

ANNUAL REVIEW 2006/07



INTRODUCTION



PROFESSOR
IAN DIAMOND

Chief Executive,
Economic and Social Research Council
Chair, RCUK Executive Group

In May 2007, RCUK marked its fifth anniversary. This event went largely unnoticed among the Research Councils not because it lacked significance but because so many of us are extremely busy engaged in cross-Council activity. The new era in cross-Council working that it signalled has become business as usual for a large number of people in the Research Councils. Around a quarter of staff in Polaris House, where five Councils have their headquarters, are employed in a cross-Council role, and this does not include those engaged in joint projects and programmes.

A major role for RCUK is making the case for research and articulating the impact that the Research Councils are having on the economy, health, policy and culture. This is an important role for us as public bodies in justifying the large amounts of public money we receive. The announcement in July 2005 of the 2007 Comprehensive Spending Review at a time of greater pressures on public expenditure brought this into sharper focus.

The early announcement of the Science Budget settlement in the Budget, a 2.5% real terms increase, demonstrates RCUK's success. There have been many facets to our arguments, covering financial sustainability, health of disciplines, multidisciplinary research, research careers, increasing KT and economic impact, public engagement, international collaboration, and delivering efficiencies through changes to peer review and the creation of a shared services centre.

The CSR settlement is just one example of our success in influencing. During the year we submitted evidence to ten Parliamentary inquiries and 18 Government consultations, including:

- RCUK response to the Government's Next Steps consultations on risky, innovative and multidisciplinary research, stimulating innovation, and the creation of the Large Facilities Research Council, including preparing the formal RCUK response to the recommendations;
- Provision of evidence to the Conservative Party's STEM review consultations;
- RCUK advice to HEFCE on plans to replace the RAE with a metrics based system;
- Provision of information for the Sainsbury Review.

In addition, the cross-cutting scrutiny inquiries now being undertaken by the House of Commons Science and Technology Committee have meant that RCUK has a greater role in coordinating inputs and liaising with the Committee.

Particular attention during the year has been given to increasing and demonstrating an increase in the economic impact of Councils' activities. In June, the House of Commons Science and Technology Committee published its report on our support for knowledge transfer and this was followed in August by the 'Worry Report'. Philip Esler will describe later in this review how valuable these have been in shaping our strategies.

A major discussion point at RCUK Executive Group, the monthly forum for the seven Chief Executives, has been our international activities. We have been active members of the Government's Global Science and Innovation Forum. Its report in October describes how the Research Councils can meet the intellectual challenge of globalisation. Colin Blakemore will describe this fast-developing area of joint activity on page 6.

Most of our stakeholders will have been unaware of a third major activity of RCUK over the last year: the project to establish a shared service centre for the Research Councils. By 2009, the Research Councils plan to share their back office functions, affecting every one of our 13,000 employees, and in particular the 600 or so people undertaking functions such as human resources, finance, IT and grant processing. The anticipated savings will have a major bearing on the resources available for research and training.

Considerable discussion preceded the publication of the Research Councils' updated position on access to research outputs in June. This is a controversial and complex issue, however the Research Council's position is simple: we want the results of the research we fund to be disseminated as widely as possible to ensure that it has the greatest possible impact. The opportunities offered by new communication technologies should be considered by researchers when they are published. We recognise that the simplicity ends there and our cautious approach will ensure that any impacts on research publication are fully understood. Next year we will commission an authoritative study to report by November 2008, which will guide our developing policy.

The RCUK partnership recognises the importance of explaining how it is operating. The launch of the new RCUK website in October was an important milestone in achieving this aim. It provides an intuitive guide to the partnership and provides a robust framework for future development. This annual review, the first to be published by RCUK, has also been produced to provide a clear account of our collective activities, and draw attention to our many successes and the activities that will guide our progress through the next Spending Review Period. We shall also reveal some of the highlights likely to appear in next year's Review.

