

Protecting HEALTH from climate change



Annex 1

REDUCING YOUR CARBON FOOTPRINT CAN BE GOOD FOR YOUR HEALTH

A list of mitigating actions¹

Your “**carbon footprint**” is a measure of the impact your activities have on the amount of carbon dioxide (CO₂) produced through the burning of fossil fuels and is expressed as a weight of CO₂ emissions produced in tonnes.

Global experts call for a target limit of approximately 2 tonnes per person per year. Currently, the global average is 4 tonnes per person, with wide variation between countries. Approximate national average for the United States of America is 20, United Kingdom 9, China 3, and India 1.2. Individual activities are estimated to contribute around 45% of your “footprint”.¹ The rest is your “allocation” of system-generated emissions related to services provided to you or on your behalf. While both system-level and individual actions will be required to help reach agreed targets, there is much everyone can do to reduce their own carbon footprints. As noted below, actions aimed at reducing carbon emissions can be very beneficial to health!

Here are a few suggestions regarding actions that could be taken to reduce emissions related to transport, food, use of energy in the home, water use, and waste management. Appropriateness of actions will depend on specific country and social circumstances. Readers will need to determine which actions are applicable to their own environments.

1. Transport

Health benefits. Increased physical activity can result in reduced obesity, heart disease (including the lowering of high blood pressure), diabetes, osteoporosis and cancer. Reduced air pollution can lead to less respiratory disease, including asthma and chronic obstructive pulmonary disease (COPD). Reduced noise will protect from hearing loss and reduce community stress. Reduced road-related injuries will result in fewer deaths and hospitalizations and less suffering.²

Environmental benefits. Changes in choices and technologies can reduce transport’s major contributions to global CO₂ emissions, small particle air pollution, noise and injuries.

Actions include:

- Try one of the following ways to get to work or school: **cycling, walking, car-pooling, public transport**. On average, for each litre of fuel burnt in a car engine, more than 2.5 kg of CO₂ are produced.
- Try to **avoid short car journeys** because fuel consumption and CO₂ emissions are disproportionately higher when the engine is cold. Research shows that one in two urban car

journeys is for under 3 km — a distance that can be easily cycled or walked.

- **Don’t speed — speeding uses more petrol and emits more CO₂.** Driving faster than 120 km per hour increases fuel consumption by 30% compared with driving at 80 km per hour. Higher gears (4th, 5th and 6th) are the most economical in terms of fuel consumption.
- **Travel by train!** One person travelling by car alone produces three times more CO₂ emissions per km than if this person were travelling by train.
- **Explore alternatives to flying.** Flying is the world’s fastest growing source of CO₂ emissions. If you fly, then consider “offsetting” your carbon emissions. There are organizations that will calculate the emissions you have caused and invest money in renewable energy.
- **Develop active transport options.** Prepare cities and settlements for active transport with accessible and safe walking and cycling paths and routes.
- **Strengthen public transport systems.** Make public transport safe, convenient and affordable. Take care in selecting vehicles to minimize their impact on emissions.

¹ Data in this annex (except where indicated by reference) is adapted from European Commission- Take Control website- http://ec.europa.eu/environment/climat/campaign/control/takecontrol_en.htm accessed January 20 2008.



2. Food

Health benefits. Better dietary choices can reduce intake of saturated fats, excess sugar and salt and thus lower the risk of obesity, heart disease, stroke, diabetes and colon and breast cancers.

Environmental benefits. Food production is a major contributor to global emissions. Reducing total global consumption of animal products (meat and dairy foods) can lead to reduced CO₂ and methane emissions produced by animals.³ Using more locally produced seasonal products reduces “food miles” and uses less fossil fuel in delivery.

