



Monitoring the Sustainability of the Public Sector Research  
Establishments

Third Annual Return (2008)

Prepared for

Department for Innovation Universities and Skills

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## Executive Summary

The second monitoring exercise indicated improvements in several areas, most notably in the area of PSREs' relationships with their strategic partner. Further assessments (including this monitoring exercise) will continue to help individual PSREs and their strategic partners<sup>1</sup> identify the issues they need to address in terms of the nature of business, governance and management, financial management, income profile, physical infrastructure and staff and overall sustainability, to reach the long-term goal of achieving sustainability.

Returns were received from 36 PSREs. One of these entered the survey for the first time. Five organisations that had previously submitted returns are no longer participating as their status is no longer a PSRE.

Overall, the major improvements made between round 1 and round 2 have been sustained and the PSREs continue to report progress on sustainability. However, the progress since round 2 has been more gradual, reflecting the fact that there are less difficult issues to address and some of these represent long term problems.

The main overall concerns are now staff recruitment and retention (a growing concern) and income shortfalls (although the level of concern on this issue is dropping overall, it is still a major concern to many PSREs). There is also a note of caution in most PSRE reports, especially about the future, which reflects a general uncertainty about future science funding against a background of tightening public expenditure.

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<sup>1</sup> e.g. parent research council, government department, or major strategic customer (who account for more than 15% of the PSRE's income).

## 1 Introduction

DIUS has a public service agreement target on science and innovation (CSR07 PSA 4) to:

“Promote world class science and innovation in the UK”

Under the equivalent SR04 target, two annual monitoring exercises on Public Sector Research Establishment (PSRE) sustainability covering 2005 and 2006 were completed and published. The third monitoring exercise undertaken between August and September 2008 is the subject of this report.

The Science and Innovation Investment Framework (2004 - 2014) identified PSREs as important players in the national research system. They represent a world-class resource with Government funding of some £1.6 billion per annum and face some of the same challenges as universities in maintaining their capital base fit for their research missions, including:

- core funding shared across several sponsor bodies;
- stiff competition for research projects remunerated at less than full cost; and
- pressures to maintain volume of activity at the expense of medium term investment.

The report (The Science and Innovation Investment Framework) details a specific goal to “Ensure a financially sustainable level of activity across UK public sector research establishments by early in the 2010 decade, avoiding over-reliance on non-research incomes and under-investment in research infrastructure”. All PSREs should demonstrably recover full economic costs over the whole of their activity (taking one year with another). Where funders do not pay full economic costs, the PSRE should make a specific and conscious decision about whether it is justified to subsidise or jointly fund the activity, and whether they have unallocated funds available for this purpose before taking on the work. Public funds should not be used to subsidise work purely of benefit to the private sector.

The report “PSREs and the Science Base” (2004) published the recommendations of the Research Council Institute and Public Sector Research Establishment Sustainability Study (RIPSS) Steering Group. These included a number of recommendations concerning infrastructure and asset maintenance, full economic costing and the strategic role of sponsoring departments. DIUS’ predecessor drafted an implementation plan to ensure that these recommendations are carried out and has commissioned annual monitoring exercises, of which this will be the third, to monitor progress towards these goals. DIUS has also established a forum with sponsor departments -

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Research Establishment Sustainability UK (RES UK) - to discuss Research Establishment sustainability and issues arising from the implementation of full economic costing.

Thirty six PSREs took part in this survey one of which had not previously been involved.

## 2 Sustainability definition and what it means

The following meaning and definition of sustainability was described in previous reports and used in the guidelines to this, the third survey of PSRE sustainability.

*“Sustainability is not the same as survival, and nor is it just a financial issue. Sustainability for an organisation means that it can continue to perform long term at whatever level is appropriate – in some cases at the highest level in the world. Two useful informal definitions are:*

- *“operating today in a way which does not inhibit the organisation’s ability to do so tomorrow” and*
- *“managing key resources so as to at least maintain the current capacity of the organisation/PSRE, or the capacity needed in the future to respond to changing demands”.*

*To do this, organisations need to be able to finance their long run costs in such a way that they are not creating liabilities for future generations. This means they need to attract income; to command the confidence of their funders and stakeholders; to create enough financial headroom for investment; to make hard decisions about their portfolio of activities (stopping, as well as starting, activities); to take account of long term implications and whole life cycle costs; and to manage the risks that all organisations face.”*

The role of a PSRE is associated with a requirement to deliver a strategic research capability required by the Government that is not readily provided by the market. The delivery of this role is often associated with the need for very expensive capital equipment and for specialised scientific expertise of outstanding quality. The delivery of a PSRE remit and the assessment of its sustainability are seldom straightforward in a business sense.