THE RESEARCH COUNCILS

The Research Councils are the UK's biggest public funders of cutting edge research. We support research, training and knowledge transfer in everything from architecture to zoology and support world-class, large-scale research facilities. We also promote public engagement in science, engineering and technology. The knowledge and expertise gained through our investment in people and innovation allows the UK to maintain a technological leading edge, build a strong economy and improve quality of life for its citizens. We work in partnership with other research investors including government departments and agencies, charities, industry and the European Commission. Our collaborations extend across disciplines, organisational boundaries and the world. We work together through Research Councils UK, the strategic partnership of the Research Councils.

The Research Councils are independent public bodies funded principally through the Government's Science Budget.

Arts and Humanities Research Council (AHRC)
www.ahrc.ac.uk

Biotechnology and Biological Sciences Research Council (BBSRC)
www.bbsrc.ac.uk

Economic and Social Research Council (ESRC)
www.esrc.ac.uk

Engineering and Physical Sciences Research Council (EPSRC)
www.epsrc.ac.uk

Medical Research Council (MRC)
www.mrc.ac.uk

Natural Environment Research Council (NERC)
www.nerc.ac.uk

On 1 April 2007 the Council for the Central Laboratory of the Research Councils (CCLRC) and the Particle Physics and Astronomy Research Council (PPARC) were merged to form:

Science and Technology Facilities Council (STFC)
www.stfc.ac.uk

RETURNS ON OUR INVESTMENTS



PROFESSOR
PHILIP ESLER

Chief Executive,
Arts & Humanities Research Council

The benefits arising from public investment in research have long been the subject of debate. The last year has seen unprecedented interest in the issue, culminating in the imperative of the Research Councils to demonstrate the economic impact of our investments. This is very difficult to realise other than in relation to patents, spin-outs and licensing, which although simple to measure do not cover the full range of economic impacts.

Our year's activities have been shaped by the publication of three reports: by the House of Commons Science and Technology Committee; by the KT External Challenge, a commissioned review undertaken by an invited panel; and by the Economic Impact Group, chaired by Professor Peter Warry.

Similar themes emerged from these exercises. The Research Councils had pivotal roles, both as funding bodies and as leaders of the research base and had made great strides in increasing the impact of their investment, but there was more that could be done:

- There was scope for more coordination between Councils and there needed to be greater leadership within the Councils.
- There needed to be greater national coordination of knowledge transfer and the Research Councils had a significant role in bringing the main players together.
- Research Councils needed to increase their engagement with users to ensure that their requirements were better reflected in funding priorities.
- Research Councils needed to evaluate the impact of their knowledge transfer schemes and of the impact of their investments.

We have addressed all of these points in our implementation plan – Increasing the Economic Impact of the Research Councils – published in January. Our starting point was reinvigorating and rebuilding our cross-Council knowledge transfer group with a more strategic focus. My fellow chief executives invited me to chair the new group. The first task of the new Knowledge Transfer and Economic Impact Group was to map out a substantive way forward for the Research Councils.



Above: Winners of the 2006 Research Councils Business Plan Competition, Warwick Warp, display their trophy outside the Royal Society, where the final was staged.

Below: Science and Innovation Minister Malcolm Wicks addresses a House of Commons reception to promote the economic impact of the Research Base, jointly organised by Research Councils UK and Universities UK. In the background are Professor Ian Diamond and Professor Drummond Bone, President of Universities UK.



In doing so we needed to establish a strong basis for action and developed three studies:

- a user satisfaction survey, to find out what our users think of us;
- a knowledge transfer study, to explore the options for improving access to our schemes; and
- an economic impact study, to establish a baseline against future improvements.

This last study is a ground-breaking initiative. Although funders in other countries have tried to quantify the outcomes of research funding, this is the first attempt anywhere to understand the breadth of impacts across all disciplines.

We recognise that accumulating data is only one part of the 'demonstrating' equation. We also need to tell the impact stories that emerge from the research. In March we published the first *Impacts* publication, in collaboration with Unico and Universities UK. Launched at a Parliamentary reception hosted by Phil Willis MP considering the economic impact of the research base, *Impacts* showcased just some of the successful research ideas that have been commercialised in recent years.

The coming year will see future editions of *Impacts* highlighting other ways in which our research has added value, such as through our work with small businesses.

