November 2013/31

Policy development

Consultation

Responses should be e-mailed by **noon on Friday 7 February 2014**

This document sets out some of the ways higher education can contribute to sustainable development, and proposes an overall framework for how HEFCE will support sustainable development in the higher education sector. It encompasses our earlier policy statements on sustainable development and carbon reduction, and will influence our future funding. We ask for comments from staff at all levels within institutions, and invite students' views too. We intend that the responses to this consultation will shape our future actions.

Sustainable development in higher education

Consultation on a framework for HEFCE

HIGHER EDUCATION FUNDING COUNCIL FOR ENGLAND

Contents

Consultation response form: See separate document alongside this publication on the HEFCE web-site at www.hefce.ac.uk/pubs/year/2013/201331

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

To	Heads of HEFCE-funded higher education institutions
Of interest to those responsible for	Senior management, Academic and support staff, Students
Reference	2013/**31**
Publication date	November 2013
Enquiries to	Andrew Smith, tel 0117 931 7001, e-mail a.smith@hefce.ac.uk

Executive summary

Purpose

1. This document sets out some of the ways higher education can contribute to sustainable development, and proposes an overall framework for how HEFCE will support sustainable development in the higher education sector. It encompasses our earlier policy statements on sustainable development and carbon reduction, and will influence our future funding. We ask for comments from staff at all levels within institutions, and invite students' views too. We intend that the responses to this consultation will shape our future actions.

Key points

2. Protecting and enhancing quality of life for current and future generations is central to sustainable development. There are social, environmental and economic dimensions to this, and the benefits and the challenges are considerable. Higher education has worked to tackle many of the challenges.

3. Higher education has a unique position in society. Its institutions can play a substantial role through teaching and research, through influence on staff and students, through business operations, and through the sustainability of their campuses.

4. We want sustainable development to be central to higher education, and propose a new vision to recognise what the sector has achieved and how much it is capable of.

5. This document sets out some of the issues:

General principles

a. Why sustainable development is important: the national and international context.

b. The important role of universities and colleges of higher education.

c. How HEFCE intends to support the sector.

Specific themes:

a. Supporting students.

b. Education for sustainability.

c. Research.

d. A modern sustainable economy.

e. Business operations.

f. Information and analysis.

g. HEFCE operations.

6. We have set out proposed 'Action points' for HEFCE within the document, and these are listed at Annex C. Comment on these is welcomed as part of the consultation.

7. The actions and vision articulated in this consultation are referred to as a framework because we want to set out a coherent longer-term engagement.

Action required

8. Comments are invited on the questions at Annex C using the response form, which can be found on our web-site at www.hefce.ac.uk/pubs/year/2013/201331/. Responses should be e-mailed to sustainabledevelopment@hefce.ac.uk by **noon on Friday 7 February 2014**.

9. Institutions responding to this consultation are asked to collaborate internally before providing feedback on the draft framework.

10. As part of the consultation we are holding two seminars in January, one of which will be made accessible via live streaming. We hope that institutions will be represented at a senior level at these events, and invite them to send up to three delegates. We also hope that at least one student from the institution will attend to contribute to discussions. We hope the events will stimulate broader discussion and action by the higher education sector, for example about:

- the challenges and opportunities that the sector faces
- how students can be better supported to develop relevant skills and knowledge
- successes that can be repeated.

The events will be taking place on: 9 January in Leeds and 30 January in London. Further information on the events is available on our web-site at www.hefce.ac.uk/news/events/2013/name,83604,en.html

Why this is important: the national and international context

UK Government

11. Ensuring a better quality of life for ourselves and future generations is at the heart of sustainable development. The idea is simple; the task is substantial.

12. In 2005 the UK sustainable development strategy, Securing the Future[1], set out the Government's goal of sustainable development:

> *'The goal of sustainable development is to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations.'*

13. The Government refreshed its vision for sustainable development in 2011. The following guiding principles remain unchanged.

- living within environmental limits
- ensuring a strong, healthy and just society
- achieving a sustainable economy
- using sound science responsibly
- promoting good governance[2].

14. It its 2013 grant letter to HEFCE, the Government recognises the higher education sector's 'good progress on sustainable development'. It calls for further support to be given, 'to build on the achievements of universities and colleges and the enthusiasm of students'[3], and asks for the development of a new sustainable development framework.

The United Nations, Rio+20 and 'The future we want'

15. Sustainable development is rising up the agenda of governments around the world. One landmark was the conference on sustainable development in Rio de Janeiro in June 2012, Rio+20. This was the biggest United Nations (UN) conference ever, with 46,000 delegates and a further 50 million people taking part through live streaming and social media. The outcome document of Rio+20 – titled 'The future we want'[4] – recognises the significance of 'education at all levels'. It encourages institutions to adopt good practice, to teach sustainable development as an integrated component across disciplines, and to undertake research in this area.

---

[1] 'Securing the future: Delivering UK sustainable development strategy' (2005) is available at https://www.gov.uk/government/publications/securing-the-future-delivering-uk-sustainable-development-strategy

[2] 'Guiding principles for sustainable development', available at http://sd.defra.gov.uk/what/principles/

[3] HEFCE grant letter from the Department for Business, Innovation and Skills, available at www.hefce.ac.uk/news/newsarchive/2013/news76313.html

[4] 'The future we want' can be found at www.un.org/en/sustainablefuture/. The resolutions have been abridged for inclusion in this document.

16. In ‘The future we want’, the UN members consider that ‘full access to quality education at all levels is an essential condition for achieving sustainable development’ (Resolution 229) and resolve to:

- improve the capacity of education systems to prepare people for sustainable development (Resolution 230)
- promote education for sustainable development and to integrate sustainable development into education beyond the United Nations Decade of Education for Sustainable Development (2005-2014) (Resolution 233)
- encourage educational institutions to adopt good practices in sustainability management on campuses and in their communities with the active participation of, inter alia, students, teachers, and local partners, and teaching sustainable development as an integrated component across disciplines (Resolution 234)
- highlight the importance of supporting educational institutions to carry out research and innovation for sustainable development (Resolution 235).

