

How Big is My Ecological Footprint?





Each of us consumes some of the Earth's products and services every day. How much we take depends on the ways in which we satisfy our needs and wants — the many habits that together create our lifestyle.

We can ask ourselves these questions to get a better sense of what these habits are:

How much water do I use on a typical day?

What do I eat and how much do I eat?

How much food do I waste?

How do I transport myself and how far do I go?

How much clothing and footwear do I have and how often do I replace it?

What and how much stuff do I buy?

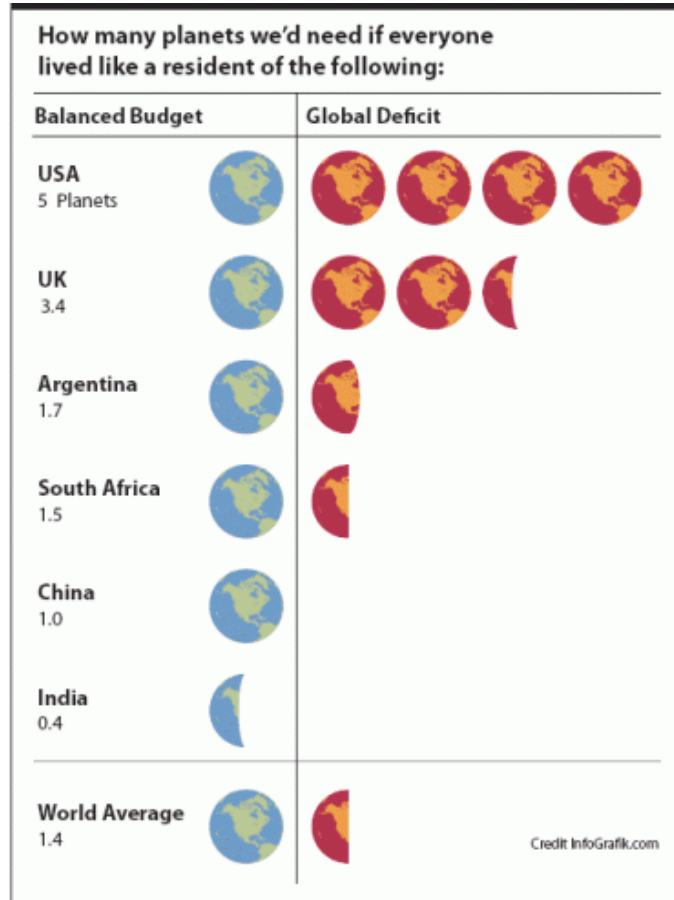
How much energy and materials are required to keep me dry and warm/cool?

How much garbage do I produce?

How much land and energy is used for my recreational activities?

