

Trains, for example, are quite variable. In the UK, the average emissions are 40 grams per passenger-kilometre (g/p-km) but, depending on the engine, the source of power and the journey, the figure varies from more than 70 g/p-km down to 27 g/p-km. So going by train is usually better, but a small, fuel-efficient car with four passengers may be more carbon-efficient than taking one of the less efficient trains. Be warned, too, that taking a sleeper train from, say, London to Edinburgh or Paris to Venice may not always be greener than flying. Sleeper cars carry fewer passengers than regular carriages, and that could push the carbon footprint of the typical sleeper passenger above that of someone flying the same route at a typical CO<sub>2</sub> emission rate for short-haul flights of 150 g/p-km.

For longer journeys, coaches such as Greyhound in the US or National Express in the UK could be just the ticket. In the UK, this would save about 140 grams per kilometre for each passenger who would otherwise have made the journey by car - the difference between the 180 g/p-km from driving a typically laden car and the 40 g/p-km on a typical coach ride - while in the US you could save 516 g/p-km. Over a 200-km drive that amounts to nearly 30 kg per trip in the UK and over 100 kg in the US.

### **Truth about flying**

If you fly more than once a year, cutting back on those journeys will be the best single thing you could do to cut your emissions. Cut out that long return flight from Europe to Miami, or the US to Rome, and you have saved 2.5 tonnes of CO<sub>2</sub> - which is probably more than you emit from your car all year. The simple truth is that frequent fliers have carbon footprints tens of times bigger than the rest of us.

Thanks to abundant cheap flights, Britons are the world's worst offenders on this score, with average emissions equivalent to 1.6 tonnes of CO<sub>2</sub> per person - more than double the rate for the average American. Cheap flights are booming in China and India too, but the annual carbon footprint for travel for average citizens in those two countries is still only around one-tenth of those in Europe and North America.

Of the things we buy, food makes up about another 2 tonnes of CO<sub>2</sub> per head. Concerned consumers often make an effort to cut their carbon footprint from food by buying locally, which reduces their "food miles". This makes some sense. A quarter of the trucks on our roads are carrying food and raw materials for the food industry. Yet many of the biggest energy inputs (and hence carbon outputs) of our food come from growing and processing food, rather than transporting it. Manufacturing fertiliser, heating greenhouses and food processing are major energy guzzlers, so buying locally is by no means automatically the greenest option. Trucking in tomatoes from sunny Spain often uses less energy than heating a greenhouse in the UK, for instance.

As a rule of thumb, meat and dairy products have high carbon footprints because of the energy needed to grow the feed for the animals. Going vegetarian could halve your carbon footprint from food to 1 tonne per year, but only if you cut back on dairy products too. If you can't go without meat and milk, you could instead halve your food footprint by going organic, largely because of the saving in fertiliser. A diet made up exclusively of locally grown, non-processed and non-packaged food can strip another 0.7 tonnes from your food-based carbon footprint, bringing an impressive total saving of 1.7 tonnes per person.

Drinks packaging matters too. Smelting aluminium is one of the most energy-intensive industries in the world, and making one beer or soda can emits 170 grams of CO<sub>2</sub>. That's the same as running your TV for 3 hours. The average person gets through 120 cans in a year, which adds up to 0.2 tonnes of CO<sub>2</sub>. So always recycle your cans and, for preference, buy draught beer or bottles instead. Glass's carbon footprint is rather less than aluminium's.

By making these small changes, the average western European can cut nearly 8 tonnes from their personal carbon footprint, taking their personal emissions down to around 2 tonnes. Multiply that by enough people and the impact could be significant. Take the UK, for example. If just one-third of the UK population did the same it would save 160 million tonnes of CO<sub>2</sub>, or more than a quarter of the nation's emissions.