# Annex A
# Consultation response form for the Research Excellence Framework

1. Respondents should complete the form below.

2. Responses should be e-mailed to refconsultation@hefce.ac.uk by **Thursday 14 February 2008**. HEIs in Northern Ireland should send a copy of their response to research.branch@delni.gov.uk

3. Institutions wishing to express an interest in taking part in the pilot of the bibliometrics indicator should e-mail their details to refconsultation@hefce.ac.uk by Thursday 31 January 2008.

4. 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.

## Respondent's details

**Are you responding:**
(Delete one)

- On behalf of an organisation

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| **Name of responding organisation/individual** | Biosciences Federation |
| **Contact name** | Dr Caroline Wallace |
| **Position within organisation (if applicable)** | Policy Coordinator |
| **Contact telephone number** | 07974 217305 |
| **Contact e-mail address** | cwallace.bsf@physoc.org |

## Consultation questions

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

**Consultation question 1a**: Do you endorse our proposals for defining the broad group of science-based disciplines, and for dividing this into six main subject groups, in the context of our new approach to assessment and funding?

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| In general, yes, but we do have significant reservations about the proposals, which the remainder of our submission will make clear. |

**Consultation question 1b**: Are there issues in relation to specific disciplines within this framework that we should consider?

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| Yes. The Biosciences Federation (BSF) considers that if clearly defined fields are to be split, the basis for the division should be unambiguous. For example, the BSF is very uneasy about the assessment of Pharmacy and Pharmacology within both Biological Sciences and Subjects Allied to Health. We are also unhappy about the division of ecology and related subjects between Physical Sciences and Biological Sciences.<br><br>Feedback received by members of the British Ecological Society suggests that ecologists, often working across inter-disciplinary boundaries, feel that their research has been undermined by the current RAE framework, with a lack of understanding of ecology on the part of Earth Sciences panels, into which some aspects of their research falls. If such divisions continue, they are likely to lead to friction, distrust and loss of respect for the process.<br><br>Finally, the BSF is very concerned that non-clinical Psychology has been separated off from other science-based disciplines (which include all the Biosciences as well as clinical psychology). In many ways the proposals for Psychology are worse than those for Pharmacy and Pharmacology because the area is arbitrarily and very unhelpfully divided into a science-based (clinical) and non-science-based (non-clinical) component. In general, the BSF subscribes to the view that clinical and non-clinical branches of the same discipline should be kept as close together as is practicable in order to encourage translation, and should certainly not be assigned to different sides of the science-based divide. |

**Consultation question 2a**: Do you agree that bibliometric indicators produced on the basis that we propose can provide a robust quality indicator in the context of our framework?

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| To answer this question one has to understand what has been proposed: the answer is very little in detail. Thus whilst it is difficult to answer “no” to the question put, it is equally difficult to answer “yes” until the detail of the algorithm to be used is known. On balance we are inclined to answer “no” because important areas that may prove difficult to include |

in the algorithm (see Q4) have been ignored.

The Biosciences Federation continues to subscribe strongly to the view that metrics are a very important way of measuring quality in many areas in the biosciences and that a good algorithm is a valuable tool for peer review panels. We do not think that the algorithm should be essentially the sole driver for the assessment process. We make this statement because there are areas that are very important but difficult to measure (Q4) and because we consider that there are excellent areas of bioscience research that are seriously threatened by the increasing use of metrics.

Areas that are threatened are those that usually receive little or no grant funding, where the publication rate is slow and where journals have low impact factors. Taxonomy and systematics are examples of sub disciplines that may be excellent and are certainly essential – not least for their important role in monitoring climate change. The subjects are already at some peril and slavish use of metrics will not enhance their prospects.

An increased emphasis on bibliometric indices will inevitably increase pressure on researchers to publish papers. Discussions with Thomson ISI, over the use of the 'web of science' to generate information for the algorithm, must include reference to the robust use of anti-plagarism software in order to detect plagiarism in its many forms. In the words of a recent article in Nature; "Given the pressure to publish, it is important to be aware of the ways in which community standards can be subverted". The same article estimated that more than 200,000 duplicate papers exist in the Medline database, with a steady rise in the rate of duplicates in the biomedical literature since 1975.[1]

The researchers conclude that "a belief that one can get away with re-use is probably the single most important factor" in the documented increase in duplicate papers. The increased use of bibliometric indicators must be accompanied by a high profile drive amongst journal editors to use new computational tools to combat plagiarism, plus clear advertisement that they are doing so to the scientific community.

[1] Errami, M., Garner, H. A tale of two citations. Nature 451: 397-399 (2008)

**Consultation question 2b**: Are there particular issues of significance needing to be resolved that we have not highlighted?

The question requires understanding of the use of the word "highlighted". Do "equal opportunities" include "diversity"? Is it agreed that these issues have to be resolved? For the Biosciences Federation, the answer "no" to question 2a is massively reinforced if these "highlighted" issues are not resolved.

