

# My impact on the planet

## Data and sources used

### Travel – CO<sub>2</sub> emissions (grams)

#### DATA

- Car: 232 CO<sub>2</sub> gr/passenger/km traveled on average
- Bus: 117 CO<sub>2</sub> gr/passenger/km traveled on average
- Train/tube: 64 CO<sub>2</sub> gr/passenger/km traveled on average
- Bike/walk: 0 CO<sub>2</sub> gr/passenger/km traveled on average
- A pine tree at a mature age (25 years old) offsets 6.6Kg of CO<sub>2</sub> a year on average.

#### MAIN SOURCES

- Department for Environment, Food and Rural Affairs (Defra), UK - <http://www.defra.gov.uk>
- UK Department for Transport, the Welsh Assembly Government and the Scottish Government - <http://www.transportdirect.info>
- United States Environmental Protection Agency - <http://www.epa.gov/climatechange>
- European Cyclists' Federation (supported by European Commission) - <http://www.ecf.com>
- The Environmental Impact of the Car, Greenpeace International, 1991. ISBN 871532 361.
- Hampshire County Council, The Castle, Winchester, Hampshire, UK - <http://www3.hants.gov.uk/education/schoolenergymatters.htm>
- Global Footprint Network, US - <http://www.footprintnetwork.org>
- World Wildlife Fund (WWF-UK) Panda House - <http://footprint.wwf.org.uk/>
- National Geographic - <http://environment.nationalgeographic.com/environment/global-warming/gw-effects/>

## Food and drinks – Water consumption (liters)

### DATA

The calculations are based on the overall water footprint, which includes both direct and virtual water consumption (all the water used during the product lifecycle).

- 1 glass of tap water: 0.3 liters of water
- 1 bottle of water (small, 0.3 liters) of water: 1.5 liters of water
- 1 cup of coffee: 140 liters of water
- 1 cup of tea: 35 liters of water
- 1 bottle of soda (medium, 0.5 liters): 35 liters of water
- 1 glass of juice (small, 0.3 liters): 180 liters of water
- Vegetarian meal: 397 liters (includes: 1 baked potato (31 l.), salad (140 l.), slice of bread (50 l.), 1 piece of cheese (95 l.), and 1 apple (81 l.))
- Meat meal (chicken): 1,525 liters (1 portion of chicken (1,304 l.), 1 salad (140 l.), and 1 apple (81 l.))
- Meat meal (beef): 3,971 liters (1 portion of beef (3,750 l.), 1 salad (140 l.), and 1 apple (81 l.))
- Bath volume: 80 liters (20 gallons) on average

### MAIN SOURCES

- National Geographic - <http://www.nationalgeographic.com/everyday/greenhouse/tips.html> and <http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator>
- The Water Footprint Network - <http://www.waterfootprint.org>
- Water footprints of nations: Water use by people as a function of their consumption pattern, A. Y. Hoekstra · A. K. Chapagain, Water Resour Manage (2006) DOI 10.1007/s11269-006-9039-x - [http://www.waterfootprint.org/Reports/Hoekstra\\_and\\_Chapagain\\_2006.pdf](http://www.waterfootprint.org/Reports/Hoekstra_and_Chapagain_2006.pdf)
- Water.org - <http://water.org/water-crisis/water-facts/water>
- Bupa - <http://www.bupa.co.uk/individuals/health-information/directory/p/hi-portion-size#textBlock279776>
- UN Water / FAO 101- [http://www.unwater.org/worldwaterday/animation\\_101.html](http://www.unwater.org/worldwaterday/animation_101.html)
- Kemira - <http://www.waterfootprintkemira.com>
- Product Water Footprint Assessments - Practical Application in Corporate Water stewardship (September 2010) [http://www.thecoca-colacompany.com/presscenter/TCCC\\_TNC\\_WaterFootprintAssessments.pdf](http://www.thecoca-colacompany.com/presscenter/TCCC_TNC_WaterFootprintAssessments.pdf) World Business Council for Sustainable Development (WBCSD) - <http://www.wbcd.org/waterforbusiness3.aspx>

## Electric appliances – Energy usage (Watts/hour)

### DATA

- Desktop computer and monitor = 193 Watts/hour (37 Watts/hour passive stand by)
- Laptop = 50 Watts/hour (3 Watts/hour passive stand by)
- Desk lamp = 30 Watts/hour
- Mobile phone = 3 Watts/hour (1 Watt/hour passive stand by)
- Tablet = 20 Watts/hour (3 Watts/hour passive stand by)
- An average electric car runs 4.6Km for each kWh of energy used.

