

## Teaching funding and student number controls

A response from the Society of Biology to the Higher Education Funding Council for England

2<sup>nd</sup> September 2011

The Society of Biology is a single unified voice for Biology: advising Government and influencing policy; advancing education and professional development; supporting our members, and engaging and encouraging public interest in the life sciences. The Society represents a diverse membership of over 80,000 - including practising scientists, students and interested non-professionals - as individuals, or through the learned societies and other organisations listed below.

### Response

The Society of Biology welcomes the opportunity to respond to this consultation.

**Consultation question 3: Following government changes to funding for higher education, we need to change the way HEFCE provides teaching grant for new-regime students. Do you have any comments on our proposed approach for 2012-13, as outlined in paragraphs 31 to 108?**

Science subjects are costly to teach, and there are few cheap options for teaching them well, principally due to the vital elements of laboratory and fieldwork. It is vitally important to continue to fund science subjects, such as the biosciences, despite the higher costs of these degrees, in order to educate graduates that possess the appropriate knowledge and skills for research and non-research careers, ensuring we maintain the science base of the UK.

HEFCE acknowledges that it needs to '*maximise predictability for institutions and thereby smooth transition*' (paragraph 96), however, the proposals made in the White Paper will result in much uncertainty for Higher Education Institutes (HEIs) over the future funding situation and the sector faces a substantial period of turmoil and unpredictability.

HEFCE state that additional funding will be given in the hope that '*higher-cost subjects should not need to charge higher fees than lower-cost subjects in order to maintain reasonable resource costs (paragraph 98)*'. However, the figure of £1500, which is given in paragraph 100 as an '*approximate illustrative*' figure for HEFCE funding to HEIs, to supplement fees paid by students taking Band B subjects is wholly inadequate and unrealistic. TRAC data available to HEFCE indicate that the differential in teaching cost between laboratory-based sciences (the biosciences, chemistry, physics) and class-room based subjects, averaged across the sector, is currently of the order of £3000- £3500. As a result, even with the additional HEFCE funding, an HEI accepting a new science student in 2012, will suffer a financial penalty of approximately £2000, compared to one accepting a new humanities or social science student. HEFCE acknowledge this in paragraph 148 when they state that "*funding supplements' for high cost subjects...will contribute towards, rather than necessarily meet the additional costs of high cost subjects*". This is a serious funding shortfall and will remain an acute problem for 2013-14 and beyond. The fact that next year's allocation is only an

Charles Darwin House, 12 Roger Street, London, WC1N 2JU Tel: +44 (0)20 7685 2550  
[info@societyofbiology.org](mailto:info@societyofbiology.org) [www.societyofbiology.org](http://www.societyofbiology.org)

interim solution, and the possibility of more fundamental changes to the funding of high cost subjects in 2013-14 is of great concern.

A further concern for the Society is the lack of recognition of the cost of field based studies. Courses which contain a field work element have been classified in Band C of the price grouping<sup>1</sup>, and will no longer be eligible for additional funding. Subjects which include large amounts of fieldwork, such as some areas of the biosciences, such as ecology, can be expensive and need the same support as laboratory sciences.

The probable consequences of this underfunding of science courses is that it is very likely that HEIs may decide that science programmes are unaffordable under the new funding regime and will reduce their teaching of science subjects, possibly even eliminating many of their science programmes. This will reduce diversity and choice in the sector and limit the opportunities available to students to study the sciences.

Some HEIs will feel that their overall strategy demands that they remain active in research and teaching in the sciences and hence will require undergraduate and postgraduate teaching income as part of their resource mix to sustain these subjects. If they aim to increase their bioscience undergraduate intake and reduce their unit costs by achieving 'economies of scale' this will inevitably damage the quality of teaching and of the student experience, through eliminating or reducing the highly-valued, but high-cost, elements of bioscience study such as small-group teaching, individual contact time, laboratory and field work and individual research projects.

In parallel such HEIs may need to eliminate programmes of 'minority' interest thus reducing the diversity of their provision. Whilst the biosciences as a whole have not been considered 'vulnerable', specific disciplines within the biosciences certainly are vulnerable and a recent report from the Biotechnology and Biological Sciences Research Council listed key bioscience disciplines (whole animal physiology, industrial biotechnologies, plant and agricultural sciences and systematics and taxonomy) that are not only strategically important for the UK but are vulnerable or likely to become so<sup>2</sup>.

Thus the consequences of the inadequate HEFCE funding supplementation for higher-cost subjects such as the biosciences are likely to be a reduction in the numbers and diversity of programmes available, in the numbers of students taking these programmes, and in the quality of the programmes on offer. It will be difficult to discern how this will support the objective of putting 'Students at the Heart of the System'.

