



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Environmental Sustainability Report

LSE 2013-14

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Foreword by the Director

When LSE was founded in 1895, we adopted the motto *Rerum cognoscere causas* – “Understanding the causes of things”. This still applies today, and it continues to be LSE’s mission to provide critical insight into the key issues of our age. Climate change, environmental degradation and sustainability are key examples of such global challenges, and we address them through our research, teaching, campus activities, and the way we engage with the wider community.

This is our second standalone Annual Sustainability Report, and I am pleased to look back over a year that has produced a great deal of excellent work in this area.

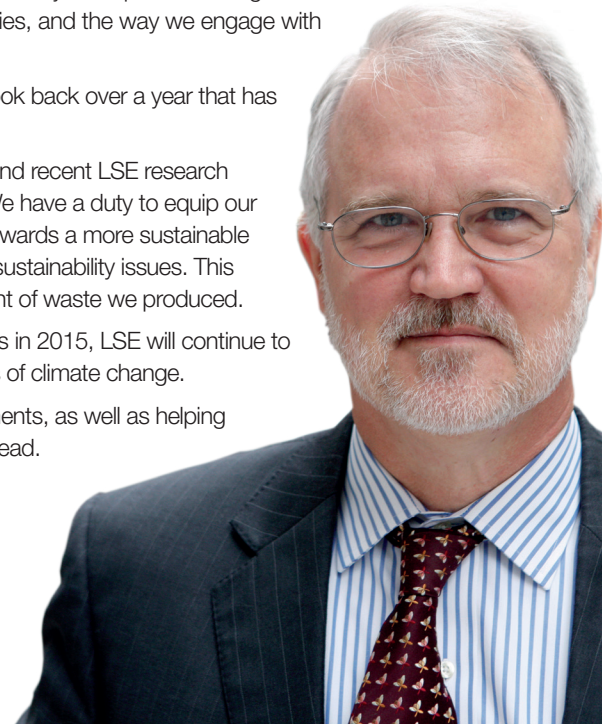
LSE has an international reputation for being a leading social sciences university, and recent LSE research has informed policy around the world on climate finance, green cities and more. We have a duty to equip our students with the knowledge and skills needed to play their part in the transition towards a more sustainable society, and have expanded opportunities for students to study and engage with sustainability issues. This year we also reduced our own energy and water consumption, and cut the amount of waste we produced.

Meanwhile, as we approach the crucial United Nations climate negotiations in Paris in 2015, LSE will continue to play our part in international debates on how we should respond to the challenges of climate change.

In the coming year, we look forward to building on our own sustainability achievements, as well as helping to address more broadly the global social and environmental challenges that lie ahead.



Professor Craig Calhoun
LSE Director



Executive Summary

This report highlights sustainability developments and achievements in the 2013-14 academic year. It is aimed at LSE students, staff and alumni, as well as interested members of the public. The report covers four key areas:

- 1** Leadership and governance (our processes for converting top-level support for sustainability into tangible action).
- 2** Campus operations (energy usage of our buildings, recycling rates, etc).
- 3** Teaching and research (case studies of research and teaching on sustainability).
- 4** Engagement and community (how we encourage sustainability among our students and staff, and in the wider world).

The statistics on the following page highlight some of our key achievements in 2013-14.

Highlights from 2013-14



Eight per cent decrease in energy consumption since 2012-13.



LSE now sends **zero** waste to landfill.



0.6 per cent less waste produced than in 2012-13.



Three per cent less water consumed than in 2012-13.



21 per cent of taught modules offer opportunities to study sustainable development.



40 per cent of LSE staff and students cycle or walk to campus.



2,000 people attended public lectures on sustainability.



200 jars of honey produced by LSE bees.



19 tonnes of CO₂e was saved by re-using furniture that would have gone to waste.



Five student-led environmental projects received funding and support.