### MAIN SOURCES

- U.S. Department of Energy - [http://www.energysavers.gov/your\\_home/appliances/index.cfm/mytopic=10040](http://www.energysavers.gov/your_home/appliances/index.cfm/mytopic=10040)
- American Council for an Energy-Efficient Economy – <http://www.aceee.org/node/3071>
- ECOS Consulting, 2006: Final Field Research Report for the California Energy Commission
- Computer world - [http://www.computerworld.com/s/article/9228212/By\\_the\\_numbers\\_Microsoft\\_s\\_Surface\\_vs\\_Apple\\_s\\_iPad](http://www.computerworld.com/s/article/9228212/By_the_numbers_Microsoft_s_Surface_vs_Apple_s_iPad)
- United Kingdom Government Digital Service - <https://www.gov.uk> - [http://www.direct.gov.uk/en/Environmentandgreenerliving/TheWiderenvironment/Climatechange/DG\\_064391](http://www.direct.gov.uk/en/Environmentandgreenerliving/TheWiderenvironment/Climatechange/DG_064391)
- Eco World - <http://www.ecoworld.com/energy-fuels/electric-car-cost-per-mile.html>
- CBS Interactive, CNET. Guide to efficiency: <http://reviews.cnet.com/green-tech/laptop-power-batteries>
- Edmunds - <http://www.edmunds.com/fuel-economy/the-true-cost-of-powering-an-electric-car.html>
- Evolve Green - <http://www.evolvegreen.ca/facts.html>

## Waste – Kilograms and grams

### DATA

- Sheet of paper (size A4, 80gr density): 5 grams
- Paper/plastic cups (300ml): 12.5 grams
- Aluminum soda can (330ml): 14 grams
- Glass bottle (500ml): 210 grams
- Plastic bottle (500ml): 19 grams
- Garbage truck average capacity: 1,001.38kg of waste

### MAIN SOURCES

- United States Environmental Protection Agency - <http://www.epa.gov/osw/conserves/materials/paper/faqs.htm> and <http://www.epa.gov/osw/conserves/materials/plastics.htm>
- Waste & Opportunity: U.S. Beverage Container Recycling Scorecard and Report, 2011 (Educational Foundation of America,)
- International Bottled Water Association - <http://www.bottledwater.org/news/earth-day-2010-finds-weight-plastic-water-bottles-reduced-32-while-maintaining-very-small-envir>
- The Australian Aluminium Council - <http://aluminium.org.au/FAQRetrieve.aspx?ID=45688>
- American Chemistry Council (ACC) - <http://www.americanchemistry.com> - <http://tinyurl.com/92tb7qy>
- Life Cycle Assessment for Three Types of Grocery Bags - Boustead Consulting & Associates
- California's Department of Resources Recycling and Recovery - Recycling: Good for the Environment, Good for the Economy - <http://www.calrecycle.ca.gov/Publications/Detail.aspx?PublicationID=1068>
- Discovery Communications, Tree Hugger - <http://www.treehugger.com/htgg/how-to-go-green-recycling.html>
- Zero Waste International Alliance (ZWIA) - <http://www.zerowaste.co.nz/what-is-waste/facts-figures/>
- The Organization for Economic Co-operation and Development (OECD) - <http://www.oecd.org/statistics>
- Nation master - [http://www.nationmaster.com/graph/env\\_pol\\_mun\\_was\\_per\\_cap-pollution-municipal-waste-per-capita](http://www.nationmaster.com/graph/env_pol_mun_was_per_cap-pollution-municipal-waste-per-capita)
- United Nations indicators - <http://unstats.un.org/unsd/environment/municipalwaste.htm>
- Environment and Sustainable Resource Development (Alberta, Canada) - <http://environment.alberta.ca/01756.html>
- Kingston Council, Australia - [http://www.kingston.vic.gov.au/page/page.asp?page\\_id=70](http://www.kingston.vic.gov.au/page/page.asp?page_id=70)
- New Scientist, Reed Business Information Ltd. - <http://www.newscientist.com/article/mg12917562.700-the-cup-that-cheers-environmentalists-.html>
- Sage Industries - <http://www.sage-industries.fr/category-food-cups-38.html>
- New York City, Department of City Planning - [http://www.nyc.gov/html/dcp/html/census/pop\\_facts.shtm](http://www.nyc.gov/html/dcp/html/census/pop_facts.shtm)