

# Calculate Your Ecological Footprint: 16 Simple Questions to Assess your use of Nature

Ritik Dholakia and Mathis Wackernagel

Ever wondered how much “nature” your lifestyle requires? You’re about to find out. This is a very basic quiz to calculate a quick and relatively accurate Ecological Footprint for an individual or family living in the US. The Ecological Footprint Quiz estimates how much productive land and water area you take up for the resources you consume and the waste you generate. After answering the easy questions you’ll be able to compare your Ecological Footprint to what other people use and to what is available on the planet. For a more detailed analysis of individual ecological footprints or to learn more about the ecological Footprint methodology and applications, check out Redefining Progress at <http://www.ecofoot.org/>.

Answer all sixteen questions as honestly and accurately as possible

## Instructions

Step 1: Circle your response and the number in each column that corresponds to your answer.

Step 2: Enter the circled number from each column into the “subtotal” boxes below each column.

Step 3: Calculate the footprint for each section by multiplying your numbers as shown.

Step 4: Enter the subtotals from each section “quiz results” section

Step 5: Add up your subtotals to get your Total Footprint.

**Caution:** This quiz may surprise you, shock you, or make you think. Please remain calm...but not to calm!

## FOOD

Question 1: Animal-based food: A plant-based diet generally requires less land, energy, and other resources. As with all food, the size of the footprint largely depends on how it’s grown. Look for “free range” animal products that have been produced by local, small-scale organic or sustainable farmers.

How often do you eat animal-based foods (beef, pork, chicken, fish, eggs, dairy products)?

- |  |      |
|--|------|
| (A) Never (vegan)  | 0.46 |
| (B) Infrequently/strict vegetarian (no meat and eggs/dairy a few times a week) | 0.59 |
| (C) Occasionally (no meat or occasional meat, but eggs/dairy almost daily)     | 0.73 |
| (D) Often (meat once or twice a week)  | 0.86 |
| (E) Very often (meat daily)  | 1.00 |
| (F) Almost always (meat and eggs/dairy in almost every meal)                   | 1.14 |

Question 2: Locally Grown Food: A significant portion of the energy involved in the food system is spent on transporting food from harvest to market, and for processing, packaging and storage. Growing food yourself or purchasing locally grown, in-season, unprocessed food can greatly reduce the need to expend energy in food production. Shopping at farmers’ markets or buying directly from farmers is the best way to ensure that you are purchasing locally grown food, and to minimize your food footprint.

How much of your food is processed, packaged, and not locally grown (from more than 200 miles away)?

- |   |      |
|---|------|
| (A) Most of the food I eat is processed, packaged, and from far away.                 | 1.10 |
| (B) Three Quarters  | 1.00 |
| (C) Half  | 0.90 |
| (D) One quarter   | 0.79 |
| (E) Very little. Most of the food I eat is unprocessed, unpackaged, and locally grown | 0.69 |

**YOUR FOOD FOOTPRINT IS** Q1 \_\_\_\_\_ x Q2 \_\_\_\_\_ x 5.5 = \_\_\_\_\_ acres. (Multiply your answer to Question 1 by your answer to Question 2 by 5.5.)

## SHELTER

Question 3: How many people live in your household?

- |                           |   |
|---------------------------|---|
| (A) 1 person              | 1 |
| (B) 2 people              | 2 |
| (C) 3 people              | 3 |
| (D) 4 people              | 4 |
| (E) 5 people              | 5 |
| (F) 6 people              | 6 |
| (G) greater than 7 people | 7 |

Question 4: House or apartment size: The average living space for a US household is around 1,500 square feet.

What is the size of your home?

- |                                 |     |
|---------------------------------|-----|
| (A) 2,500 square feet or larger | 2.9 |
| (B) 1,900 – 2,500 square feet   | 2.2 |
| (C) 1,500 – 1,900 square feet   | 1.7 |
| (D) 1,000 – 1,500 square feet   | 1.2 |
| (E) 500 – 1,000 square feet     | 0.7 |
| (F) less than 500 square feet   | 0.2 |

Question 5: Do you use energy conservation and efficiency measures throughout your home?

- |         |      |
|---------|------|
| (A) Yes | 0.75 |
| (B) No  | 1.00 |

Question 6: Which describes your home?

- |                               |     |
|-------------------------------|-----|
| (A) Free-standing house       | 1.0 |
| (B) Multistory apartment home | 0.8 |
| (C) Green-design home         | 0.5 |

**YOUR TOTAL SHELTER FOOTPRINT IS:**  $5.1 \times (2.6/Q3) \times Q4$  \_\_\_\_\_  $\times Q5$  \_\_\_\_\_  $\times Q6$  \_\_\_\_\_ = \_\_\_\_\_ acres (Multiply 5.1 to the answer of 2.6 divided by the answer to Q3 then multiply that result to the answer to Question 4 by answer to Question 5 by answer to Question 6.)

