



**September 25 2009
Earth Overshoot Day
MEDIA BACKGROUNDER**

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1. Terms Defined

- Ecological overshoot occurs when human demand exceeds the regenerative capacity of our collective natural ecosystem. Global overshoot occurs when humanity demands more resources and produces more waste, such as CO₂, than the biosphere can regenerate and reabsorb.
- The Ecological Footprint measures the amount of productive land and sea area it takes to produce all the resources a population consumes and absorb its waste, using prevailing technology.
- Earth Overshoot Day, a concept devised by the U.K.-based new economics foundation, marks the day when humanity begins using more ecological resources and services in a given year than Earth can regenerate in that year. This overuse adds to our global ecological debt – the slow depletion of resource stocks and accumulation of waste, primarily CO₂ in the atmosphere.
- Global hectares (acres) are hectares (acres) weighted by world-average productivity.

2. Key Facts

(data from Global Footprint Network's National Footprint Accounts, 2008 Edition)

- Humanity's use of nature (in terms of natural resources and services) has increased from using slightly more than half of planet Earth's biocapacity in 1961 to the equivalent of 1.4 planet Earths in 2009.
- United Nations business-as-usual projections show humanity requiring the equivalent resources of two planets by the early 2030s, around the time children born today would be graduating college (for details see Global Footprint Network and WWF's [Living Planet Report 2008](#)). This would put Earth Overshoot Day on July 1, and means it would take two years for the planet to regenerate what we use in one year. Reaching this level of ecological deficit spending may be physically impossible.
- As of 2005, the most recent year for which data are available, the biologically productive area available on this planet was 2.1 hectares/person (5.2 acres), with no area set aside for wild species. Meanwhile, the average per capita Ecological Footprint was 2.7 global hectares/person (6.8 acres).
- The average Ecological Footprint per person in the United States is 9.4 global hectares (24 acres). If everyone in the world lived consumed resources like an American, it would take the resources of almost five planets to sustainably support humanity.
- The carbon Footprint, which accounts for the emissions from use of fossil fuels, is more than half of humanity's total Ecological Footprint. It is the fastest growing component, increasing more than ten fold from 1961 to today.

3. How Various Nations Compare

Globally, we are using 1.4 Earths' worth of biocapacity every year. Some nations, however, use a lot less than this, and some use a lot more. Here is how many Earths we would need if everyone lived like a resident of the following countries (as per data from Global Footprint Network's National Footprint Accounts, 2008 Edition).

- United States 4.6 Earths
- Canada 3.4 Earths
- United Kingdom 2.6 Earths
- Japan 2.4 Earths
- Germany 2.0 Earths
- Russia 1.8 Earths
- Mexico 1.6 Earths
- Costa Rica 1.1 Earths
- India 0.4 Earths

4. The Climate Connection

Carbon is the primary culprit of our ecological overspending. Humanity is emitting carbon dioxide faster than the planet can reabsorb it. Our carbon Footprint (the amount of land and sea it would take to absorb all the carbon we emit) has increased 1000% since 1961. Now over 50% of our Ecological Footprint comes from carbon emissions. We are now emitting much more carbon dioxide than the natural ecosystems of the planet can absorb; thus it is building up in the atmosphere and contributing to climate change.

Curbing carbon emissions is an essential strategy both for addressing climate change and reducing overshoot. If we can dramatically cut CO₂ emissions without depleting other natural assets, we can rebalance our Earth budget. However, some strategies for addressing climate change, like certain biofuels, simply shift the pressure to other ecosystems and therefore don't contribute to ending overshoot overall.

5. How Earth Overshoot Day is calculated

$[\text{world biocapacity} / \text{world Ecological Footprint}] \times 365 = \text{Earth Overshoot Day}$

Earth Overshoot Day is calculated by determining the amount of biocapacity the planet produces in a year, and comparing that to humanity's Ecological Footprint, the amount of biocapacity required to produce what we consume and absorb our waste.

By calculating the ratio of globally available biocapacity to global Ecological Footprint and multiplying by 365, we find the number of days that the biosphere can supply resources to support our demand, and the number of days we operate in overshoot this year.

This ratio shows that in just 268 days, we demand the biosphere's entire capacity for the year 2009. The 268th day of the year is September 25.

Note: 2009 Earth Overshoot Day is projected from 2005 source data. Earth Overshoot Day is calculated based on Global Footprint Network's projections of overshoot, determined as follows:

The amount of biocapacity available in 2009 (the estimate of nature's annual budget) is projected from 2005 values based on historical rates of annual biocapacity growth over the last eight years. The percent of overshoot for 2009 is calculated by determining the expected annual growth in Ecological Footprint given expected GDP in 2009 (as estimated by the International Monetary Fund), and given the historical link between GDP and Ecological Footprint, which shows that since 1961, humanity's Ecological Footprint has grown at about 1 – 2 percent less than world GDP growth.

6 . Contact and Global Footprint Network Information

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