Sustainability is much broader than simple financial viability. Most PSREs depend on their strategic partner for the majority of their revenue funding and for funding the major investments in the sites and specialised facilities that are needed. The assessment needs to take account of the uncertain and risky nature of the research and of the strategic alignment of the PSRE research with the current and future policy commitments of its sponsoring department or strategic partner of the PSRE. Skilled scientists and equipment are needed to deliver research and the quality and the capabilities of both are integral to sustainability.

### 3 The methodology for the third survey

As in the second survey, PSREs were asked to make an assessment of their sustainability, against four categories:

- Strategic Profile,
- Income Profile,
- Physical Infrastructure, and
- Staff.

Additionally, PSREs were asked to provide an assessment of their 'Current Overall' position and to assess their 'Forward Look' taking a three to five year time horizon. The PSREs were asked to report their assessments using a "traffic light" system as in the previous studies.

GREEN	GOOD: Achieved or on track. Low risk to overall delivery
AMBER-GREEN	MIXED: Broadly on track. May need some additional action. Medium risk to overall delivery
AMBER-RED	PROBLEMATIC: Going off track. Significant corrective action needed. High risk to overall delivery
RED	HIGHLY PROBLEMATIC: Not achieved or clearly off track. Substantial and/or urgent corrective action needed. Very high risk to overall delivery

The PSREs submitted their returns following discussion and review of the assessments with their strategic partner. At the start of the survey, DIUS requested that the relevant Chief Scientific Advisers or Chief Executives participate and agree the returns with their PSREs.

In a small number of returns DIUS or Quotec, the consultants managing the survey on behalf of DIUS, have discussed the assessments with the PSREs. The assessments used in this report are the agreed assessments following discussion with the PSREs and/or their strategic partners.

## 4 Findings from the Survey

The survey was sent to 36 PSREs and returns were received from all. One of these (Diamond) entered the survey for the first time. Five organisations that had previously submitted returns are no longer participating as they do no regard their status as any longer being a PSRE.

- Institute of Grassland and Environmental Research now part of Aberystwyth University
- Roslin Institute now part of Edinburgh University
- Rowett Research Institute now part of Aberdeen University
- Scottish Agricultural College
- Scottish Agricultural Science Agency

Overall, the major improvements made between round 1 and round 2 have been sustained and the PSREs continue to report progress on sustainability. However, the progress since round 2 has been more gradual, reflecting the fact that there are less difficult issues to address and some of these represent long term problems.

Slightly less than a fifth of the PSREs reported their overall current status as green, a slight increase compared to the previous round. None reported their current status as red. Across all of the six areas of the assessments there is a small increase in the number of green assessments to just over a quarter. The numbers of amber green and amber red assessments are very similar and there has been a decrease in the small number of red assessments.

Only a few PSREs have real concerns in strategic profile. This reflects the increased dialogue with strategic partners which was brought about partly by this sustainability survey in prior years.

The main overall concerns are now staff recruitment and retention (a growing concern) and income shortfalls (although the level of concern on this issue is dropping overall, it is still a big concern to many PSREs). For some PSREs the Comprehensive Spending Review has not yet resulted in an agreed budget, as it is still being negotiated with their strategic partner. There is also a note of caution in most PSRE reports (especially about the future), which reflects a general uncertainty about future science funding against a background of tightening public expenditure.

### 4.1 Strategic Profile

To reach an assessment of its strategic profile each PSRE was asked to consider

- Strategic Direction - fit of PSRE capabilities with the requirements of its strategic partner

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- Governance Issues - relationship between the PSRE and its strategic partners and how that is managed
  - Strategic Management Issues - the systems and procedures the PSRE has to manage the key elements that determine sustainability
  - Progress - overall progress since the last review.