### TRANSPORTATION

Question 7: On average, how far do you travel on public transportation each week (bus, train, subway, or ferry)?

- |                         |       |
|-------------------------|-------|
| (A) more than 200 miles | 17.29 |
| (B) 75 – 200 miles      | 8.47  |
| (C) 25-75 miles         | 3.09  |
| (D) 1-25 miles          | 0.89  |
| (E) 0 miles             | 0.00  |

**YOUR PUBLIC TRANSIT FOOTPRINT IS**  $0.05 \times Q7 =$  \_\_\_\_\_ acres. (Multiply the circled number by 0.05)

Question 8: Car: The average car-driving American travels about 14,000 vehicle miles per year, or 270 miles per week.

On average, how far do you go by car each week (as a driver or passenger)?

- |                       |      |
|-----------------------|------|
| (A) 400 miles or more | 1.91 |
| (B) 300 – 400 miles   | 1.43 |
| (C) 200 – 300 miles   | 1.00 |
| (D) 100 – 200 miles   | 0.55 |
| (E) 10 – 100 miles    | 0.12 |
| (F) 0 – 10 miles      | 0.00 |

If your answer is 0-10 miles for Question 8, enter 0 in the subtotal box and skip Questions 9 and 10.

Question 9: How many miles per gallon does your car get? (If you don't own a car, estimate the average fuel efficiency of the cars you ride in.)

- |                                    |      |
|------------------------------------|------|
| (A) More than 50 miles per gallon  | 0.31 |
| (B) 35 – 50 miles per gallon       | 0.46 |
| (C) 25 – 35 miles per gallon       | 0.65 |
| (D) 15 – 25 miles per gallon       | 0.98 |
| (E) Fewer than 15 miles per gallon | 1.54 |

Question 10: How often do you drive in a car with someone else, rather than alone?

- |                              |      |
|------------------------------|------|
| (A) Almost never             | 1.50 |
| (B) Occasionally (about 25%) | 1.00 |
| (C) Often (about 50%)        | 0.75 |
| (D) Very often (about 75%)   | 0.60 |
| (E) Almost always            | 0.50 |

**YOUR CAR FOOTPRINT IS**  $Q8$  \_\_\_\_\_  $\times Q9$  \_\_\_\_\_  $\times Q10$  \_\_\_\_\_  $\times 4.0 =$  \_\_\_\_\_ acres.

Question 11: Air travel: Every year, Americans fly an average of 4.7 hours per person on commercial airlines. This is roughly equivalent to one round trip flight between Washington DC and Chicago each year.

Approximately how many hours do you spend flying each year?

- |  |      |
|--|------|
| (A) 100 hours (approximately one coast-to-coast US roundtrip each month)         | 20.0 |
| (B) 25 hours (approximately two or three coast-to-coast US roundtrips each year) | 5.0  |
| (C) 10 hours (approximately one coast-to-coast US roundtrip per year)            | 2.0  |
| (D) 3 hours  | 0.6  |
| (E) Never fly  | 0.00 |

**YOUR AIR TRAVEL FOOTPRINT IS**  $0.3 \times Q11 =$  \_\_\_\_\_ acres (multiply the circled number in the box by 0.3)

**MOBILITY FOOTPRINT (a total of the above three [Q 9, Q10 and Q11] results)** = \_\_\_\_\_ acres (add public transit, car, and air travel totals)

**GOODS**

Question 12: Compared to people in your neighborhood, how much waste do you generate?

- |                    |      |
|--------------------|------|
| (A) Much less      | 0.75 |
| (B) About the same | 1.00 |
| (C) Much more      | 1.25 |

**YOUR GOODS FACTOR IS** = \_\_\_\_\_ acres (Enter the circled number)

**QUIZ RESULTS:**

- |  |       |         |
|--|-------|---------|
| 1. FOOD FOOTPRINT                          | _____ | ACRES * |
| 2. SHELTER FOOTPRINT                       | _____ | ACRES * |
| 3. MOBILITY FOOTPRINT                      | _____ | ACRES * |
| 4. GOODS FACTOR                            | _____ | ACRES   |
| 5. SHELTER + MOBILITY (add 2 + 3)          | _____ | ACRES   |
| 6. GOODS & SERVICES (multiply 4 x 5 x 0.9) | _____ | ACRES * |

**YOUR TOTAL FOOTPRINT (add 1 + 2 + 3 +6 [those with an asterisk])** = \_\_\_\_\_ **ACRES**

**In comparison:**

The average US Ecological Footprint is 24 acres per person.

