

Society of Biology

Annex A

Consultation questions and response form

1. Responses to the consultation should be made by completing the form below, and returning it by e-mail by **midday on Wednesday 16 December 2009**.
2. All responses should be e-mailed to ref@hefce.ac.uk. **In addition:**
 - a. Responses from institutions in Scotland should be **copied to** Pauline Jones, Scottish Funding Council, e-mail pjones@sfc.ac.uk.
 - b. Responses from institutions in Wales should be **copied to** Linda Tiller, Higher Education Funding Council for Wales, e-mail linda.tiller@hefcw.ac.uk.
 - c. Responses from institutions in Northern Ireland should be **copied to** the Department for Employment and Learning, e-mail research.branch@delni.gov.uk.
3. We will publish an analysis of responses to the consultation. Additionally, all responses may be disclosed on request, under the terms of the Freedom of Information Act. The Act gives a public right of access to any information held by a public authority, in this case HEFCE. This includes information provided in response to a consultation. We have a responsibility to decide whether any responses, including information about your identity, should be made public or treated as confidential. We can refuse to disclose information only in exceptional circumstances. This means responses to this consultation are unlikely to be treated as confidential except in very particular circumstances. Further information about the Act is available at www.informationcommissioner.gov.uk. Equivalent legislation exists in Scotland.

Respondent's details

Are you responding: (Delete one)	On behalf of an organisation
Name of responding organisation/individual	Society of Biology
Type of organisation (Delete those that are not applicable)	Academic association or learned society Professional body Charity/third sector organisation
Contact name	Dr Laura Bellingan
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Consultation questions

(Boxes for responses can be expanded to the desired length.)

Consultation question 1: Do you agree with the proposed key features of the REF? If not, explain why.

The Society of Biology, the unifying organisation representing a large constituency of bioscience researchers and users of research, appreciates the opportunity to respond to HEFCE's proposals. We welcome the fact that HEFCE has listened to responses to its previous consultation and that it now proposes to use publication metrics to inform -- rather than drive -- assessment of excellence. The use of citation analysis is highly developed in many of the life and biomedical sciences and its value is well-recognised. Yet even in this field, the results of such analysis should not be used uncritically and we fully endorse peer review processes -- informed by a wide range of performance indicators -- as the best means of assessing excellence.

We hope that this evidence of HEFCE's responsiveness to the views of the overwhelming majority of the research community will continue in its reaction to comments made in this consultation. In particular, we hope that HEFCE will recognise that its proposals relating to assessment of 'impact' will not enable sound, evidence-based judgements and that more analysis and trials are required before this can become a sufficiently robust component of the REF to justify the proposed 25% weighting.

We also argue below that the assessment of 'research environment', which we welcome in principle, should be based on several categories of quantitative and verifiable retrospective information and not on rhetorical statements on the vitality of the current research environment or vague claims about future arrangements for support of research.

We also comment below on concerns regarding some aspirations of the timetable (see Q12), and note that we are not convinced that the difficult issue of consistency between panels (which was not solved during the RAE process) will be fully solved by these proposals either. We would welcome a solution to this issue.

Consultation question 2: What comments do you have on the proposed approach to assessing outputs? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following proposals:

- that institutions should select research staff and outputs to be assessed
- for the categories of staff eligible for selection, and how they are defined
- for encouraging institutions to submit – and for assessing – all types of high-quality research outputs including applied and translational research
- for the use of citation information to inform the review of outputs in appropriate UOAs (including the range of appropriate UOAs, the type of citation information that should be

provided to panels as outlined in Annex C, and the flexibility panels should have in using the information)

and on the following options:

- whether there should be a maximum of three or four outputs submitted per researcher
- whether certain types of output should be 'double weighted' and if so, how these could be defined.

We support the position established at previous RAEs that the process is selective, not comprehensive, and agree that institutions should select research staff and outputs to be assessed.

One group of researchers who previously fell into the 'C' category but are completely excluded under current proposals, is research-active retired and emeritus staff, who are likely to form quite a large category in 2012/3 based on the demographics of academic recruitment in the 1970s. Such individuals may have made a significant contribution to outputs, impact and environment *during the assessment period* and there is no difficulty in establishing the employment status or research base of such researchers during the period. The exclusion of this group is not explicitly acknowledged or justified in the proposals.

We welcome proposals outlined in paragraph 35 to encourage submissions from researchers when circumstances preclude inclusion of the maximum number of outputs.

