractive to universities to carry out. An initial allocation of £35M was made in December 2002, of which NERC received £8m for distribution to its Research and Collaborative Centres. A second allocation of £27M will be made in Autumn 2003. Future investment beyond 2005–06 will be informed by a review during 2003 of the asset base of all Research Council institutes, including NERC's Research and Collaborative Centres, by independent consultants.

Where NERC has relocated some NERC Centres to universities, this has the advantage of reducing overheads, bringing together expertise, and sharing facilities. This in turn makes NERC Research Centres a more competitive option when commissioning contracts.

15. We commend the actions NERC has taken to improve its provision of information to user groups and to give an insight into its decision-making processes. We believe that NERC has set a good example for other Research Councils. (Paragraph 39)

As public bodies, all the Research Councils comply with the Code of Practice on Access to Government Information. The Government welcomes the Committee's acknowledgement about the progress NERC has made in communicating information. NERC will continue to use a range of approaches and review their effectiveness.

16. Perhaps English Nature have not been articulating their concerns loudly enough, but we were nonetheless surprised that NERC had been unaware of the reports of skills shortages in nature conservation from an organisation with interests so central to NERC's mission. (Paragraph 41)

Whilst NERC supports research in science underpinning nature conservation, particularly though not exclusively at its Research Centres, (e.g. in biodiversity, ecology, and sustainable use of natural resources) NERC's business is not in nature conservation research *per se*.

NERC is very keen to build on/establish good working relationships with conservation bodies like English Nature. With this in mind, NERC's Director of Science and Innovation,

together with a NERC Council member, have already met with English Nature, to discuss the issues raised in their evidence to the Scrutiny Report and future collaborative working.

NERC wishes to 'join-up' with other funders as much as possible. This is illustrated by the formation of the Environment Research Funders' Forum (ERFF) set up by NERC in October 2002. The Government notes that both English Nature and the Joint Nature Conservation Committee are now corresponding members of ERFF.

The Committee's attention is also drawn to the response to Recommendation 5. NERC has actively sought to engage its user community in decisions relating to training priorities and will continue to do so. It is hoped that English Nature will input to the planned Masters review in 2004–05.

17. We welcome the aim of the Environmental Funders' Forum to improve strategic decision making and coherence across the environmental science sector. We recommend that NERC sets out clearly how the work of the Forum feeds into its own strategic decision making to enable its community to engage appropriately with the Forum and NERC's existing consultative mechanisms. (Paragraph 44)

The Environment Research Funders' Forum (ERFF) was established as a direct response to feedback from stakeholders who responded to NERC's consultation when developing its 5-year strategy *Science for a Sustainable Future*. The Forum aims to improve strategic decision-making and coherence of environmental research funding in the UK and will ensure that member organisations' strategies are aligned.

The Forum has commissioned an analysis of environmental science in the UK to inform a single view of the priorities for UK environmental research. Outputs from this study, which involved extensive consultation, will be considered by NERC's Science and Innovation Strategy Board and NERC Council as part of an analysis of NERC's current portfolio and strategic planning process.

Engaging with many of the larger stakeholders jointly through the ERFF will allow efficient and productive discussion while allowing more time for consultation with non-ERFF stakeholders, particularly users of NERC research, on a one to one basis or in workshops. Many of the Forum's activities will involve corresponding members and other organisations where it is relevant to do so. One such example is the horizon scanning working group. ERFF is committed to consider, and involve as necessary, organisations from outside ERFF in all activities it initiates.

There is of course a continuing need for consultation by NERC with non-ERFF members about its strategy, implementation and science programmes and the needs of other organisations. NERC also has a role in facilitating the exchange of information between researchers and end users of that research. NERC will continue to consult its stakeholders by many mechanisms, including web based consultations, annual meetings, and workshops.

FINANCIAL MANAGEMENT

18. We fail to see why NERC should be treated differently for the purposes of End Year Flexibility from other Research Councils. (Paragraph 49)

19. OST must take responsibility for taking so long to resolve this issue. By failing to inform the Research Councils of the basis of the End Year Flexibility calculations until three months before the end of the financial year, OST left those Research Councils in financial difficulties with very little room for manoeuvre. But NERC knew that discussions on this issue were ongoing and should have made sufficient provision to cater for an unfavourable outcome. Neither OST nor NERC showed the necessary urgency or foresight throughout 2001 in seeking to resolve this issue. (Paragraph 50)

20. NERC had not built up any reserves to enable it to cope with unforeseen expenses, in spite of the uncertainties surrounding the introduction of Resource Accounting and Budgeting. This was short-sighted and unresponsive financial management in the face of emerging difficulties. (Paragraph 51)

21. We believe that NERC acted prematurely in cancelling the July 2002 grant round. However, in view of the part it played in contributing to NERC's financial difficulties, OST should have done more to help the Research Council find the money over ensuing financial years to avoid the need for any cancellation of a grant round. (Paragraph 54)

The Government acknowledges the Committee's concerns and welcomes the Committee's recognition of the steps taken by both OST and NERC, including the establishment of reserves, to improve financial planning and control to avoid a reoccurrence of such issues, and to deal with unforeseen financial pressures.

