

MAY 30th
SEPT, 2003

Response by the Committee for Heads of Environmental Sciences to the Consultation in Earth Systems and Environmental Sciences (Sub Panel E17)

Question 1 How far do you agree that the descriptor provided by the sub-panel describes the ~~main~~ subject areas of the UOA?

Response: AGREE

While we welcome the broad range of disciplines that are covered in the sub-panel descriptor, the absence of ecology as a distinct discipline is, in our view, a serious omission. We acknowledge the phrase 'biology of the environment' but we suggest that this phrase does not give sufficient weight to the extremely important role played by ecology in environmental sciences.

Recommendation: Include ecology as a separate discipline in the UOA descriptor.

Question 2 How far do you agree that the sub-panel's proposed weightings for research outputs, research environment and research esteem are appropriate to the UOA?

Response: STRONGLY DISAGREE

We are extremely concerned by this unexpected distribution of weightings. The relatively small percentage to publications and the associated increase in the weighting for esteem are particularly disturbing. Specific comments are:

1. The vast majority of our constituents (and we suspect a large number of the earth sciences community) have worked since RAE2001 on the clear and firm understanding that the research assessment would be dominated by their outputs. The CHES membership expected that output would account for in the region of 75%. The suggested figure of 60% is substantially lower than could have been foreseen and means that, if this distribution stands, the assessment criteria significantly deviate from the reasonable expectations of a large number of those being assessed; a situation which is not consistent with good assessment practice. The 60% weighting for output will retrospectively undermine the rationale of the apparently well-formulated, output-based research strategies of many departments throughout the country.
2. Another worrying aspect of this weighting is the fact that it varies significantly from the weightings that will be used by panels in related subjects. In particular we are concerned at the strong discrepancy between the Earth Systems and Environmental Sciences panel weightings (in common with the other Main Panel E disciplines) and those of the other associated panels. Whereas Main panel E will use 60-20-20 weightings to output, environment and esteem respectively, Main panel B (including Public Health), Main panel D (including Biological Sciences) and Main Panel J (including Law and Sociology) will use 75-20-5; Main Panel H (including Geography and Environmental Studies, Archaeology and Town and Country Planning) will use 75-15-10 and Main Panel F (including Mathematics) will use 70-20-10. Many of our member departments will submit to several of these panels creating a clearly uneven playing field for colleagues in the same departments. In multidisciplinary fields, such as in the Environmental Sciences, it is particularly important, in our view, to avoid such internal variability in assessment criteria.

3. We contend that since the RAE is designed to assess research activity during the census period, the emphasis of criteria such as esteem, based as it is on membership of committees and panels, militates against the perception of fair and open assessment of ~~current research activity~~. Good ~~current~~ research is published in good current journals and all of the community have the opportunity to publish in 'Science' or 'Nature', there are a limited number of places on Research Council panels. Modern science is based on the editorial standards of good international peer reviewed journals, here we are all confident of the professional review of our work. It seems to CHES that this detailed, expert and internationally assured review should also be the core of the RAE.
4. Even the threat to the perception of objectivity in the reduction of the importance of output is in itself a serious indictment of the suggested balance.
5. The figure of 20% for environment is slightly higher than we would have expected though this is not a strong criticism.
6. In our view, the weighting of 20% for research esteem is unacceptable. It seems to CHES that this category is both the most difficult to assess in a transparent and objective way and the most retrospective of the three assessment areas. Giving a high weighting to the esteem of researchers will contribute to a strong memory in the assessment process that is based on largely subjective criteria.
7. It is an additional concern that only 500 characters are allowed in the description of a researcher's esteem. Even for a smaller weighting we would argue that this character limit is increased substantially.

The sub-panel members will be aware of the significant disquiet, particularly among many environmental science departments, which followed the publication of the RAE grades in 2001. CHES have consistently argued that the confidence of the community is an extremely important requirement for RAE 2008. Clear objective criteria are essential if this confidence is to be assured. Since the firm expectation of our constituency was for an output dominated process and that it is output which can most objectively be judged we argue that the weightings should be changed to: Output 75%, environment 15%, esteem 10%.

Recommendations

1. Change the weightings of the three assessment categories to: Output 75%, Environment 15%, Esteem 10%. This is the strongest recommendation we will make in this consultation.
2. Increase the number of characters to be used to describe esteem to 1000.

Question 3: How far do you agree that the sub-panel's range of indicators for excellence is appropriate for the UOA in assessing the submitted research outputs?

