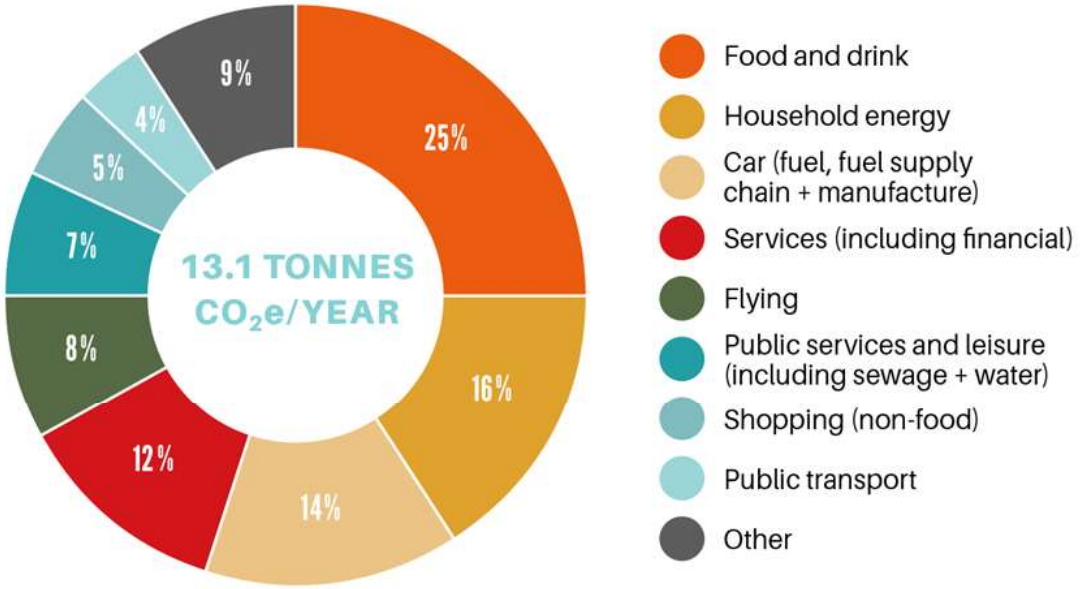
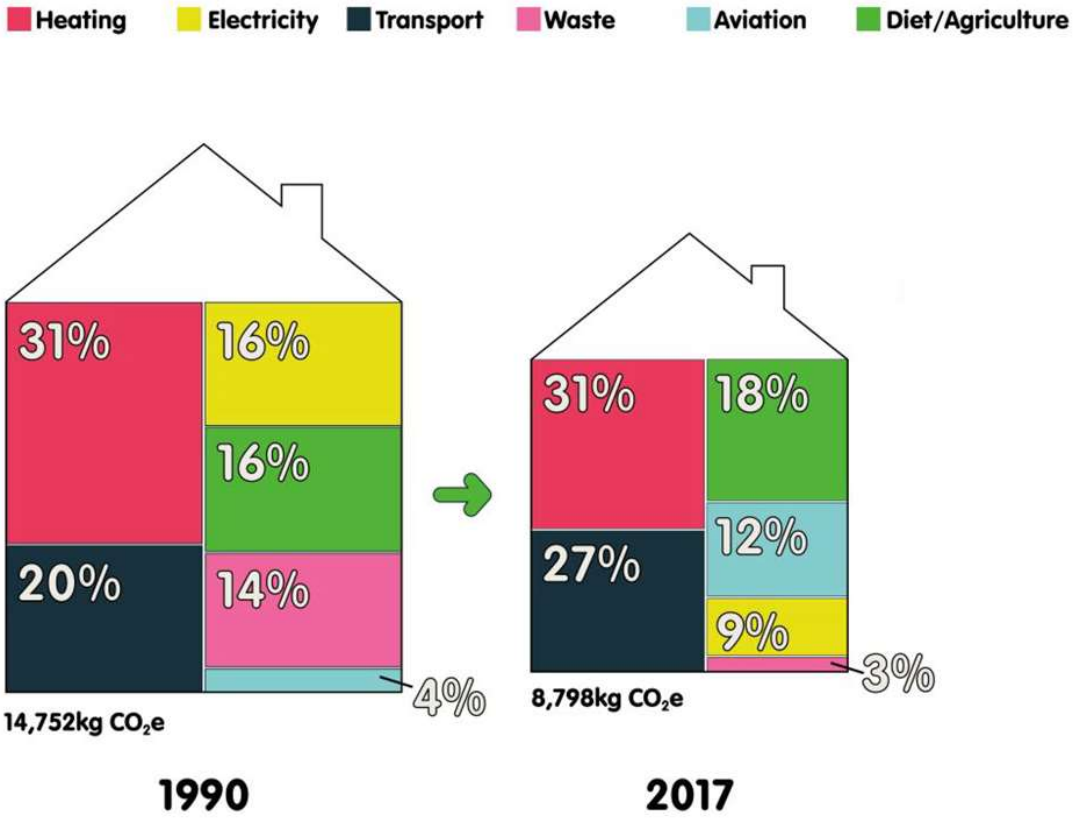
AVERAGE CARBON FOOTPRINT IN THE UK*