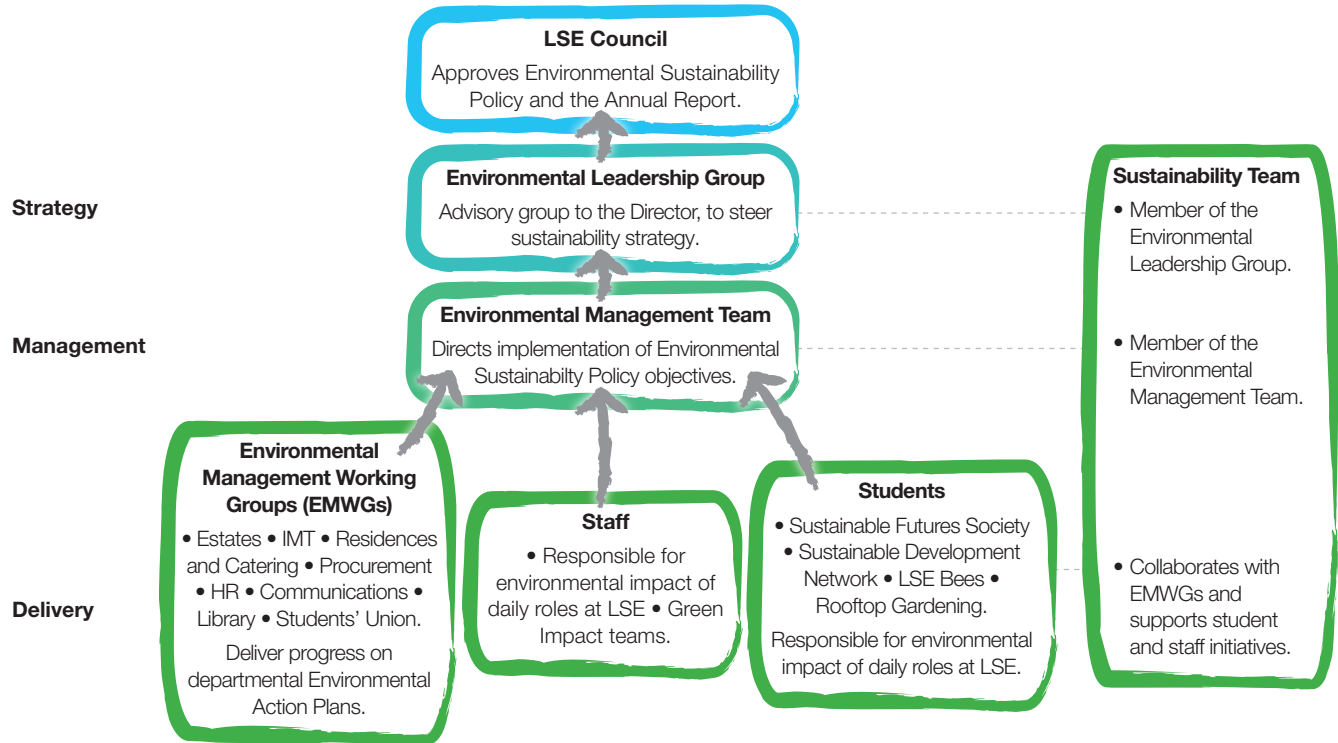
Leadership and Governance

Environmental sustainability is embraced at every level of LSE, from the small-scale integration of sustainability into the daily working life of the School, right up to the most senior management.

Successfully delivering this work requires continuous cooperation across LSE between staff, departments, the Students' Union and others. This collaboration is summarised in the diagram on the following page showing LSE's environmental reporting structure.

Our Environmental Sustainability Policy is put into practice through an Environmental Management System (EMS), which strategically manages, monitors and improves each of our environmental impacts. The EMS has been certified to the internationally recognised ISO 14001 standard since 2012. In 2014-15 we aim to achieve ISO 50001 certification for our Energy Management System, to enhance our energy efficiency and cut carbon emissions.

How does LSE make decisions about environmental sustainability?



Estates and Operations

LSE recognises that its own activities embody significant environmental impacts. We have a responsibility to minimise these, and create positive environmental change where possible.

We do this by managing resources efficiently (energy, water, waste, etc.), considering environmental factors when buying goods and services, and ensuring that our buildings perform to high environmental standards.

Energy, carbon and preventing pollution

Progress and initiatives:

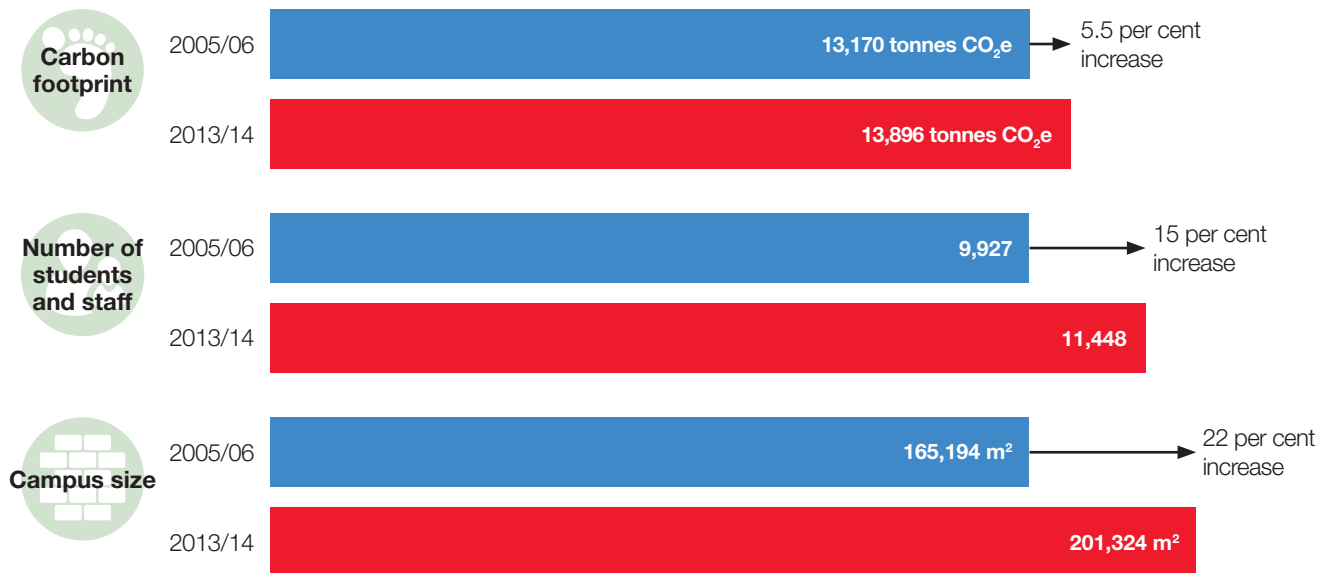
In 2013-14, LSE buildings emitted 13,896 tonnes of CO₂e and consumed 40,323 MWh of energy. Although our 2013-14 energy consumption decreased by eight per cent compared with 2012-13, our carbon footprint increased by one per cent during the same period, due to changes in the fuel sources of grid electricity.