As the single largest funder of basic research in the UK, the Research Councils have a pivotal role in maximising the value of the research base, but we are one of a number of organisations committed to this objective. RCUK has provided a focus for collective engagement between the Councils and other players, such as the Regional Development Agencies and Devolved Administrations, Unico, Auril, Universities UK and the Funding Councils. RCUK has also coordinated the Research Councils' engagement with the Technology Strategy Board, including plans for collaboration with the new 'arm's length' TSB.

This forward-looking activity should not detract from our existing successes. Our flagship joint scheme is the RCUK Business Plan Competition which helps researchers turn great research into great business. Last year's final, in December, gave us an early opportunity to welcome Malcolm Wicks to his new job as Science Minister. Warwick Warp, a spin-out that has commercialised new software for analysing fingerprints for criminal investigations, came away with the £25,000 prize, but a great strength of the scheme is that all participants gain. Applicants received guidance and mentoring from experts and emerged stronger for the experience. Meanwhile, the competition's winner in 2004, ThruVision, goes from strength to strength and last year deployed its terahertz imaging system in Canary Wharf, which will detect explosives, liquids and bomb-making components even if they are hidden under clothing or inside rucksacks.

LOOKING FORWARD

The Research Councils will develop and launch a new high-level strategic knowledge transfer summit to address barriers to innovation, inviting the leading organisations in the KT arena to bring their issues and ideas together and unite in developing practical solutions to real world problems.

A GLOBAL ENDEAVOUR



PROFESSOR
COLIN BLAKEMORE

Chief Executive,
Medical Research Council

The creation of new knowledge is an international activity and many of the Research Councils' activities reflect this. For my colleagues supporting research in astronomy and particle physics, the scale of investment in major facilities demands international collaboration. In other areas, research is location-specific: volcanologists have limited opportunities for research in the UK; and anthropologists cannot transport rainforest communities for study. At my own Council, we are acutely aware that infectious diseases do not recognise political boundaries. Across all disciplines, researchers have always pursued their passion by seeking out the best opportunities, wherever they may be found.

But just as businesses need to meet the challenge of globalisation, so must research. The emerging economies of China and India are being supported by rapidly expanding research bases. The past year has seen Research Councils join forces with other Government departments and other public bodies to address this through the Global Science and Innovation Forum. The Councils have been represented by John O'Reilly and John Wood. GSIF's strategy, published in October recognised that Research Councils have a long history of facilitating and taking advantage of opportunities for international partnership but asked the Research Councils to consider extending our presence internationally working under the RCUK brand.

In response we have developed plans to open offices in China, US and India to take advantage of the unique opportunities that are emerging, supplementing the strong relationship we have with the Foreign and Commonwealth Office's Science and Innovation Network, UK Trade and Investment and the British Council. Indeed, through UK's posts overseas we have been able to be active in a number of initiatives to promote bilateral research collaborations. There has been an RCUK presence at the China, India and Japan Joint Ministerial Commissions. The UK: Brazil Year of Partnership in Science in 2007 in Brazil was an excellent opportunity to encourage greater collaboration between the two countries in areas of common interest, including climate change, agriculture and health. As with much of our international work, our aim was to ensure that the most relevant people in the UK got to meet the most relevant people in Brazil so that the researchers themselves could determine whether there is scope for further collaboration.

In June we joined the then Science Minister Lord Sainsbury and the Chief Scientific Adviser at the inaugural Indo-UK Science and Innovation Council in London. Here agreement was reached on the UK-India Education and Research Initiative, a programme to stimulate substantial joint activity across research and education. We have been encouraging our research communities to respond and they have already reported success.

Below: Sir David King in Brazil as part of the Year of Partnership of Science. The initiative has led to the signing of a Memorandum of Understanding between the Brazilian National Institute of Space Research and STFC aimed at stimulating scientific cooperation in the space science and technology area.



The Research Councils already have a substantial presence overseas in the form of the UK Research Office (UKRO) in Brussels. All seven Research Councils sponsor the office which aims to increase the involvement of UK researchers in EU research programmes, including the Framework Programme 7 and the constituent European Research Council. Around 150 research organisations subscribe to UKRO's services, providing 60% of its running costs.