*A **carbon footprint** measures the total greenhouse gas (GHG) emissions caused directly and indirectly by a person. It's **measured** in tonnes of **carbon** dioxide equivalent (tCO_2e), a standard unit which expresses the impact of different GHGs.

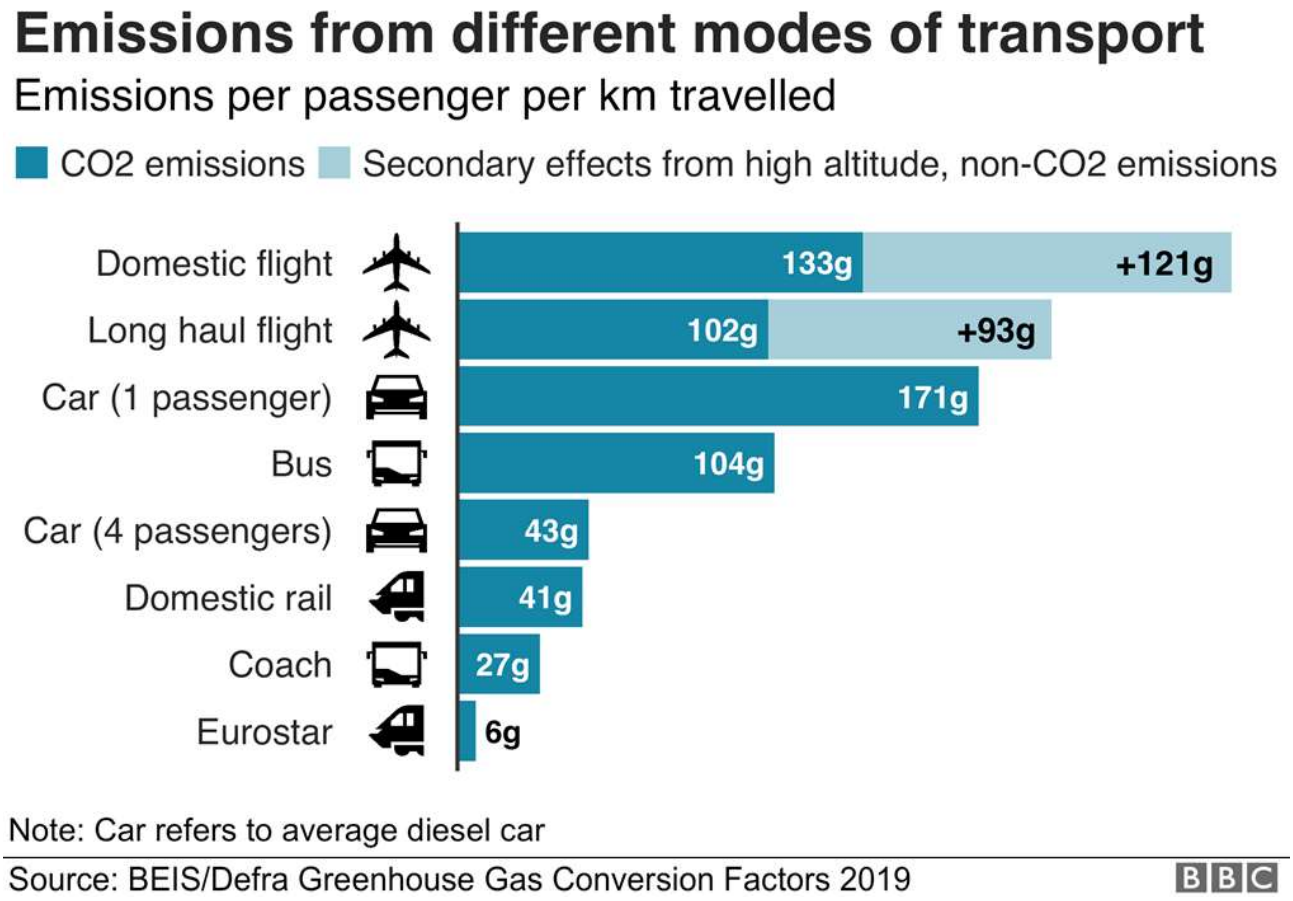
Source: Small World Consulting

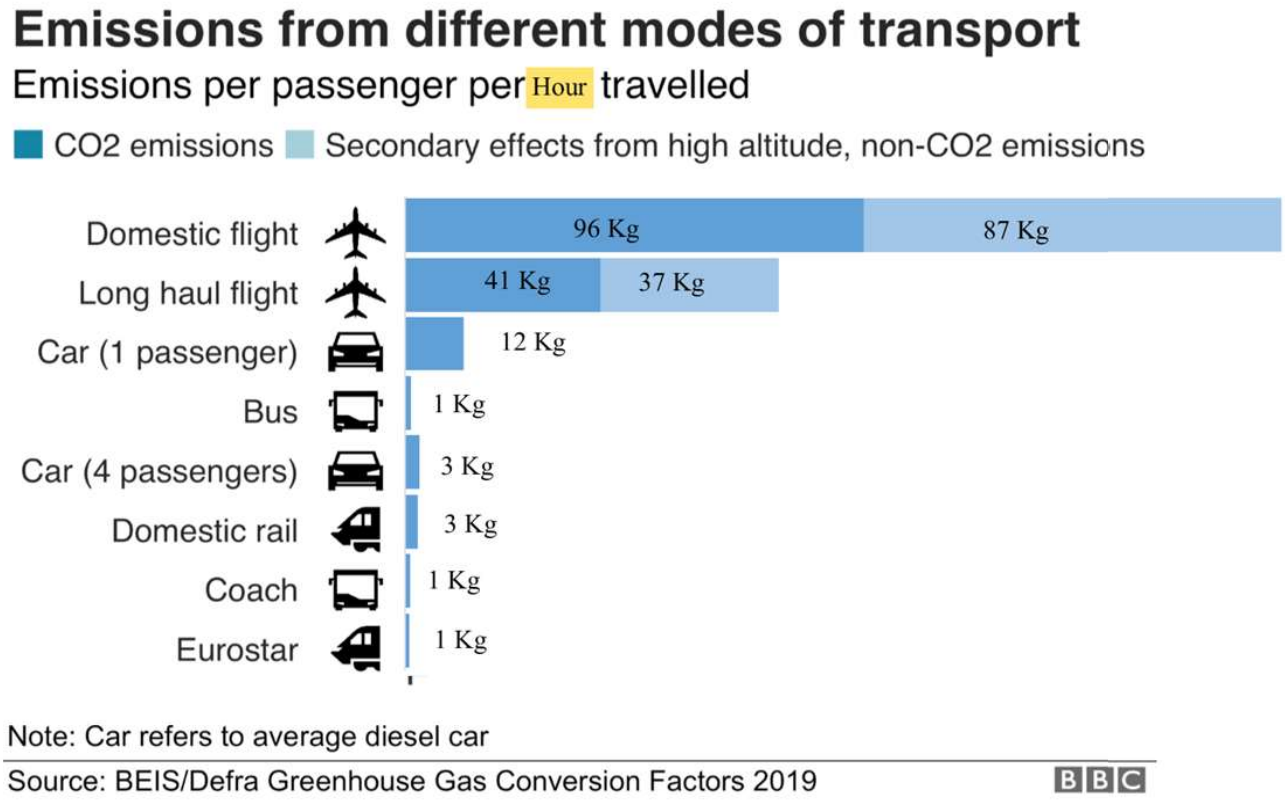
UK average household emissions



Source: Energy Systems Catapult Limited

Transport