17. While the UN Decade of Education for Sustainable Development has a closing conference planned for November 2014, the work will continue at programme level. Also the UN declared 2011-2020 as the UN Decade for Biodiversity, recognising that biodiversity provides food security, human health, clean air and water, livelihoods and poverty reduction[5].

18. One of the main outcomes of Rio+20 was an agreement to create a set of Sustainable Development Goals which will build on the UN’s 2005 Millennium Development Goals[6] to end poverty. The UK Prime Minister is chairing one of three panels to lead on this.

19. The implications of increasing greenhouse gases are clear. The UN Intergovernmental Panel on Climate Change, which convened in 1988, concluded that climate change is unequivocal and that human activities make a big contribution[7]. In 2006 the Stern Review reinforced this by showing how the benefits of strong early action greatly outweigh the costs of inaction.

20. The overwhelming view of scientists is that unless we make deep inroads into reducing carbon emissions, we are likely to see more severe weather events, more frequent and prolonged hot and cold weather and severe flooding, with consequent impacts on food supplies and the number of species in the world. The social and economic consequences will be profound.

Students want their place of study to be sustainable

21. In the UK, students are aware of sustainability and want this to be reflected in their institution, their studies and their overall experience. A series of surveys, funded by the Higher Education Academy (HEA) and carried out by the National Union of Students

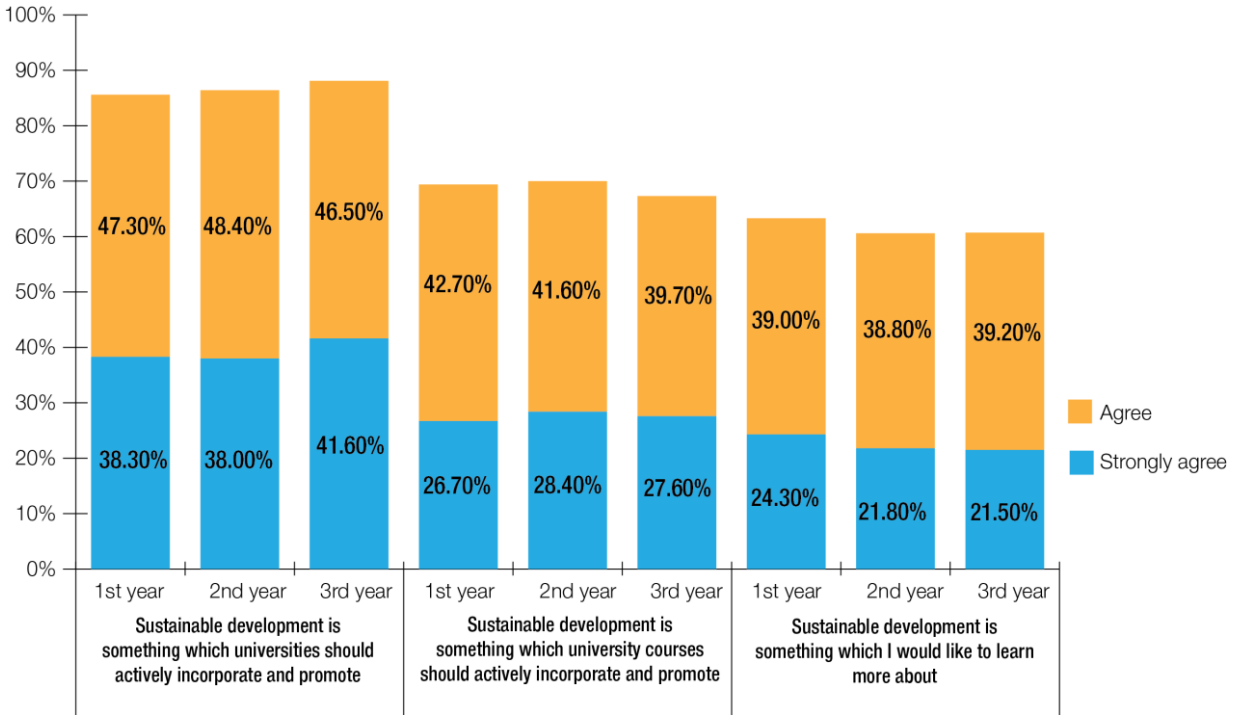
[5] UN, General Assembly, 65th session, resolution A/RES/65/161, Convention on biodiversity, 20 December 2010 can be found at www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/65/161

[6] For further information see www.un.org/millenniumgoals/

[7] For further information see www.ipcc.ch/

(NUS), has found that around 85 per cent of first-year students think universities should actively promote sustainable development, and around 60 per cent want to learn more about it[8].

Figure 1 Responses from the annual HEA-NUS survey on the attitudes of students to sustainability



The role of universities

22. Universities are making a substantial contribution toward sustainable development through their teaching and research, through their business operations, and through their influence on communities, staff and students. Lord Stern of the London School of Economics summed up the breadth of their role in his foreword to the 2009 update of our 'Sustainable development in higher education' document:

> *'It is crucial that the sector contributes strongly to sustainable development. It can do so by training and expanding minds; researching answers to challenges and informing public policy; showing its own understanding and commitment through careful campus management; and by being a responsible employer and active member of the business and local community.'*[9]

[8] 'Student attitudes towards and skills for sustainable development' can be found on the Higher Education Academy web-site at www.heacademy.ac.uk/resources/detail/sustainability/2013_student_skills_final_report

[9] From Foreword to 'Sustainable development in higher education' (HEFCE 2009/03), available at www.hefce.ac.uk/pubs/year/2009/200903/

23. HEFCE consulted on its vision for sustainable development in higher education in 2005[10] and this was incorporated in the 2005 strategy[11] before being amended in 2008 to include reference to 'research and exchange of knowledge through business, community and public policy engagement'. The 2008 vision therefore effectively dates from 2005 and is as follows:

> *'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[12].'*

24. We believe sustainable development should be central to higher education, and propose to update the 2005 vision to recognise that the sector has moved on and how much it is capable of. Given the progress made by some universities we no longer consider that a timeframe is appropriate. Accordingly, we propose the following wording, which emphasises the leadership role of the sector:

> *'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 their own business management.'*
>
> **Action**: Our 2005 vision was that within the next 10 years, the sector would be recognised as a major contributor to society's efforts to achieve sustainability. We will assess how far this has been realised and what further opportunities remain.