Actions include:

- **Reduce intake of animal products in developed countries.** Industrialized countries need to reduce their meat consumption from the current 224 g/person/day. Global convergence to 90 g/person/day would have a significant effect on carbon levels and health. Increasing meat intake in low-income countries could reduce childhood growth stunting.
- **Eat local and seasonal produce.** Fresh, locally grown, seasonal food generally uses less energy to produce. It burns up fewer food miles, as the distance it has to travel from farm to plate requires less fuel.
- **Try not to waste food.** Only buy or order what you need.
- **Recycle organic waste.** Methane released by decomposing biodegradable waste in landfills accounts for around 3% of the European Union’s greenhouse gas emissions. By recycling your organic waste, or composting it if you have a garden, you can help eliminate this problem!

3. Energy Use

Health benefits. Access to clean and reliable energy can reduce ill-health consequences of indoor air pollution (attributable annual mortality is 1.6 million), outdoor air pollution (attributable annual mortality 0.8 million in cities →100 000) and occupational health hazards, particularly in low income countries. Currently, 2.4 billion people depend on traditional biomass fuels and 1.6 billion do not have electricity⁴.

Actions include (depending on geographical and social circumstances):

- **Turn down the heat.** Reducing the temperature by just 1 °C can cut 5–10% off your family’s energy bill and avoid up to 300 kg of CO₂ emissions per household per year.
- **Turn down the cold.** Air conditioners are real energy wasters — an average room air conditioner operates at 1000 W, causing around 650 g of CO₂ emissions per hour. Fans might be an alternative, otherwise use air conditioners sparingly and look for the most energy-efficient model. In countries with dry heat, the room water coolers are as effective and draw only a fraction the energy consumed by an air conditioner. Turn off fans in rooms not in use.
- **Programme your thermostat** so that at night, or while you are out of the house, you minimize your heating or cooling use. This alone can reduce your heating and cooling use by 7–15%.
- **Install good home insulation.** This is one of the most effective ways to reduce CO₂ emissions and to save energy in the long term. Heat loss through walls, roof and floor commonly accounts for over 50% of overall space heat loss. Insulate your hot water tanks, the pipes of your central heating, windows (see below), roofs, ground floors as well as your wall cavities, and fit aluminium foil behind your radiators. In tropical climates (and during heatwaves) good insulation will help keep heat out.
- **Replace your old single-glazed windows with double-glazing.** This requires an initial investment, but can more than halve the energy lost through windows and pay off in the long term.
- **Move your fridge and freezer.** Placing them next to the cooker or boiler consumes much more energy than if they were standing on their own.
- **Defrost old fridges and freezers regularly.** Even better is to replace them with newer models, which all have automatic defrost cycles and are generally up to twice as energy-efficient as their predecessors. When buying new appliances (not only fridges, but also washing machines, dishwashers, etc.), choose those with high energy efficiency ratings.

- **Be careful which settings you use.** If you set your fridge on its coolest setting, you will not only consume more energy; your food will not keep fresh for as long because it might be spoiled through freezing.
- **Don’t put hot or warm food in the fridge.** You save energy by letting it cool down first before placing it in the fridge.
- **Check if your water is too hot.** Your cylinder thermostat does not need to be set higher than 60 °C.
- **Switch off the lights when you don’t need them.** Switching off five lights in hallways and rooms in your house when not in use can save around 60 a year and avoid about 400 kg of CO₂ emissions per year.
- **Use energy-saving light bulbs.** Just one can reduce your lighting costs by up to 60 and avoid 400 kg of CO₂ emissions over the lifetime of the bulb — and they last up to 10 times longer than ordinary light bulbs. Energy-saving bulbs are more expensive to buy, but cheaper over their life span.
- **Do not leave appliances on standby.** Use the on/off function on the machine itself. A television set switched on for 3 hours a day (the average time Europeans spend watching TV) and in standby mode during the remaining 21 hours uses about 40% of its energy in standby mode.
- **Unplug your mobile telephone charger when you are not using it.** Even when it is not connected to the telephone, it is still draining electricity. There are estimates that 95% of the energy is wasted when you leave the charger plugged in all the time.
- **Switch to green electricity, if available.** By doing so, you will help to strengthen renewable energy sources.
- **Find alternatives to biomass fuels.** Bioenergy technologies, improved stoves with chimneys, and cleaner fuels such as kerosene liquefied petroleum gas can positively impact on efficiency and emission concerns and reduce risks associated with indoor pollution

4. Water Use

Health benefits. Actions that promote and preserve water quantity and quality will help maintain safe drinking-water, agriculture and

aquaculture-related food supplies, and avoid malnutrition and problems related to water contamination. The risk of outbreaks of waterborne diseases decreases where standards of water, sanitation and personal hygiene are high.