The Biosciences Federation Task Force that considered these questions concluded that the proposals reinforce the impression that top ranking scientists need to be male! Members of the Task Force were astonished that no consideration seems to have been given to career breaks (predominately female) or part time working (predominately female).

We were all able to give examples of excellent female postdocs who did not want to

move on because of the inflexibility of the playing field. These assessment proposals should have made clear from the outset that more than one route as a senior scientist is understood and accounted for.

There is a very real danger inherent in the proposed structure of the REF that those who take career breaks or are likely to do so, mainly women, will find it hard to gain employment (as universities will not wish to see the publication output of their departments, and thus their funding, fall) or will find it difficult to gain promotion within their field. The outputs of those who have been in continuous service and those who have taken a career break must be viewed across comparable timescales; namely, time off for career breaks should not be counted towards length of time producing productive work.

**Consultation question 3a**: What are the key issues that we should consider in developing light touch peer review for the non science-based disciplines?

The Biosciences Federation believes that it is desirable for all disciplines to be treated in a similar way. Members accept that weightings will be different – for example in the use of metrics – but the aim should be to treat science, arts and humanities as equally as possible and not to start from the position that they will be totally different.

**Consultation question 3b**: What are the main options for the form and conduct of this review?

**Consultation question 4**: Is there additional quantitative information that we should use in the assessment and funding framework to capture user value or the quality of applied research, or other key aspects of research excellence? Please be specific in terms of what the information is, what essential element of research it casts light on, how it may be found or collected, and where and how it might be used within the framework.

The answer to this question provides a major reason why the Biosciences Federation subscribes to the view that panels should be informed by metrics but the exercise must not be driven nearly 100% by the output from an algorithm. There are two examples that will be used to illustrate the point.

The first concerns translation. In this context, we take translation to include transfer of knowledge, expertise and skills into practical benefits for health, industry, business, public policy, public engagement, outreach, education and training. All of these are important outputs of excellent research, but are not rewarded by the narrow definition of research excellence proposed in the REF and universities may therefore be reluctant to devote sufficient time to them. A major concern of the Cooksey Review was how to

incentivise scientists to become more involved in knowledge transfer. If this is to have little weight in the assessment exercise it will not be a matter of surprise that translation in the UK remains problematic. Of course, the question arises about the metrics to apply and the difficulty in answering this question is well known. However just because the question is difficult does not mean it can be ignored. Whilst counting patents, investment income, start ups etc are all fraught with difficulty, it is possible to take an holistic view, that is quantifiable, about the performance of an institution or school or unit of assessment: this requires a panel. The BBSRC, for example, has done this for many years in the context of its Institutes.

The second example concerns graduate students. At present these seem to be excluded from the proposed algorithm. They are an important output from research laboratories and there are many ways that their training can be evaluated – for example completion rates.

If adequate metrics cannot be agreed for these examples, the panels could agree scores that are then fed into the algorithm.

The BSF is strongly supportive of the recent comments by Rt Hon John Denham MP, Secretary of State for Innovation, Universities and Skills:[2]

*"there may be disincentives in the system that emphasise published and peer-reviewed work over public policy advice.. as part of [the REF]…we need to have a discussion on whether there is more we can do to ensure that this essential work is not undervalued.*

*" a scientist who produces fewer papers but produces excellent evidence and advice in the national interest on behalf of Government should not feel that they may disadvantage themselves, their research colleagues or their institution when research funds are distributed…I hope the sector more broadly will get better at nurturing and rewarding scientists who play such important roles."*

The BSF strongly urge HEFCE to ensure that the REF contains clear incentives for scientists to undertake activities without their university departments and to engage more widely with policy makers and the public. The recent launch of the Beacons for Public Engagement by Research Councils UK, and higher education funding councils, including HEFCE, provides an excellent framework for increased interaction between the public and the science community[3]. It would seem perverse indeed if the REF undermined efforts by Research Councils to foster participation.

Evidence suggests that those contributing predominantly to teaching activities in the laboratory feel less valued within universities than their counterparts who carry out research in the main[4]. The RAE contributes directly to such perceptions as teaching is not seen to bring in the same level of funding as research-focussed activities. The proposals here outlined by HEFCE do nothing to suggest that this situation will change, a great shame for those academics who devote their time to training the next generation of scientists. Such talent will be lost if a means is not found to greater value the contribution

which teaching makes to the efficacy of science departments.

[2] John Denham Speech: Science and Society, 16 January 2008.
http://www.dius.gov.uk/speeches/denham_science_society_160108.html (Accessed 6 February 2008).

[3] http://www.rcuk.ac.uk/sis/beacons.htm

[4] Women in Clinical Academia: Attracting and Developing the Medical and Dental Workforce of the Future. The Medical Schools Council, London (2007).

**Consultation question 5**: Are our proposals for the role of expert panels workable within the framework? Are there other key issues on which we might take their advice?