We are puzzled by the definition of 'significance' in para. 39 which implies that those outside academe 'use' research, while those within academe are only 'intellectually influenced' by it. Across the biological sciences, academic researchers enthusiastically 'use' and 'apply' research that describes new techniques or methods; in many cases such publications do not have 'intellectual influence' -- they simply make it possible to perform entirely new kinds of measurement or analysis, that cumulatively have enormous impact. The distinction between 'influence' and 'use' seems entirely false and arbitrary.

We believe that the definitions of output quality levels (para. 41) are just as ambiguous and vague as those offered in previous RAEs, and just as likely to lead to inconsistency between panels. If the Funding Councils wish to ensure that only a defined % of outputs submitted are awarded a specific rating (either overall, or within an individual Unit of Assessment), then they should state this openly, and define the % splits of levels in advance, while publishing the evidence base for their judgements, using international comparators (cf. para. 99c).

We welcome the use of citation information to inform rather than drive the assessment and are content with plans to commission suitable databases to supply this information. However we are concerned that the normalisation of citation information within a unit of activity might produce anomalies or disadvantage. Given the greater breadth of many of the proposed REF units of assessment (compared to RAE2008), it is inevitable that they will be very diverse in sub-specialities. Even former UOA 14, which is proposed to continue unchanged into the REF, ranges from molecular and cell biology to ecology and taxonomy which differ vastly in citation practice and in the time for impact on the field to be demonstrated by accumulation of citations. It is essential that the normalization is sufficiently refined to make such differentiation in a way that

does not disadvantage small specialisms; the limited data in Annex C do not provide this assurance. We wish to seek clarification that the sub-fields for normalization within each Unit will be defined by appropriate experts and that assessment panels will be well briefed about the characteristics and potential anomalies of their area.

Regarding the number of outputs per researcher we recognise that there is merit in confining the number of submissions to 3 in that it will reduce the assessment burden. However, in our fields, most active researchers will produce >10 outputs in an assessment period, and there is a view that a reduction of assessed outputs to 3 may not give recognition to the quantity of high-quality outputs produced. Furthermore, there is the likelihood of an unanticipated impact on publication behaviour, with established researchers incentivised to combine the work of several team-members into single 'super' publications, which will not give appropriate recognition to the individual contributions of team members and act in particular to disadvantage PhD students and early career scientists. On balance, we favour retaining 4 outputs and managing panel workload by appropriate statistical sampling.

Regarding the 'double weighting' of some submissions we recognise that some studies in the fields of ecology, palaeontology and systematics (for example) generate very large-scale publications; if there is to be recognition of this through 'double-weighting', very clear guidance will be necessary.

Consultation question 3: What comments do you have on the proposed approach to assessing impact? If you disagree with any of these proposals please explain why.

Comments are especially welcomed on the following:

- how we propose to address the key challenges of time lags and attribution
- the type of evidence to be submitted, in the form of case studies and an impact statement supported by indicators (including comments on the initial template for case studies and menu of indicators at Annex D)
- the criteria for assessing impact and the definition of levels for the impact sub-profile
- the role of research users in assessing impact.

We recognise that 'impact', as defined in the document, is a desirable outcome from the totality of an HEI's research and that it is reasonable to seek to assess and reward it.

Our concerns are i) that the proposal gives this element of assessment considerable prominence in the absence of any validation of the proposed methodology and in the face of abundant research which demonstrates the difficulty of this task, ii) that there is no evidence for alignment between Funding Councils and Research Councils in their approach to this issue, iii) that there is inadequate recognition of how researcher mobility impacts on the issue, iv) that the proposal demands quantities of textual material to compensate for the inadequacy of quantitative data, imposing a heavy burden while revealing the absence of well-established and robust methods for quantifying 'impact', and v) that the timetable for piloting the proposed methodology is inadequate to refine it effectively before implementation.

We welcome the recognition that there are significant and variable time lags before the impact of some research can be recognised, but we consider that the model of this outlined in paragraphs 67 and 68 is flawed and unrealistic. The model wishes to reward impacts that have ‘become evident during the REF assessment period’ (para. 62) and accepts that the original research leading to this impact may have occurred earlier, but it also requires that assessment ‘will focus on the submitted unit’s contribution to...impacts *through activity within the unit during the assessment period*’ (para. 67) (our italics). This does not appear to acknowledge that there can be a significant time lag between the ‘activity’ required to generate impact, and the ‘evidence of impact’. In practice, original research over a period of years can lead to a conception of how it might be applied; the next stage, involving proof of concept studies, protecting IP, developing a business plan, seeking early-stage finance etc. could take several years, and the ‘evidence of impact’ in terms of products or profits might involve further delays. The range of BBSRC funding available for different stages in this development process is evidence of its complexity. Thus it is unlikely that, within a single assessment period, a unit of assessment could claim evidence of impact and also demonstrate that its activity during the period led to that impact.

