

RESOLVE Carbon Calculator

Research Summary

Truly understanding what drives carbon emissions is essential to tackle climate change. Most analyses of the UK's carbon footprint look at the emissions produced within the UK's territorial borders. But this ignores the greenhouse gas emissions generated by the production and transportation of goods and services imported from abroad and purchased by UK consumers.

Research by the ESRC Research Group on Lifestyles, Values and the Environment (RESOLVE) incorporates this oversight by adopting a different approach that studies the UK's carbon footprint according to the emissions generated by consumption in the UK, and, importantly, enables exploration of the underlying drivers of consumption. The researchers developed a scientific model, the Surrey Environmental Lifestyle Mapping (SELMA) Framework, to quantify how UK consumer purchasing decisions impact on greenhouse gas emissions.



The research has directly influenced business, first through working with the Carbon Trust, a UK company that helps businesses reduce carbon emissions, to produce the influential report, *The carbon emissions generated in all that we consume*, in 2006.

SELMA shed new light on which products and services are most carbon intensive by considering both greenhouse gas emissions generated by businesses in production and the emissions embedded in the goods and services along business' supply chains. Such information helps business prioritise areas where emission reductions can be achieved.

Working further with the Carbon Trust, along with the UK environment ministry, Defra, and the British Standards Institution, RESOLVE has helped develop a product carbon footprinting standard, known as PAS 2050. This new standard is the first widely-consulted method that specifically addresses the emerging interest of

Impact

By bringing a fresh perspective to how a country measures its greenhouse gas emissions, researchers from RESOLVE) have had an impact on business and the general public.

The research quantifies how people's consumption habits result in carbon emissions through the scientific model, SELMA. By attributing the responsibility for emissions directly to consumers, the research makes a powerful case for consumers, and the businesses that sell to them, to minimise carbon emissions.

both organisations and consumers in understanding the carbon footprint of goods and services.

RESOLVE's influence ensured the standard included the GHG emissions arising from products across their life cycle, from raw material extraction to product disposal. SELMA was also used to assess the importance of the carbon emissions embedded in capital goods as a basis for deciding whether or not they should be included in PAS 2050.

The potential impact of the research was delightfully documented in the BBC's Ethical Man series in 2006. The programme charted the progress of Newsnight reporter Justin Rowlatt and his family as they reduced their direct carbon footprint by 40 per cent in the space of single year, with the RESOLVE Director, Professor Jackson's guidance. The programmes were broadcast to over 50 million viewers in 200 countries worldwide at the same time as a surge in public awareness of the dangers of climate change.



Key Findings

- Official figures show the UK greenhouse gas (GHG) emissions (including those from aviation) fell nine per cent between 1990 and 2004. In contrast SELMA calculates a seven per cent increase in emissions. The difference highlights how the UK has merely displaced its emissions overseas – of little help in tackling global climate change.
- In 2004 a quarter of UK household GHG emissions were due to the pursuit of recreation and leisure making it the most carbon intensive part of Britain's lifestyles. Pinpointing the people's most carbon intensive activities can help identify the priority areas for lowering GHG emissions.
- Considerable amounts of GHG emissions result from the infrastructure that delivers certain goods and services. Therefore structural changes offer the highest potential to lower emissions. For example, food and catering generate 22 per cent of UK GHG emissions. Some of the carbon footprint stems from the widespread dominance of out of town supermarkets that require consumers to drive to make purchases.

Further Information

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