Notes of the Solid-Earth Geophysics Forum
Royal Astronomical Society
Wednesday 6th January 2016, 2 p.m.

In attendance

Andrew Curtis (Edinburgh), Martin Barstow (Leicester), Jonathan Bull (Southampton), Nigel Cassidy (Keele), James Hammond (Imperial), Andrew Hooper (Leeds), Juliet Biggs (Bristol), Randell Stephenson (Aberdeen), Nic Bilham (GeolSoc), Richard Hobbs (Durham), Jon Bull (Southampton), Ian Bastow (Imperial), Richard England (Leicester), Jessica Johnson (Anglia), David Al-Attar (Cambridge), Tim Minshull (Southampton), Lars Stixrude (Southampton), Robert Massey (RAS), Sylvia Hales (RAS), Sheila Peacock (BGA), Mike Galsworthy (Scientists4EU), Duncan Wingham (NERC).

Apologies

Peter Clarke (Newcastle), Huw Davies (Cardiff), Steve Jones (Birmingham), Geoffrey Petts (British Hydrological Society), David Cornwell (Aberdeen), Christine Peirce (Durham).

1. **Introduction and Welcome from the Chair, Sheila Peacock (BGA)**

All attendees introduced themselves and Sheila Peacock explained that the Chatham House rule applied, so comments at the meeting should not be attributed to individuals.

Update from the Natural Environment Research Council (NERC), Prof Duncan Wingham (CEO of NERC)

Prof Wingham gave an update on NERC matters, particularly on the management of grants and the impact of the Comprehensive Spending Review.

- Demand management of research grants

NERC is implementing new measures designed to raise the success rates for discovery science standard grants. The aim is to reduce the number of and size of applications from research organisations, as well as continuing to ensure research excellence, efficiency and value for money from the taxpayer.

- Comprehensive Spending Review

The Comprehensive Spending Review led to a much better settlement than anyone had expected, with the overall science resource budget maintained in real terms until 2021, so depending on the level of inflation we could see a cash increase of 12% over the same period. This is also far better than the outcome for most other (unprotected) government departments.

Although the headline announcements have been made, the allocations to the research councils are not expected until mid- to late February. A significant proportion of the science budget is also now designated for the Global Challenges Fund, so has to be spent on projects that are compatible with Official Development Assistance (ODA) rules.

Once the ODA spend is accounted for, the research councils are likely to receive a flat cash resource settlement for the next five years[1], so significant budget pressures remain. The ODA funds will also continue to count towards the commitment to maintaining the overseas aid budget at 0.7% of GDP.

ODA rules in practice also mean that projects funded through this route must demonstrate that the research has as a primary (although not sole) purpose of benefitting the developing world (as defined by the OECD; see e.g. http://www.oecd.org/dac/stats/documentupload/DAC%20List%20of%20ODA%20Recipients%202014%20final.pdf for a list of eligible countries); and that it demonstrates intent (that is, that the conduct of the research answers to the purpose).

To put this in context, currently some 6% of NERC funded projects are based in the tropics, whereas some 50 % is sited in the UK. Over the course of the spending review period, the funds allocated for ODA projects are likely to rise to 16-17% of the science budget. At the moment it is not clear whether BIS, the RCs, the proposed RUK, or the Department for International Development (DfID) will be the lead body with accountability for these resources. The CSR also included a pledge to double the budget for Newton Fund projects.

There are some examples of ODA compatible work in geophysics, for example the British Geological Survey (BGS) has contracts with Liberia and the World Bank.

After the allocations are complete, NERC may have up to £20m of uncommitted capital each year. The geophysics community needs to be significantly more ambitious about using capital on this scale.

- Nurse Review

In the CSR announcement the Chancellor indicated that the Government would implement the recommendations of the Nurse Review. This will likely see the breakup of the Higher Education Funding Council for England (HEFCE), though the 'dual support' system for research funding will be retained.

A key pledge in the review is to create a new non-departmental public body above the research councils. Research UK (RUK) will likely have greater powers than RCUK, and a significant research budget of its own for interdisciplinary projects, perhaps as a result further reducing the controllable budgets for the research councils.

Implementing the Nurse recommendations will though take 2-3 years, as although research councils can be changed through secondary legislation (statutory instruments from government), abolishing HEFCE will need primary legislation and the approval of Parliament.