Response: **AGREE**

We broadly agree with the indicators of excellence described for assessing output. We have however, some concerns as to their practical application. In particular, we are not convinced that the necessarily limited range of expertise within the E17 panel will, in many cases, be able to reproduce the rigour of the review process in many international journals. There, a minimum of two (and often more) internationally respected specialists give detailed reviews of the work at a level which is beyond that which could be generally be attained by the panel. We are not of the view, for example, that the reading of limited portions of any output, which has been published in a top quality international journal, by a non-specialist, will contribute anything of value above the fact of this publication.

In saying this, we understand the reticence of the sub-panel to commit to citation scores or some other quantitative measure of excellence. These measures may not be appropriate to any given output. We would, however, like to be assured that only in extremely unusual circumstances should the assessment of the panel differ from the perceived quality of the editorial standard of the journal. Papers published in high quality journals should always attract high scores in the process.

In addition, there are significant quality control issues that arise from the use of a large number of external advisors. It is clear that these advisors have an important role but it is again the final responsibility of the most specialist panel member to adjudicate the final grade. The problems outlined above maintain even with the use of large numbers of external advisors.

Finally, it is not clear how many words will be available to describe the backgrounds to any given output in RA2. Given the importance of this facility, and with due consideration to panel workloads, we feel that a relatively high number of words per output should be allowed.

Recommendation:

1. That the panel amend the description of the assessment methodology so that the relationship between assessment of the panel member and the editorial standard of the journal (or other) is clarified and that the objectivity of the assessment be, thereby underpinned. We consider this to be our second most important recommendation.
2. That the length of the supporting text in RA2 be clarified. We recommend that this be fixed at 200 words per output.

Question 4: How far do you agree that the sub-panel's range of indicators for excellence is appropriate for the UOA in assessing the research environment component of a submission?

Response: **STRONGLY AGREE**

We feel that the range of indicators of research excellence, research student activity, income and research infrastructure and planning, adopted by the panel is correct. In particular we applaud:

1. The commitment to rewarding good, forward-looking research planning that is enshrined in para 33 and 43.
2. The flexible attitude towards the grouping of researchers in para 35.
3. The encouragement of early career researchers in para 37.

4. The commitment to equity of esteem of multi- and inter-disciplinary research in para 39.
 5. The commitment to equality of esteem in respect of applied research in para 40.
- We would caution however, that the panel take into account the possible adverse effect of a previous poor performance in the RAE. Thus allowance might be made, for example, for low numbers of research students where access to research studentships was forbidden because of a poor rating last time. See the note in response to consultation question 9.

Question 5: How far do you agree that the sub-panel's range of indicators for excellence is appropriate for the UOA in assessing evidence of esteem within a submission?

Response: AGREE

While we would broadly agree with the list of esteem indicators, we would argue that peer review should be included in the list of esteem indicators for two reasons. Firstly, repeated review for top class international journals and for research councils clearly indicates the confidence of the community in that person's academic judgement. This is surely a measure of esteem. Secondly, academia relies on peer review, but at present there is almost no incentive to contribute to this process. The result is that journals and research councils are finding it increasingly difficult to find suitable reviewers. By explicitly including peer review as a measure of esteem, therefore, the panel will not only reward activity appropriate activity but will also assist in the encouragement of the peer review log-jam.

Recommendation: Peer review activity should be explicitly included in the list of esteemed activities.

Question 6: How far do you agree that the sub-panel has identified appropriate criteria for assessing the vitality and sustainability of the research described in each submission, including its criteria for assessing the contribution of researchers at different career stages?

Response: STRONGLY AGREE

We applaud the efforts of the panel to encourage the inclusion of early career researchers in RAE submissions. We should again caution against a strong memory in the assessment process by stressing the importance of early career researchers activity in the profile of any given department. It is clear that many departments who survived a low grade in RAE 2001 have had some restriction on recruitment but have still managed strongly to improve their performance.

Question 7: If relevant in this UOA, how far do you agree that the sub-panel's criteria and working methods are appropriate for identifying and assessing applied research equitably alongside other forms of research?

Response AGREE

While we agree with the main sentiments expressed in these paragraphs we are not convinced that they are supported by an objective methodology. We would therefore like to see more detail as to the precise working methods that will be applied.

Recommendation: The panel should give more detail on the assessment methodology and criteria.