- We adopted an Energy Policy and achieved ISO 50001 certification, an international standard of Energy Management System.

- 78,225 kWh of electricity was generated by solar PV panels, and 70,045 kWh was generated by Combined Heat and Power (CHP) units. This is enough to power our Cowdray House building for a year.
- 60 hand-dryers were installed that are 80 per cent more energy-efficient than conventional dryers. More will be rolled out across campus in 2014-15.
- 32,000 energy-efficient lights were installed to replace less efficient lighting, saving 42 tonnes of CO₂e.
- In 2013-14 the school signed the Mayor of London's Air Quality Pledge to help improve local air quality. This includes raising awareness of air pollution, and working with suppliers to minimise transport emissions.

LSE's carbon footprint has increased by 5.5 per cent compared with our 2005 baseline. However, taking into account the growth of the School during this period, carbon emissions per m² of floorspace have decreased by 13 per cent, whilst emissions per capita of student and staff have fallen by 8.5 per cent, due to energy efficiency measures we have introduced. This is shown in the graphics on the following page.

Carbon footprint vs LSE population and campus size: 2005/06 to 2013/14



Future goals:

- Review our Carbon Management Plan to make it a more accessible and practical tool to help manage our energy consumption and carbon emissions.
- Deliver 72 individual projects to retrofit energy efficiency measures into ten of our buildings, supported by the Mayor of London's "RE:FIT" programme of investment in low-carbon public buildings. The projects will save around 1,120 tonnes of CO₂e per year, representing an eight per cent reduction of LSE's total carbon footprint.

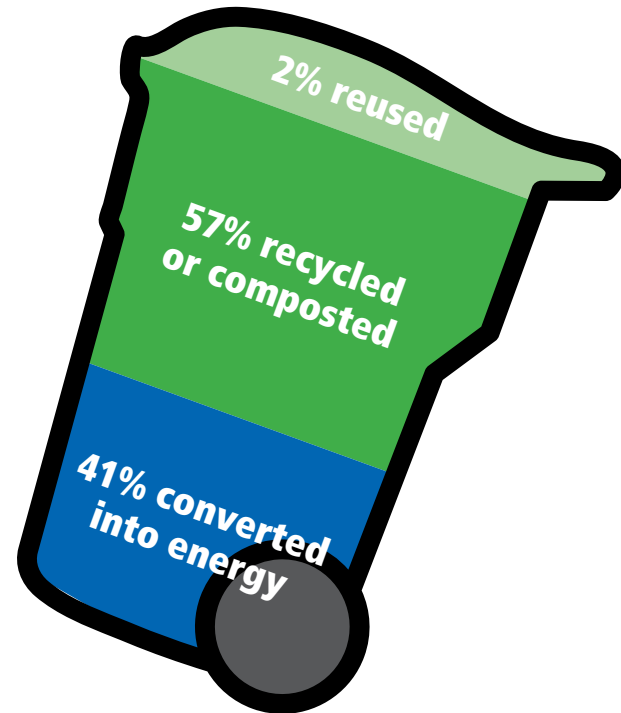
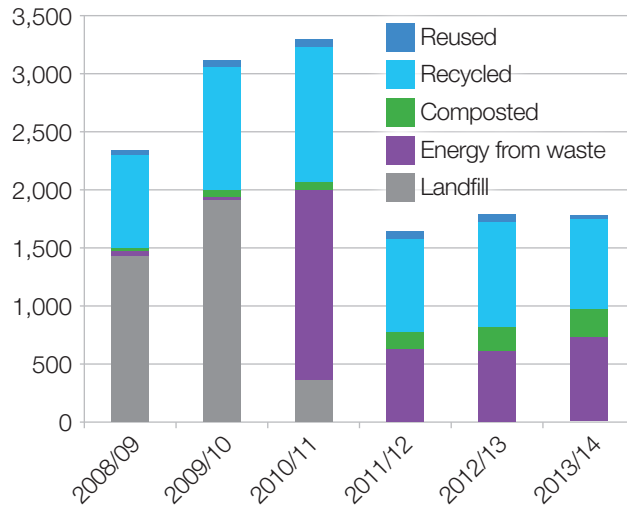
Reducing Waste

Progress and initiatives:

Major progress has been made in waste and recycling, both on campus and in halls of residence.

