

# Frequently Asked Questions



## 1) How Accurate is the Ecological Footprint Quiz?

The quiz is based on national consumption averages and is meant to give an idea of Ecological Footprint size relative to other people in the country you live in. It is not highly detailed, but should give most people an idea of where they stand. If you already live a sustainable lifestyle, do not be discouraged by your results. There are some portions of your Footprint that are not the direct result of your consumption habits. For example, each resident of a city is 'responsible' for a portion of the city's infrastructure, such as roads, schools, and government offices, regardless of whether the resident uses those services. In addition, some options that could make your Footprint smaller are not available to you as a result of choices on the part of local decision makers, such as reliable and efficient public transportation as an alternative to driving. Therefore, an important path to reducing your Footprint is to advocate for more sustainable decisions at all levels of government. This will make it easier for you and many others to reduce Ecological Footprints.

## 2) How is the Ecological Footprint measured?

The Ecological Footprint measures the amount of nature's resources an individual, a community, or a country consumes in a given year. The analysis is primarily based on data published by United Nations agencies and the Intergovernmental Panel on Climate Change. We use official statistics tracking consumption and translate that into the amount of biologically productive land and water area required to produce the resources consumed and to assimilate the wastes generated using prevailing technology. Because people use resources from all over the world, and affect faraway places with their pollution, the Footprint is the sum of these areas wherever they are on the planet.

*Ecological Footprint calculations are based on five assumptions:*

- It is possible to keep track of most of the resources people consume and many of the wastes people generate. Much of that information can be found in existing official statistics.
- Most of these resource and waste flows can be converted into the biologically productive area that is required to maintain these flows.
- These different areas can be expressed in the same unit (hectares or acres) once they are scaled proportionally to their biomass productivity. In other words, each particular acre can be translated to an equivalent area of world-average land productivity.
- Since these areas stand for mutually exclusive uses, and each standardized acre represents the same amount of biomass productivity, they can be added up to a total—a total representing humanity's demand.
- This area for total human demand can be compared with nature's supply of ecological services, since it is also possible to assess the area on the planet that is biologically productive.



### *Conservative Estimates*

The results underestimate human impact and overestimate the available biological capacity by:

- Counting each area only once, even if the area provides two or more ecological services at once.
- Choosing the more conservative estimates when in doubt.
- Including current agricultural practices as if current industrial yields would not cause any significant long-term damage to the soil productivity.
- Leaving out some human activities for which we have insufficient data.
- Excluding those activities that systematically erode nature's capacity to regenerate. They consist of:
  - The uses of materials for which the biosphere has no significant assimilation capacity (e.g. plutonium and other radioactive elements associated with nuclear energy production, polychlorinated biphenyls (PCBs), and chlorofluorocarbons (CFCs)).
  - Processes that irreversibly damage the biosphere (e.g. species extinction, aquifer destruction, deforestation, and desertification).

## **2) What are the units used in measuring footprint size?**

Footprint results are expressed in global acres (or global hectares in metric measurement). There are approximately 2.5 acres in a hectare. Each of those acres (hectares) corresponds to one acre (hectare) of biologically productive space with world-average productivity. Today, the biosphere has 26.7 billion acres (or 10.8 billion hectares) of biologically productive space corresponding to less than one-quarter of the planet's surface. These 26.7 billion acres (10.8 billion hectares) include 5.7 billion acres (2.3 billion hectares) of productive ocean and 21 billion acres (8.5 billion hectares) of productive land.

Biologically productive land is land that is fertile enough to support forests, agriculture and / or animal life. All of the biologically productive land of a country comprises its biological capacity. Arable land is typically the most productive area.

## **3) What about population?**

- Population is one factor in the global EF, along with consumption and the type of environmental impacts of technology.
- Consumption is critical because 1 person living at a US lifestyle has a footprint of 9.57 hectares (23.6 acres). That figure is more than 4 times the footprint of someone living at the level of the average 2.3 hectares (5.75) acres.
- A more equitable distribution of resources worldwide would provide better access to education and health care for women in the 'developing' world. This is the most effective way to reduce population growth rates.



#### **4) How does technology play a role in footprint size?**

The world's Ecological Footprint changes in proportion to global population size, average consumption per person, and the resource intensity of the technology being used. Technology can alter the productivity of land, or the efficiency with which resources are used to produce goods and services. The footprint calculations are conservative estimates of human impact since insufficient data are available on some uses of the biosphere. Also, the calculations assume that the technologies used in resource exploitation are the average of those prevailing in the world today, and do not make distinctions between the use of more sustainable exploitation in some places and less sustainable exploitation in others. This may distort the size of some countries' footprints, but does not affect the global result.

#### **5) The US and the developed world has all the conveniences--cars, air conditioning, etc. Why should we suggest to developing countries that they not develop along the same lines?**

The countries with the largest per capita footprints have a leadership responsibility in this regard. They can use their technological, economic, and political power to promote development that improves quality of life in environmentally sustainable ways. Energy and the impacts of fossil fuels is a critical example. Countries such as the US could support a rapidly-growing country such as China to 'leapfrog' over fossil fuels and transition to renewable energy.

That said, the Ecological Footprint does not necessarily suggest that people with large per capita footprints should eliminate consumption and wealth to equalize the global distribution. Rather, people can become aware of their purchasing power and the environmental and social implications of each decision. They can then make choices that support sustainable practices and technologies, or they can choose not to buy unnecessary items.