Question 8: ~~If relevant in this UOA, how far do you agree that the sub-panel's criteria and working methods are appropriate for identifying and assessing practice-based or practice-led research equitably alongside other forms of research?~~

Response AGREE

Again, while we agree with the main sentiments expressed in these paragraphs we are not convinced that they are supported by an objective methodology. We would therefore like to see more detail as to the precise working methods that will be applied.

Recommendation: The panel should give more detail on the assessment methodology and criteria.

Question 9: General comments on any other aspect of the sub-panel's criteria and working methods. Where appropriate, respondents might wish to comment here, for example, on any non-standard data or data analyses that the sub-panel has requested:

This response from the Committee of the Heads of Environmental Sciences is, as it was in previous responses to consultation requests, the result of a detailed and wide-ranging consultation across the full spectrum of Environmental Science departments who are members of CHES. The comments it contains, therefore, represent a consensus view from a large number of these departments.

It is the strong view of the CHES that, following the results of RAE2001, one of the main conditions that must be satisfied to ensure the success of this exercise, is that it is demonstrably objective and reproducible. In such an assessment, extreme care must be taken to guarantee that the desirable temporal consistency of its results is arrived at by the persistence of excellence in successful departments and not as the result of the employment of a set of criteria which are so retrospective and resource bound as to preclude any other outcome.

We are acutely aware of the severe resourcing crises that arose from RAE2001 for a large number of environmental sciences departments. Many departments did not survive these crises; others have made very laudable efforts to modify their research activity to ensure a better performance in RAE2008. We submit that these departments should be rewarded for these efforts and the criteria chosen for the assessment must ensure that the outcome of any previous assessment does not, in itself, predict the outcome of this one.

John McCloskey
Chair CHES Research Sub-Committee
19/09/05

Annex A

Review of research assessment: response form

Please complete and return as a Word attachment to an e-mail, to responses@ra-review.ac.uk. The deadline for responses is 30 September 2003.

Response by (name of person or organisation):...Prof D A Davidson, Chairman, Committee of Heads of Environmental Science Departments

Corporate response (representing the views of the group or organisation): Yes
Private response (representing the views of one or more individuals): No

Contact in case of queries:

Name: Prof D A Davidson.....
Tel:01786 467844.....
e-mail:.....d.a.davidson@stir.ac.uk

Recommendation 1 (see paragraphs 113-116 of the review)

Any system of research assessment designed to identify the best research must be based upon the judgement of experts who may, if they choose, employ performance indicators to inform their judgement.

Do you agree or disagree with recommendation 1? Place a cross beside the appropriate answer.

- | | |
|----------------------------|------|
| Strongly agree | ... |
| Agree | x... |
| Neither agree nor disagree | ... |
| Disagree | ... |
| Strongly disagree | ... |

Comments on recommendation 1:

The majority of CHES members (Committee of Heads of Environmental Science Departments) support the principle of expert peer review.

However, in recent RAEs, there has been concern within the Environmental Science community that panel membership in this subject area has not reflected the nature and diversity of the subject. CHES has submitted to HEFCE a report detailing these concerns. In future RAEs, it is essential that Departments feel that their submissions are being assessed by appropriate peers.

Recommendation 2 (see paragraphs 117-126 of the review)

- a. There should be a six-year cycle.
- b. There should be a light-touch 'mid-point monitoring'. This would be designed only to highlight significant changes in the volume of activity in each unit.
- c. The next assessment process should take place in 2007-8.

Do you agree or disagree with recommendation 2? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a		x			
Point b		x			
Point c		x			

Comments on recommendation 2:

Concerns were expressed over precisely what is meant by a light-touch 'mid-point monitoring.' There is a danger this could become a 'mini-RAE' submission. It is essential for this mid-point monitoring to be transparent, have clear aims and have widespread support. Implications for grading/funding have also to be stated.

Recommendation 3 (see paragraphs 127-133 of the review)

- a. There should be an institution-level assessment of research competences, undertaken approximately two years before the main assessment.
- b. The competences to be assessed should be institutional research strategy, development of researchers, equal opportunities, and dissemination beyond the peer group.
- c. An institution failing its assessment against any one of the competencies would be allowed to enter the next research assessment but would not receive funding on the basis of its performance in that assessment until it had demonstrated a satisfactory performance.

Do you agree or disagree with recommendation 3? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a		x			
Point b		x			
Point c		x but wide range of views			

Comments on recommendation 3:

For (a), it is common practice in many universities for there to be 'dummy run RAE' submissions well in advance of an actual RAE. For institution-level assessment of research competences, explicit guidance is needed.

