



## What is your ecological / carbon footprint? Why does it matter?

Our Ecological Footprint measures our consumption of natural resources. This footprint can be compared with nature's ability to renew these resources. A country's footprint is the total area required to produce the food and fiber that it consumes, absorb the waste from its energy consumption, and provide space for its infrastructure.

We consume resources and ecological services from all over the world, so our footprint is the sum of these areas, wherever we are on the planet.

When we walk on the beach, our footprint actually displaces sand. The larger the footprint the more sand is displaced. With the ecological footprint concept, the more we consume and throw out, the more natural resources we use and thus our symbolic ecological footprint grows.

The 'ecological footprint' measures how much productive land it takes to support the lifestyle of an individual, a city, region or country in today's economy. This is calculated as the land use types:

1. built up, housing/living areas,
2. crop and pastoral land,
3. managed forest land, and
4. energy-producing land,

that are required for production and consumption of goods and services:

1. food ,
2. housing,
3. transport, and
4. consumer goods and services.

Ecological footprints are usually expressed in hectares or 'hectares per person,' or some sources express the footprint in the number of planets for a given year. (a hectare is a universal measure of land equal to a little over 2 acres.)

The larger the ecological footprint, the more resources are needed to sustain an individual's or country's current lifestyle.

In 2004, the World Wildlife Fund (WWF) measured the ecological footprint of 150 countries. The average footprint globally in 2004, was 2.2 hectares.

For the world's population at the time, there was only 1.8 hectares available per person. So, the 'average footprint' was equivalent to using about 1.2 planets.

The USA had a footprint equivalent to 9.6 hectares per person. If everyone lived as we do in the United States, we would need 5 planets to sustain this way of life.

This global 'overshoot' began in the 1980s and has been growing ever since. In effect, overshoot means that, worldwide, we are spending nature's capital faster than it is being regenerated.

**The sustainability challenge is for us to find ways to experience rewarding lives within the limits of our one planet, our Mother Earth.**

## CALCULATORS:

You can measure the ecological footprint of a single person, a school, a parish, an institution, or a whole country.

Carbon Footprint calculators and Environmental Footprint calculators both measure our consumption of the earth's resources and give significant ways to reduce an individual or organization's use of these resources.

You can find a number of such 'calculators' on the Internet:

[www.myfootprint.org](http://www.myfootprint.org)

[www.greentagusa.org](http://www.greentagusa.org)

[www.carbonfund.org](http://www.carbonfund.org)

[www.nativeenergy.org](http://www.nativeenergy.org)

[www.renewablechoice.com](http://www.renewablechoice.com)

Energy Funds/Investments:

[www.solarenergyfund.com](http://www.solarenergyfund.com);

Sustainable Energy investments:

[www.thesef.org/](http://www.thesef.org/)

Earth Day Network

<http://earthday.net/>

Global Footprint Network.

[www.footprintnetwork.org](http://www.footprintnetwork.org)

The World Wildlife Fund WWF

[www.worldwildlife.org](http://www.worldwildlife.org)

These calculators vary in style: some are simple quizzes; others are more complex but probably more detailed and helpful in their results.

A good calculator will be followed by suggestions of ways that you can improve your footprint. For example: *Interfaith Power and Light* [www.theregenerationproject.org](http://www.theregenerationproject.org) is a very user-friendly organization with groups in many states, including Iowa. You may be familiar with its project known as "Cool Congregations" in which parish organizations are helped to improve both their individual and group footprints. The two sheets attached here are listings of practical steps to efficient energy usage.

There are many things each of us, as individuals, can do to reduce our environmental footprint. The choices we make in our homes, our travel, the food we eat, and what we buy and throw away will influence our carbon footprint and can help ensure a stable climate for future generations.

### **25 Simple Steps Under \$25**

Who ever said you have to spend a lot of dough or shiver in the cold and dark to better care for the earth? We didn't! We think Mother Nature wants us to be smart *and* comfortable. By using power more efficiently, we reduce our carbon dioxide emissions, thus slowing down the pace of global warming and in turn, save money. Come on, show Mother Nature you're no dim bulb!

#### **LIGHTING**

1. Buy energy-efficient compact fluorescent bulbs for your most-used lights. About \$2/bulb.  
CO2 reduction (by replacing one frequently used bulb): about 180 pounds a year.
2. Turn off unneeded lights.  
CO2 reduction: 380 pounds a year.
3. Replace halogen lamp with compact fluorescent lamp.  
CO2 reduction: 475 pounds a year.