- LSE now sends zero waste to landfill. Any waste that cannot be avoided, re-used, recycled or composted is sent to an energy-from-waste plant.

LSE waste disposal 2008/09 to 2013/14 (tonnes)



- Total waste produced in 2013-14 was 1,787 tonnes excluding construction waste, down 1 per cent on 2012-13. Trends in LSE waste since 2008 are shown in the graph on the preceding page.
- We have moved to a new waste contractor to improve recycling rates and get more accurate data on how much waste we dispose of.
- We re-used 294 items of furniture that would otherwise have been disposed of, saving £41,500 and 19 tonnes of CO₂e.
- 452 reusable Smart Mugs were sold, 28 per cent more than in 2012-13, saving the number of disposable coffee cups used. Refillable LSE water bottles are now also sold, which can be filled at one of the 64 water fountains on campus instead of buying bottled water.
- Halls of residence gave all new students a Tupperware box to take away food from canteens, saving food waste and disposable takeaway packaging.

Future goals:

- LSE will reduce the amount of waste we produce by engaging with suppliers to minimise packaging at source.
- We will streamline the process for departments moving offices within LSE to minimise waste by re-using unwanted items where possible.

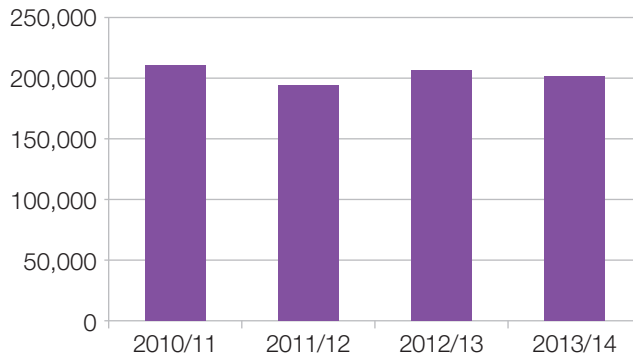


Water

Progress and initiatives:

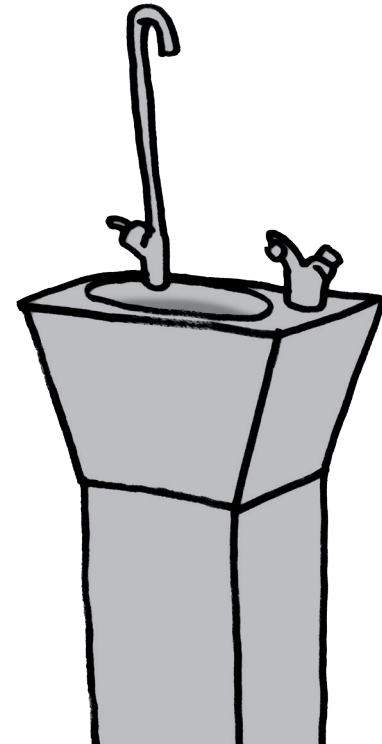
- In 2013-14 LSE consumed 201,805 m³ water. This is a three per cent decrease from 2012-13.
- 550 foam hand-soap dispensers were installed in campus bathrooms, which require 46 per cent less water to rinse. They are now installed as standard across LSE.
- More Propelair toilets have been installed across the campus, which save around 80 per cent per flush.

Water consumption 2010/11 to 2013/14 (m³)



Future goals:

- More water-efficient technologies will be installed across campus, such as sensor taps and low-flush toilets.
- Water efficiency initiatives will be undertaken in the halls of residence, including water-efficient toilets and more efficient laundry management.



Procurement

Progress and initiative:

- Carbon emissions from the procurement of goods and services were 41,059 t CO₂e in 2013-14, up by 42 per cent from 2012-13 due to increased overall expenditure.
- The LSE Sustainable Procurement Strategy was launched, providing a framework for major purchases to take energy and environmental factors into account.
- Staff in LSE Advancement created guidelines for “Greening your Event”. It includes ordering seasonal food where possible, and sourcing Fairtrade tea and coffee. This will be rolled out in other departments in 2014-15.
- The four catered halls of residence achieved the Soil Association “Food For Life” Bronze award, which certifies food is sustainably sourced, healthy and nutritious.
- LSE Catering’s “Feel Good Food Days” raised awareness of the environmental impact of the food we eat, featuring many dishes with reduced meat content, and a further 70 per cent which is vegetarian.