UKRO has provided the Research Councils with guidance and information, which has been particularly valuable in the past year with rapid developments in the creation of a European Research Council and the proposal for a European Institute of Technology. Each Research Council was represented by its chief executive on EuroHORCS (European Heads of Research Councils). The close working relationship fostered by the RCUK partnership enabled a single chief executive, often my former colleague at EPSRC, John O'Reilly, to represent all of us.

LOOKING FORWARD

The coming year will see major advances in our collective international activity. We will be publishing the RCUK International Strategy. Our first offices outside Europe will be opened in China and USA and we will be appointing staff dedicated to cross-Council international activities.

Above: Professor John Wood, Chief Executive of the Council for the Central Laboratory of the Research Councils presents the first European Roadmap for Research Infrastructures to Commissioner Janez Potocnik in October. The Research Councils have been a driving force behind the new European Strategy Forum on Research Infrastructures (ESFRI), which has applied the same 'roadmap' process that has served the UK so well. Professor Wood was the inaugural Chairman of ESFRI and oversaw the production of the roadmap.

JOINED UP RESEARCH



PROFESSOR
KEITH MASON

Chief Executive,
Science & Technology Facilities Council

Some of the most exciting research advances occur at the boundaries between disciplines and many of the issues faced by the UK can only be solved by drawing on research from wide-ranging disciplines. The Research Councils' ability to fund work at the boundaries of disciplines, both between and within the remits of individual Councils, was under scrutiny at the beginning of the year with 'Next Steps'. The consultation questioned whether there was sufficient support for interdisciplinary research.

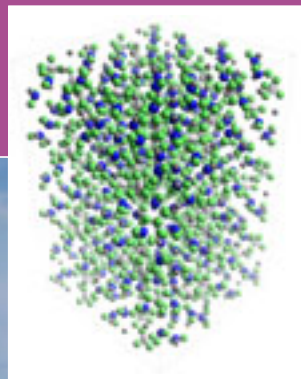
Our response, published on the RCUK website, provided ample evidence that the Research Councils recognise the importance of funding innovative research and have a strong track record in recycling funding into new priority areas. We always accept that we can always do things better. In September, we endorsed a new cross-Council funding agreement for responsive mode applications. This removes the need to fund proposals jointly below a threshold level, aims to simplify the review process, continues to ensure fair and appropriate cross-Council consideration of peer review, and should not discourage applications across Council boundaries. Researchers working at the interfaces between disciplines can be confident that their applications will be peer reviewed in a fair and transparent manner, and not subject to extra layers of assessment.

The Research Councils currently run seven major cross-Council research programmes developed through the 2000 and 2002 Spending Reviews. These are now having an impact. For example, as part of the Rural Economy and Land Use programme, political scientists and biologists at Warwick University have been working alongside the Pesticide Safety Directorate to see how changes in regulations could encourage greater use of bio-pesticides. Our investment in e-science is also being realised. The Meteorological Office is adopting a new approach to data modelling and data management pioneered by the NERC Data Grid, which makes environmental data more easily available to scientists. This allows users to find out what data sets are available and where; explore what is known about the data sets including information about how the data was collected and what it has been used for; and access, manipulate and visualise the data.

During the last year, our research directors have been working closely together to identify and develop potential cross-Council multidisciplinary research opportunities for the next Spending Review Period. In some cases these have built on existing cross-Council programmes. We have also been mindful of the public policy challenges faced by the UK, as set out by HM Treasury in July 2005, such as our ageing population, climate change and global threats to security.

Given the topicality and urgency of research to address the Treasury challenges, new cross-Council opportunities have already been put to the research community. For example, MRC, BBSRC and ESRC have identified funds for new Centres to address lifelong health and wellbeing.

Far right: UK scientists have developed a compound of the element lithium which may make it practical to store enough hydrogen on-board fuel-cell-powered cars to enable them to drive over 300 miles before refuelling. The breakthrough, funded through the Research Councils' Energy Programme, has been achieved by a team from the Universities of Birmingham and Oxford and STFC's Rutherford Appleton Laboratory in Oxfordshire. The image shows how hydrogen atoms can be absorbed effectively into the new storage material – hydrogen atoms are shown in green, lithium atoms in dark grey, nitrogen atoms in blue and boron atoms are in grey and inside the pyramids.