We note that HEFCE appears to be aware of these likely consequences and that one section of the document (paragraphs 160-163) is concerned with 'Monitoring and addressing vulnerabilities', especially in relation to strategically important subjects. We note that there was no consultation question addressing this important issue and hence we address it here. We are very concerned that the predictable consequences of the radical policy changes now envisaged will be to damage irreversibly the strength of the teaching and research base in the biosciences in England. Government has repeatedly recognised the importance of this base for both the private and public sectors, through its role in providing well-qualified people and cutting-edge knowledge to the health, agriculture, pharmaceuticals and biotechnology sectors. The biosciences are strategically highly important and some specialisms within the biosciences are both strategic and vulnerable<sup>3</sup>. As a Society we are working closely with the Office of Life Sciences in an attempt to address some of these problems.

---

<sup>1</sup> HEFCE 2010/24 - How HEFCE allocates its funds [http://www.hefce.ac.uk/pubs/hefce/2010/10\\_24/](http://www.hefce.ac.uk/pubs/hefce/2010/10_24/)

<sup>2</sup> BBSRC - Strategically Important and Vulnerable Capabilities in UK Bioscience (2009) [www.bbsrc.ac.uk/web/FILES/Reviews/0905\\_bioscience\\_research\\_skills.pdf](http://www.bbsrc.ac.uk/web/FILES/Reviews/0905_bioscience_research_skills.pdf)

<sup>3</sup> BBSRC - Strategically Important and Vulnerable Capabilities in UK Bioscience (2009) [www.bbsrc.ac.uk/web/FILES/Reviews/0905\\_bioscience\\_research\\_skills.pdf](http://www.bbsrc.ac.uk/web/FILES/Reviews/0905_bioscience_research_skills.pdf)

There is acute danger that the changes envisaged will reduce the flow of graduates and the level of research activity in the biosciences to an extent that will be highly damaging to the national interest. The impact of decisions made at this point in time may not be visible until many years down the line. Furthermore, it is likely that such loss of capacity will become irreversible on a timescale too rapid for effective corrective action to be taken. We are keen that there are measures put in place to review the effect of these new proposals on student and graduate choices in strategically important disciplines such as the biosciences. We would like to ask HEFCE what monitoring will be carried out to detect any drop in student numbers in the sciences, and what will be done if they do?

**Consultation question 4:** *We have been asked by the Government to remove students achieving AAB+ equivalent from the student number controls. Do you have any comments on our proposed method of implementing this, as outlined in paragraphs 116 to 128? Please identify any possible negative or positive impacts from this proposal.*

The government has stated that 65,000 places are to be made available for students achieving AAB grades or above at A-level or equivalent.

The pool of AAB+ students who have taken predominantly science subjects at A-level or equivalent, and who are thereby qualified to enter science degree programmes, is relatively small. Many HEIs will focus their recruitment efforts on AAB+ students who have not taken science subjects, given the larger pool size, and the financial incentive for recruiting students to classroom based courses relative to science courses. Unless HEFCE increases the funding for higher cost courses pro rata with the increase in the students going on the course, it would benefit a HEI financially to try to attract AAB+ equivalent students in non-science subjects where the costs more closely match the income from student fees.

A small number of prestigious HEIs will be in a strong position to attract the majority of AAB+ students in the sciences and this is likely to reinforce the damaging consequences to teaching quality and quality of student experience highlighted above. In parallel, HEIs not able to compete effectively for AAB+ science students, will find it financially unsustainable to maintain science provision and will be further incentivized to withdraw from offering science programmes. This will compound the reduction in diversity and choice available to students and will deny access to bioscience to many who wish to study it. This has negative implications in terms of widening participation. A-level and equivalent grades often correlate with the socioeconomic background of students. Plans therefore to allow universities unlimited recruitment of students with AAB + equivalent grades is likely to lead to the elite institutions which are able to attract these top students, recruiting a greater number of students from prosperous backgrounds.

Another circumstance from this potential clustering of science students at particular institutions could be that higher numbers of students in laboratory and field based practical classes can put a significant strain on standards and increased student numbers would be, effectively, a penalty for the students on these courses. In the sciences, there is fixed capacity for these courses due to the practical aspects of the learning environment. Without capital funding and additional staffing to support them, science students cannot be transferred between institutions without significant impact on the quality of teaching and learning. The market will not correct damage to teaching quality and the quality of student experience if all providers simultaneously reduce the quality of their provision. If student caps are removed, it is vital that universities have the capacity to receive these students and still provide quality teaching.

A further negative impact of removing students achieving AAB grades at A level or equivalent is the effect that this may have on student choices of their AS levels. We may well see a decrease in numbers of

students taking science and maths subjects at A-level if they perceive them as harder subjects<sup>4</sup> which may decrease their chances of achieving AAB+ equivalent grades. This would result in an even more disproportionate student population only eligible to study non-science degrees.