25. With 17,000 universities in the world, higher education is a global enterprise operating collaboratively through the exchange of ideas, students and staff. These connections and the positions of universities in societies mean that higher education has the potential to drive global change. English universities, with their overseas campuses and high proportions of students from overseas, have a considerable opportunity to lead this drive for change.

How HEFCE will support the higher education sector

26. We want to support individual institutions and the sector as a whole in taking actions to support sustainable development.

27. In particular we seek to:

- raise the profile of sustainable development as central to higher education
- integrate sustainable development into our business planning and policy-making

[10] 'Sustainable development in higher education: consultation on a support strategy and action plan' (HEFCE 2005/01), available at http://webarchive.nationalarchives.gov.uk/20120118171947/ http://www.hefce.ac.uk/pubs/hefce/2005/05_01/

[11] 'Sustainable development in higher education' (HEFCE 2005/28), available at http://goo.gl/K5pjEP

[12] 'Sustainable development in higher education: 2008 update to strategic statement and action plan' (HEFCE2009/03), available online at www.hefce.ac.uk/pubs/year/2009/200903/

- work with other organisations to bring about change
- support capacity-building to develop skills and show how challenges can be met
- provide information and analysis, for example on carbon management
- improve HEFCE's approach in our own operations.

28. Our work on sustainability is guided by our Leadership Governance and Management Strategic Advisory Committee, and this will continue to be the case[13]. Sustainability needs to be considered holistically however and become an integral issue for all our strategic committees.

Action: We will introduce sustainability into the terms of reference for all HEFCE's strategic committees.

29. The sections that follow outline the role of universities, and our intended actions to support sustainable development:

- supporting students
- education for sustainable development
- research and knowledge exchange
- a modern sustainable economy
- university management
- information and analysis.

Supporting students

30. Higher education is often a formative time for students, as many leave home for the first time when they start a course. Students are typically open to new ways of doing things, and this is a significant opportunity to help them adopt or maintain 'green' attitudes and behaviours. Making a change at this point in their lives is likely to endure and its impact be amplified; for example it may extend to their future workplaces and their families. NUS recognises this, and about 10 per cent of its 200 staff work in dedicated sustainability roles: their three award-winning green programmes are provided to 77 higher education institutions in the UK[14]. Universities can also influence the wider community, for example through their staff, their interactions with the community, and their considerable purchasing power.

Case study: University of Southampton

A campus-wide energy audit at the University of Southampton was completed by 255 students and staff in 2012. Its aims were to deliver carbon savings, empower students and staff in sustainability actions, and raise the profile of sustainability.

[13] Annex A lists the main actions and engagements by HEFCE since the publication HEFCE 2009/03. Future actions contained in this framework are listed in Annex B.

[14] For more information on Green Impact, Student Switch Off and Student Eats see www.nus.org.uk/greener

In less than four hours and across 34 buildings, student and staff groups audited 5,570 computers, plus all printers and lights.

The volunteers switched off all non-essential office equipment left on for the weekend, reducing energy usage by 6 per cent and saving 7 tonnes of carbon and £1,600 (compared with a typical term-time weekend).

31. Students and their representatives are valuable partners for institutions, providing both human resources and enthusiasm. There are rich opportunities for student employment in sustainability-related roles within universities and students unions, giving students valuable experience while they earn money. NUS has been instrumental in developing such opportunities; for example, HEFCE is providing £5 million from our Catalyst Fund to support NUS's Student Green Fund[15]. This is supporting 25 student-led projects at universities and colleges, which have has attracted widespread interest and led new conversations between students unions, universities and other partners.

Action: We will support NUS with the Student Green Fund and will seek other opportunities for collaboration.

Action: We will continue to support sustainability projects through the Catalyst Fund.

32. The National Student Survey (NSS) gathers information from final-year students about their experiences to inform potential students. A review of the NSS has begun and is due to report in summer 2014.

Action: The forthcoming review of the NSS may identify the potential for including questions about sustainable development.

Case study: University of Worcester and the City Council

A partnership between the University of Worcester and the City Council has increased recycling rates among Worcester's student community and is providing student volunteers with additional skills in communication, professionalism, teamwork and equality. Representatives visited 329 privately rented student properties, as well as 21 halls of residence, and recycling rates increased by 123 per cent. To assist on visits, the partnership produced a short video showing students sorting typical household waste (www.youtube.com/watch?v=53v5qW4SWM0) and created a Facebook page.

Students also undertook surveys aimed at stimulating the Green Deal in the student private rented sector (www.gov.uk/green-deal-energy-saving-measures). The project, funded by the Department for Energy and Climate Change, used an online tool to give an immediate result in suitability for a Green Deal Assessment. The project enabled students to improve living conditions for themselves and future tenants while developing employability skills. The project trained 25 students and completed 260 pre-assessment surveys, leading to 162 referrals to delivery partners.

[15] For more information on the Student Green Fund see www.nus.org.uk/sgf

Education for sustainable development[16]

33. The environmentalist and educator David Orr draws attention to the need for 'education of a certain kind', including the principles of ecology, social justice and environmental ethics[17].