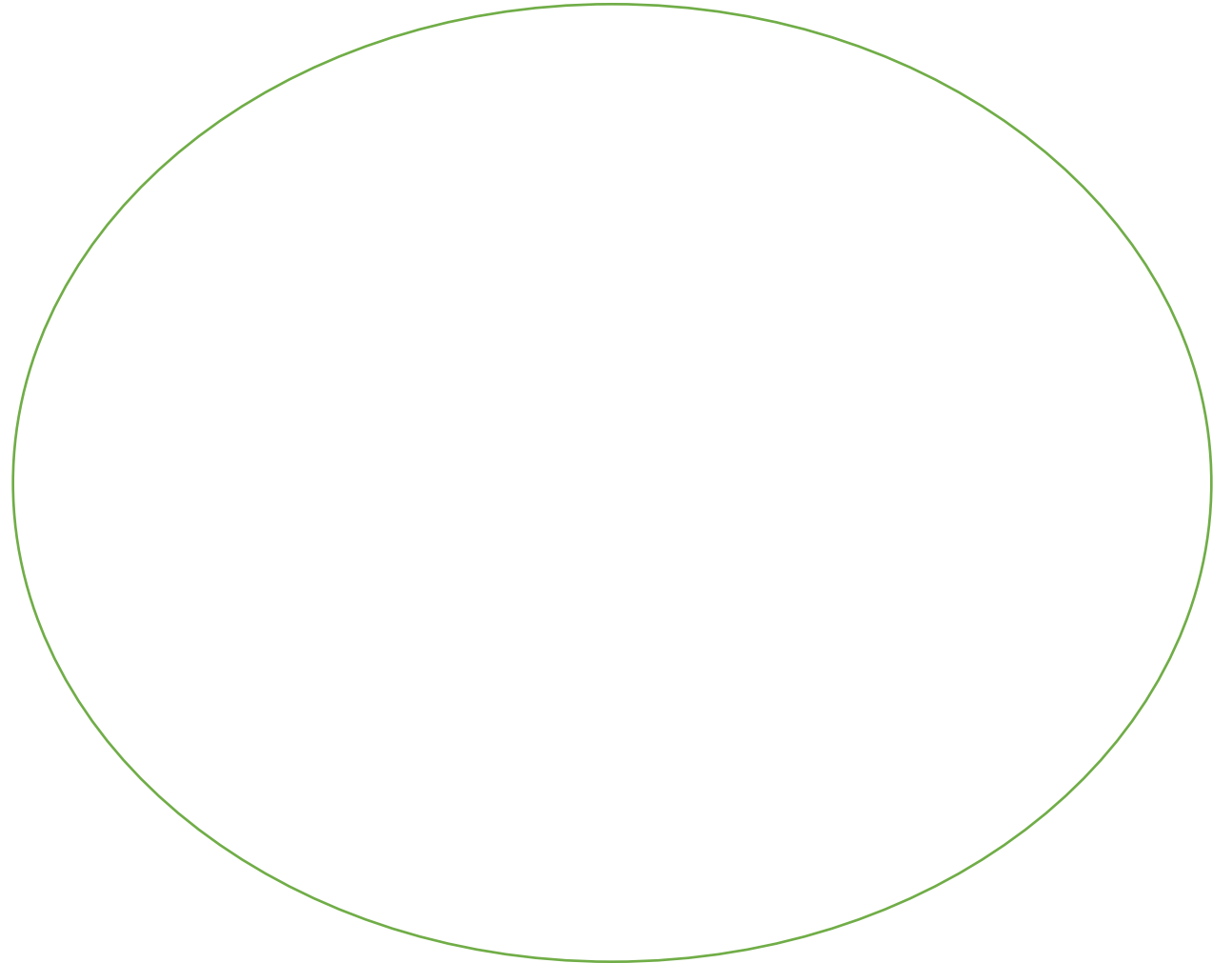


Ecological footprint



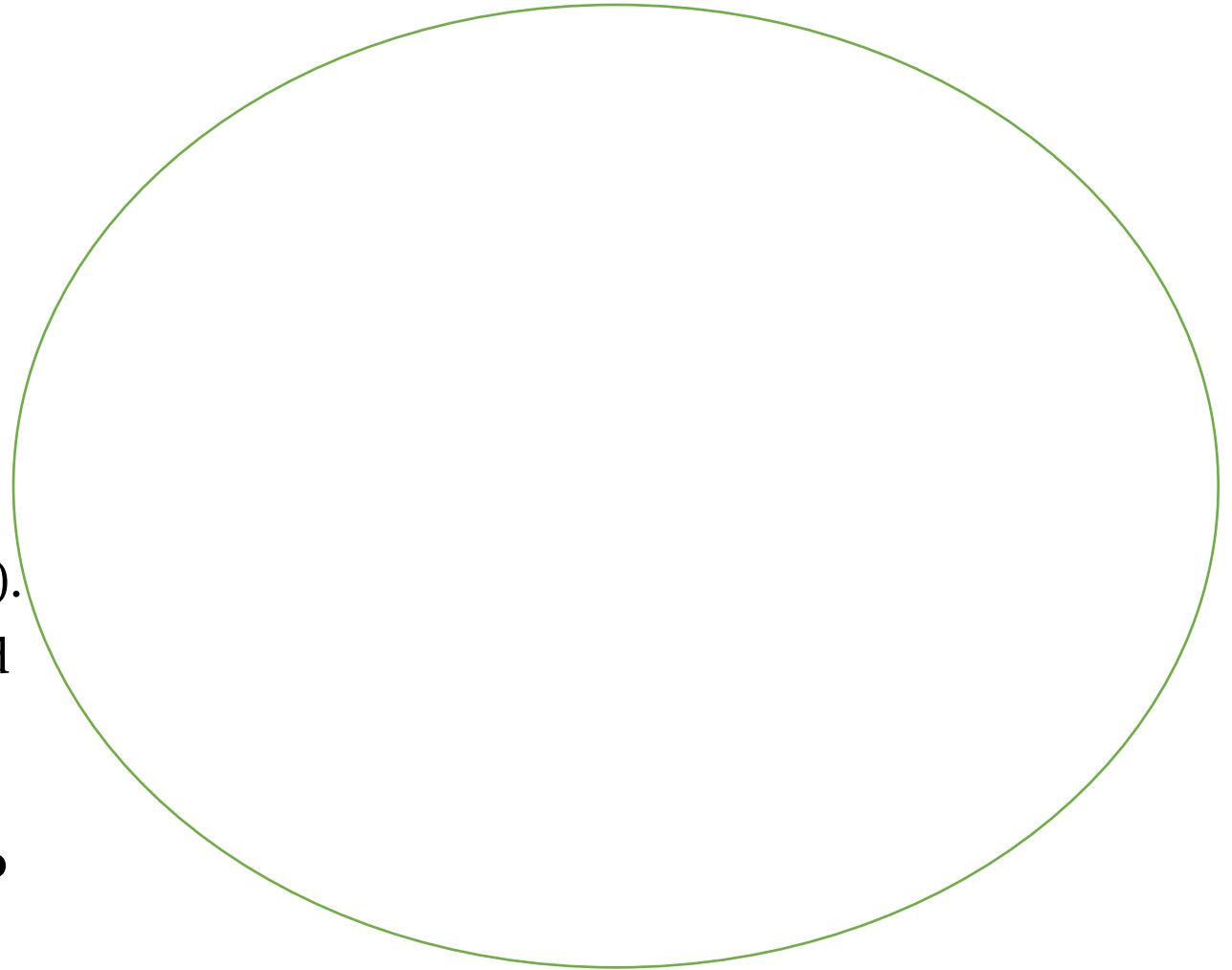
In the 1990s, sustainability gurus Mathis Wackernagel and Bill Rees coined the term “ecological footprint” to refer to the load or demand that we place on the Earth’s resources. An ecological footprint is a measure of how much of the Earth’s biologically productive land and water is needed to produce our food, material goods, and energy, and to absorb our waste