Your footprint measures \_\_\_\_\_ % of an average US Footprint. (Your Footprint divided by 24 times 100)

Worldwide, there exists 4.7 biologically productive acres per person.

Therefore, if everyone lived like you, we would need \_\_\_\_\_ planets. (Your Footprint divided by 4.7)

**US Footprint Averages (acres/person)**

Food Footprint:	5.5
Shelter:	5.1
Mobility Footprint:	4.3
Public Transit:	0.1
Car:	4.0
Air Travel:	0.3
Goods & Services Footprint:	8.6
Average Total Footprint	23.5

To arrive at your food footprint, the quiz sums up arable land, pasture, sea space, and land areas to sequester CO2 from the energy expended to grow, process and transport the items. Your goods and services footprints are determined based upon the size of your food, shelter, and mobility footprints. This result considers average lifestyles, and estimates your use of appliances, clothing, electronics, sports equipment, toys, computers, communications equipment, household furnishing, and cleaning products. The quiz includes services like water, sewage, garbage, telecommunications, education, healthcare, financial services, entertainment, recreation, tourism, military, and other governmental serves. Your mobility footprint includes many of the impacts that result from walking, cycling, taking trains, driving cars, and flying.

The goal of sustainability is to make sure that people can live well within the means of nature, now and in the future. In order to get there, we need to know where we are and be able to track our progress.

A nation's Ecological Footprint is a measure of the amount of productive land area needed to support that nation's consumption and waste. These calculations are based on officially published and peer-reviewed data. They show that in many countries, and for the world as a whole, the demand for nature's services ("ecological capacity") exceeds the amount of nature available.

Nations that are not able to support domestic consumption with their own supply of nature are running what is called an ecological deficit. In other words, these countries are either importing ecological capacity from other places around the world, or they are taking it from future generations.

Just as nations track their fiscal deficit, we need to track our ecological deficits. Ecological Footprint assessments are a 21st century tool to do just that. They allow individuals and governments to measure and communicate the impacts of natural resource use. By showing us where we need to go, they can help accelerate a transition to a sustainable world.

## Ecological Footprints of Nations (1999 Data)

		(in global acres per capita)		
Country	Population (in millions)	Ecological Footprint (per person)	Current Capacity (per person)	Ecological Deficit (if negative)
<b>WORLD</b>	<b>6,210.1</b>	<b>6.0</b>	<b>4.7</b>	<b>(-1.3)</b>
Argentina	37.9	7.5	16.5	9.0
Australia	19.7	18.7	36.1	17.4
Austria	8.1	11.7	6.9	(-4.8)
Bangladesh	134.0	1.3	0.7	(-0.6)
Brazil	174.5	5.9	14.9	9.0
Canada	31.2	21.8	35.2	13.3
Chile	15.6	7.7	10.5	(-2.8)
China	1,284.2	3.8	2.6	(-1.2)
Denmark	5.4	16.2	8.0	(-8.2)
Egypt	66.2	3.7	1.9	(-1.8)
Finland	5.2	20.8	21.3	0.5
France	59.3	13.0	7.1	(-5.9)
Germany	82.2	11.6	4.3	(-7.3)
India	1,053.4	1.9	1.7	(-0.2)
Indonesia	217.3	2.8	4.5	1.7
Italy	57.7	9.5	2.9	(-6.6)
Japan	127.2	11.8	1.7	(-10.0)
Korea Republic	48.1	8.2	1.8	(-6.4)
Malaysia	24.4	7.8	8.4	0.6
Mexico	100.8	6.2	4.2	(-2.1)
Netherlands	16.1	11.9	2.0	(-9.9)
Norway	4.6	19.6	14.7	(-4.9)
Pakistan	144.8	1.6	1.0	(-0.6)
Philippines	78.3	2.9	1.4	(-1.5)
Poland	38.6	9.1	4.0	(-5.1)
Russia	144.2	11.1	12.0	0.9
South Africa	44.2	10.7	6.0	(-4.7)
Spain	39.5	11.5	4.4	(-7.1)
Sweden	8.9	16.6	18.1	1.5
Switzerland	7.3	10.2	4.5	(-5.7)
Thailand	61.7	3.8	3.4	(-0.4)
Turkey	67.2	4.9	3.0	(-1.8)
United Kingdom	60.2	13.2	4.1	(-9.1)
United States	288.3	24.0	13.0	(-10.9)