

**Is our food supply sustainable? To answer this question, we need to ask: Can we continue to produce food in the way we currently do, and still provide food for a growing world population, and for future generations?**

# Sustainability of food

## Sustainable food means:

- Feeding ourselves and still leaving enough room on this one earth for **biodiversity and for forests** that we need for our wellbeing;
- Protecting our **water supplies and ecosystems** from pollution, such as nitrates in agricultural run-off;
- Using only as much water as is **replenished by rainfall**, so that levels in underground aquifers stay more or less level;
- **Treating people fairly** – ensuring safe working conditions for workers, giving them a wage they can live on sustainably, and enabling their children to have access to schooling;
- Minimising our emissions of **greenhouse gases** (GHGs); and
- **Minimising food waste** – ensuring as much as possible is eaten and not thrown away.

## How is food part of the wider concept of sustainability?

### Climate change

By now, most of us understand that global temperatures are rising significantly because of our actions – and that this rise in temperature is changing the climate in dangerous ways. To avoid the most dangerous climate change, we have to act fast to reduce the GHGs given off by our activities. Government action is vital, but we, as individuals, can also play our part, by working out and then reducing our carbon footprint.

### What's a carbon footprint?

A carbon footprint is a way of measuring the amount of GHGs given off when something (a car; a steak; a T-shirt) is produced. As the main GHG is carbon dioxide (CO<sub>2</sub>), we talk about a 'carbon footprint', but it also includes other GHGs such as methane and nitrous oxide, sometimes referred to as CO<sub>2</sub>e (carbon dioxide equivalent). We talk about a person having a carbon footprint of, say, 12 tonnes of CO<sub>2</sub>, but the average footprint per person varies hugely between countries and cultures.

### Food and our carbon footprint

Food is a significant part of our carbon footprint. Agriculture (including the effects of land clearance) can account for up to 32 per cent of world GHG emissions. Our food footprint – all the GHGs given off by providing the food we eat – varies according to what we eat and where it comes from.

In the UK, the average food footprint is about one fifth of our total footprint, or just under three tonnes per person, but it can be as high as five tonnes if we eat a lot of meat, dairy products and imported food – especially food that has been flown in – or as low as half a tonne if we avoid meat and dairy and eat local, seasonal food.

### Carbon-intensive aspects of food Which has the highest food footprint?

**Production:** agriculture – on the farm?

**Processing:** turning the raw foodstuffs into what we buy?

**Transport:** getting all the raw materials together, and then the finished food to us?

**Packaging:** wrapping it up to keep it fresh?

While transport and packaging both score high in public awareness as important issues needing reduction – especially air transport – production alone accounts for more than 40 per cent of our overall food footprint, and it's much higher for meat and dairy products.



## Food waste

We all say we want to cut down on food waste, for the sake of our pockets as well as the environment, but figures from WRAP (Love Food, Hate Waste) show we throw away about 16 per cent of the perfectly edible food we've bought. **This is a huge waste of the resources that went into producing it!**



### Great ways to avoid food waste:

- Make a list and just buy what you need
- Let people serve themselves at mealtimes
- Avoid 'buy one get one free' offers – unless you're sure to use the second one
- Be creative with leftovers – make curries, frittata, soups, pies etc
- Keep an eye on your store cupboard
- Put veg and fruit in a plastic bag in the fridge to keep them fresh.

**If you do have some waste food: compost is better than landfill, so put it on your compost heap or in the council green bin.**



## Social and environmental issues

The food we buy in the supermarket comes from all over the world, and we often don't know how it was produced and processed. Sometimes we would be horrified if we knew.

**Destruction of natural environments** Large areas of rainforest, for example in the Amazon and in Indonesia, are being destroyed, either to grow soya for cattle feed – to produce meat for rich nations – or to grow palm oil for our margarine and other foods. Meanwhile mangrove swamps in south East Asia are threatened by intensive prawn production.

**Depletion of natural resources** Soil is a living structure and needs care and nourishment to maintain fertility. Inappropriate use of fertilisers and pesticides, plus the impact of heavy farm machinery, leads to soil structure breaking down, the loss of important minerals and the land becoming less fertile.

The sea is not immune – marine systems are also suffering. Over-fishing, particularly of popular species like cod, has led to a reduction in fish stocks

**Conditions of agricultural workers** In many places children labour in the fields, conditions for farm workers are unsafe or insecure, and small farmers are disadvantaged by restrictive practices and unfair subsidies. In the cocoa industry, for example, children work in some of the big plantations that produce the beans for much of our chocolate, so buying Fairtrade chocolate avoids encouraging child labour, as well as ensuring that growers are paid a better price for their crop.