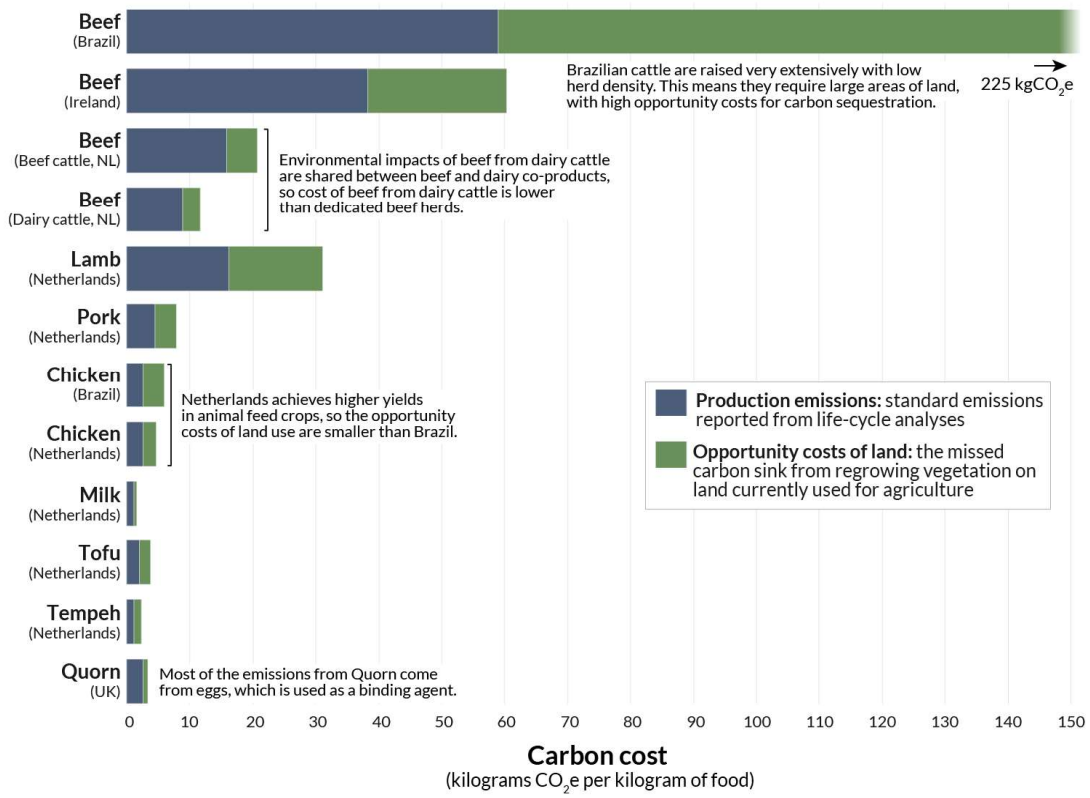

Emissions from different modes of transport
Emissions per passenger per km travelled
CO2 emissions
Secondary effects from high altitude, non-CO2 emissions
Domestic flight
133g
+121g
Long haul flight
102g
+93g
Car (1 passenger)
171g
Bus
104g
Car (4 passengers)
43g
Domestic rail
41g
Coach
27g
Eurostar
6g
Note: Car refers to average diesel car
Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019
BBC


Emissions from different modes of transport
Emissions per passenger per Hour travelled
CO2 emissions
Secondary effects from high altitude, non-CO2 emissions
Domestic flight
96 Kg
87 Kg
Long haul flight
41 Kg
37 Kg
Car (1 passenger)
12 Kg
Bus
1 Kg
Car (4 passengers)
3 Kg
Domestic rail
3 Kg
Coach
1 Kg
Eurostar
1 Kg
Note: Car refers to average diesel car
Source: BEIS/Defra Greenhouse Gas Conversion Factors 2019
BBC

What are the carbon costs of different foods?