**Consultation question 5:** *The Government has asked us to consult on a core/margin approach to re-allocating places towards lower fee provision in order to increase choice, competition and fee diversity. Do you have any comments on our proposed method of implementation, as outlined in paragraphs 129 to 139? Please indicate any impacts you can identify, whether positive or negative.*

As described above, TRAC data indicate that the differential in teaching costs between laboratory-based sciences and class-room based subjects, averaged across the sector is currently of the order of £3000-£3500. By making additional student places available for institutions that charge fees of less than £7,500, many institutions may be dis-incentivised from offering more expensive courses such as the sciences. It is unlikely that science programmes will be offered by many HEIs whose strategy is to set an average fee level below £7500, given the known extra costs of providing science programmes. Taking account of the need to provide funds for bursaries, it will be uneconomic to do so, even allowing for HEFCE supplementation at the low level envisaged. Thus apparent 'incentives' to institutions to offer programmes at 'value for money' are unlikely – in practice – to increase choice or competition in relation to students wishing to study the sciences.

The alternative scenario is that institutions may be incentivised to offer programmes with little or poor quality practical content to keep costs down and allow them to charge lower students fees. However, it is difficult to see how a HEI could provide high-quality research-led teaching for less than £7,500.

This reform may also lead to further issues regarding widening participation and access to the best institutions for students from less affluent backgrounds. With the increased fees potentially putting off many students who feel that they could not afford the £9,000 per year fees, students from poorer backgrounds may end up limited in their choice of science courses, with limited opportunities to attend institutions that deliver high-quality research-led teaching.

**Consultation question 6:** Do you have any comments on the impact(s), positive or negative, that the proposals in this consultation will have on equality and diversity?

We have noted above that a predictable consequence of the changes proposed by HEFCE could be the elimination of many HEIs from offering programmes in the biosciences and a reduction of the diversity of programmes being offered.

Other changes are likely to lead to more potential students aiming to reduce their financial challenges and maintaining their family commitments by only considering HEIs at which they could study while living at home. The focusing of bioscience programmes in a considerably smaller number of institutions will be especially damaging for these students, whose range of choice will be limited by their situation.

---

<sup>4</sup> SCORE - Relative difficulty of examinations in different subjects (2008)  
<http://www.cemcentre.org/attachments/SCORE2008report.pdf>

We gratefully acknowledge the contributions of the Society of Biology's Council and Education, Training and Policy Committee; the Heads of University Biological Sciences; the British Ecological Society; the Genetics Society; the Biochemical Society; Science and Plants for Schools; and the Society for Endocrinology.

### Full Members

Anatomical Society  
Association for the Study of Animal Behaviour  
Association of Applied Biologists  
Biochemical Society  
Biosciences KTN  
Breakspear Hospital  
British Andrology Society  
British Association for Lung Research  
British Association for Psychopharmacology  
British Biophysical Society  
British Crop Production Council  
British Ecological Society  
British Lichen Society  
British Microcirculation Society  
British Mycological Society  
British Neuroscience Association  
British Pharmacological Society  
British Phycological Society  
British Society for Ecological Medicine  
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 Society for Research on Ageing  
British Society for Soil Science  
British Society of Animal Science  
British Toxicology Society  
Experimental Psychology Society  
Fisheries Society of the British Isles  
Genetics Society  
Heads of University Biological Sciences  
Heads of University Centres of Biomedical Science  
Institute of Animal Technology  
International Biometric Society  
Laboratory Animal Science Association  
Linnean Society of London Marine Biological Association  
Nutrition Society  
Royal Entomological Society  
Royal Microscopical Society  
Science and Plants for Schools

Scottish Association for Marine Science  
Society for Applied Microbiology  
Society for Endocrinology  
Society of Environmental Medicine  
Society for Experimental Biology  
Society for General Microbiology  
Society for Reproduction and Fertility  
Society for the Study of Human Biology  
SCI Horticulture Group  
The Physiological Society  
Tropical Agriculture Association  
UK Environmental Mutagen Society  
University Bioscience Managers' Association  
Zoological Society of London

### Supporting Members

Association of the British Pharmaceutical Industry (ABPI)  
Association of Medical Research Charities  
AstraZeneca  
BioIndustry Association  
BioScientifica Ltd  
Biotechnology and Biological Sciences Research Council (BBSRC)  
BlueGnome Ltd  
GlaxoSmithKline  
Huntingdon Life Sciences  
Institute of Physics  
Lifescan (Johnson and Johnson) Scotland Ltd  
Medical Research Council (MRC)  
Oxford University Press  
Pfizer UK  
Royal Society for Public Health  
Syngenta  
The British Library  
Unilever UK Ltd  
Wellcome Trust  
Wiley Blackwell