

Royal Holloway
University of London

Environmental Sustainability Report 2010/11

1. Carbon

1.1 Carbon Emissions

The College has made a commitment to reduce its carbon emissions by 48% from 2005 levels by 2020. This is in line with the funding council's requirements and the Government's target outlined in the Climate Change Act 2008.

In 2005/6 the College's greenhouse gas emissions were 15,514 tonnes CO_{2e} (made up of Scope 1¹ and 2 emissions). By 2010/11 these emissions had been reduced by 11.5% to 13,716 tCO_{2e}. Scope 3 emissions, which are not currently included in our footprint were 10,883 tCO_{2e} (see Figure 1).

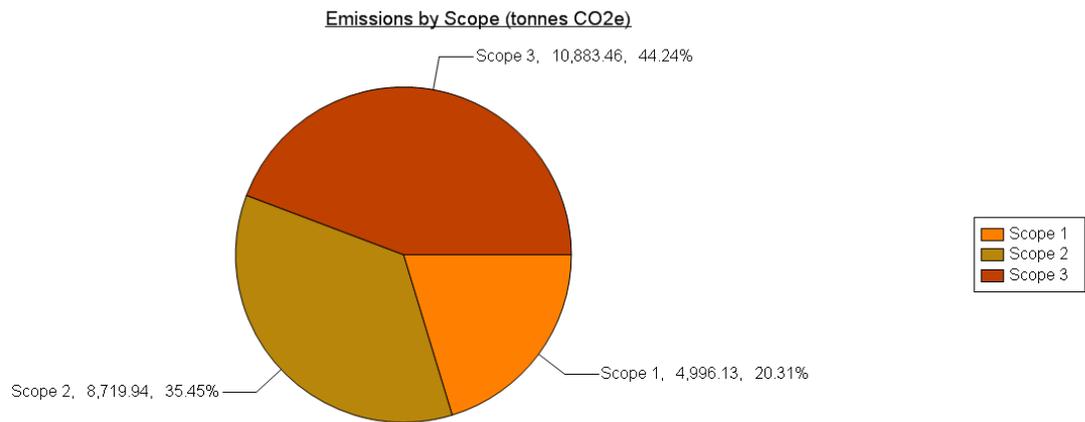


Figure 1: Emissions by Scope

This is the first year that we have measured Scope 3 emissions. We have done this in preparation for the HEFCE requirements to set targets for scope 3 emissions by December 2013. Scope 3 emissions measured in this carbon reporting period include emissions from water use, waste disposal, air travel by international students, business travel by public transport, air and staff owned vehicles as well as staff and student commuting. We will be measuring emissions from our procurement activities over the next 12 months.

Table 1 shows a breakdown of emissions for each emission source.

¹**Scope 1:** GHG emissions from sources that are owned or controlled by the company, **Scope 2:** GHG emissions from the generation of purchased electricity, heat and steam consumed by the company. **Scope 3:** GHG emissions that occur as a consequence of the activities of the company, but occur from sources not owned or controlled by the company.

Table 1: Emissions breakdown by source

Emission sources	Unit	C02e (tonnes)	Scope
Natural Gas	kiloWatt hours	4,970	1
Petrol (litres)	litres	2.87	1
Diesel (litres)	litres	0.75	1
Diesel (spend uk)	Pound	22.5	1
Scope 1		4,996	
Electricity (kWh)	kiloWatt hours	8,720	2
Scope 2		8,720	
Car - Average (diesel - miles)	Miles	1,365	3
Car - Average (petrol - miles)	Miles	2,915	3
Freight Rail (tonne km)	tonne km	0.00	3
Motorcycle - average (petrol) miles	Miles	0.00	3
Public transport - air travel domestic (average)	person kilometres	25.54	3
Public transport - air travel long haul (econ)	person kilometres	5,553	3
Public transport - air travel short haul (econ)	person kilometres	777.95	3
Public transport - Bus and coach - ave (pkm)	person kilometres	43.11	3
Public transport - National Rail (pkm)	person kilometres	139	3
Water supply (m3)	m3	55.73	3
Waste disposal - Impact of other materials	tonnes	8.42	3
Waste disposal - Textiles	tonnes	0.47	3
Scope 3			10,883
Total			24,600

Electricity use is our biggest source of emissions followed by natural gas, long haul air travel (within which the main contribution is from international student flights) and car mileage. This is illustrated in Figure 2, below.