34. The HEA-NUS survey referred to in paragraph 21 clearly indicates that most students wish to learn about sustainability, and this is reflected in the significance given to it by employers and professional bodies. A 2008 study for the Higher Education Academy found that social and environmental ethics and competencies are important issues for employers and applicants[18]. Universities are addressing this issue, and HEFCE's approach is sensitive to the need to respect the autonomy and academic freedom of higher education institutions. The Quality Assurance Agency for Higher Education and the Higher Education Academy are producing guidance for institutions on the skills, aptitudes and knowledge that students will need; this is due for publication in early 2014.

35. HEFCE funds the Higher Education Academy, and sustainability is one of the 12 priorities set out as a condition of receiving our funding. The Higher Education Academy will continue supporting:

- universities in meeting the agendas for education for sustainable development (ESD) and global citizenship, and in working with professional and sector bodies and staff in subject communities to support ESD
- the development of graduates equipped to contribute to a modern environmentally sustainable economy
- universities through the Green Academy, or similar change programmes to introduce sustainable development into the curriculum.

Case study: University of the West of England

The University of the West of England believes it has a duty to ensure that graduates are able to play a part in leading society to a more sustainable future. Of the university's departments, 94 per cent consider that incorporating sustainable development into the curriculum within their subject areas is either 'important' or 'very important', and concepts of sustainability are now included in core programmes for over 70 per cent of students. The initiative is being led by the Assistant Vice-Chancellor, Environment and Sustainability and a lecturer in Education for sustainable development. Current activities include staff training and the development of web resources which draw together good practice from across the university.

[16] The terms 'Education for sustainable development' and 'Education for sustainability' are used interchangeably.

[17] David Orr, 'The Learning Revolution: Education innovations for global citizens', *In context*, no. 27 (Winter 1991), p. 52, available at www.context.org/iclib/ic27

[18] 'Employable graduates for responsible employers', available on the Higher Education Academy web-site at www.heacademy.ac.uk/projects/detail/esd/esd_employable_graduates

Action: We will continue to support the work of the Higher Education Academy and others who can contribute to education for sustainability.

Research and knowledge exchange

36. Universities are making intellectual and technical advances that help other organisations apply sustainable solutions and reduce their carbon footprint. Research is therefore of critical importance[19].

Case study: Cranfield University

The Carbon Brainprint project at Cranfield University set out to quantify the impact of universities on carbon footprint reduction. One of the findings was that just two of Cranfield's projects led to reductions of 120,000 tonnes of greenhouse gas emissions in one year alone – 50 times Cranfield's own annual carbon footprint[20]. A short video about the project is at www.youtube.com/watch?v=9GSjDaWO9dQ

37. The new system for assessing the quality of research in UK higher education institutions, the Research Excellence Framework (REF), includes an explicit assessment of the impact that research has had on society, the economy, culture, the environment, health and quality of life. The REF therefore incentivises institutions to demonstrate the impact of their research, including to sustainable development.

38. In assessing the quality of research outputs, we have considered how to ensure that excellent research in all its forms will be assessed on an equal footing. This includes interdisciplinary research, considered important for sustainable development because many of the challenges and opportunities span discipline boundaries. In developing the REF we consulted on this issue and, although submissions will continue to be made in subject-based units of assessment, some enhancements have been made:

a. The unit of assessment and panel structure has been changed so that there are fewer panels with broader remits and broader expertise.

b. The panels include appropriate expertise in interdisciplinary research.

c. Institutions are invited to identify interdisciplinary research, thereby drawing it to the panels' attention.

d. Work that spans unit of assessment boundaries may be cross-referred to other panels for advice where more appropriate expertise may be available.

Action: We will publish the results of the REF in December 2014, and the submissions made by institutions including the impact case studies in early 2015.

[19] Universities UK's 2008 report 'Greening spires: Universities and the green agenda', available at www.universitiesuk.ac.uk/highereducation/Pages/GreeningSpires.aspx, showcases some of the work carried out by universities.

[20] For more information see www.carbonbrainprint.org.uk

A modern sustainable economy

39. According to the United Nations Environment Programme[21], a 'green economy' is one that 'results in improved human wellbeing and social equity, while significantly reducing environmental risks and ecological scarcities'. Modelling in 2011 showed that if countries around the world allocated up to 2 per cent of global gross domestic product (GDP) over the next 40 years to jump-start a transformation of the global economy, this would generate as much growth and employment as the so-called 'brown economy', where no investment would have been made into greening. The green economy would outperform a brown economy in both the medium and long term, and the transition would provide environmental and social benefits, as well as reduce the risks of global climate disruption.

40. Universities are well placed to contribute to this transition in many ways: through skills development, research, innovation, knowledge exchange, policy development, and stimulation of the demand for goods and services.

41. The three main findings of the 2011 UN Green Economy Report[22] are that:

a. The transition to a green economy generates increased wealth, particularly in natural capital, as well as a higher rate of GDP growth.

b. There is an inextricable link between the conservation of ecological capital and poverty eradication, because of the benefit flows from natural capital received directly by the poor.

c. A green economy would create new jobs. A later 2012 report estimated that these could be up to 60 million globally[23].

42. The UN has considered the impacts of the green economy in six economic sectors:

a. **Agriculture:** poverty reduction, food security, livelihoods and biodiversity.

b. **Fisheries:** developing capacity to conserve, manage and realise the benefits of sustainable fisheries; phasing out subsidies that contribute to overfishing.

c. **Forests:** sustainable management, certification and promotion of trade in legally harvested products, the fight against illegal logging and trade, and improving the livelihood of forest communities.

d. **Manufacturing:** energy and resource efficiency in the design and production of goods and services, and the management of chemicals and waste.

e. **Renewable energy:** renewable energy and more efficient use of traditional energy sources.

f. **Tourism:** well designed and managed tourism contributing to social, environmental and economic wellbeing, particularly in developing countries. Ecotourism places tangible economic value on natural capital.

