

Sustainable development in higher education: Consultation on a framework for HEFCE

Consultation question 1: In 2005 we set out a vision (updated in 2009) of how higher education could contribute to sustainable development:

'Within the next 10 years, the higher education sector in this country will be recognised as a major contributor to society's efforts to achieve sustainability – through the skills and knowledge that its graduates learn and put into practice, its research and exchange of knowledge through business, community and public policy engagement, and through its own strategies and operations.'

With the end of that 10-year period approaching, to what extent do you agree that this vision has been realised?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
✓				
The achievement of the vision has in large part been due, rightly, to the role played by diverse institutions across the sector in focusing on different aspects of the overall vision and hence playing to their strengths. HEFCE should celebrate these achievements in sustainable development more publicly, particularly those relating to research and translation.				

Consultation question 2: To what extent do you agree that HEFCE's engagement has contributed to sustainability in higher education?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
		✓		
HEFCE has contributed to sustainability in higher education by raising its profile and providing some funding to support sustainability measures. However, it should be noted that the sector's diversity is such that institutions have specific and diverse roles to play within the broader sustainability agenda moving forward. We would therefore advise that HEFCE recognises that institutions will continue to develop bespoke sustainable development contributions which are aligned to their particular strengths and broader strategic objectives. Such an approach will be more effective in supporting sustainable development in the longer term than attempting to shape the nature of individual institutions' contributions. It will also ensure that institutional growth and development is not constrained by artificial restraints. With HEFCE's capital funding to renew research infrastructure so constrained, it would be preferable in future to allocate all available funding on the basis of excellence, rather than fragment the funding available by also having separate funding schemes linked to sustainability. HEIF funding should be further directed towards institutions with proven track records of delivery and capability as a consequence of a critical mass of research excellence across relevant disciplines.				

Consultation question 3: Do you agree that this revised vision is appropriate?

'Our vision is for universities to be widely recognised as leaders in society's efforts to achieve sustainability – through the skills and attitudes that students gain and put into practice, through research and knowledge exchange, and through universities' own business management.'

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
	✓			
<p>Institutions have different roles to play in sustainable development as a consequence of their mission, strengths, and operational constraints. This being so, institutions' contributions to the wider sustainability agenda will be greater in some areas than in others, and this should not be penalised. It is important that sustainability is embedded in business operations, but this must not have an adverse impact on contributions made in other ways, e.g. in education, research and translation. Any benchmarking of institutions which constrains their academic missions would have an adverse impact on the sustainability agenda in the longer term.</p>				

Consultation question 4: Do you agree with our appreciation of the issues and the actions we propose, as outlined in the framework?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
		✓		
<p>As part of its sustainability framework, HEFCE should give more significance to the role the sector plays in developing research solutions and applying them in collaboration with industry and other bodies, thus supporting a modern sustainable economy. The College has substantial activity in this area. For example, the Energy Futures Lab aims to address the issue of providing a secure and sustainable energy supply for the future by building on the high-quality research undertaken across the College in areas including energy efficiency, nuclear power, renewable energy, transport, electrical networks, economics, and policy development. The Qatar Carbonates and Carbon Storage Research Centre (QCCSRC), a 10-year collaboration jointly funded by Qatar Petroleum and Shell with additional support from Qatar Science & Technology Park, brings together a multidisciplinary research team to investigate some of the most important challenges in the exploitation of carbonate reservoirs, such as cleaner methods for the production and use of oil and gas, as well as more efficient recovery; research in these areas is crucial to reducing the release of carbon dioxide into the atmosphere and mitigating climate change. Examples of College spin-out companies based on sustainable technologies include Eonic Technologies, which develops new catalytic processes for manufacturing polymers using waste carbon dioxide, and Ceres Power, which develops pioneering fuel cells which reduce energy usage and carbon emissions. The College's academics also engage in consultancy work, translating their research expertise. For example, Imperial academics have provided expertise to help an SME develop durable solar-powered lighting for low-income users in developing countries¹, and have provided expertise on electricity distribution and intelligent infrastructure for the Energy Technology Institute's "Plug-In Vehicles" project, which aims to develop a commercially viable mass market for low-carbon transport². The most effective way to support research and translation in the area of sustainable development is to ensure that excellence alone informs the distribution of research funding, that institutions are able to recover the full economic costs of research, and that HEIF funding is concentrated into those institutions with a proven track record of capability and delivery as a consequence of a critical mass of research excellence across relevant disciplines.</p> <p>It is essential that any benchmarks should reflect institutional diversity and any subject-specific differences (e.g. lab-based subjects which require more space and resource). This will both make the benchmarks more useful (because institutions will be able to compare themselves to others in similar situations) and ensure that they do not act as a restraint on growth. The College would advise that rather than working towards absolute targets, HEFCE should instead look at using measures per capita, per square metre, etc. as appropriate to ensure that there are no artificial restraints on institutions expanding their activities, particularly high-quality research. The use of sector level averages would not be appropriate.</p> <p>There is considerable complexity in this area which should be fully explored in the setting of any benchmarks. For example, a very high level of carbon emissions per</p>				

