1. Energy Consumption

Electricity Usage:

Usage: 300 kWh

Emissions Factor: 0.233 kg CO₂e per kWh (assuming an average grid mix)

Total Emissions: 300 × 0.233 = 69.9 kg CO₂e

Heating/Cooling (Natural Gas):

Usage: 40 m³

Emissions Factor: 2.03 kg CO₂e per m³ of natural gas

Total Emissions: 40 × 2.03 = 81.2 kg CO₂e

Appliance Usage:

Estimated based on typical household appliance consumption

Total Emissions: 30 kg CO₂e

2. Transportation

Car Travel (Gasoline):

Distance Driven: 800 km

Fuel Efficiency: 8 L per 100 km

Fuel Used: (800/100) × 8 = 64 L

Emissions Factor: 2.31 kg CO₂e per liter of gasoline

Total Emissions: 64 × 2.31 = 147.84 kg CO₂e

Public Transport:

Type: Bus

Distance Travelled: 100 km

Emissions Factor: 0.103 kg CO₂e per km

Total Emissions: 100 × 0.103 = 10.3 kg CO₂e

Flights:

Number of Flights: 1 (domestic, short-haul)

Distance: 500 km

Emissions Factor: 0.15 kg CO₂e per km (economy class)

Total Emissions: 500 × 0.15 = 75 kg CO₂e

3. Waste and Recycling

Waste Produced:

Total Waste: 20 kg

Emissions Factor: 0.36 kg CO₂e per kg (landfill waste)

Total Emissions: 20 × 0.36 = 7.2 kg CO₂e

Recycling Deduction: Approx. -5 kg CO₂e (depending on recycling efficiency)

4. Food Consumption

Diet Type: Mixed diet (meat and plant-based)

Total Emissions:

Meat: 50 kg CO₂e

Dairy: 15 kg CO₂e

Plant-based: 10 kg CO₂e

Total Food Emissions: 75 kg CO₂e

5. Goods and Services

Clothing Purchases: 1 pair of jeans, estimated emissions: 33 kg CO₂e

Electronics: 1 smartphone, estimated emissions: 75 kg CO₂e (based on production)

Other Purchases: Miscellaneous goods: 20 kg CO₂e

Total Monthly Carbon Footprint

Total Emissions for the Month:

69.9 (electricity) + 81.2 (heating) + 30 (appliances) + 147.84 (car) + 10.3 (bus) + 75 (flight) + 7.2 (waste) + 75 (food) + 33 (clothing) + 75 (electronics) + 20 (miscellaneous)

= 624.44 kg CO₂e

Comparative Benchmarking

National or global average for one person per month: approx. 1,000 kg CO₂e

Personal footprint compared to average: 37.6% lower