There is some concern by CHES members regarding available time for introducing this prior to the next RAE.

Recommendation 4 (see paragraphs 134-155 of the review)

- a. There should, in principle, be a multi-track assessment enabling the intensiveness of the assessment activity (and potentially the degree of risk) to be proportionate to the likely benefit.
- b. The least research intensive institutions should be considered separately from the remainder of the HE sector.
- c. The form of the assessment of the least research intensive institutions would be a matter for the relevant funding council.
- d. The less competitive work in the remainder of institutions should be assessed by proxy measures against a threshold standard.
- e. The most competitive work should be assessed using an expert review assessment similar to the old Research Assessment Exercise.

Do you agree or disagree with recommendation 4? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a		x			
Point b		x			
Point c		x			
Point d			x		
Point e		x			

Comments on recommendation 4:

A serious concern of CHES is the ease which progression would be possible from one assessment track to another.

Within the least research-intensive universities, there are many instances of excellent research work. It is doubtful if linkages with other institutions will be sufficient to protect these research groups.

On point (d), CHES observes that there would be substantial difficulties in devising research metrics that can be applied across different subject areas.

Recommendation 5 (see paragraphs 156-171 of the review)

- a. The output of the Research Quality Assessment should be a 'quality profile' indicating the quantum of 'one star', 'two star' and 'three star' research in each submission. It will not be the role of the assessment to reduce this profile to summary metrics or grades.
- b. As a matter of principle, star ratings would not be given to named individuals, nor would the profile be published if the submission were sufficiently small that individual performance could be inferred from it.
- c. Panels would be given guidelines on expected proportions of three star, two star and one star ratings. These proportions should normally be the same for each unit of assessment. If a panel awarded grades which were more or less generous than anticipated in the guidelines, these grades would have to be confirmed through moderation.¹

Do you agree or disagree with recommendation 5? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a	x				
Point b	x				
Point c	x				

Comments on recommendation 5:

On (c), CHES strongly welcomes this on the basis of recent RAE experience. CHES submitted to HEFCE strong evidence to suggest that the grade distribution for Environmental Science submissions was substantially different from cognate subject areas. Thus CHES welcomes (c) since it addresses a key concern of comparability. The Report is to be commended for the emphasis given to improving moderating procedures.

¹ This consultation question reflects an edited version of recommendation 5. The recommendation in the review report also states that 'the funding councils should provide institutions with details of the relative value, in funding terms, of one star, two star, and three star research, and of research fundable through the Research Capacity Assessment in advance of the assessment. These ratios might vary between disciplines.' In the event that the review recommendations are accepted, each funding council will develop its own policies for reflecting the assessment results in funding, taking proper account of Sir Gareth's recommendation.

Recommendation 6 (see paragraphs 172-197 of the review)

- a. There should be between 20 and 25 units of assessment panels supported by around 60 sub-panels. Panels and sub-panels should be supported by colleges of assessors with experience of working in designated multidisciplinary 'thematic' areas.
- b. Each panel should have a chair and a moderator. The role of the moderator would be to ensure consistency of practice across the sub-panels within the unit of assessment.
- c. Each panel should include a number of non-UK based researchers with experience of the UK research system.
- d. The moderators of adjacent panels should meet in five or six 'super-panels' whose role would be to ensure consistency of practice between panels. These 'super-panels' should be chaired by senior moderators who would be individuals with extensive experience in research.

Do you agree or disagree with recommendation 6? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a		x			
Point b	x				
Point c		x			
Point d		x			

Comments on recommendation 6:

As previously noted, the grade distribution for Environmental Science compared very badly with other subjects in the last RAE. Thus CHES considers it essential that the moderating procedures are transparent and explicit. Points (b) and (d) go some way to addressing these concerns. The moderating procedure must include rigorous statistical analysis to identify at an early stage any results which seem deviant. There is a very strong view within CHES that a Sub-Panel deals solely with Environmental Science.

Recommendation 7 (see paragraphs 198-204 of the review)

- a. The rule that each researcher may only submit up to four items of research output should be abolished. Research Quality Assessment panels should have the freedom to define their own limits on the number and/or size of research outputs associated with each researcher or group.
- b. Research Quality Assessment panels should ensure that their criteria statements enable them to guarantee that practice-based and applicable research are assessed according to criteria which reflect the characteristics of excellence in those types of research in those disciplines.