Our “living” Earth has a surface area of 51 billion hectares, but less than one quarter of this — under 12 billion hectares — is biologically productive for human use. This is the amount of land available on the planet to provide all of the food, water, and other materials that we need to support ourselves.



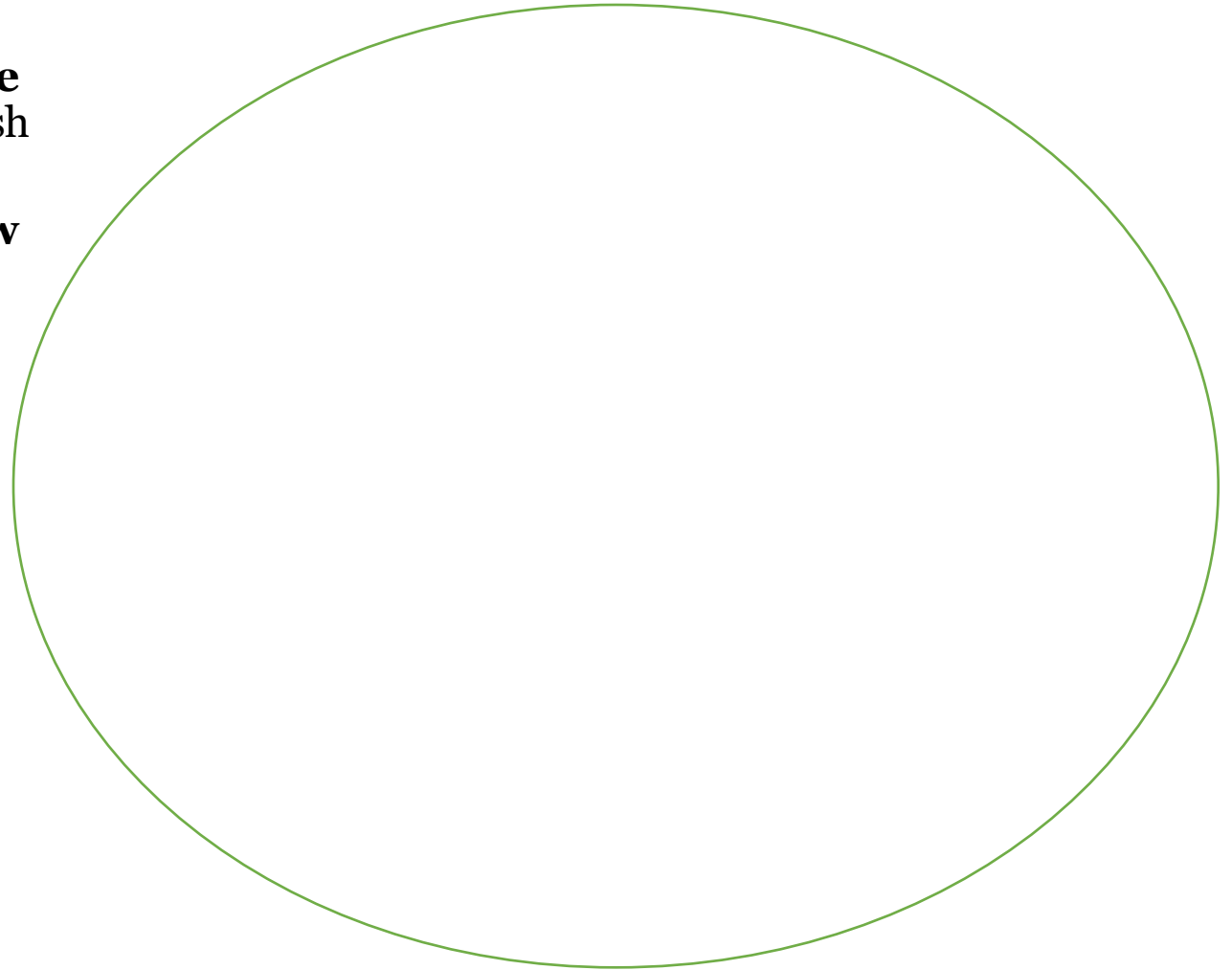
28 percent of the Earth's surface is land and 72 percent is water.