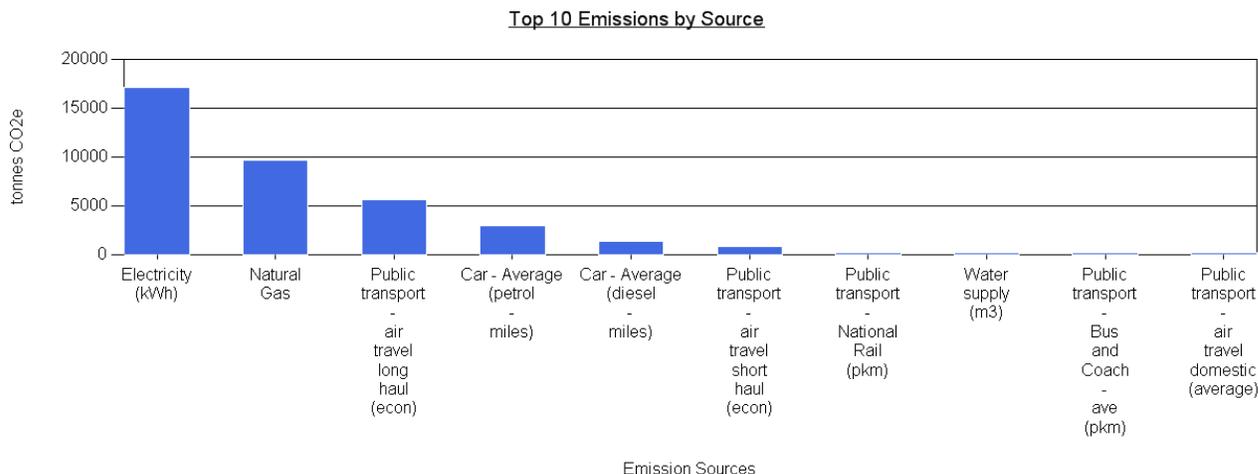


Figure 2: Top 10 emissions

1.2 Carbon Reduction Commitment Registration

This year the College made its first submission as a participant under the Carbon Reduction Commitment (CRC) which is a new emission trading scheme that aims to reduce the amount of carbon dioxide (CO₂) emitted in the UK. It came into force in April 2010. The College will have to monitor its emissions and purchase allowances for each tonne of CO₂ it emits.

As well as reducing carbon emissions, by increasing energy efficiency the scheme will help organisations save money through reduced energy bills. These savings should be well in excess of the cost of participating in the scheme.

1.3 CEMARS

In order to meet the requirements of the CRC and to effectively monitor all of its greenhouse gas emissions the College has registered to have these externally verified under the internationally accredited CEMARS (Certified Emissions and Reduction Scheme). This has provided us with a robust framework through which to manage our greenhouse gas emissions to ensure compliance with the CRC.

The College has been certified to ISO 14064-1. This scheme has meant that all emissions are verified to HEFCE requirements.

2. Water

During the last year the College has installed a new water ring main. This will reduce the impact of leaks in future years. The steep drop in 2009/10 may have been a result of the introduction of waterless urinals, projected at the time to save 33 million litres of water per year. The

increase in subsequent years is likely to be a result of a number of leaks before the new ring main was fitted. This is shown in Fig.3 below.

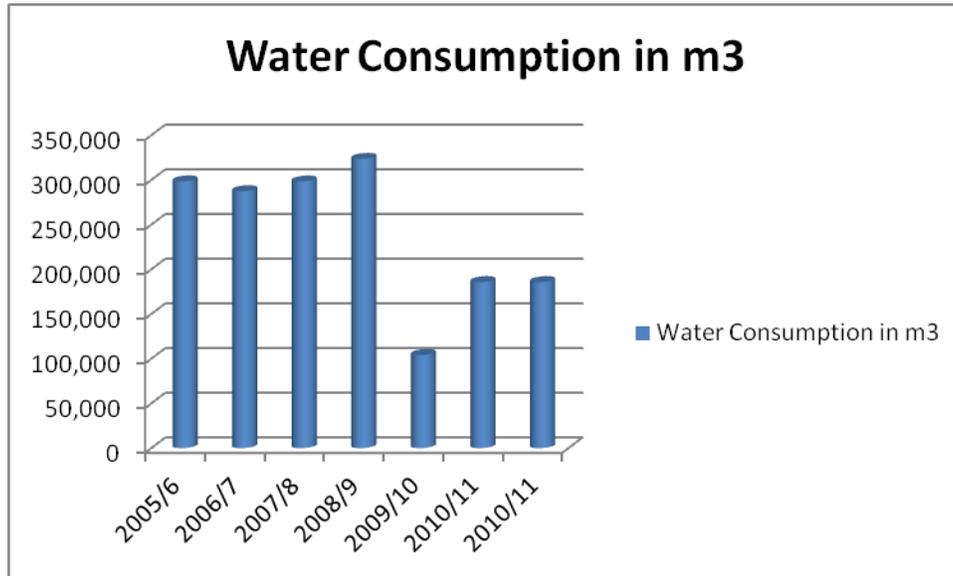


Fig 3: Water Consumption from 2005/6 – 2010/11

3. Waste

3.1 Waste minimisation

During the last year the College has run several waste minimisation events and has bought some new external bins which have dual apertures for landfill and recycling. Recycling points have been created in office and academic areas to encourage staff and students to recycle more of their waste.

3.2 Reuse

For the last five years the College has run an end of term reuse project so that students' unwanted items are reused or recycled rather than sent to landfill sites.

In 2010/11 approximately 1 tonne of items including clothes, shoes, bedding, bags, kitchen utensils, stationary, electronic equipment, bric-a-brac and food was diverted from being sent to landfill. This is less than in 2007/8 when 3 tonnes of items were reused.