Future goals:

- LSE will increase engagement with suppliers to factor environmental performance into purchases.
- In 2014-15 LSE Catering will run campaigns on sustainable fish and reduced-meat diets.



Buildings

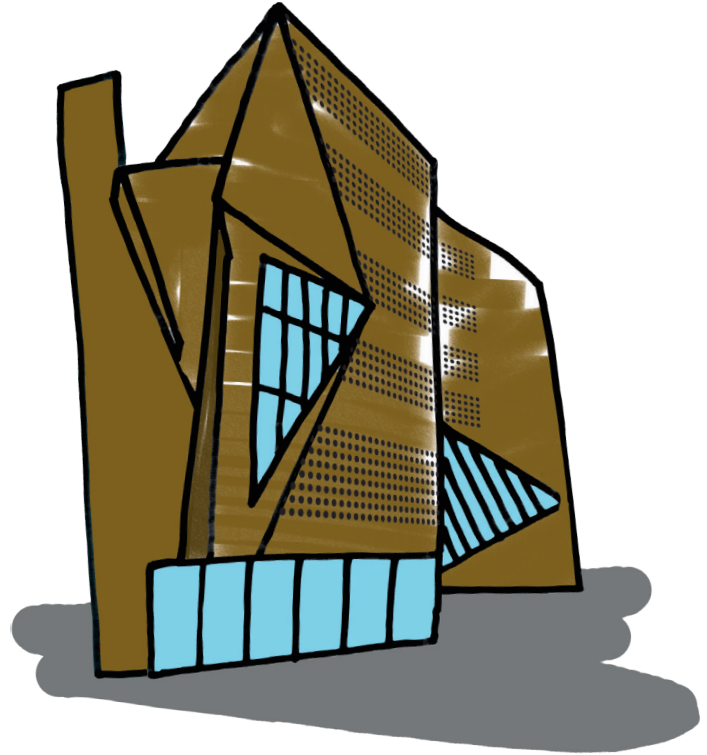
Progress and initiatives:

Opening of Saw Swee Hock

The Saw Swee Hock Student Centre opened its doors in January 2014. The building was designed to the highest environmental standards and achieved BREEAM “Outstanding” status and an “A” rated Energy Performance Certificate.

Features include solar PV panels and two CHP boilers; low energy consumption through natural ventilation and advanced building controls; automated sub-meters for highly localised energy consumption information; water-efficient toilets; and greywater collection. Key to the building’s efficiency is correct usage of its features, which we have encouraged by engaging with building users through training, signage and newsletters.

As well as becoming a landmark building on campus, the Saw Swee Hock building has received national critical acclaim. It won the RIBA “London Building of the Year Award” and the *Architects’ Journal*’s “AJ100 Client of the Year Award”, and was shortlisted for the RIBA Stirling Prize 2014.



- A major new building will begin construction in 2015 on the site of the existing Centre Buildings. We are working with the architects, Rogers Stirk Harbour and Partners, to deliver a highly environmentally sustainable building. Plans include a public square and green roof space.
- There are ongoing maintenance projects aiming to continuously green the campus, for example the installation of energy efficient lighting and more efficient hand dryers.

Future goals:

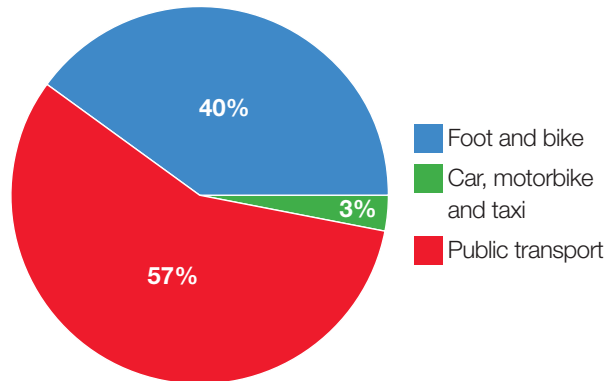
- LSE aims for the Centre Buildings redevelopment to achieve a minimum of BREEAM “Excellent”, and an “A” rated Energy Performance Certificate.
- The refurbishment of the Parish Hall building is targeting RICS SKA “Gold” certification for sustainable refurbishment.

Transport

Progress and initiatives:

- 40 per cent of students and staff commute to LSE by bike or on foot, according to a survey in March 2014. (See pie chart below.)
- The travel survey has allowed us to evaluate how best to improve the cycling facilities on campus.
- The tax-free salary-sacrifice bike purchasing scheme helped 34 staff buy a bike to start commuting to work.
- The new Media Centre has allowed staff to hold meetings and give media interviews without needing to leave campus.

How LSE students and staff commute to campus



Future goals:

- A group of students and staff plan to set up a Bicycle User Group to exchange cycling tips and better understand how LSE can improve its cycling facilities.
- A bike lending scheme will be established on campus and in halls of residence.