- Focusing on the 28 percent of the pie that is land:
 - **color about two-thirds of the land area green to represent the 19 percent of Earth's surface that is biologically productive for human use** (i.e., land that is fertile enough to support agriculture, forests, or animal life).
 - **color the other third of the land area brown to represent the 9 percent of Earth's surface that is marginally productive or unproductive for human use** (e.g., land that is paved, covered by ice, lacks water, or has unsuitable soil conditions).
- Processes such as desertification, soil erosion, and urbanization are constantly reducing the amount of biologically productive land on Earth. To show this, **draw small brown tentacles reaching from the border of the brown segment into the green segment.**



Now, focusing on the water realm:

- **color about one-twentieth of the water section blue to show that 4 percent of the Earth's surface is lakes and oceans that are biologically productive for human use** (i.e., yield more than 95 percent of the global fish catch).
- **color the remaining section black to show that 68 percent of the Earth's surface is ocean that is marginally productive or unproductive** for human use (i.e, yields only about 5 percent of the global fish catch).
- **Draw black “tentacles” from the unproductive-water segment to the productive-water segment to represent processes that contribute to loss of fertility in lakes and oceans.** These include the destruction of coral reefs, oil spills, overfishing (of both marine and lake species), and shoreline development.
- This leaves a pie chart featuring four segments of varying sizes — an excellent picture of our “living” planet. Label the sections, noting the percentage of the Earth's surface that each represents and listing the forces represented by the “tentacles.”



Fact #1: Of the 51 billion hectares of the Earth's surface, only 12 billion hectares are biologically productive and therefore capable of providing resources and treating waste. That's 10 billion hectares of land and 2 billion hectares of water.

Fact #2: The human population is 7 billion and climbing. Of the biologically productive land and water that is available, our average Earth share is 1.9 hectares per person (not including the needs of all other life forms). As our population grows, we must either reduce our average Earth share or find more Earths to inhabit.

Fact #3: The amount of biologically productive land on Earth is in decline owing to urbanization, overgrazing by livestock, deforestation, toxic contamination, poor agricultural practices, desertification, and global climate change.

Inescapable conclusion: Less is more: we all need to shrink our ecological footprint.

Do to Math

An ecological footprint calculation provides a baseline from which to measure progress toward a smaller footprint and more sustainable lifestyle. Set a few goals for yourself (ie. to eat less meat or to spend more time outdoors) and re-calculate your footprint.

Goals set:

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-
-

Current ecological footprint: _____

Re-calculated footprint: _____