Again, there is not enough information on which to give an unambiguous answer. The Biosciences Federation realises that each Panel cannot have an expert who can deal with each sub field. This would make the panels far too large and unworkable. But will the Earth Science Panel have an ecologist (that ecologists would recognise as "one of theirs")? How will interdisciplinary research be handled?

The BSF would also like to stress that all panel members must receive equality and diversity training prior to beginning their role in assessment.

**Consultation question 6**: Are there significant implications for the burden on the sector of implementing our new framework that we have not identified? What more can we do to minimise the burden as we introduce the new arrangements?

The highest priority is to have a transparent system that has the respect of the community and acknowledges the range of important outputs that have to be assessed. Only when this is in place is it sensible to discuss how refinements might " lighten the burden". The BSF is concerned that lightening the burden is as important as having an excellent and fair appraisal system: this cannot be the case. On the other hand, the BSF fully acknowledges the need to keep the "touch" as light as possible.

**Consultation question 7**: Do you consider that the proposals in this document are likely to have any negative impact on equal opportunities? What issues will we need to pay particular attention to?

Yes. We are greatly concerned that the implications of these proposals for equal opportunities, particularly gender based, have not been adequately thought through. Our detailed comments appear in answer to question 2b.

**Consultation question 8**: Do you have any other comments about our proposals, which are not covered by the above questions?

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***About the Biosciences Federation***

The Biosciences Federation (BSF) is a single authority representing the UK's biological expertise, providing independent opinion to inform public policy and promoting the advancement of the biosciences. The Federation was established in 2002, and is actively working to influence policy and strategy in biology-based research – including funding and the interface with other disciplines - and in school and university teaching. It is also concerned about the translation of research into benefits for society, and about the impact of legislation and regulations on the ability of those working in teaching and research to deliver effectively. The Federation brings together the strengths of 44 member organisations (plus six associate members), including the Institute of Biology which represents 39 additional affiliated societies (see Appendix). This represents a cumulative membership of over 65,000 individuals, covering the full spectrum of biosciences from physiology and neuroscience, biochemistry and microbiology, to ecology, taxonomy and environmental science. The Biosciences Federation is a registered charity (no. 1103894).

## Appendix

**Member Societies of the Biosciences Federation**

Association for the Study of Animal Behaviour
Association of the British Pharmaceutical Industry
AstraZeneca
Biochemical Society
Bioscience Network
British Andrology Society
British Association for Psychopharmacology
British Biophysical Society
British Ecological Society
British Lichen Society
British Mycological Society
British Neuroscience Association
British Pharmacological Society
British Phycological Society
British Society of Animal Science
British Society for Developmental Biology
British Society for Immunology
British Society for Matrix Biology
British Society for Medical Mycology
British Society for Neuroendocrinology
British Society for Plant Pathology
British Society for Proteome Research
British Toxicology Society
Experimental Psychology Society
Genetics Society
Heads of University Biological Sciences
Heads of University Centres for Biomedical Science
Institute of Animal Technology
Institute of Biology
Institute of Horticulture
Laboratory Animal Science Association
Linnean Society
Nutrition Society
Physiological Society
Royal Microscopical Society
Royal Society of Chemistry
Society for Applied Microbiology
Society for Endocrinology
Society for Experimental Biology
Society for General Microbiology
Society for Reproduction and Fertility
Universities Bioscience Managers Association
UK Environmental Mutagen Society
Zoological Society of London

**Associate Member Societies**

BioIndustry Association
Royal Society
Wellcome Trust
Merck Sharp & Dome
Medical Research Council
Biotechnology & Biological Sciences Research Council
Association of Medical Research Charities

**Additional Societies represented by the Institute of Biology**

Anatomical Society of Great Britain & Ireland
Association for Radiation Research
Association of Applied Biologists
Association of Clinical Embryologists
Association of Clinical Microbiologists
Association of Veterinary Teachers and Research Workers
British Association for Cancer Research
British Association for Lung Research
British Association for Tissue Banking
British Crop Production Council
British Inflammation Research Association
British Marine Life Study Society
British Microcirculation Society
British Society for Ecological Medicine
British Society for Parasitology
British Society for Research on Ageing
British Society of Soil Science
Fisheries Society of the British Isles
Freshwater Biological Association
Galton Institute
Institute of Trichologists
International Association for Plant Tissue Culture & Biotechnology
International Biodeterioration and Biodegradation Society
International Biometric Society
International Society for Applied Ethology
Marine Biological Association of the UK
Primate Society of Great Britain
PSI - Statisticians in the Pharmaceutical Industry
Royal Entomological Society
Royal Zoological Society of Scotland
Scottish Association for Marine Science
Society for Anaerobic Microbiology
Society for Low Temperature Biology
Society for the Study of Human Biology
Society of Academic & Research Surgery
Society of Cosmetic Scientists
Society of Pharmaceutical Medicine
UK Registry of Canine Behaviourists
Universities Federation for Animal Welfare

**Additional Societies represented by the Linnean Society**

Botanical Society of the British Isles

Systematics Association