Our World in Data

Total carbon costs is the combination of greenhouse gas emissions from food production, plus the opportunity costs of land. Using land for agriculture – either crops or pasture for livestock – prevents natural vegetation, such as forests, or wild grasslands from growing on that land. The CO_2 this land could have sequestered is the 'carbon opportunity cost'.



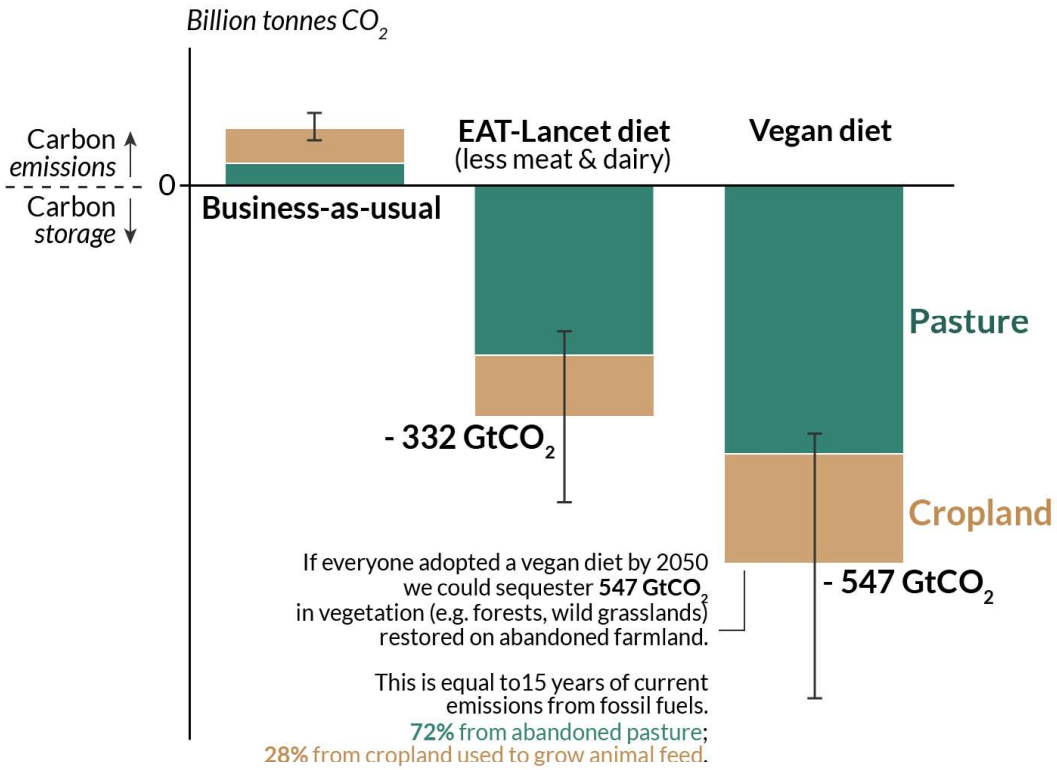
Carbon dioxide equivalents are measured using GWP100 values, and missed carbon sinks over a 100-year time horizon.

Source: Schmidinger, K., & Stehfest, E. (2012). Including CO_2 implications of land occupation in LCAs—method and example for livestock products.

How much carbon dioxide could regrowth of trees and wilderness store if we changed global diets?

Our World in Data

Using land for agriculture – either crops or pasture for livestock – prevents natural vegetation, such as forests, or wild grasslands from growing on that land. The CO_2 this land could sequester is the 'carbon opportunity cost'.



