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**August 21, 2010
Earth Overshoot Day
MEDIA BACKGROUNDER**

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1. The Earth's Ecological Limits

While economies, populations and resource demands grow, the size of the planet remains the same. Since the 1980s, when global ecological overshoot became a consistent reality, we have been drawing down the biosphere's principal rather than living off its annual interest. To support our consumption, we have been liquidating resource stocks and allowing carbon dioxide to accumulate in the atmosphere.

Ecological overshoot is possible only for a limited time before ecosystems begin to degrade and possibly collapse. This can already be seen in water shortages, desertification, erosion, reduced cropland productivity, overgrazing, deforestation, rapid extinction of species, collapse of fisheries and global climate change. New consequences of overshoot are regularly being discovered, and others may only become apparent long into the future.

2. Terms Defined

- Ecological overshoot occurs when human demand exceeds the regenerative capacity of a 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.
- Biocapacity is shorthand for biological capacity, which is the ability of an ecosystem to regenerate useful biological materials (resources) and to absorb wastes generated by humans.
- Earth Overshoot Day, a concept devised by the U.K.-based [new economics foundation](http://www.neweconomics.org), marks the day when humanity's demand for ecological resources and services in a given year exceeds what the Earth can regenerate in that year. We maintain this deficit by liquidating stocks of resources and accumulating waste, primarily CO₂ in the atmosphere.
- Global hectares (acres) are hectares (acres) of land at world-average productivity.

3. Key Facts and Figures

(All data from Global Footprint Network's 2009 National Footprint Accounts)

- As of 2006, the most recent year for which data are available, the biologically productive area available on this planet was 1.8 hectares/person (4.5 acres), with no area set aside for wild species. Meanwhile, the average per capita Ecological Footprint was 2.6 global hectares/person (6.5 global acres).
- The amount of ecological resources and services that humanity requires has increased from slightly more than half of planet Earth's biocapacity in 1961 to that of almost one and a half planets in 2006. (Note that biocapacity represents the rate at which the world's ecosystems are able to regenerate renewable resources, not the total stocks of these resources on Earth.)

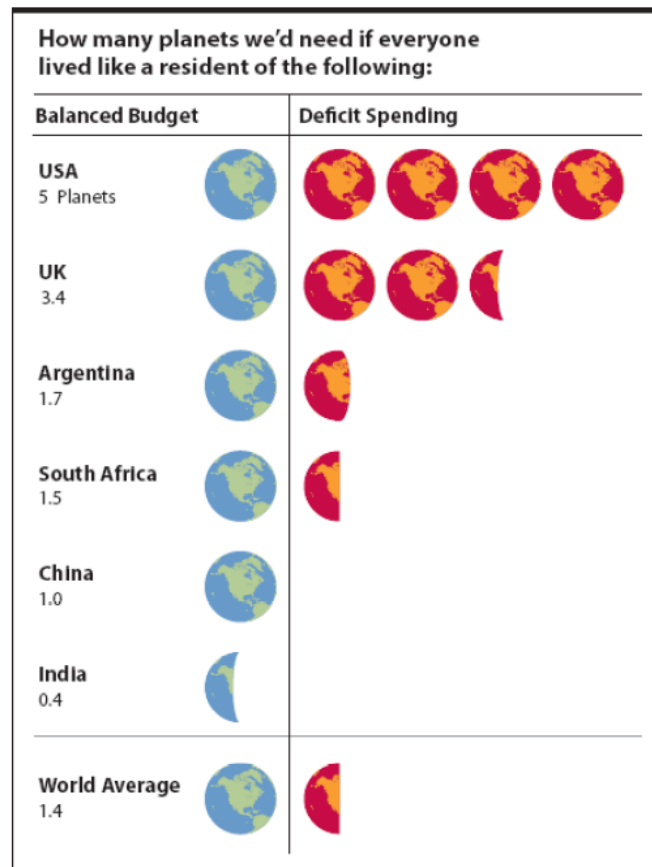
- Moderate United Nations projections suggest that demand will grow significantly faster than biocapacity and that by the 2030s, the capacity of two Earths will be needed to keep up with our consumption. Staying on this course would quickly diminish our room to maneuver, and would put the well-being of many of the planet's residents increasingly at risk.
- The carbon Footprint, which accounts for the emissions from use of fossil fuels, is more than half of humanity's total Ecological Footprint. Since 1970, our total carbon Footprint has more than tripled, from 2.9 to 9 billion global hectares. In that time carbon has also gone from being a smaller part of humanity's total Footprint than cropland, to outstripping every other area of demand by a significant margin.

4. How Nations Compare

Nations vary widely in their level of demand for ecological services. In some countries, the per capita Ecological Footprint is many times higher than the global average. In others, it is much lower -- in some cases too low on average to provide for basic needs.

The average Ecological Footprint per person in the United States is 9 global hectares (22.5 global acres), the equivalent of about eight full-sized soccer fields. The average Ecological Footprint per person in Germany is 4.03 global hectares (10 global acres). On the other end of the spectrum are countries such as Pakistan, Congo and Haiti, which have an average Ecological Footprint of slightly more than one global hectare (half a global acre). (To view a bar graph of 150 countries, see www.footprintnetwork.org/EF_by_nation.)

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 2009 National Footprint Accounts.)



Source: InfoGrafik

5. How Earth Overshoot Day is calculated

Every year, Global Footprint Network determines global biocapacity -- or the amount of resources nature is able to generate each year -- and compares that with Ecological Footprint, the amount that humanity requires. Earth Overshoot Day is calculated by comparing our demand (as calculated by the Ecological Footprint) against nature's supply (as calculated by biocapacity.)

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

This ratio shows that in just **233** days, we demand the biosphere's entire capacity for the year 2009. The 233rd day of the year is August 21.

Note: 2010 Earth Overshoot Day is projected from preliminary assessments of 2007 data, and projections forward to 2010 of that data as follows:

Biocapacity projections are based upon historical rates of biocapacity growth over the last five years.

Ecological Footprint projections are derived by calculating the historical correlation between GDP growth and growth in the various Footprint components, and applying this to expected GDP growth in 2010 (as estimated by the International Monetary Fund).

6 . Contact and Global Footprint Network Information

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