¹<http://www.imperial-consultants.co.uk/showcases/shedding-light-madagascar>

²<http://www.imperial-consultants.co.uk/showcases/intelligent-infrastructure-paves-way-electric-vehicles>

square metre might reflect very efficient use of space rather than poor practice in sustainability measures. Care should also be taken to ensure that the setting of benchmarks does not act as an incentive for institutions to reduce their carbon footprint artificially by merely passing it on to others, e.g. by transferring the running of halls of residence to third parties. It would be helpful for institutions to be consulted on the proposed methodology for calculating any benchmarks.

HEFCE should ensure that any linking of capital funding to sustainability does not inhibit the realisation of core academic objectives, and should note that research-intensive institutions will need an appropriate amount of capital funding to assist them in reducing carbon emissions. Carbon reduction will be more challenging for activities with high intrinsic energy consumption. For example, the potential conflict between carrying out research of social, economic and environmental importance and the application of the resources needed to do this work should be acknowledged. Institutions should be given the autonomy to develop specific sustainability policies which accord to their particular mission and strengths and recognise the subject base and the infrastructure in which they operate. As an illustration of this, the College's current Carbon Management Plan³ is tailored towards the requirements of a research-intensive institution, and the College publishes an annual report⁴ reviewing the progress made against it. Sustainability is also embedded across the College's business operations, for example in catering, procurement, and facilities management.

The College delivers world-leading, research-led degree courses in STEM subjects which make an important contribution to the development of the next generation of professional and academic leaders with an awareness of sustainability and the ability to identify and apply evidence-based solutions. In addition to the sustainability content embedded in relevant course curricula (e.g. Green Chemistry, Conservation Science, Environmental Engineering, Sustainable Business), the College's Imperial Horizons programme offers undergraduate students the opportunity to study global challenges in an interdisciplinary context, with a focus on understanding the broad issues involved, working in multi-disciplinary teams, tackling confusing, contradictory and non-comparable datasets, developing novel and imaginative solutions, and communicating risk, need and uncertainty to different audiences⁵.

The College would support HEFCE's recognition of the importance of institutional autonomy and academic freedom; allowing institutions to develop their own approaches based on their particular strengths is the best way to support education for sustainable development. Institutions' curricula should not be determined by external bodies, but by academics supported by broad frameworks. The QAA's role is to ensure that institutions have processes to ensure the quality of their provision, not to set curricula. The most effective way for HEFCE to help support the development of the next generation of sustainability professionals and academics would be to enable universities to recover the full costs of science teaching.

It would not be appropriate to include questions about sustainable development in the NSS, as the purpose of the NSS is to provide effective, meaningful and broadly comparable information to prospective students about the academic experiences of current students. Drifting away from this overall mission by providing information that does not focus on academic issues and experiences would, therefore, dilute the

³ <https://workspace.imperial.ac.uk/facilitiesmanagement/Public/Imperial%20College%20Carbon%20Management%20Plan%20Final.pdf>

⁴ <https://workspace.imperial.ac.uk/sustainability/Public/Sustainability%202011-2012.pdf>

⁵ <http://www3.imperial.ac.uk/horizons>

primary purposes of the NSS.

Consultation question 5: Do you have any suggestions for improving the Revolving Green Fund?

The College has not yet had reason to apply to the Revolving Green Fund. Any decision to do so in the future would need to weigh the benefits against the additional administrative time required.

Consultation question 6: Are the key themes we have identified the right ones? Are there other themes or areas of work that HEFCE should be prioritising?

As stated above, HEFCE should give considerably more significance to the role that the sector plays in developing research solutions and applying them in collaboration with industry and other bodies. Research and translation are key parts of moving forwards with the sustainability agenda, and maximising the benefits delivered from research and translation would be best achieved by directing funding where there is a critical mass of cross-disciplinary excellence in STEM.

Consultation question 7: Do you have any other comments on our approach to sustainable development?

HEFCE should ensure that it supports sustainable development in the context of the overall sustainability of the higher education sector and the UK research base, including financial sustainability. In general, funding should be allocated on the basis of excellence.