---

[21] More information is available at www.unep.org/

[22] Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication www.unep.org/greeneconomy/greeneconomyreport/tabid/29846/default.aspx

[23] 'Working towards sustainable development: Opportunities for decent work and social inclusion in a green economy', available at www.ilo.org/global/publications/books/WCMS_181836/lang--en/index.htm

43. In renewable energy, for example, global investment rose by 32 per cent in 2010 to a record £130 billion, with China the largest investor in renewable energy projects[24].

Case study: Brunel University

In the UK we consign 300,000 tonnes of aluminium to landfill per year, representing £775 million of direct economic loss with an energy loss equivalent to 11 million barrels of oil.

Researchers at the Brunel Centre for Advanced Solidification Technology are developing techniques to revolutionise the production of metal components, by using recycled metals in casting items that require very little subsequent machining. This will radically reduce the energy and materials needed to manufacture high-quality parts.

If reliable methods can be found to reuse and 'up-cycle' existing metal, then enormous amounts of energy and resources, currently spent on disposing of used metal and extracting fresh supplies, can be saved. Reductions in mining and waste disposal will have major environmental benefits, reducing pollution and preserving landscapes and wildlife habitats.

44. In the UK the Confederation of British Industry (CBI) has identified opportunities to 'become the leading destination for low-carbon investment', and estimates that supporting a low-carbon economy could potentially add £20 billion to the UK's GDP by 2015. According to the CBI, in 2010-11 the UK's share of the £3.3 trillion global green market reached £122 billion, around 8 per cent of GDP, employing 940,000 people[25].

45. HEFCE's funding for knowledge exchange (provided via its Higher Education Innovation Funding, or HEIF), has supported a range of projects that have a green dimension since 2001: on electric vehicles, aerospace, carbon-related behaviour change and town planning. In 2013, HEFCE's Catalyst Fund is providing £50 million to enhance the contribution that universities make to economic growth.

46. A total of 16 such projects were selected for support by the Catalyst Fund in summer 2013. Collectively they are expected to contribute to the creation of more than 500 new companies, 1,200 products and 3,000 jobs, and thus to contribute more than £3 billion to the UK economy. The projects include courses, training, applied research and business support for companies working in the following sectors:

- low-carbon
- advanced manufacturing
- automotive
- sustainable buildings and retrofit
- renewable energy

[24] 'Global Trends in Renewable Energy Investment 2011', UN Environment Programme and the Frankfurt School of Finance, available online at http://fs-unep-centre.org/publications/global-trends-renewable-energy-investment-2011

[25] 'The colour of growth: maximising the potential of green business', CBI 2012, available at www.cbi.org.uk/campaigns/maximising-the-potential-of-green-business/

- recycling
- waste and water.

One project will focus on developing solutions to urban problems such as transport, energy and water.

> **Action**: We will make the case for further investment and identify opportunities where our funding can contribute to the development of a modern sustainable economy.

47. The National Centre for Universities and Business[26] was recently established to strengthen collaboration between universities and business.

> **Action**: We will discuss with the National Centre for Universities and Business how sustainability should best be incorporated in its future work.

University management

48. There is substantial good practice in universities' business operations; evidence shows that many higher education institutions have successfully reduced their direct environmental impact. Research published by HEFCE in 2010 shows that for the 45 universities with data for both years, emissions per full-time equivalent student were on average 64 per cent higher in 1990 than in 2005[27].

49. The higher education sector has demonstrated strong commitment to a carbon reduction strategy, and each higher education institution has produced carbon management plans which move the sector substantially towards government carbon reduction targets[28]. Research can be carbon-intensive, and solutions are often technical and require collaboration between laboratory technicians, academics and estates professionals. HEFCE's Catalyst Fund is supporting the S Labs project which has been successful in advancing good practice in the design and operation of laboratories[29].

Case study: University of Nottingham

The Centre for Sustainable Chemistry at the University of Nottingham will be housed in the UK's first carbon-neutral laboratory building. The entire carbon footprint of the laboratory – including the materials used in construction, the energy consumed during occupation, and the eventual demolition and restoration of the site – will make no overall contribution to greenhouse gas emissions. The building will combine new technologies with well understood principles of heat, light and air movement. The 4,500 square meter facility, costing £18.5 million, will be constructed to achieve a Building Research Establishment Environmental Assessment Method rating of 'outstanding' and a Leadership in Energy and Environmental Design standard of 'platinum'. The building is due to be operational in April 2015.

[26] For further information see www.ncub.co.uk/

[27] 'Carbon baselines for individual higher education institutions in England: Report to HEFCE by SQW', available at www.hefce.ac.uk/pubs/rereports/year/2010/heicarbonbaselines/

[28] 'Carbon reduction target and strategy for higher education in England' (HEFCE 2010/01), available at www.hefce.ac.uk/pubs/year/2010/201001/

[29] More information is available at www.goodcampus.org/

50. A number of universities are expanding teams, and making senior appointments, with broad responsibilities in sustainability. Enhancing the ability of people and organisations through capacity-building is crucial for the transition to sustainability, and HEFCE will continue to support this.

51. The Leadership Foundation for Higher Education (LFHE) provides a dedicated service to develop, support and advise on leadership, governance and management for all the UK's universities and colleges of higher education. It is committed to developing and improving the skills of existing and future leaders of higher education. It receives membership subscriptions from UK higher education institutions and revenue from courses, events, publications and development programmes, as well as income from the UK funding bodies. The LFHE is building sustainability into its values and programmes, such as the highly regarded Top Management Programme, and is involved in judging the Green Gown Awards. It works in partnership with the Committee of University Chairs, a membership body for the chairs of university governing bodies, to provide development programmes for governors of universities.