The bulk of the items were donated to local charities, such as the Besom Trust which provides sheltered accommodation to vulnerable people in the community and the Princess Alice Hospice. Stationery was given away to a local primary school and books were sold at a local church bookshop. Textbooks were donated to the College bookshop.

3.3 Recycling

Recycling for glass, paper, cardboard, plastic bottles, cans and tins has been continuing in catering outlets and all halls of residence. The College also has facilities for recycling batteries, clothing and shoes, bras, photocopier toner, mobile phones and aerosols. In 2010/11 we have recycled approximately 318 tonnes of waste. By the end of the year the first phase of mixed recycling bins were being rolled out to academic buildings and public areas. This will continue into the coming academic year.

4. Other initiatives

4.1 The Campus Community Garden

The Community garden and campus allotment was launched in June 2010 with great success. The allotment has 13 small plots which have been used by staff and students for growing their own fruit and vegetables. Some plots were neglected over the winter and a weeding session was organised with some of the allotment holders to help prepare the allotments for new students. The Student Union has undertaken to do a campaign in the new academic year to get groups of students to work together on the allotments.

4.2 Energy Metering Project

The College has invested in Energy Monitoring and Targeting Software, which will enable us to measure the gas, electricity and water consumption of all of our buildings. This will enable building users to have access to this data so that they can monitor their usage.

4.3 Fairtrade

The College has successfully managed to maintain its Fairtrade status since 2005.

5. Research and teaching

The College teaches several courses around Sustainability, principally in the Geography department and School of Management. The College offers MSc programmes in Practising Sustainable Development, ICT4D with Practising Sustainable Development, Sustainability and Management and International Sustainability Management amongst others.

There are also undergraduate courses in sustainability in subjects such as, Geography, Economics, Politics and Drama.

Research

The Centre for Research into Sustainability (CRIS) is an inter-disciplinary centre for studies into sustainability. CRIS is a joint initiative between the highly respected School of Management and renowned Department of Geography the degree programme that they run is called 'Sustainability and Management'. So this centre is interdisciplinary in nature as it combines differing and complementary approaches to sustainability to offer a rounded contribution to understanding this complex contemporary phenomenon. CRIS's purpose is to support and

encourage top quality research into sustainability primarily within Royal Holloway but ultimately further afield. The Centre seeks to achieve an international profile for innovative and far reaching interdisciplinary research.

In addition to this sustainability is a core subject area within the Politics, Development and Sustainability research group with a number of academics working on sustainability themes and projects.

Recent Grant Successes

2011/12. Project funded by the Association for Certified Chartered Accountants £20,000 - Researchers Laura J. Spence, Gloria Agyemang and Leonardo Rinaldi

Environmental Aspects of Sustainability, SMEs and the Role of the Accountant
Accountants are understood to be 'trusted advisors' for small and medium sized enterprises, frequently giving advice on a wide range of subjects beyond financial management and reporting. In this project we investigate the potential for small and medium sized accounting practitioners to offer environmental sustainability advice to their small and medium sized enterprise clients. The project is international, including research in the UK primarily, but also Hong Kong and Canada.

2011-2013 Successful ESRC/DFID Research Grant application: Leveraging Buying Power for development –Ethical consumption and public procurement in Chile and Brazil (£328,469 FEC, start date 1 Oct)

Principal Investigator with two Co-Is: Prof Roberto Bartholo, Federal University of Rio de Janeiro; Dr Tomas Ariztía, Universidad Diego Portales, Santiago; grant proposal was one of 17 successful ones out of 178 applications UK-wide (success rate <10%). Project employs a full-time post-doctoral Research Assistant at RHUL.

The project's aim is to 1) explore what Chilean and Brazilian citizens understand to be meanings of "ethical consumption", 2) explore practices that they engage in as individual consumers, 3) compare this individual behaviour with the collective buying practices in the shape of public procurement, including online marketplaces. The project conducts research in close collaboration with key ethical consumption NGOs Ciudadano Responsable (Chile), Akatu (Brazil) and the UK's ECRA, publishers of Ethical Consumer Magazine, the leading publication in the field.

COBRA Project - Dr Jay Mistry of the Geography Department is the coordinator of the project 'Local solutions for future challenges: Community Owned Best practice for sustainable Resource Adaptive management in the Guiana Shield, South America' (COBRA).

This is a three year collaborative project between research, civil society and small business organisations funded by the European Commission under the Environment theme of the seventh framework (1.9 million Euros). The COBRA project members are: Royal Holloway (UK), Institute of Environmental Security (Netherlands), International Union for the Conservation of Nature (IUCN-Netherlands), Iwokrama International Centre for Rainforest Conservation &

Development (Guyana), Equipe de Conservação da Amazônia (Brazil), Politecnico di Torino (Italy), The Open University (UK) and the Wildfowl and Wetlands Trust (UK).

The purpose of this project is to enable and disseminate grassroots solutions to complex natural resource management problems in the Guiana Shield using a participatory action research approach. The COBRA project will study the impact of new environment/development funding streams on indigenous groups, the response of civil society organisations, and strategies to influence policy and implementation practices at the local to international level.

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