

The 5tCO₂ challenge

The Personal Carbon Budget

Leading a sustainable lifestyle is an imperative of our contemporary existence; it is neither an optional nor an alternative lifestyle. As a human race we can no longer ignore the significant nefarious impacts of our individual and collective behaviours on our surroundings. Every decision we make has a direct consequence on our society, on the economy, and on the environment in which we dwell. As we develop new ways of interacting with the world, it behoves us to be mindful of the fact that development is not always positive, nor is it necessarily constructive.

Thinking about Sustainable Development on a global scale is a gargantuan task involving objectives that are beyond the scope of one person. As governments and international organisations attempt to address climate change, poverty, peace and justice, hunger, and standards of education across the world, each one of us can devise a personal strategy, based on principled action and educated decisions. One aspect of such a personal strategy could be around our individual Carbon Footprint.

Reducing our Carbon Footprint is not difficult. It requires that we make consistent, systematic changes to some of our daily habits, and aim to develop a sustainable lifestyle by shaping our behaviours so that they allow us to lead a good quality of life—one that does not compromise the quality of life of future generations¹.

Thinking about our behaviours in terms of a Personal Carbon Budget (PCB) is one helpful strategy to measure the extent to which they impact on the world around us. The PCB is calculated by combining personal emissions from housing, travel, eating, buying products and utilising services. Nowadays, it is probably safe to assume that most of us are in the habit of recycling household rubbish, insulating the loft and installing double-glazing in our homes; we probably restrain ourselves when it comes to using electricity, water and gas; and we know that taking the train is more environmentally friendly than driving a car. Nonetheless, it is not always possible to understand, in quantitative terms, the extent to which our actions contribute positively or negatively to the environment around us. Devising a PCB enables us to manage our Carbon footprint and set personal targets for reducing it.

¹ I am paraphrasing from the United Nations' definition of Sustainable Development, as published in the Bruntland Report (1987): "development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

A good range of published literature² outlining the importance of managing our individual behaviours is available, and there are numerous websites that offer online calculations of our Carbon footprint³. While there is little consensus about the optimum level of an individual's footprint, it is possible to draw up a plan that would ensure that we are conscious of our impact and that we mitigate some of our more “destructive” behaviours.

Mike Brenner-Lee suggests that “in the UK and many other European countries, adopting a 10-tonne lifestyle would mean reducing your emissions to about one-third below average”. The 10-tonne lifestyle causes 10 tonnes of Carbon dioxide emissions (10tCO₂e) per year, per person. The “average” that Brenner-Lee refers to is calculated globally and takes into account emissions by the USA (highest in the world, typically at 20t CO₂e), Canada and Australia (typically at 14t CO₂e) and India (1.4t CO₂e) . The good news is that, according to statistics from 2001, many of us in the UK are living with an 11t footprint (compared to 26t CO₂e in 2004⁴). However, whilst a 10t lifestyle would require drastic changes to the way of life in the USA, Canada and Australia, it is still not a satisfactory standard. Chris Goodall, for example, would rightly argue that we should be aiming for a target closer to 2t CO₂e per year. According to the website: shrinkthatfootprint.com, “if your personal footprint is 20t it shouldn't be all that difficult to reduce it to 15t, a reduction equivalent to an average personal footprint in 2010. On the other hand, reducing your personal footprint from 10t to 5t could involve quite a lot of changes and some difficult sacrifices”⁵. What would it take to reduce our current UK lifestyle from 11t, and closer to 5t?

Footprints

It is useful to consider the footprint caused by activities we undertake regularly. Brenner- Lee offers the following guidelines:

Activity	Footprint Estimate CO ₂ e / year	
Each text message	0.014g	Negligible

²See for example: Mike Berners-Lee's *How Bad are Bananas?* (2010) and *The Burning Question: we can't burn the world's oil, coal and gas. So how do we quit?* (2013); Chris Goodall's numerous publications, notably *How to Live a Low-Carbon Life* (2010).

³ Some of these websites are hosted by organisations with a vested interest in a specific cause or political affiliation. Having tried several different websites, I found that www.carbonindependent.org seems to offer a fair and well-informed assessment of a person's footprint.

⁴ According to Druckman and Jackson (2009)

⁵ “Carbon Targets for your Footprint” <http://shrinkthatfootprint.com/carbon-targets-for-your-footprint> <accessed November 2015>

An email, with a long attachment	50g	135Kg
A pint of tap water	0.14g	14 Kg
Walking through big electric doors, opening into a large stairwell on a cold windy day	84g	42.5 Kg (2times /day x 253 working days)
A plastic carrier bag, heavyweight, reusable variety	50g	18Kg
Boiling a litre of water in an electric kettle	70g	50Kg (2times/day x 253 working days)
A banana	80g	50Kg (1 /day x 253 working days)
An hour's TV, 32-inch LCD	88g	32 Kg
A large Cappuccino	235g	60Kg (1/day x 253 working days)
A bottle of beer from the shop	900g	228 Kg (1/day x 253 working days)
A shower (electric, power)	1.7 Kg	430 Kg (1/day x 253 working days)

Consider the numbers above in comparison with these:

Activity	Estimate / year
1 return flight UK – Spain	1.25 tonnes
Swimming in a public pool twice per week (17Kg emission per visit)	1.8 tonnes
Each web search = 4.5g of emission; spending long hours searching the web	3 tonnes
Owning a medium-sized car and driving an average of 9,000 miles per year ⁶	3.9 tonnes
1 return flight to California	4.5 tonnes
1 return flight UK - Australia ⁷	12 tonnes
A pack of Asparagus, out of season, air-freighted from Peru to the UK in January (3.5 Kg)	50 tonnes (if your entire diet consisted of such food products)

In a piece of research conducted in 2010, Druckman and Jackson found that “around 10% of the carbon footprint is due to holidays, with total recreation and leisure activities accounting for well over a quarter of all household emissions.

⁶ Source: <http://www.carbonindependent.org/> <accessed November 2015>

⁷ Source: <http://www.carbonindependent.org/> <accessed November 2015>

Other notable results are that food and catering accounts for nearly a quarter of emissions, and that GHG emissions due to a meal eaten out are around 71-83% higher than for a meal eaten in the home”.

If we set ourselves the challenge of pursuing a 5tCO₂e lifestyle, then we need to commit to understanding and calculating the effect of our daily activities and focussing on specific areas where we inflict the most CO₂ emissions. In other words, while it is important to use less plastic bags, take quick showers, and consume less meat and dairy products, the net effect of these behaviours will be less significant than a commitment towards eating locally- produced seasonal foods, cooked at home and restraining ourselves when it comes to long haul flights.

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