



United Kingdom



Counting consumption

CO₂ emissions, material flows and Ecological Footprint of the UK by region and devolved country

Executive summary

The following is a summary of key findings from the Ecological Budget UK report, *Counting Consumption*, which provides a clear picture of the CO₂ emissions, material flows and Ecological Footprint of the UK by region and devolved country. The full report can be downloaded from www.ecologicalbudget.org.uk

Ecological Budget UK provides a much needed evidence base to better understand the important issues of Sustainable Consumption and Production (SCP). It provides a statistical and scientific basis for SCP strategies in the UK at national and regional levels. It shows the total global impact of UK consumption, not only by accounting for direct resource flows and emissions within the UK, but also by including the manufacture of imported products and materials. Ecological Budget UK's three headline indicators – CO₂ emissions, material flow analysis, and the Ecological Footprint can be used together or side-by-side for different purposes.

The Ecological Budget UK has produced the following headline results.

Material flow

- > The total material input is 15.2 tonnes per person (also described as tonnes/capita or t/cap).
- > Of this total, 26 per cent comes from imports.
- > The average household directly purchases 2.5 tonnes a year and throws away a tonne of waste each year.
- > 35 per cent of all material goes to capital stocks (new buildings, roads and other infrastructure).
- > 21 per cent of all material is exported.
- > 37 per cent of all material ultimately ends up as waste.

Ecological Footprint

- > The total Ecological Footprint per person in the UK is 5.4 global hectares (an area equivalent to a normal hectare but adjusted for average global productivity).
- > The highest footprint of all devolved administrations and English regions is the South East at 6.3 global hectares per person (gha/cap).
- > The lowest footprint of all devolved administrations and English regions is Wales at 5.2 gha/cap per person.
- > If the footprint was to be distributed evenly among the global population, the UK is currently overshooting that by a factor of three. In other words, if everyone lived like we do in the UK, we would need three planets to support our current lifestyles.



CO₂ emissions

- > The total carbon emissions from UK production is 10.8 t/cap.
- > The total carbon emissions from UK consumption is 11.9 t/cap.
- > The total carbon emissions in imports for consumption is between 10 and 30 per cent of the total UK emissions.
- > In terms of carbon emissions, the most resource intensive sectors are the cement industry followed by electricity generation.
- > The most indirectly resource intensive sector is banking and finance.
- > The consumption type with the highest impact is domestic energy consumption followed by car use.
- > The consumption type with highest impact per £ spent is electricity generation.

This baseline report concludes that it would require three planets to support the world's consumption if everyone used as many of the Earth's available resources ("bio-capacity") as the average UK resident. This level of resource use is unsustainable, and demonstrates the need for a 'One Planet Economy' – an economic system of production and consumption which respects environmental limits while being financially and socially sustainable. A One Planet Economy will require a 75 per cent

reduction in resource flows and the Ecological Footprint – this is commonly known as a Factor Four reduction. This is a hugely challenging target. But it is essential to long-term sustainability, even if achieved at the distant horizon of 2050. A Factor Four reduction in resource consumption means a year-on-year reduction of -3 per cent in resource flows and Ecological Footprint. Set against an economic growth rate averaging 2.25 per cent per year, this implies 'decoupling' economic and material growth at a rate of -5.25 per cent per year – over twice the rate seen in recent years.

One of the key outputs of the Ecological Budget UK project, the Resources and Energy Analysis Program (REAP), provides an essential contribution to the UK policy evidence base. Following the launch of this report, a five year programme of research and development is now taking shape. This includes a contribution to the evidence base for the One Planet Economy:

- > national material/energy accounts and budget implications, to be shown alongside the fiscal and monetary budget, on an annual basis;
- > a full breakdown of direct, external, embedded and induced impacts of

economic activity, using CO₂, material flow analysis, Ecological Footprint analysis and other appropriate measures;

- > an investigation of key supply chains (e.g. construction, chemicals) for their total environmental costs and benefits on a lifecycle/risk management basis;
- > an investigation of critical policy options (e.g. nuclear power) for the total environmental costs and benefits on a lifecycle/risk management basis.

Ecological Budget UK has taken the first step in understanding how the decisions we take every day affect the environment around us. It is an essential step in creating a platform to enable us to move from the current UK 'three planet economy' to a One Planet Economy.

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