> **Action**: We will support the LFHE in its goal to embed sustainability in its programmes and activities, and engage with the Committee of University Chairs to promote sustainable development as a central principle in governance.

52. Higher education is making progress in reducing its emissions and becoming more sustainable, mitigating and adapting to the unavoidable consequences of climate disruption. A 2013 report from the Department for Energy and Climate Change indicates that energy prices are expected to rise by 20 per cent between 2013 and 2020, and that such increases would further benefit energy efficiency measures[30].

53. In 2010 HEFCE, Universities UK and GuildHE published carbon reduction targets for higher education in England. These targets were based on extensive research and wide consultation.

54. The overall sector target is for reduction of Scope 1 and 2 carbon emissions by 34 per cent by 2020 and 80 per cent by 2050, against a 1990 baseline[31]. Against the higher 2005 baseline, this is equivalent to a reduction of 43 per cent by 2020 and 83 per cent by 2050.

55. The overall target is very challenging. 2011 data indicate that the collective impact of institutional targets would lead to a 38 per cent reduction between 2005 and 2020; more recent data is needed to find out what further progress institutions have made towards these targets. Anecdotally, some institutions report strong progress; for some

[30] 'Estimated impacts of energy and climate change policies on energy prices and bills 2013', available online at http://goo.gl/5P2gD. The estimate is based on figures in Table 2 for medium-sized businesses which are not subject to the Carbon Reduction Commitment.

[31] The World Resources Institute classifies 'Scope 1' emissions as those occurring directly from sources that are owned or controlled by an organisation, for example emissions from boilers and vehicles; 'Scope 2' describes emissions resulting from the generation of electricity purchased by the organisation; 'Scope 3' covers all other emissions that occur as a consequence of the activities of an organisation but arise from sources it neither owns nor controls, for example procurement and commuting.

however expanding research capacity is presenting particular challenges despite the opportunities offered by high-performance laboratories, more efficient use of space and equipment sharing.

> **Action**: We will commission research on progress in meeting sector carbon targets. This will involve reviewing institutional targets to ascertain whether they are progressing sufficiently to meet the sector target of a 43 per cent reduction in carbon emissions by 2020 against a 2005 baseline.

56. Over £60 million has been made available over three rounds of HEFCE's Revolving Green Fund (RGF) for projects that reduce carbon emissions and save money. A 2010 evaluation of the first round of RGF showed that the fund was meeting its aims and that projects were already reducing English universities' emissions by over 2 per cent every year[32]. Because of the 'revolving' nature of the fund, this annual saving could potentially rise to 9 per cent by 2020. A report on the third round of RGF identifies the 43 institutions that have received funding under RGF3 and sets out project details[33].

> **Action**: We will make the case for additional investment in cost saving and carbon reduction through the Revolving Green Fund.

57. Linking capital funding to environmental performance, efficient use of space and carbon reduction through our Capital Investment Framework (CIF) has been effective in using a light-touch process to encourage change[34]. At present the scope and extent of future capital is unclear and we are deciding whether a future CIF is appropriate. In any event we will continue the link between capital and sustainability, potentially through the requirements of individual funding schemes, as we did for the UK Research Partnership Investment Fund[35].

> **Action**: We will link capital funding to sustainability, either through an over-arching CIF process or through the terms of individual schemes.

Case study: University of Hertfordshire

Guided walks and interpretation boards are provided to encourage staff and student involvement in the six county wildlife sites at the University of Hertfordshire. Under the Biodiversity Plan, wildflower meadows are only mown twice a year, increasing diversity and cutting costs. The plan has also led to sedum green roofs being included in projects, and hedgerows being enhanced to provide wildlife corridors.

---

[32] 'Evaluation of the Revolving Green Fund: A report to HEFCE' by Oakleigh Consulting Ltd, available at www.hefce.ac.uk/pubs/rereports/year/2010/rgfeval2010/

[33] 'Revolving Green Fund 3: Application assessments and outcomes', a report to HEFCE by Atkins, available at www.hefce.ac.uk/pubs/rereports/year/2013/rgf3/

[34] For more information see 'Arrangements for the second Capital Investment Framework' (HEFCE Circular letter 17/2010), available at www.hefce.ac.uk/pubs/year/2010/cl172010/

[35] The UK Research Partnership Investment Fund is a HEFCE fund set up in 2012 to support investment in UK higher education research facilities. More information is available at www.hefce.ac.uk/whatwedo/rsrch/howfundr/ukrpif201215/

58. The procurement of goods and services is an important aspect of sustainable development. A report in July 2009 referred to case studies in schools and the NHS which estimated that emissions from procurement might account for half of the sector's total[36]. We have already supported the Centre for Sustainable Procurement, run by the North East Universities Procurement Consortium, and we will continue to work with sector bodies where we can support more sustainable procurement[37].

59. Procurement emissions are, like waste, water and commuting, classed within Scope 3: emissions that arise from an organisation's activities, but from sources which the organisation neither owns nor controls. In order to improve understanding of Scope 3 carbon emissions, we commissioned guidance on measuring them[38]. An output from this was a tool which applies the Department for the Environment, Food and Rural Affairs' carbon intensity factors to different expenditure categories. Regional purchasing consortia automatically provide the outputs to their members, making it very easy for institutions to receive an estimate of their procurement emissions. The expenditure category approach is of limited use as an improvement method, however, and we will explore whether it can be bettered.

> **Action**: We will seek to identify a better method of estimating the carbon emissions arising from the procurement of goods and services.

60. Universities are major users of information and communications technology, which accounts for around 2 per cent of global carbon emissions as well as additional impacts in the form of resources used, manufacturing, re-use or disposal. Jisc's 'Sust IT' programme has supported projects at institutions and good practice materials[39].