Right: The synchrotron light produced by Diamond is an indispensable tool in many research areas including physics, chemistry, materials science and crystallography. In addition, synchrotron light is increasingly being exploited by new communities such as medicine, geological and environmental studies, structural genomics and archaeology.



An important role for RCUK is to identify and prioritise the large facilities and infrastructure needed by our researchers. The timescale for developing and delivering these projects is long. Our Large Facilities Roadmap, published every two years, draws together existing large projects under development with those identified by our research communities as important for the next 15-20 years. Annually, we decide collectively which projects should be priorities for funding and make recommendations to the Office of Science and Innovation on the allocation of its Large Facilities Capital Fund.

Last year saw the culmination of one project that has become a reality through the roadmap process. The Diamond Light Source is the largest research facility to be built in the UK for 30 years. This bright X-ray source opened for business in February 2007. STFC has an 86% shareholding in Diamond and it forms an integral part, along with the Rutherford Appleton Laboratory, of the newly formed Harwell Science and Innovation Campus. We were also able to remind people that large facilities needn't be equipment, buildings or ships. ESRC successfully argued that large datasets perform the role for social scientists as CERN does, for example, for particle physicists. The £15.5 million UK Longitudinal Household Survey will involve 40,000 households, making it the largest of its type in the world.

The dataset will revolutionise the capacity to study our society, in such key areas as household and demographic change, poverty, migration, labour market dynamics, crime and ageing.

Research Councils have been at the heart of moves to maintain the UK's strength in stem cell research. Last year BBSRC pledged to host the secretariat for the new UK National Stem Cell Network, which will bring coordination and coherence to a range of national and regional activities in the field of stem cell research. ESRC, MRC and EPSRC also contribute to the costs of the secretariat, which will support Lord Naren Patel of Dunkeld, the first chair of its Steering Committee.

The Government's Foresight Programme published its report on its Detection and Identification of Infectious Diseases project in April. Julia Goodfellow, Chief Executive of BBSRC, represented all the Research Councils at the high-level stakeholder group. We will be taking the recommendations of the report into account as the Research Councils consider a range of future policies and how the Councils can work together and with other funders in the area of infectious disease research.

LOOKING FORWARD

In autumn 2007, the Research Councils will reveal the multidisciplinary research programmes for the next spending review period.



THE HUMAN DIMENSION



PROFESSOR
JULIA GOODFELLOW

Chief Executive,
Biotechnology and Biological Sciences
Research Council

The Research Councils support around 30,000 of the UK's academic researchers. We therefore have a responsibility, with others, to encourage people into research careers. We are also aware of the need to equip and train researchers with the skills that are needed to maintain the strength of UK's internationally recognised research base. We recognise that many of the issues are common to many or all research disciplines and we therefore work through RCUK as well as our separate Councils.

A highlight of last year was the development and publication of the RCUK Research Careers and Diversity Strategy in January. This document, following on from the late Sir Gareth Roberts's *Set for Success* report, sets out our new strategy providing detail on some areas such as the RCUK Academic Fellowship scheme.

In August 2006, we published an independent report on the impact of enhanced salaries and stipends for postdoctoral researchers and PhD students. We found that increased income was helping academia to recruit and to retain the brightest young researchers. However the report also highlights some areas of concern, where lucrative alternative careers are still exacerbating skills shortages in some disciplines. We are encouraging universities to apply for higher salaries and stipends in their grant applications if they are experiencing trouble recruiting in certain disciplines and the full economic costing of research grants enables them to do this.

The RCUK Academic Fellowship scheme has provided 800 fellows, funded jointly by Research Councils and higher education institutions. The participating institutions have an obligation to award the fellow a permanent academic position at the end of the five-year fellowship, thus providing a route into permanent employment.

This scheme provides us with a wonderful opportunity to provide these future research leaders with the skills and experiences that they will need to further their own careers and maintain the UK's research competitiveness. In January we held the first RCUK Academic Fellowships conference in Birmingham at which the fellows discussed what it was like to be an RCUK Academic Fellow and their experiences with the required 15% of their time devoted to outreach activities and how to improve these interactions.

