Ten things you can do to reduce your environmental impact

Your carbon footprint is not the whole of your environmental impact. But for the average person in the UK, it is the majority of it, as measured by the amount of productive land needed to absorb the effects of different activities (page 16 of this report). It is also the easiest part of your footprint to estimate. So that's what we'll do here.

Worldwide CO2e emissions (the "e" meaning "equivalent", to include the warming effect of other greenhouse gases) are about 7 tonnes of CO2e per human per year. For the UK, it's officially 9 tonnes, but those are just the gases emitted in this country. We also need to add something for the stuff we buy and use in the UK that's manufactured overseas, and for international air travel. Those are both hard to quantify, but an extra 50% would be a conservative estimate, making a total of at least 13.5 tonnes. This needs to be reduced to net zero as soon as possible - there is no single deadline, and significant uncertainty in the science, but dates of 2025, 2030, 2040 and 2050 are used, for different countries and sectors of the economy, and depending on assumptions about the climate's response to CO2 levels and how much warming we aspire to avoid.

As consumers there is a limit to what we can do; political action is essential. But we do have choices, and the impact of those choices will be amplified by their influence on the people around us. Here are some ways in which you could reduce your carbon footprint by at least one tonne of CO2e.

1) **Fly less**. One return flight of a thousand miles each way - say, between the UK and Cyprus - emits the equivalent of one tonne per economy class passenger, including the additional radiative forcing (warming effect) from aircraft emissions. An economy return to Seattle is 2.5 tonnes. Business class and first class are significantly worse - according to a World Bank study, three times and nine times respectively. See also some thoughts from LSE on academic travel from both the sustainability and D&I angles. And "offsetting" your flights (or anything else) is a problematic concept, as this amusing thought experiment shows.

2) **Eat less meat and dairy, and waste less food in general**. This is essential for avoiding climate breakdown. If you're a typical meat eater, going vegan will cut your emissions by one tonne per year, and going vegetarian will cut two thirds of a tonne. It's not simple, though; the impact depends on which animal you are eating and how it was farmed, while dairy is on some metrics as bad as meat or even worse. Buying locally sourced food or growing your own also helps. For more details, see this data and this systematic review. Reducing food waste is also vital - much of this happens before the food reaches the consumer, but you can help by buying food that would otherwise be rejected.

3) **Drive less**. If your car gets 40 miles per gallon, then you emit one tonne by driving about 4,500 miles. Emissions from electric cars are less, but they depend on how the electricity is generated. And all types of car cause emissions during manufacture and disposal, so if you don't drive every day, how about car-sharing with friends or joining a car club network? Or go by train; you can compare environmental impacts here.

4) **Heat less**. That is, heat the air surrounding your house less by insulating and draughtproofing your home. Heating the average UK home emits 2.7 tonnes of CO2 per year. The emissions saved by insulation depend on a lot of things, but very roughly, thoroughly insulating a poorly insulated home will save one tonne per year per person in the house for as long as the house is standing. If you want to get into the details, there is a calculator here. Also, consider a water-saving showerhead. And if you are choosing somewhere to rent, check the accommodation's energy label.

5) **Pets** have a carbon pawprint. Unfortunately, estimates vary by more than an order of magnitude, and are further complicated by the fact that dogs can be vegetarian. The worst case, though, is that feeding a St Bernard causes 2.3 tonnes of emissions per year. A full analysis is here. Of course looking after a pet that's already here is only humane, but think twice before letting them breed or buying from a breeder.

6) **Invest less in fossil fuels**: switch your electricity and gas away from them to renewable sources, don't use banks that are fuelling the climate crisis, and choose your pension and other investments wisely.

7) **Procreate less**. Population change is a hugely important, though slow-acting, factor in environmental overload. If, optimistically, UK emissions are reduced linearly to net zero by 2050, a child born next year will be responsible for around 300 tonnes of CO2e, which, if assigned to the parents making the decision, adds 150 tonnes to each of their emissions totals. This is a complex and very personal area, and there are many ways to look at it; here is one of them.

8) **Buy less**. The stuff you buy each year probably represents several tonnes of embodied carbon. Buy second hand, share things, repair things, and when you do have to buy new, choose something that's going to last a long time.

9) **Keep less**, and give more (and effectively, but watch out for pitfalls). Other things being equal, the less you spend or invest, the lower the emissions you will generate. If you want to target climate change specifically, have a look at Cool Earth, a charity which gives people living in rainforests a monetary incentive not to sell their forests to loggers, reducing poverty and helping the planet in one go. You might also want to read the analyses here and here.

10) **Accept less**, and expect more - of the politicians you elect, of the companies you buy from and work for, of the organizations you belong to. Even if you act on all the other items in this list, you will not reduce your environmental impact to a sustainable level, because you're embedded in the system. Collective action is required; be a citizen, not just a consumer. There is a welcome waiting for you in a myriad of organisations aiming to transition rapidly to a safe world. Prepare for the changes that must come if we're going to avert the worst of climate breakdown, and start to live them.

Some bonus things that you might not have thought of:

11. Five **bitcoin** transactions emit 1 tonne of CO2 on average. Thus bitcoin represents a gamble on the future in more ways than the obvious one.

12. **Build less**. Building an average UK house emits 50 tonnes. If you do build, make it energy efficient, and use wood as much as possible; wood captures carbon, while

manufacturing concrete emits huge amounts of it. There is some [interesting research](#) on wooden buildings going on here in Cambridge.

13. **Watch TV less** (except for David Attenborough), and **read more**. Watching less TV can in fact [directly reduce your carbon footprint](#) a little. But the real point is that learning about the seriousness and complexity of the multiple ecological crises we face - which are not discussed much on TV - is likely to motivate you to persevere with the other items on this list. It may also upset and depress you. But for better or worse, what you put serious effort into learning is not easy to ignore later.

14. **Watch videos about climate breakdown**. If you still need motivation to get on with making changes, try [this](#), [this](#), [this](#) and [this](#).

Please don't pick and choose between the ideas presented here. Not having children doesn't make the emissions from holiday flights go away, and not owning a car doesn't remove the impact of eating beef. We have an emergency on our hands, and a full-on emergency response is needed. If you needed an ambulance, you wouldn't be impressed if the paramedics stopped on the way for a sandwich even if they subsequently drove really fast to your house (thus virtuously "offsetting" their delay).