Researcher mobility complicates the picture further. Initial research in one institution, could be followed by a move to another institution, where development work might be undertaken, but the evidence of impact might not accrue before the researcher had moved to another institution. If necessary, we can provide case studies that substantiate our case.

Furthermore we do not believe that the second sentence of para. 68 is clear. ‘We do not envisage that a unit could claim credit for impact...without a demonstrable contribution by the unit to that exploitation’ which would appear to discourage researchers and Departments from e.g. placing their work in the hands of their institution’s knowledge transfer professionals, or selling exploitable know-how to industrial concerns that are well-placed to exploit it, or commissioning independent professionals to undertake exploitation of their basic research. It is unlikely that this is the intention of the proposal, but the statements in the consultation document are obscure. We also find it difficult to understand the rationale for the statement (para 71) ‘It should not be possible to achieve the highest score by concentrating...part of the territory’, when this may be precisely the strategy required to achieve significant impact.

We accept that ‘Case studies’ are currently probably the only method available for assessing impact, but they are difficult to evaluate systematically, revealing the primitive state of ‘impact assessment’ in this area. They are also burdensome to produce, and we suggest that the requirement on a unit should be to describe no more than 1 case study per 10 research-active staff. We also feel that there is an opportunity to develop a more coherent and less burdensome approach by working in partnership with Research Councils to require HEIs to demonstrate how they have achieved impact from the public research funding they receive; we find it surprising that there is no mention in HEFCE’s proposals of co-ordination or alignment with RCs.

In Annex D we note that the description of possible indicators for the delivery of highly skilled people focuses too narrowly on industry. We do not feel that this is in the intended spirit of the framework and would suggest that including movement of staff to industry, public service, policy, education etc would be helpful.

We are concerned that the timetable for the completion of pilots and production of guidelines in less than one year is unrealistic or suggests that only a very superficial analysis will be possible.

We would welcome clarification of the role of 'associate users' and an indication of how much weight their evidence might carry with assessing panels.

Consultation question 4: Do you have any comments on the proposed approach to assessing research environment?

We feel strongly that 'environment' should not be assessed on rhetoric but on measurable activities that reflect past performance, in line with the remainder of the assessment. We are opposed to any elements that appear to accept as evidence vague or unverifiable statements of current practice or future plans.

We suggest that 'research environment' should be assessed on the basis of objective and quantitative data, and that wherever possible this should use auditable data already collected and reported by HEIs.

We suggest the use of the following elements which make major contributions to 'research environment':

- a) Capital expenditure on research buildings and equipment from university general funds (Investment in and sustainability of research infrastructure)
- b) External research income
- c) Sustainable age structure of research-active staff and evidence of appropriate equality and diversity measures (Evidence of investment in new staff / data on new appointees and on progression of Fellows and other young academics)
- d) Numbers and completion rates for research students
- e) Indicators of research-based esteem and public service (as used in RAE2008).

The net 'environment profile' could be readily achieved by summing profiles of these five independent elements.

A pilot for assessing the research environment could run in parallel with the impact pilot.

Consultation question 5: Do you agree with our proposals for combining and weighting the output, impact and environment sub-profiles? If not please propose an alternative and explain why this is preferable.

In light of our concerns about the generation of good measures of impact, we oppose the assignment of a 25% weighting to this category. We question the justification for such a substantial weighting in view of the acknowledged uncertainties and we urge that it be set at a lower level for the upcoming REF in which it will be being piloted. On the basis of the novelty of this element, the well-recognised difficulty of evaluation of 'impact' and the unproven nature of the proposed methodology we believe that the 'impact' weighting should be 10-15% at most.

On the proviso that it is based on measurable elements such as those outlined in response to Q4 above, we recommend that the 'environment' element should be increased to carry a 25% weighting by summing assessments of the separate elements defined above. These elements provide quantitative and relevant information in a way that imposes little additional reporting burden, and their robustness should be recognised by carrying a significant weighting in the overall assessment.

Consultation question 6: What comments do you have on the panel configuration proposed at Annex E? Where suggesting alternative options for specific UOAs, please provide the reasons for this.