> **Action**: We will work with sector bodies including Universities UK and GuildHE where we are able to support progress in areas such as procurement and information and communications technology.

[36] 'Research into a carbon reduction target and strategy for Higher Education in England: A report to HEFCE' by SQW Consulting and SQW Energy, available at www.hefce.ac.uk/pubs/rereports/year/2009/carbonreductionforhe/

[37] For more information see http://spce.ac.uk/

[38] 'Measuring Scope 3 emissions' reports and good practice are available at www.hefce.ac.uk/pubs/rereports/year/2012/scope3carbon/, www.hefce.ac.uk/pubs/year/2012/201201/ and www.hefce.ac.uk/pubs/year/2012/201202/

[39] For more information see www.jisc.ac.uk/guides/go-green-for-a-sustainable-future

Green Gown Awards: 2012 winners

Founded by Higher Education Environmental Performance Improvement, the Green Gown Awards are administered by the Environmental Association of Universities and Colleges[40]. The 2012 Green Gown winners included:

- the University of Cumbria, which reduced car travel on the 70-mile journey between the Carlisle and Lancaster campuses by 49 per cent and eliminated the need for a fleet of 49 pool cars
- the University of Bradford, which achieved a 31 per cent reduction in waste since 2007, making a 57 per cent saving in cost against 'business as usual' and recouping its investment in less than four years
- the University of Cambridge, for sustained reductions in energy use despite increasing energy-intensive research
- five Bloomsbury colleges, for a collaborative 'Greenthing' initiative that included introducing a shared environmental management system
- the University of Bradford, for 'The Green', a student village where students experience life in a high-performing building while learning about sustainability. (The Green cost the same as a traditional residence yet achieved a Building Research Establishment Environmental Assessment Method score of 94 per cent, the highest multi-residential score ever)
- Aston University, for the refurbishment of a Grade II listed sports centre, extending the life of a beautiful, but threatened community asset, linking it to a combined heat and power scheme that integrates the production of heat and electricity, thus improving energy performance
- Manchester Metropolitan University, which 94 per cent of its students regard as an 'eco-friendly university'
- De Montfort University, for an iPhone app which allows students and staff to see the real-time energy consumption of their buildings
- the University of Worcester for 'The Hive', a fully integrated university and community library, also voted Building Magazine's Sustainable Project of the Year 2013
- the University of Leeds for its 'italladdsup' energy reduction campaign.

Information and analysis

61. Providing information, benchmarking and guidance is important for progress, and we have supported or undertaken work in a number of such areas. This has included:

a. A review of the Higher Education Statistics Agency's Estates Management Record.

[40] For more information see www.eauc.org.uk/green_gown_awards

b. Three projects run by the Environmental Association of Universities and Colleges:

- Sustainability Exchange
- Learning in Future Environments
- EcoCampus benchmarking and accreditation schemes[41].

c. The publication of a report on the Estates Management Record, now undertaken by the Association of University Directors of Estates.

d. We continue to support dissemination from the annual Green Gown Awards, and have published guidance on producing carbon management plans[42].

Action: We will support the provision of information and analysis so that institutions can follow a broadly consistent approach which takes account of good practice and developing national policy.

Action: We will develop a model to predict the carbon emissions of each institution so that they can benchmark performance.

62. Performance indicators in higher education provide information on the nature and performance of the sector. They are intended as an objective and consistent set of measures of how an institution is performing. The Performance Indicators Steering Group is currently undertaking a review of the indicators to determine their future scope and purpose. Following this it is intended that the indicators themselves will be reviewed and, if appropriate, new indicators proposed. One area where new indicators could be added is sustainability.

Action: The introduction of sustainability indicators will be considered following the fundamental review of performance indicators.

HEFCE commitment

63. We believe we should lead by example, and will continue to improve our own performance, in the following ways:

- maintaining certification to the ISO14001 environmental standard and the Carbon Trust Standard
- participating in NUS's Green Impact programme
- reviewing and implementing our corporate social responsibility (CSR) policy and targets, and publishing an annual report[43].

[41] For the Estates Management Statistics Record, see www.aude.ac.uk/info-centre/EMS; for the Sustainability Exchange, see http://sustainabilityexchange.ac.uk/index.php; for Learning in Future Environments, see www.thelifeindex.org.uk/; for EcoCampus, see www.eauc.org.uk/ecocampus

[42] 'Carbon management strategies and plans' (HEFCE 2010/02), available online at www.hefce.ac.uk/pubs/year/2010/201002/

[43] ISO 14001 specifies the requirements of an environmental management system. For more information on the Carbon Trust Standard, see www.carbontrust.com/client-services/footprinting/footprint-certification/carbon-trust-standard; for more information on Green Impact,

In 2012 we were a West of England carbon champion for achieving a 17 per cent reduction in our carbon emissions between 2010 and 2011, and we have since achieved a Gold Ska rating for the refurbishment of our new London office[44]. Our CSR policy includes objectives and targets relating to:

- business ethics
- managing environmental impacts
- procurement
- our people
- the community
- working with the sector.

Action: We will continue to improve HEFCE's own CSR performance and report publicly on progress each year.

see www.nus.org.uk/greener ; for more information on our Corporate Social Responsibility policy, see www.hefce.ac.uk/about/howweoperate/corporatesocialresponsibility/

[44] Operated by the Royal Institute of Chartered Surveyors, Ska Rating is an environmental assessment tool for sustainable fit-outs. For more information on the west of England Carbon Challenge, see www.westofenglandcarbonchallenge.org/

Annex A: Actions and engagements by HEFCE since February 2009

These are the main actions and engagements by HEFCE since the publication of 'Sustainable development in higher education' (HEFCE 2009/03) in 2009.