An important role for RCUK is to share and build on best practice. Last year EPSRC piloted a 'vacation bursaries' scheme, benefiting from the experience gained from BBSRC's existing scheme. These provide funding for undergraduates in the summer vacation to gain first-hand experience of university research which we hope will spur them on to consider a research career. An evaluation by EPSRC showed that participants found the scheme useful in deciding whether to pursue a research career. The Research Councils are considering how to develop the scheme.

In recent years, a number of Councils have introduced doctoral training accounts to assist universities in funding PhD studentships rather than the traditional individual award. Through this scheme, Councils provide universities with maximum flexibility in managing funding and support for their research students by providing a grant covering all aspects of training. Last year, BBSRC moved to fund all its studentships to universities in this way and made sure that there was funding available for a full four years of research and training if this was appropriate. Other Councils are exploring how the training account model could be best applied for their communities.

Right: At the first RCUK Academic Fellowships conference in Birmingham, our fellows shared their ideas on how they could deploy the required 15% of their time devoted to outreach activities.



Far right: The RCUK report on the Health of Disciplines revealed significant falls in the numbers of researchers in some disciplines, for example in medicine and dentistry, and the action being taken by the Research Councils to address the issue.



As Philip Esler described on page 4, our knowledge transfer activities have been under intense scrutiny in the past year. A challenge for us is to provide researchers with the skills they need to realise the economic and social impact of their research. Last year EPSRC invested £1.4 million to fund training and/or course development in the area of entrepreneurship to encourage innovative approaches to exploitation. They will be sharing their experience to inform the activities of other Councils.

RCUK are concerned about the career structure for researchers, especially those on short term contracts. We have been working with the higher education sector in revising the Concordat for Career Management of Research Staff. This will build on the results of a project led by RCUK and Universities UK, to map the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers against existing legislation, guidelines and good practice in the UK in order to provide a comprehensive gap analysis. This was published in November and showed that in most cases the UK already meets the requirements of the European Charter and Code with no major conflicts with current practice; indeed, in some cases we found that the UK already exceeds the standards.

Last year we sponsored the Times Higher Educational Supplement Award for Support for Early Career Researchers. There were over 40 entries to the competition, reflecting the success we have had in boosting the importance of this area of work. The standard of all the entries, and not just the winner – Imperial College, gave us confidence that a culture change is taking place in the way we nurture our research workforce.

The year ended sadly for many in the research community with the untimely death of Sir Gareth Roberts. Gareth was a good friend to many of us in the Research Councils and an inspiration in our efforts to build a stronger research workforce.

LOOKING FORWARD

Developments will continue in 2007/08 with the launch of a new *Careers in Research* website, in partnership with the Royal Society and the Wellcome Trust. This will provide the next generation of researchers with the information they need to explore a career in research. We are about to commission a cohort-based longitudinal survey of research students across all disciplines covering at least the first ten years of their career and examining socio-economic factors. We hope this will help us to better understand the diversity of career options open to researchers. We will also launch an association for overseas recipients of Research Council fellowships which may be widened to include other UK funded fellowships recipients.



MORE BANGS FOR OUR BUCKS



PROFESSOR
RANDAL RICHARDS

Interim Chief Executive,
Engineering and Physical Sciences
Research Council

One of the founding principles of RCUK was that it should enable Councils to work more efficiently and provide a better service for the research community. One of its great successes has been the introduction of Je-S, the Joint Electronic Submission system. A study conducted this year showed that around 70% of those surveyed thought the system had improved the grant application process, in particular making it easier for joint working on proposals and to work on proposals remotely.

The next phase of Je-S – extended to include the back office processing – last year became part of a much larger activity, indeed one of the largest administrative challenges faced by the Research Councils in recent years. The Shared Services Centre (SSC) Project, launched in November 2006, will have a far-reaching impact on the Councils. It aims to set up a single Research Council resource providing services in IT, IS, finance, human resources, procurement and grant processing. The proposed RCUK Shared Services Centre will provide services not only to the Research Councils' headquarters but also to their widely dispersed research institutes. The projected savings from establishing the SSC will enhance the Research Councils' reputation for efficiency and sustain the Government's confidence in our ability to maintain the excellence of the UK research base and maximise the impact of our investments.