Do you agree or disagree with recommendation 7? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a	x				
Point b	x				

Comments on recommendation 7:

CHES welcomes the proposed greater flexibility in submitted materials. In some environmental science departments, there is a considerable amount of applied research which has been undervalued in previous RAEs. Point (b) indicates that much better account can be taken of applied research – to be welcomed.

Recommendation 8 (see paragraphs 205-213 of the review)

- a. The funding councils should work alongside the subject communities and the research councils to develop discipline-specific performance indicators.
- b. Performance against these indicators should be calculated a year prior to the exercise, and institutions advised of their performance relative to other institutions.
- c. The weight placed upon these indicators as well as their nature should be allowed to vary between panels.

Do you agree or disagree with recommendation 8? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a			x		
Point b		x			
Point c		x			

Comments on recommendation 8:

The general bases to these recommendations are commendable, but there will be considerable difficulties in deriving research metrics which can be applied across subjects. Extensive consultation will be required with subject communities to ensure the acceptability of any proposed metrics.

Recommendation 9 (see paragraphs 214-234 of the review)

- a. Where an institution submits to Research Quality Assessment in a sub-unit of assessment all staff in that sub-unit should become ineligible for the Research Capacity Assessment, even if they are not included in the Research Quality Assessment submission.
- b. The funding councils should establish and promote a facility for work to be submitted as the output of a group rather than an individual where appropriate.
- c. The funding councils should consider what measures could be taken to make joint submission more straightforward for institutions.
- d. Where an institution submits a sub-unit of assessment for Research Quality Assessment, no fewer than 80% of the qualified staff contracted to undertake research within the sub-unit of assessment must be included in the submission.
- e. All staff eligible to apply for grants from the research councils should be eligible for submission to Research Quality Assessment.

Do you agree or disagree with recommendation 9? Please indicate your views using the grid below:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Point a		x			
Point b		x			
Point c		x			
Point d		x			
Point e		x			

Comments on recommendation 9:

Point (d) generates considerable debate within CHES. The merit of the proposal as it stands is to significantly reduce 'gamesmanship' in terms of RQA submissions. However, there is uncertainty as to what 80% means? In Environmental Science Departments there could well be groups of staff who are included in other RQA/RCA submissions from within individual universities. So 80% of what?

Recommendation 10 (see paragraphs 235-238 of the review)

Each panel should consider a research strategy statement outlining the institution's plans for research at unit level.

Do you agree or disagree with recommendation 10? Place a cross beside the appropriate answer:

- | | |
|----------------------------|------|
| Strongly agree | ... |
| Agree | ... |
| Neither agree nor disagree | ...X |
| Disagree | ... |
| Strongly disagree | ... |

Comments on recommendation 10:

Again, a commendable proposal in principle, but what will it mean in practice? The danger is that universities would submit very bland and generalised statements which could not be properly evaluated by an assessment panel.

Question 11 Burden for institutions

The review proposals have been designed to make the burden of assessment proportionate with the possibility of financial reward. Do you agree that this has been achieved? Place a cross by the appropriate answer.

- | | |
|----------------------------|------|
| Strongly agree | ... |
| Agree | ... |
| Neither agree nor disagree | ...X |
| Disagree | ... |
| Strongly disagree | ... |

Comments on question 11 – burden for institutions:

This is difficult to evaluate since financial rewards from RAE scores have always been publicised after RAE submissions. It would be extremely helpful to Universities if details on R income distribution were published well in advance of RQARCA submissions as described in paragraph 90.

Question 12 Value of research assessment

What value do you place on the research assessment if the financial reward is likely to be small? Place a cross by the appropriate answer.

High	...
Medium	...
Low	x...

Comments on question 12 – value of research assessment:

There is little point in Departments/Universities bearing all the costs of preparing research assessment submissions unless there is adequate return on such investment.

Question 14 Overall approach of the review

Notwithstanding your views on any specific recommendations, and given the responses to the earlier 'Invitation to contribute', do you agree or disagree with the broad approach taken by the review to the question of research assessment? Place a cross by the appropriate answer:

Strongly agree	...
Agree	...X
Neither agree nor disagree	...
Disagree	...
Strongly disagree	...

Comments on question 14 – overall approach of the review:

The broad approach has the support of CHES, but to repeat main concerns from previous RAEs:

- Lack of comparability in grade distributions between units of assessment
- Moderation procedures did not work well
- Crucial importance of staff feeling that they are assessment by peers in their subject area
- Greater attention needs to be given to assessing output from applied research