The rules on End Year Flexibility (EYF) apply equally to all Research Councils. The Government acknowledges, however, that whilst specific support was provided to ease transitional problems for some Councils—including some reprofiling of budgets and arranging exceptional virement from capital to resource—earlier and better understanding of how EYF would be applied under the new financial regime would have been helpful in reducing uncertainty.

The Government notes the Committee's view that the cancellation of the July 2002 Grants Round was premature. Though regrettable, the decision was taken by NERC in good faith, on the basis of all the information available at the time, in order to forewarn the community and avoid inconveniencing grant applicants in preparing nugatory bids.

22. NERC should be prepared for a higher than usual number of high quality applications in the July 2003 grant round. If this is the case, we recommend that NERC gives careful consideration to devoting more resources than usual to funding the best applicants, without jeopardising budgets for future years. (Paragraph 55)

NERC's evidence indicated increased resources were planned for the July 2003 grant round within its strategic framework. Applications for the July 2003 grant round have been slightly above average for recent years and additional resources have been allocated to fund the highest quality applications. At this time, NERC is unable to assess whether there has been an impact on the quality of applications.

23. Although NERC was responsible for some poor financial management, we do not believe that OST was serving its Research Councils as well as it should. OST appeared to be incapable or unwilling to obtain straight answers at a timely stage from the Treasury on behalf of the Research Councils. We recommend that OST holds regular meetings with the Treasury and Research Council Finance Directors in order to resolve issues of concern and to engage in horizon scanning for future problems. (Paragraph 58)

The Government remains fully committed to ensuring that the Science Budget is used effectively and that best use is made of the flexibilities that exist. It shares the Committee's view that good communication between the Councils, OST and Treasury is central to early identification of issues. In its role as sponsor for the Research Councils, OST has regular and extensive discussions with Research Councils about a range of financial issues, including thorough regular meetings of the Finance Officers Group, and has regular discussions with HM Treasury.

KNOWLEDGE TRANSFER

24. NERC should devote the necessary resources to a new knowledge transfer strategy in order to provide an opportunity to take full advantage of the immense commercial opportunities that might arise as a result of NERC's science. (Paragraph 62)

Government has a responsibility to ensure that it gains maximum advantage for the UK from public investment in science and research, both by promoting excellent science and by ensuring that it is exploited to the benefit of the wider economy and for enhancement of quality of life. Knowledge transfer is an important element of the Government's commitment to investment in science. Exploitation of the science and engineering base is vital for driving up productivity in the UK through supporting innovation. The Government has put in place incentives, mechanisms and resources that will encourage scientists and engineers to turn basic and strategic research into products and services.

In parallel, Research Councils have an important role to play in the knowledge transfer agenda. They fund a range of knowledge transfer activities from business plan competitions and networking opportunities, to technology licensing and start up companies, together with a great deal of research activity that has clear business interest and collaboration.

Recognising the importance of knowledge transfer from NERC-funded science, in June 2003, NERC Council approved an additional £1.8m for these activities over the 2003–04 to 2005–06 period. Along with the extra £4.5m agreed by Council in January, this brings to £21.9m the total Council has allocated to its knowledge transfer fund for this period.

A knowledge transfer policy and strategy was also agreed at the June 2003 Council meeting. NERC will strive to involve potential beneficiaries of its research at all stages from planning through execution, application and review. NERC intends to fund the best proposals for knowledge transfer using a range of partnership mechanisms. NERC is also working towards meeting the recommendations of the "Baker Review" through identifying and carrying forward new commercial opportunities arising from its own Research Centres.

NERC's new Funding Framework now allows it to track knowledge transfer investment separately from research and training. This will provide greater transparency of the demand for knowledge transfer funds.

SCIENCE IN SOCIETY

25. We accept that NERC is but one player in a large field, but we look to NERC to take responsibility for coming forward with imaginative and inclusive schemes to improve public understanding of environmental sciences. (Paragraph 66)

NERC's priority in the Science and Society area, as reflected in its revised Charter, is to generate public awareness and encourage public engagement with and dialogue about its science. The Government welcomes the fact that NERC has developed many partnerships with other bodies in this area.

NERC supported a debate, jointly with ESRC and EPSRC on Urban Living at the BA Festival of Science at Salford on 9 September 2003. Other examples of its collaborative activities include work with the Science Museum and EPSRC on a climate change exhibition in 2002, and support for the work of the Royal Society by participating in its summer exhibition. For the last two years NERC's regional events have included debates on topics such as nuclear waste, transport and energy, and future events will include this public dialogue element.