	Action
2009	
July	Publication of 'Research into a carbon reduction target and strategy for Higher Education in England'.
July	Publication of 'Consultation on a carbon reduction target and strategy for higher education in England' (HEFCE 2009/27).
August	The Sustainable Procurement Centre of Excellence for the higher education sector – £398,000 provided for capacity building.
	Leading sustainable development in higher education initiative supported 11 good practice projects[45].
2010	
January	Publication of 'Carbon reduction target and strategy for higher education in England' (HEFCE 2010/01), a joint publication with Universities UK and GuildHE.
January	Publication of 'Carbon management strategies and plans' (HEFCE 2010/02). This provides guidance for institutions on producing individual carbon reduction strategies and targets, and associated carbon management plans.
July	Publication of 'Evaluation of the Revolving Green Fund: a report to HEFCE'.
July	Launch of the second Capital Investment Framework linking environmental performance to capital allocations.
July	HEFCE's Financial Memorandum requires institutions to have carbon management plans.
August	Publication of 'Carbon baselines for individual higher education institutions in England'.
2011	
June	Revolving Green Fund – invitation to apply for a second phase of funding (HEFCE Circular letter 16/2011).
June	Publication of carbon baselines and targets by institution.
2012	
January	Publication of the guidance 'Measuring Scope 3 carbon emissions'.
July	HEFCE became a West of England Carbon Champion for reducing carbon emissions by 17 per cent between 2010 and 2011.
August	New Estates Management Record published by the Higher Education Statistics Agency contains provision for comprehensive collection of Scope

[45] For more information, see www.hefce.ac.uk/whatwedo/lgm/landg/lgmf/leadingsustainabledevelopmentinhe/

	3 emissions.
November	Revolving Green Fund – invitation to apply for a third phase of funding (HEFCE Circular letter 16/2011).
2013	
January	Revised process for assessing the sustainable development impact of HEFCE policies.
April	Award of £5 million for the National Union of Students Student Green Fund.
April	Finlaison House, HEFCE's new London base, achieves Gold Ska rating for the environmental standard of the fit-out.
May	£20 million awarded under the third round of the Revolving Green Fund.

Annex B: Future actions by HEFCE

This annex lists the actions that HEFCE will take which have been listed throughout the document.

General	**Paragraph**
Our 2005 vision was that within the next 10 years, the sector would be recognised as a major contributor to society's efforts to achieve sustainability. We will assess how far this has been realised and what further opportunities remain.	24
We will introduce sustainability into the terms of reference for all HEFCE's strategic committees.	28
Students and society	
We will support the National Union of Students with the Student Green Fund and will seek other opportunities for collaboration.	31
We will continue to support sustainability projects through the Catalyst Fund.	31
The forthcoming review of the National Student Survey will consider the potential for including one or more questions about sustainable development.	32
Education for sustainability	
We will continue to support the work of the Higher Education Academy and others who can contribute to education for sustainability.	35
Research and knowledge exchange	
We will publish the results of the Research Excellence Framework in December 2014, and the submissions made by institutions including the impact case studies in early 2015.	38
A modern sustainable economy	
We will make the case for further investment and identify opportunities where our funding can contribute to the development of a modern sustainable economy.	46
We will discuss with the National Centre for Universities and Business how sustainability should best be incorporated in its future work.	47
University management	
We will support the Leadership Foundation for Higher Education in its goal to embed sustainability in its programmes and activities, and engage with the Committee of University Chairs to promote sustainable development as a central principle in governance.	51
We will commission research on progress in meeting sector carbon targets. This will involve reviewing institutional targets to ascertain whether	55

they are progressing sufficiently to meet the sector target of a 43 per cent reduction in carbon emissions by 2020 against a 2005 baseline.	
We will make the case for additional investment in cost saving and carbon reduction through the Revolving Green Fund.	56
We will link capital funding to sustainability, either through an over-arching Capital Investment Framework process or through the terms of individual schemes.	57
We will seek to identify a better method of estimating the carbon emissions arising from the procurement of goods and services.	59
We will work with sector bodies including Universities UK and GuildHE where we are able to support progress in areas such as procurement and information and communications technology.	60
Information and analysis	
We will support the provision of information and analysis so that institutions can follow a broadly consistent approach which takes account of good practice and developing national policy.	61
We will develop a model to predict the carbon emissions of each institution so that they can benchmark performance.	61
The introduction of sustainability indicators will be considered following the fundamental review of performance indicators.	62
HEFCE operations	
We will continue to improve HEFCE's own corporate social responsibility performance and report publicly on progress each year.	63

Annex C: List of consultation questions

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?

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

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.'*

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

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

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?

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

Annex D: Abbreviations and glossary

BIS	Department for Business Innovation and Skills, the department of UK government with ultimate responsibility for higher education in England
CIF	Capital Investment Framework, a methodology to assess the way universities and colleges approach capital investment asking them to demonstrate that they are managing their physical infrastructure as an integral part of their strategic and operational planning and that their plans in this area are environmentally sustainable
CSR	Corporate social responsibility
CUC	Committee of University Chairs, a forum for discussion for university chairs. Its primary purpose is to enable chairs to contribute their distinctive experience, knowledge and perspective as laypersons and to consider matters which concern all universities
GDP	Gross domestic product
HEA	Higher Education Academy
HEFCE	Higher Education Funding Council for England
Institutions, higher education institutions, universities	In this document the terms ‘institutions’, ‘higher education institutions’, and ‘universities’ all refer to HEFCE-funded universities and colleges of higher education
Jisc	The UK’s expert on digital technology for education and research
LFHE	Leadership Foundation for Higher Education
NSS	National Student Survey
NUS	National Union of Students
REF	Research Excellence Framework, the system for assessing the quality of research in UK higher education institutions; its outcomes inform the selective allocation of research funding by UK funding councils
RGF	The Revolving Green Fund provides recoverable grants for HEFCE-funded institutions to reduce carbon emissions
The sector	HEFCE-funded universities and colleges of higher education
UN	United Nations