External (garden) water conservation actions include:

- **Conserve household water.** Identifying and encouraging people to collect and use “grey” water for washing, bathing and watering gardens and livestock will help preserve drinking-water supplies.
- **Harvest rainwater (from rooftops).** Tanks (butts) to store water as an alternative source of drinking-water so that communities are not solely reliant on groundwater.
- **Raise hand pumps** to protect drinking-water from flood contamination.
- **Irrigate home gardens (in dry environments).** Use barrier methods (contour bounding, gully plugging, checking dams and dykes, etc.) to catch rainwater and give it time to soak into the ground (reduce runoff), lifting water tables and hence availability of drinking-water.

Internal household actions include:

- **Boil less water.** If you only boil just enough water for your cup of tea, you could help save a lot of energy.
- **Cover your pots while cooking.** Doing so can save a lot of the energy needed for preparing the meal.
- **Avoid drinking bottled water.** Where possible, avoid bottled water as it has large environmental and economic costs associated with plastic bottles and transport.
- **Take a shower instead of a bath.** Doing so takes up to four times less energy. To maximize the energy saving, avoid power showers and use low-flow showerheads, which are cheap and provide the same comfort.
- **Turn off the tap.** If you turn off the tap while brushing your teeth, you can save several litres of water per person per day.
- **Use the washing machine and dishwasher only when they are full.** If you need to use a machine when it is half full, then use the half-load or economy setting. There is also no need to set the temperatures high. Nowadays detergents are so efficient that they

get your clothes and dishes clean at low temperatures.

- **Use a tumble dryer only when absolutely necessary.** Each drying cycle produces over 3 kg of CO₂ emissions. Drying clothes naturally is by far the best way to do it: your clothes will last longer and the energy provided is free and non-polluting!

5. Waste Management: Reduce, Reuse, Recycle

Environmental and health benefits. Waste is an important contributor to carbon emissions. Reducing waste can lead to big emission savings and lower land fill requirements, with consequent reductions in air and land pollution. Waste not only discharges CO₂ and methane into the atmosphere, it can also pollute the air, ground-water and soil.

Actions include:

- **Recycle as much as possible.** Take used glass to the bottle bank and separate paper and cardboard, plastics and cans for recycling from the rest of your waste. Recycling one aluminium can saves 90% of the energy needed to produce a new one — 9 kg of CO₂ emissions per kg of aluminium! For 1 kg of recycled plastics, the saving is 1.5 kg of CO₂;

for 1 kg of recycled glass, it is 300 g of CO₂; and recycling 1 kg of paper instead of putting it in landfills avoids 900 g of CO₂ emissions as well as methane emissions.

- **Ensure your local authority provides for recycling options.** Lobby for appropriate collection and disposal facilities.
- **Reduce waste.** Most products we buy cause greenhouse gas emissions in one way or another, e.g. during production and distribution. By taking your lunch in a reusable lunch box instead of a disposable one, you save the energy needed to produce new lunch boxes.
- **Reuse your shopping bag.** When shopping, it saves energy and waste to use a reusable bag instead of accepting a disposable one in each shop.
- **Choose products that come with little packaging.** Buy refills when you can — you will also cut down on waste production and energy use!
- **Buy intelligently.** One bottle of 1.5 litres requires less energy and produces less waste than three bottles of 0.5 litres.
- **Stop household burning of rubbish.** Household burning of rubbish adds to emissions and risks releasing toxic chemicals into the atmosphere.

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The messages provided are a global mix, some more applicable to developed and some to developing countries. The World Health Organization (WHO) strongly encourages adaptations to suit local conditions and reach a local audience.