NERC is to be a partner in a new schools resource initiative, including DfES, OST, PPARC, BNSC and the Met Office, which will use the excitement of space to encourage interest in science. It will focus on the use of Earth Observation satellites to address environmental issues: two areas of strong public interest. Work is underway to develop a new resource pack (posters, publications, web-based resources related to the curriculum) aimed primarily at the 11-18 age group.

We are encouraged that NERC is keen to engage the public in science with innovative activities and NERC Research Centres continue to devise exciting ventures such as the multimedia *Antarctic Waves* project developed by the British Antarctic Survey (BAS) (which won a BAFTA award) and the *Stand Up Science Show* which ran successfully at several BA Festivals.

NERC's policy on Science and Society can be seen at: (www.nerc.ac.uk/insight/openness/scisocpolicy.asp).

REPRESENTATION OF WOMEN AND ETHNIC MINORITIES

26. NERC was quicker than some in recognising the unacceptability of an almost exclusively white, male work force. But it has not followed up and addressed the causes of this imbalance with vigour or much success. It is right that this situation is being addressed by all parties involved rather than by Research Councils in isolation. We see little merit in the Government setting unrealistically high targets when earlier lower targets have not been met. This risks placing unreasonable pressure on the recruitment process. Nevertheless, we welcome NERC's belated attempts to address assess those contributory factors which are relevant to itself, as well as its participation in broader

programmes. We look forward to seeing how rapidly it takes forward the results of current work. (Paragraph 70)

The Government welcomes the Committee's endorsement of the work NERC has done in this important area and very much agrees that these are not issues that can be addressed by any one Research Council. NERC will continue to identify and deal with issues where it has the ability to do so (e.g. in ensuring that underrepresented groups have full access to career development opportunities and in promoting science as a good career choice) but the UK needs to address with greater vigour the problem of attracting children from particular groups or backgrounds into science, mathematics and engineering.

NERC has done a great deal of work in looking at the issue of representation of ethnic minorities within science. NERC established at an early date, with the help of the University of Warwick, that the pool from which NERC recruits does not contain enough members of ethnic minorities. This information has been fed into appropriate fora and NERC is an active participant in initiatives aimed at raising awareness of science as a career choice for members of ethnic minority groups. NERC will continue this in future, with a new focus on working through cross-Research Council groupings that are participating in a Sector Skills Council for Science, Engineering and Manufacturing Technologies (SEMTA) initiative in this area.

NERC has spent some time looking at why women are underrepresented at senior scientific levels and has made some significant changes to its policies and processes as a consequence. NERC has taken the lead in introducing family friendly policies and working flexibilities. NERC will continue with this important work, including plans later this year to examine in more detail the reasons why women appear to leave science careers, and working with other Research Councils on the implementation of agreed Greenfield Report objectives.

CONCLUSION

The Government welcomes the Committee's report and notes that NERC is already working to address many of the recommendations.

The areas of science which NERC supports, and on which it works with Research Councils UK (RCUK) and partners to deliver, is of increasing importance and relevance. As the Committee has itself reported "society's interest in environmental science is second only to medical science".

Department of Trade and Industry

September 2003

Reports from the Science and Technology Committee 2002-03

The following Reports have been produced by the Committee since the start of the present Session. The reference number of the Government's response to the Report is printed in brackets after the HC printing number.

First Report	The Work of the Particle Physics and Astronomy Research Council	HC 161 (HC 507)
Second Report	Annual Report 2002	HC 260
Third Report	The Work of the Medical Research Council	HC 132 (CM 5834)
Fourth Report	Towards a Non-Carbon Fuel Economy: Research, Development and Demonstration	HC 55-I (HC 745)
Fifth Report	The Work of the Natural Environment Research Council	HC 674
Sixth Report	UK Science and Europe: Value for Money?	HC 386-I
Seventh Report	Light Pollution and Astronomy	HC 747-I
First Special Report	Government Response to the Science and Technology Committee's Fifth Report, Session 2001-02, Government Funding of the Scientific Learned Societies	HC 53
Second Special Report	Government Response to the Science and Technology Committee's Sixth Report, Session 2001-02, the National Endowment for Science, Technology and the Arts: A Follow-up	HC 276
Third Special Report	Government Response to the Committee's Seventh Report, Session 2001-02, The Office of Science and Technology: Scrutiny Report	HC 293
Fourth Special Report	Government Response to the Committee's Eighth Report, Session 2001-02, Short-term Contracts in Science and Engineering	HC 442
Fifth Special Report	Government Response to the Committee's First Report, The Work of the Particle Physics and Astronomy Research Council	HC 507
Sixth Special Report	Government Response to the Committee's Fourth Report, Towards a Non-Carbon Fuel Economy: Research, Development and Demonstration	HC 745