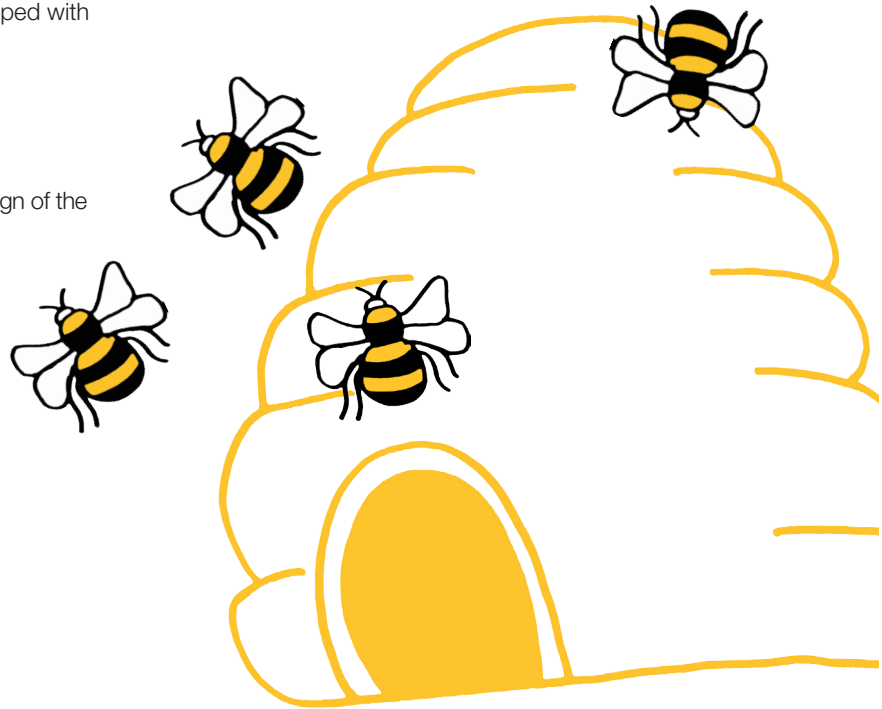
Biodiversity

Progress and initiative:

- The LSE Beekeeping Society harvested 200 jars of honey in autumn 2013.
- The rooftop vegetable gardens also had a good yield, and produce was given to staff and students who helped with the harvest.

Future goals:

- Biodiversity features will be incorporated in the design of the Global Centre for Social Sciences.
- A fifth beehive will be installed in 2014-15.



Teaching and Research

LSE conducts a wide range of teaching and research on environmental sustainability topics. Our research influences global policy and thinking on issues including climate change, urban development, environmental governance and more. Our teaching equips LSE graduates with knowledge and critical thinking skills to address the complex web of issues and challenges, including the environment, that shape our society.

Teaching

- LSE teaches 223 modules which offer the opportunity to study sustainable development, representing 21 per cent of all modules on offer. These modules are not just taught in the Geography and Environment Department and other “usual suspects” – they are found in 23 out of the 24 academic departments and institutes across LSE, including in the Departments of Accounting, Anthropology and Economics.

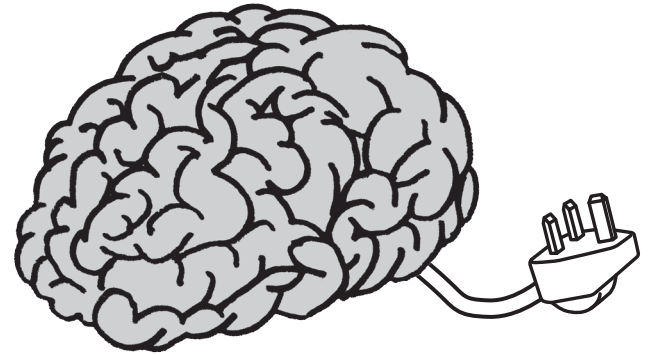


The Mathematics Department incorporated environmental topics into class assignments in four core undergraduate modules, helping to raise awareness of environmental issues in areas where they might not be expected. Environmental themes were also included in coursework assignments, including questions based on carbon trading, green taxes, and statistical climate modelling. Around 1,000 students have taken these courses. This project also won the LSE “Green Impact Excellence” award.

The Government Department offers a module on sustainability policy called “Sustainability Science and Policy: Problems and Perspectives”. The course explores how social and environmental policy makers and analysts use interdisciplinary approaches to design and implement effective and beneficial public policy.

The Management Department offers a module on Business Transformation and Project Management, which features a coursework project where students project-manage the introduction of a recycling system into a fictional organisation. Students use LSE's own waste management practices as a starting point to consider alternative solutions to environmental projects.

LSE 100 is a course taken by all LSE undergraduates, which applies critical thinking to the major social sciences questions of our times, including climate change as well as issues such as the financial crisis. Last year 1,219 students took the course.