Note: Figures only include carbon storage in vegetation – it does not include reductions in greenhouse gas emissions from food production. Soil carbon sequestration is also not shown, but the authors estimate an additional 135 – 225 $GtCO_2$ of carbon storage in soils.

Source: Matthew Hayek et al (2020). The carbon opportunity cost of animal-sourced food production on land. *Nature*.

Land Use

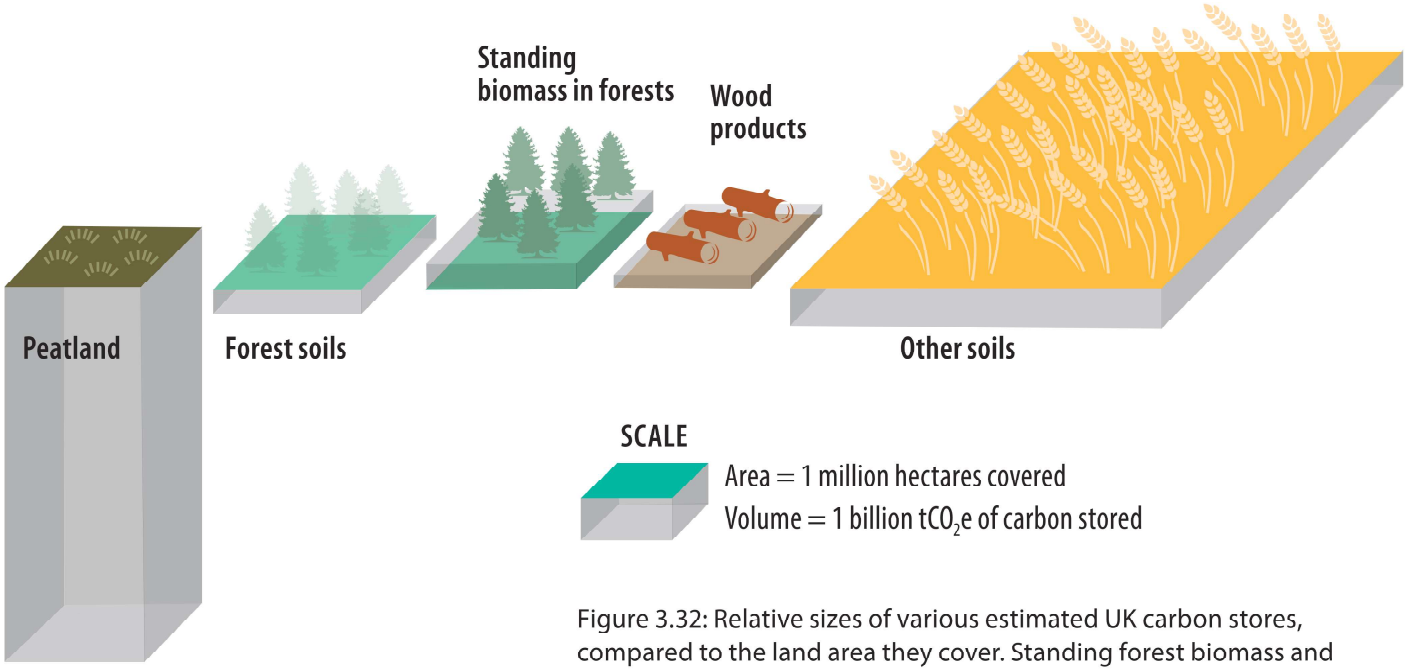


Figure 3.32: Relative sizes of various estimated UK carbon stores, compared to the land area they cover. Standing forest biomass and wood products show the carbon store above the ground level.

Top options for reducing your carbon footprint

Average reduction per person per year in tonnes of CO2 equivalent

Live car-free
2.04

Refurbishment /renovation
0.895

Battery electric car
1.95

Vegan diet
0.8

One less long-haul flight per year
1.68

Heat pump
0.795

Renewable energy
1.6

Improved cooking equipment
0.65

Public transport
0.98

Renewable-based heating
0.64

Source: Centre for Research into Energy Demand Solutions

BBC