The creation of the RCUK SSC may be the largest project to improve the way we work but it is not in isolation. The RCUK Efficiency Delivery Project has successfully delivered its forecast 'Gershon' savings. We expect that during the current spending review period we will have saved 5% of our administration costs and 3% programme costs through reprioritisation. Last year, this amounted to cash savings of £162 million, exceeding our target by £47 million. This is money we can invest in excellent research.

The Research Councils have awarded grants on the new full economic cost (fEC) basis for those applications received after 1 September 2005. This reflects our commitment to the long-term sustainability of the research base. fEC was introduced to allow research organisations to fully understand the costs required to fulfil a research project in return for which the Research Councils would pay a greater contribution towards these costs, currently 80%. This has required a review of the Research Councils Assurance requirements. To this end, we have launched the RCUK Assurance Branch which is charged with developing, implementing and overseeing the new strategy, to take effect from 2007/08. The strategy lays the foundation for regular visits to institutions to provide assurance on the regularity of expenditure on Research Council awards as well as on the implementation of TRAC (transparent approach to costing) methodology adopted in UK universities.

Below: Large facilities such as the Second Target Station for ISIS at STFC's Rutherford Appleton Laboratory are highly complex projects. The NAO's recommendations will prove valuable in managing future projects.



Above: Full economic costing was introduced to allow research organisations to fully understand the costs required to fulfil a research project.

Our commitment to financial accountability has also prompted us to develop stronger linkages with the Funding Councils and the HE sector with the aim of sharing good management practice and developing common approaches to issues such as accountability.

Our peer review process contributes significantly to the competitiveness of UK research, but that does not mean we should not seek to make it more effective and more efficient. Last year we completed twin studies to establish the costs, one by ourselves on the Research Councils' administration costs and another by the consultants DTZ on the costs to the research community for preparing and reviewing proposals and final reports. We found continued support for use of peer review to allocate funds and an appreciation that the Research Councils' processes compared favourably with other, international, grant awarding bodies.

Unsuccessful applications do not represent a waste of time since peer review provides valuable feedback for researchers. However, success rates for applications have been falling in recent years as a result of increased demand and we would be concerned if rates fell below 20% (the Council average is 28%). We recognise the need to reduce the amount of time that researchers spend on preparing applications. We proposed a number of options to reduce this, including quotas, controlling submissions, consolidating grants and greater use of outline proposal, all of which are currently used by Councils under certain circumstances. Nevertheless, given the potential impact of some of these options, our consultation, issued in October to our communities, will guide our decisions in the coming year.

The £2.8 billion we invested in research last year represents a significant slice of public expenditure. It is appropriate, therefore, that the National Audit Office undertakes audits and good-governance reviews of our work and expenditure. Last year NAO conducted reviews of our implementation of full economic costing, RCUK governance, and operation of the Large Facilities Capital Fund and infrastructure projects. There are useful lessons for us to learn. For example, the development of new large research facilities is highly complex, by definition employing ground-breaking technological advance and involving sustained investment over a number of years. Our track record is good and our introduction of the large facilities roadmap was an acknowledged success. Nevertheless, the NAO will be able to help us identify and manage the risks involved with such projects. The NAO has also provided recommendations on how we can improve the operation of the RCUK Executive Group.

LOOKING FORWARD

During the year we will be publishing our final business case for a shared service centre. We anticipate that this will provide an overwhelming case to take the project forward.

SCIENCE IN SOCIETY



PROFESSOR
ALAN THORPE

Chief Executive,
Natural Environment Research Council

As demonstrated by Tony Blair's 'Britain's path to the future' speech in November 2006, science in society is still high on the government agenda: "Science cannot any longer be detached from the society that houses it. Its influence is too pervasive for that... We need to engage the public at a very early stage (and) we need scientists willing and able to explain, to reason".