Research

The Carbon Bubble

Authors: James Leaton, Nicola Ranger, Bob Ward, Luke Sussams, Meg Brown

Grantham Research Institute for Climate Change and the Environment (in partnership with Carbon Tracker)

The Carbon Bubble Report identifies that if the planet is to avoid catastrophic climate change, a large quantity of fossil fuel reserves cannot be burned, and must be left in the ground. This implies that if policy makers were to enforce this through regulation, the value of these “unburnable” fossil assets would plummet, meaning that investment in fossil fuels could represent “stranded assets”.

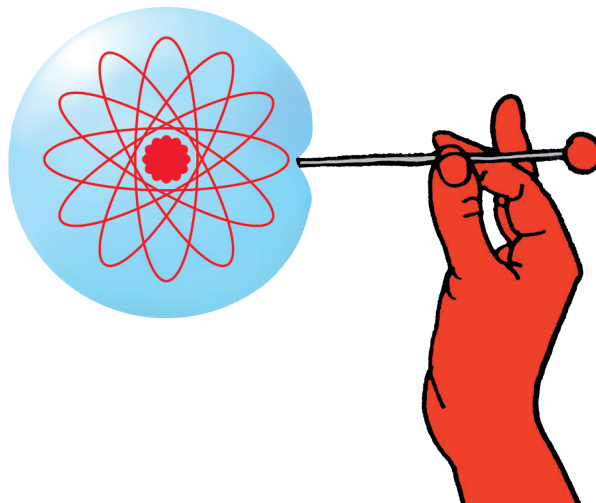
The report calls for regulators, governments and investors to re-evaluate energy business models against carbon budgets, to prevent a \$6 trillion carbon bubble in the next decade.

Climate change and human security: international governance architectures, policies and instruments

Author: Michael Mason

Geography and Environment Department.

This research links the complexities of climate change to the wellbeing and resilience of human populations. It incorporates climate change research into human security work, using both disciplinary and interdisciplinary approaches.



An economic solution to climate change that could save trillions

Authors: Simon Dietz, Sam Fankhauser

Grantham Research Institute for Climate Change and the Environment

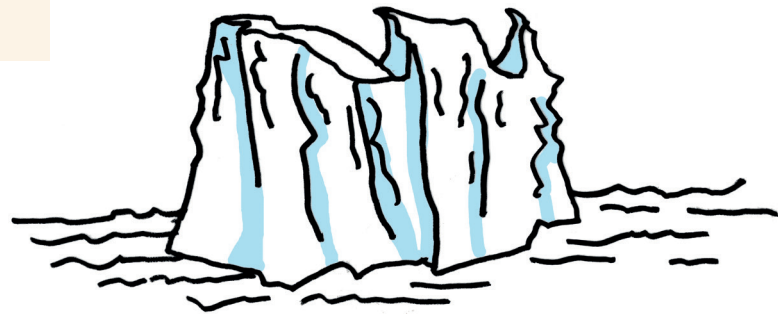
During growing concern over the impact of climate change, policymakers have been investigating ways to reduce carbon emissions. A key challenge for economists is that polluters are not required to pay the full costs of the harmful effects of their activities. Economists have contended that putting a price on carbon, to ensure polluters are forced to review the negative effects of their harmful emissions, must be a core element of an economically efficient strategy to curb these emissions. This research has influenced policy and the design of carbon pricing legislation in the UK and elsewhere.

Climate Justice is not Just Ice

Author: Tim Forsyth

Department of International Development

Debates on climate justice often focus on the dichotomy between “procedural” justice (fairness in decision-making procedures) as opposed to “distributive” justice (fairness in the distribution of resources). However, these distinctions often fail to acknowledge the diversity of experiences of climate risks, and the contested nature of many proposed solutions. This paper calls for a reassessment of debates around climate justice, taking into account this diversity – particularly the need to integrate climate mitigation with a reduction in social vulnerability.



Making waste treatment a safer business

Authors: Julia Black, Robert Baldwin

Law Department

This research developed a new methodology to quantify and regulate the environmental hazards of low-risk industries, such as recycling depots and chicken farms.

Whereas the hazards associated with high-risk sites such as nuclear power plants are often well-documented, this research addressed the difficult challenge of devising strategies to proportionately and consistently manage lower level risks, by developing an innovative “regulation matrix” tool.

Cities and the New Climate Economy: The transformative role of global urban growth

Authors: Graham Floater, Philipp Rode, Alexis Robert, Chris Kennedy, Dan Hoornweg, Roxana Slavcheva, Nick Godfrey

LSE Cities (in partnership with The Global Commission on the Economy and Climate)

The New Climate Economy project explains how the world's 724 largest cities could reduce greenhouse gas emissions by up to 1.4 billion tonnes of CO₂e per year by 2030, through better and more efficient transport systems. This project comprised a series of studies, and was an international collaboration that took place over several years.



Other recent LSE research includes:

- **“Scientific ambiguity and climate policy”.**

Antony Millner, Simon Dietz, Geoffrey Heal (2013)

Grantham Research Institute.

- **“Hidden alliances: rethinking environmentality and the politics of knowledge in Thailand’s campaign for community forestry”.**

Tim Forsyth (2014)

Department of International Development.