Overall the PSREs reported little change in their assessment of strategic profile since the last survey. The returns show ongoing work to align PSRE capabilities and strategies with the requirements of their strategic partners, and a strong dialogue between PSREs and their strategic partners in nearly all PSREs, building on the dialogue seen in the 2006 survey.

Uncertainty due to a review of strategy or potential change of funding arrangements by their strategic partners is generally reflected in an amber green rating by the PSRE. A number of PSREs report concerns about the funding of major capital expenditure and estate renewal. As a result of earlier strategic reviews there are examples of significant restructuring in some PSREs. Three PSREs involved in the previous studies have been assimilated into neighbouring universities. A small number report major organisational restructuring associated with a reduction of the number of operating sites, and others report planning for restructuring in the medium term.

Some strategic partners have quite far reaching reviews of governance underway, and in some cases uncertainty about the outcome of these is also reflected in the assessment of the PSRE. DEFRA has appointed corporate owners and corporate customers for the PSREs that it sponsors, with the objective of delivering better strategic engagement.

Progress has been maintained in developing and implementing high level management systems and most PSREs report progress in this area.

Reviews by strategic partners of policy and funding in areas of interest to PSREs are to be expected periodically. These will raise the level of uncertainty within the PSRE whilst the review is taking place.

## 4.2 Income Profile

More than half the PSREs have concerns (Amber green) on their income – reflecting worries about inflation (particularly pay, utility and building costs) and sources of income – especially where core income is fixed or declining. Several PSREs have major short-term difficulties with their income. This concern over income is often reflected into their concern regarding the forward look for the PSRE. Although many have received increased funding from their strategic partner since the last round, several others have received a level settlement with little or no provision for inflation.

In general their strategies for coping with these concerns are relatively high risk – involving strong growth in third party income. Several PSREs are planning a substantial increase in income from business and non core sources. These targets might be hard to achieve in the developing business climate, and it is not clear that those PSREs have adequate plans for alternative action if these income streams do not materialise. In several PSREs the element of core funding has been reduced and replaced by programme funding which may be let by competition, placing further pressure on income.

Pay and utility cost inflation is expected to increase and is causing concern in many PSREs, especially where income levels from strategic partners are fixed. It is possible that this pressure may lessen as the general economy slows further. PSREs with building programmes report very high building cost inflation.

Despite a more gloomy response on income since the last round, most PSREs are reporting an increase in overall income and in research income since the last return in many cases by more than 10%.

Many PSREs have been successful at increasing income from other sources, principally public sector e.g. other government departments, Research Councils or European Framework programmes. It is noteworthy that, compared to the HEI sector, where there is now a history of entrepreneurial universities, PSREs tend to receive a very high proportion of their funding from one source (strategic partner) and don't generally have the same flexibility or skills developed to diversify funding.

All PSREs report that decisions to undertake work funded at less than 100% FEC is based on a strategic review and generally on the basis that the proposed work is highly complementary to the core project work in place. The benefits of charging at FEC are gradually appearing and there are no reports of competition for UK contracts being awarded at less than FEC.

EU funding continues to be at less than FEC across the PSREs and this can be a problem where other funding cannot be found on a consistent basis to augment it. Some PSREs have become more selective in participating in EU projects.

### **4.3 Physical Infrastructure**

PSRE reports vary widely, but overall the picture, whilst mixed, is not as bad as it was - when the sustainability survey work started. Progress since the last round has however been limited, with around a fifth of PSREs reporting increased problems whilst the same number have improved.

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Not all PSREs have adequate plans in place for dealing with their building and equipment assets, though good progress across the PSRES can be seen since the first RIPSS report.

Maintenance spend is typically around 3-4% but with many at 1-2% or less, including several of those which have moved into new buildings recently. A small number are spending considerably more than 5% (largely dealing with a backlog of maintenance). Overall, maintenance spend has stayed broadly the same across the sample of PSREs that reported expenditure for prior years in rounds 2 and 3. Similarly the spend on new capital equipment is broadly the same.

Spend on new buildings, plant and machinery has grown slowly since the last round and is predicted to grow slightly next year (ignoring the major expenditure at LMB).

Most PSREs report that all their estate is fit for purpose.

Around 10% of PSREs continue to have major concerns regarding their buildings and other PSREs are predicting problems ahead.