- Governance of NERC research centres

[1] Most research councils received close to flat cash for resources. See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/505308/bis-16-160-allocation-science-research-funding-2016-17-2019-20.pdf and the RAS response to this at https://www.ras.org.uk/news-and-press/news-archive/264-news-2016/2796-research-council-budget-allocations

The view of the NERC executive is that NOC and BGS would be better served as independent charities rather than being integral to the research council. BGS activity is hindered by the current relationship and its management would prefer to see government funding related directly to the services it provides, rather than having NERC as an intermediary. BGS work is also not necessarily a high priority for NERC as a whole, and NERC would prefer to see BGS carrying the risk and costs of issuing fracking licenses.

Q: Will NERC have the resources to support the new larger capital budget?

DW: This has constrained the work of BGS in the past, when for example a capital bid for the Energy Security & Innovation Observing System for the Subsurface (ESIOS) was reduced from £80m to £31m, as NERC lacked the resources to support a higher commitment.

The government's science capital roadmap (see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/383439/14-1248-science-capital-consultation-response.pdf) sets out a commitment to grow capital spending until 2020-21. This offers a significant opportunity to have strategic infrastructure planning, with fewer, but larger and better-resourced organisations.

Q. Will Research Councils be able to make a case for moderation so the timescale is a little more reasonable and similar to the timescale we might be spending on the normal grant process?

DW. Research Councils have made clear the difficulty of trying to spend large sums of money quickly.

Q. Do you feel that there is a particular opportunity to move some areas of science from one Research Council to another?

DW. No. There is no strong case to start moving science.

3. UK Science and the European Union, Mike Galsworthy, Scientists4EU

Mike Galsworthy, Programme Director for Scientists4EU (see http://scientistsforeu.uk), set out the role of his organisation and the issues for science in the coming referendum on UK membership of the European Union. SfEU argues that the EU offers clear benefits for science and that this case needs to be made to the wider public.

- 13% of the EU budget is invested in research and innovation
- Horizon 2020 has a budget of €80 billon (£65 billion) for this area, an increase of 30% compared with the previous Framework 7.
- The UK is very successful at accessing investment and collaborations via the EU – on many measures we are more successful than any other member state.
- With the domestic science budget at best frozen in real terms, the EU has supported a significant increase in investment in UK research.

- When Switzerland restricted freedom of movement to and from EU member states following a referendum, it lost 40% of related grant funding.

- In the event of #Brexit, there is no guarantee that the £10 billion EU subscription would be invested instead in the NHS and in science.

- The science community needs to voice its concerns through the media and through its networks. We cannot afford to take the referendum result for granted.

- SfEU would also like to see the 'leave' campaign put its case and set out the impact of UK withdrawal on science.

4. Immigration, equality and diversity (Sheila Peacock, BGS)

SP drew the attention of the Forum to the planned review of Tier 2 visa rules. The Government is expected to tighten the criteria, making it harder to recruit scientists from outside to EU to roles in both industry and academia.

The existing regime already creates the impression that the UK does not welcome foreign workers, deterring large companies from investing here. If visa applications become more difficult, particularly in the event of a UK withdrawal from the EU, science organisations in the public and private sector will struggle to recruit the people they need.

SP noted that immigrants in highly skilled roles in areas like science are net contributors to the UK economy. The scientific community therefore need to communicate their concerns to the government and the public.

5. BIS Green Paper on excellence in HE teaching.

The Green Paper sets out proposals to change the higher education landscape, and invited contributions to a consultation that closed in mid-January. The Geological Society responded, as did the Institute of Physics, and the RAS commented on both of those pieces of evidence. With limited resources, the Society did not put in evidence of its own on this occasion.

Some of the proposals in the Green Paper are:

- Introduce a Teaching Excellence Framework that aims to deliver better value for money for students, employers and taxpayers
- Increase access and success in higher education participation for those from disadvantaged and under-represented groups
- Create a new single gateway for entry and create a common system for all providers
- Establish a new Office for Students to promote the student interest and ensure value for money and to reduce the regulatory burden on the sector.

The Government aims to drive universities to show their strengths in teaching, and to demonstrate excellence. The Forum though has concerns about the new approach, including its impact on STEM courses. For example, when academics are absent and pursuing research fieldwork during term time (including sea time and austral summer fieldwork in Antarctica) their courses might be rated less favourably in a metric of "availability to students".

6. AOB

The Chair thanked everyone for attending and agreed that there should be another meeting in the second half of the year.