- **“Capacity, Innovation and their Interaction in Multistakeholder Sustainability Initiatives”.**

Kira Matus (2014)

Government Department.

- **“Adaptation to climate change and economic growth in developing countries”.**

Simon Dietz, Antony Millner (2014)

Geography and Environment Department.

Future goals:

- The LSE 100 module will add additional lectures to its climate change section, addressing environmental law and exploring how “nudge” theory has been used to cut individuals’ energy consumption.
- LSE academics will feed into the United Nations’ “COP 21” international climate negotiations in Paris in 2015.

Engagement and Community

LSE recognises that alongside our research, teaching, and initiatives on campus, it is also essential to engage with staff, students and external stakeholders on environmental sustainability issues.

We run numerous initiatives to inspire and empower staff and students to enhance their own environmental impacts, as well as promoting debate around how these issues relate to the wider world.

Sustainable Projects Fund

In 2013-14, LSE supported students and staff to lead their own projects to:

- Install a green roof
- Start a bicycle recycling scheme
- Buy ethically sourced magazine stands for student publications
- Conduct a research study on smart mug usage
- Install a large new drinking water fountain.

These initiatives were made possible by the Sustainable Projects fund – a prize-fund for student and staff projects on campus to enhance sustainability. The Fund is financed by a 10p “tax” on bottled water sold at LSE Catering outlets, and is run by the student Sustainable Futures Society with support from LSE Estates.



Engagement within LSE

Green Impact

Green Impact is a competition that supports staff to make incremental changes to “green” their offices. In 2013-14, 36 teams took part involving over 150 staff, saving an estimated 76 tonnes of CO₂e.

Student Switch-Off

Student Switch-Off is a successful student competition, which encourages students living in halls of residence to save energy. Over 250 students took part in 2013-14 and energy use in halls dropped by over 4 per cent compared with a 2010 baseline. This saved over 29 tonnes of CO₂e, equating to around £7,000 in energy bills.

Sustainability Training

A sustainability training e-learning module was delivered to all LSE Estates Division staff to help them contribute to the School’s environmental goals through their everyday roles.

Green Week

In 2013-14 a “Green Week” was held on campus. Events included an electricity-generating bike, a demonstration of a solar powered car, a bike maintenance workshop and a beehive visit.

Engagement in the community

Public Lectures

Each year, LSE’s renowned public lecture programme features internationally-acclaimed speakers from academia, government and beyond – many of which focus on sustainability. In 2013-14, environmentally-themed talks were given by Mary Robinson, Professor Bruno Latour, the late Professor Ulrich Beck, , Professor Lord Nicolas Stern, leader of the Green Party Natalie Bennett, renewable energy pioneer Jeremy Leggett, ecologist Satish Kumar and many others, attracting combined audiences of over 2,000 people.

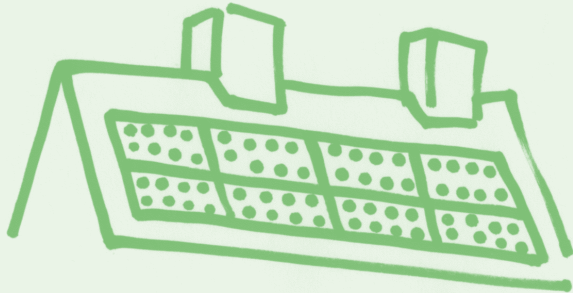
Climate change poetry

A lively evening of climate-related poetry and debate, featuring writers, performance poets and academics, was hosted by the Grantham Research Institute for Climate Change and the Environment.



“Pollinate”

Pollinate Energy is a social enterprise that equips citizens in India’s marginalised urban communities to install their own local-scale solar energy systems. It was co-founded by Katerina Kimmorley, a Geography and Environment MSc student, to help address the social, health and environmental issues associated with energy poverty. Pollinate won £10k from the LSE Annual Fund, and has since gone on to expand, and has been recognised by several awards, including being named as a Lighthouse Activity under the 2013 United Nations Momentum for Change Awards.



Soap-box talks at the Natural History Museum

Amelia Sharman, a PhD candidate at the LSE Grantham Institute, gave a public “soap-box talk” at the Natural History Museum, presenting her research on engaging with climate sceptics, and discussing her ideas with members of the public – whilst (literally) standing on a soap-box. Three other LSE researchers also participated in the event – “Science Uncovered” – which formed part of Universities Week 2014.

Collaboration in the higher education sector

LSE continues to participate in many university-sector organisations and discussions, including the development of the People and Planet Green League, the Members’ Advisory Council of the Environmental Association for Universities and Colleges, and the Executive Committee of the London Universities Environmental Group (LUEG)

Future goals

- Bespoke sustainability training workshops will be delivered to each individual team within the Estates Division, to follow up the sustainability e-module
- The Sustainability in Practice public lecture series will continue with more speakers and events.



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