4. Light your Christmas tree with LED lights rather than incandescent.  
CO2 reduction: 122 pounds a season.

### **HOME APPLIANCES / GADGETS**

5. Unplug/dispose of old fridge in basement.  
CO2 reduction: 2500 pounds a year.
6. Line dry clothes in summer. CO2 reduction: 780 pounds a year. Line dry clothes *all year* (using indoor clothes drying rack adds benefit of additional humidity in the winter.)  
CO2 reduction: 1400 pounds a year.  
OR use one less dryer load/wk CO2 reduction: 200 pounds a year.
7. Cut phantom electric loads in half...buy power strips for TVs/stereo and turn off home office equipment when not in use. (Phantom loads account for 6% of electric usage).  
CO2 reduction: 500 pounds a year.
8. Run your dishwasher only with a full load. Use the energy-saving setting to dry dishes. Don't use heat when drying.  
CO2 reduction: 200 pounds a year.
9. Use a manual push mower. (Blade sharpening @ Blain's Farm & Fleet \$6/blade, ea 2-3 yrs)  
CO2 reduction: 80 pounds a year.

### **HOME HEATING AND COOLING**

10. Ask your utility company for a home energy audit to find out where your home is poorly insulated or energy-inefficient.  
CO2 reduction: Potentially, *thousands of pounds* a year.
11. Don't overheat or overcool rooms. Adjust your thermostat (lower in winter, higher in summer)  
CO2 reduction (for each 2-degree adjustment): 500 pounds a year.
12. Clean or replace air filters as recommended. Cleaning a dirty air conditioner filter can save 5% of the energy used.  
CO2 reduction: About 175 pounds a year.
13. Install programmable thermostat to automatically adjust temperatures.  
CO2 reduction: 600 pounds a year.
14. Caulk and weather strip around doors and windows to plug air leaks.  
CO2 reduction: Up to 1350 pounds a year.

### **WATER**

15. Reduce showers time by 5 min/person. (Showers account for 2/3 water heating costs.)  
CO2 reduction: 250 pounds/person a year.
16. Wash clothes in warm or cold water, not hot.  
CO2 reduction (for two loads a week): 500 pounds a year.
17. Turn down your water heater thermostat; 120 degrees is hot enough.  
CO2 reduction (for each 10 degree adjustment): 500 pounds a year.
18. Install low-flow shower heads to use less hot water.  
CO2 reduction: Up to 300 pounds a year.
19. Install faucet aerators.  
CO2 reduction: 20 pounds/faucet a year.
20. Wrap your water heater in an insulating jacket (only if it is over 5 years old)  
CO2 reduction: Up to 1000 pounds a year.

### **GETTING AROUND**

21. Whenever possible walk, bike, carpool or use mass transit.  
CO2 reduction (for every gallon of gasoline you save): 20 pounds.
22. Check the inflation in your auto's tires monthly. Increases fuel efficiency.  
CO2 reduction: 250 pounds a year.
23. Change your auto's air filter according to manufacturer's specifications.  
CO2 reduction: 200 pounds a year

## **REDUCE, REUSE, RECYCLE**

24. Reduce waste by recycling: (for every gallon of garbage reduced per wk, you save 100 pounds).  
CO2 Reduction for 10 less gallons per wk: 1000 pounds a year
25. Reduce waste by buying minimally packaged goods; choose reusable products over disposable ones, begin composting; reuse your own cloth grocery bags; buy food in bulk.  
CO2 reduction (if you cut down your garbage by one gallon/wk): 100 pounds per year

## **OTHER / EQUALLY IMPORTANT**

- *Urge* government leaders to raise mpg standards for cars to 45 mpg and SUVs and other light trucks to 34 mpg. It's one of the biggest steps we can take to control climate change, meaning billions of pounds of CO2/yr.
- Support the development of renewables from your local electric company! (According to the DNR Iowa gets 95% of its energy from the burning of fossil fuels.)
- Reduce waste and promote energy-efficient measures at your school or workplace. Work in your community to set up recycling programs.  
CO2 reduction (for every pound of office paper recycled): 4 pounds a year.
- Buy Fresh / Buy Local / Buy Organic. The chemicals used in modern agriculture pollute the water supply and require energy to produce.
- Reduce meat consumption and in turn reduce harmful methane gases.
- Invest in businesses using and/or producing alternative energy sources or in other ways addressing climate change issues.

## **Some steps to reduce global warming cost OVER \$25 but save in the long run.**

- Replace any home appliances, furnace, air-conditioners that are older than 10 years with ENERGY STAR appliances.
- Replace windows with the most energy-saving models. Add air-gap window films to seal leaky windows in winter.
- Insulate walls, ceilings and basements. Wrap your water heater or replace it with on-demand hot water models.
- Install solar electrical heating system and hot water heating system.
- Buy a gas-efficient automobile; or a hybrid car; and get yearly engine tune-up and maintenance.

Resources: Interfaith Power and Light; Environmental Defense Fund, Rocky Mountain Institute, Ten Percent Challenge, National Catholic Rural Life Conference -; [www.ncrlc.com](http://www.ncrlc.com) ; Seattle City Light; The Tides Foundation - <http://www.tides.org/> ; and <http://stopglobalwarming.org/>

## **RECOMMENDED MATERIALS:**

**“Green Living Handbook:  
A 6-Step Program to Create an Environmentally Sustainable Lifestyle”**

**“Low Carbon Diet: A 30 Day Program to Lose 5,000 Pounds”**

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