We are concerned at the placing of Neuroscience, an experimental science dealing with a wide range of species, in a portmanteau medically-oriented unit alongside psychology and clinical psychiatry. We feel that Psychology is a large and diverse discipline which should stand alone, that Psychiatry should be included within a clinical unit and that Neuroscience should be included in 'Biological Sciences'.

We have a concern about the assessment of Environmental Biology within the proposed structure, based on experience at RAE2008. At that time, environmental biologists were returned to any of UOAs 14, 16, 17 and 32 which were dominated, respectively, by laboratory-based bioscientists, agricultural scientists, physical (earth) scientists and social scientists. There is a belief in the ecology and environmental biology community that none of these Units had appropriate expertise in their area and concern that this will be repeated in the REF, given the continuance of all those UOAs into the proposed REF unit structure.

We are not convinced that Pre-clinical, Human Biological and Sports Science represent a well-defined and distinctive area of work.

We suggest that the very large proposed panel covering a range of health-related professions should be split into two panels covering 'Dentistry, Nursing and Pharmacy' and 'Allied Health Professions'.

Consultation question 7: Do you agree with the proposed approach to ensuring consistency between panels?

We welcome the aspiration to ensure greater consistency across panels but are not convinced that the proposed methods will ensure this. There is widespread belief in our community that there were differences in approach and standard between UOAs 14, 15 and 16 at RAE2008, with UoA 14 seen as having been more rigorous, or more prescriptive and narrow-minded, depending on point of view.

We do not believe that practice is so variable across the disciplines represented in the units within proposed main panel A as to justify the units taking different approaches to the areas described in para 101. There is considerable scope for judgement in how an HEI plans its

submission across this range of units and we do not think this should be determined by perceptions about different practices within the cognate units about how environment or impact will be assessed, how citation data will be used, or what information should be included in 'short statements'. We are concerned about anecdotal evidence that HEIs were deterred from submitting high-quality collaborative work by fear about how these statements would be interpreted, which in turn might act to deter inter-disciplinary or international research collaboration.

The proposals on international bench-marking and international participation do not inspire any more confidence than the arrangements made for RAE2008.

In the interests of clarity we suggest that whether the final decision on rating rests with panels or with UoAs is made explicit.

Consultation question 8: Do you have any suggested additions or amendments to the list of nominating bodies? (If suggesting additional bodies, please provide their names and addresses and indicate how they are qualified to make nominations.)

We would like to see the Society of Biology included in the list. The Society was formed by the unification of the Institute of Biology and the Biosciences Federation (both are listed but should now be removed).

Silsoe Research Institute has now closed.

The Roslin Institute is now within the University of Edinburgh.

The inclusion of more industrial users of science would be beneficial.

Consultation question 9: Do you agree that our proposed approach will ensure that interdisciplinary research is assessed on an equal footing with other types of research? Are there further measures we should consider to ensure that this is the case and that our approach is well understood?

We recommend that it should be possible to flag parts of submissions to more than one UOA at the discretion of the submitting institution in order to ask for appropriate oversight.

Consultation question 10: Do you agree that our proposals for encouraging and supporting researcher mobility will have a positive effect; and are there other measures that should be taken within the REF to this end?

We welcome moves to support and encourage researcher mobility. We note that implications are broader than movement of researchers between industry and academia.

Consultation question 11: Are there any further ways in which we could improve the measures to promote equalities and diversity?

We welcome the recognition that measures to promote equality and diversity are an important component of this process and that central guidance on these matters could be helpful. Given that data will be collected and that the pilot bibliometrics exercise will also generate data we would welcome discussion on whether these results should inform the whole research community. Specific feedback and advice could be offered to those institutions which were felt by the Equality Challenge Unit to have done poorly in this regard in the RAE. We further note that good practice and relevant evidence should contribute to panel assessments under 'environment.'

Consultation question 12: Do you have any comments about the proposed timetable?

We are concerned that certain aspects of the timetable are unrealistic. In particular we are concerned that should criteria be published late in 2011 it will adversely affect the ability of HEIs to prepare for submission in 2012.

Consultation question 13: Are there any further areas in which we could reduce burden, without compromising the robustness of the process?

In past assessments, a significant proportion of costs fell on institutions. We welcome suggestions that data collected for other purposes should be used in the REF where possible and would wish to see fuller use of such data to reduce burden and improve robustness (see response to Q 4 above concerning the 'research environment').

We feel that the burden of reporting on 'impacts' could be reduced by following up proposals in the Wellings Report and by working more closely with Research Councils.

Consultation question 14: Do you have any other comments on the proposals?