#### **4.4 Staff**

The returns present a mixed picture concerning staffing issues, with a number expressing strong concerns.

More concerns have been expressed concerning staffing than in the previous round, and overall the ratings on this criterion have slipped slightly. Although there will always be challenges in staff recruitment and retention, the output and sustainability of PSREs is very directly linked to the quality of the staff. The returns indicate many institutions are attaching greater strategic importance to staff issues and indicate substantial investment across the sector in policies for recruitment, retention and succession planning and in associated HR systems. The staffing issues of specific PSREs depend on geographical location, the research focus of the establishment, the prestige of the institution and, in some cases, constraints on the salary and reward structure set by the strategic partner.

There are some very specific disciplines and skills in short supply:

- animal technicians,
- informatics specialists,
- mathematical modelling,
- oceanography
- immunology

- analysts and software systems specialists
- engineering and technical support

Additionally in some cases institutions are struggling to provide adequate salaries to attract staff in a wider range of disciplines. Particular difficulties are reported where PSREs are co-located with university centres or departments which have greater flexibility in remuneration policy and are generally offering higher salaries. In specific areas of the biosciences, institutions are competing with charities or universities that can offer significantly more attractive remuneration packages. Recruitment of senior research staff, especially those with an international profile, was reported as challenging in more than a fifth of returns.

As the proportion of core funding decreases and is replaced by more programme or project specific funding, some PSREs are recruiting on fixed term contracts to manage their staff liabilities. However, while providing flexibility and minimising financial liabilities, the increased proportion of staff on fixed term may make it more difficult to retain the balance of skills and capabilities that they consider essential to their core capabilities.

Many institutions report using a wide range of discretionary payments in order to recruit skills in short supply or senior staff of the required profile.

The returns requested information on the percentage of staff over 55. Although fixed retirement age is disappearing most employees are expected to retire between 60 and 65, especially where there has been a final salary related pension scheme in place. Most PSREs report a staff profile with between 10 and 20% of staff in the 55+ age group. 20% is in line with the proportion of working age population between 55 and 65, though 10% of staff over 55 is more typical in organisations where most staff are retiring at 60 (due to pensions being payable at that age). Most PSREs seem to be aware of the issues caused by a high age profile of their staff.

These include:

- Impact on pension scheme payments/affordability
- PSREs facing future downsizing may find it easier to manage as more people retire
- PSREs in growing/important areas face higher pressure finding suitable staff
- PSREs with high age profile can appear traditional – which may add to difficulties of hiring staff

- Older staff are sometimes considered less worthy of training and can be less adaptable, which may be pertinent for changing roles in PSREs e.g. where new commercial income streams need to be generated.
- Older staff can be more expensive to make redundant.

PSREs report various staff turnover figures, though most are in the range 5-8% and this level is not a concern for most PSREs. Some turnover is clearly good for bringing in fresh ideas and new experience; also the exiting staff may well be taking useful skills into the wider economy. Assessing the right level of staff turnover is difficult and an overall figure might hide imbalances within an organisation (for example a high turnover of senior managers is likely to be more of a problem than a high turnover of junior staff). Ideally PSREs will have a strategy in place to monitor and manage staff experience profile and turnover by experience level. Some PSREs have a staff strategy which takes account of their age profile.

## 4.5 Overall Current Assessment

There are a range of individual problems being faced by PSREs and less than 10% of PSREs are green in all categories of the detailed assessment. It is not therefore surprising that only around 20% of PSREs are able to report a green overall assessment.

The majority of PSREs report an overall assessment of amber-green, highlighting some concerns, but mostly reflecting some reasonable risk with their business plans.

A small number of PSREs are giving cause for greater concern and have been reported as amber-red overall.

## 4.6 Forward Look Assessment

Many PSREs are predicting that the future will be worse than the present, with staff issues and cost inflation against a fixed budget being areas of most concern. Some are embarking on ambitious plans to develop new income streams – most of which are acknowledged as risky/uncertain and some are concerned about the availability of capital for new buildings. Some are concerned that strategic reviews and changes in strategic partner priorities will adversely affect them, with a few reporting uncertainty over governance arrangements. Some have major concerns that they can foresee and which they are flagging now in the hope that these concerns can be forestalled.