By working together the Research Councils are leading the field to better stimulate engagement of our research communities with the public. A significant milestone at the beginning of the year was the publication of the RCUK Science in Society strategy, providing for the first time a framework for collective activity through the dedicated RCUK Science in Society Unit. This set the scene for a challenging and exciting year. Administrative changes, such as achieving a fully unified budget, have created efficiency gains in the management and delivery of cross-Council projects.

New schemes have been created to benefit all the Councils. Beacons for Public Engagement, announced in December, is one of the biggest projects to support public engagement ever seen in this country. This £8 million initiative addresses the need to reward and recognise public engagement at an institutional level, funded in partnership with the Funding Councils and the Wellcome Trust. There has been an overwhelming response from the academic community with almost 90 applications for the initiative which aims to fund around six Beacons and a National Coordinating Centre.

There are an increasing number of projects that cover all of the Research Councils. For the first time, the RCUK National Science Week Awards were open to researchers funded by any of the seven Research Councils. This important development illustrates the commitment of all Research Councils to the public engagement agenda, and provides a pilot for the joint public engagement grant framework commitment in the Science in Society Strategy.

Support to science teachers has been provided last year through our support for research update courses run by the DfES-funded Science Learning Centres. According to an independent evaluation, these have proved the most successful ever run by the Centres and RCUK is considering opportunities for expanding the scheme over the next few years. RCUK has also acted to improve the availability of resources that enhance the science curriculum. We have worked with the Association for Science Education to ensure that all materials developed by the Research Councils for school pupils or teachers can now be found through a single portal called Schoolscience.co.uk. Both these initiatives will help the Government meet its target in the Science and Innovation Framework: Next Steps to improve continuing professional development for teachers in this way and support the new 'How Science Works' elements of the school curriculum.

Strong partnerships have been developed with key external stakeholders, ensuring that Research Councils have an increased influence on public engagement issues across the UK. By working together, the Research Councils are increasingly viewed as leaders in public engagement and their views were represented on high level stakeholder groups.



Above: Science in society has remained high on the Government's agenda. Crown copyright

Below: RCUK was also represented at the Queen's Science Day at Buckingham Palace in October 2006, which received BBC1 news coverage throughout the day. Crown copyright



These included:

- Office of Science and Innovation's Sciencewise Strategy Panel
- Department for Education and Skills's High Level STEM Strategy Group
- Department for Education and Skills's School Science Board
- Department for Constitutional Affairs's Cross-Government Public Engagement Group
- Public Engagement Strategy Group, with membership including the Royal Society, the Wellcome Trust, the British Association for the Advancement of Science and the National Museum of Science and Industry.

The Research Councils further exerted their influence in responding to a number of consultations and inquiries.

- Influencing the Future: A Levels
- Conservative Party STEM Taskforce: Science & Society
- Scottish Executive Science and Innovation Strategy
- House of Commons Education and Skills Committee inquiry into higher education
- House of Lords Science and Technology Committee inquiry on science in schools.

RCUK's science in society activities need to be evidence-based. Last year we funded a study, jointly with the Royal Society and the Wellcome Trust, to examine the factors affecting science communication by scientists to support the development of strategies to encourage scientists and engineers to communicate with stakeholders including the public, policymakers and media. An important finding was that of those surveyed, 74% reported having taken part in at least one science communication or public engagement activity in the past 12 months – an 18% increase in activity since 2000*. The biggest barrier to getting more engaged was the need to spend more time on research. 81% percent of those surveyed said that bringing more money into the department would encourage them to undertake more public engagement. These findings were valuable in developing the Beacons initiative.

LOOKING FORWARD

The RCUK Science in Society Unit have worked closely with the RCUK Energy Research Programme team to develop a public dialogue project which will increase accountability for RCUK decision-making by ensuring that public views are considered.

RCUK is also taking the lead on the next major UK survey of public attitudes to science and have just commissioned work to start on this study which will complete in March 2008. This study is the largest of its kind in the UK and follows up earlier surveys, therefore providing longitudinal data as well as an up-to-date analysis of the public's views.

*Benchmarked against the MORI/Wellcome Trust survey 'Role of Scientists in Public Debate'



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