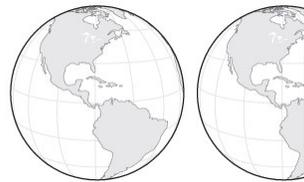


World • Analysis

# We would need 1.7 Earths to make our consumption sustainable

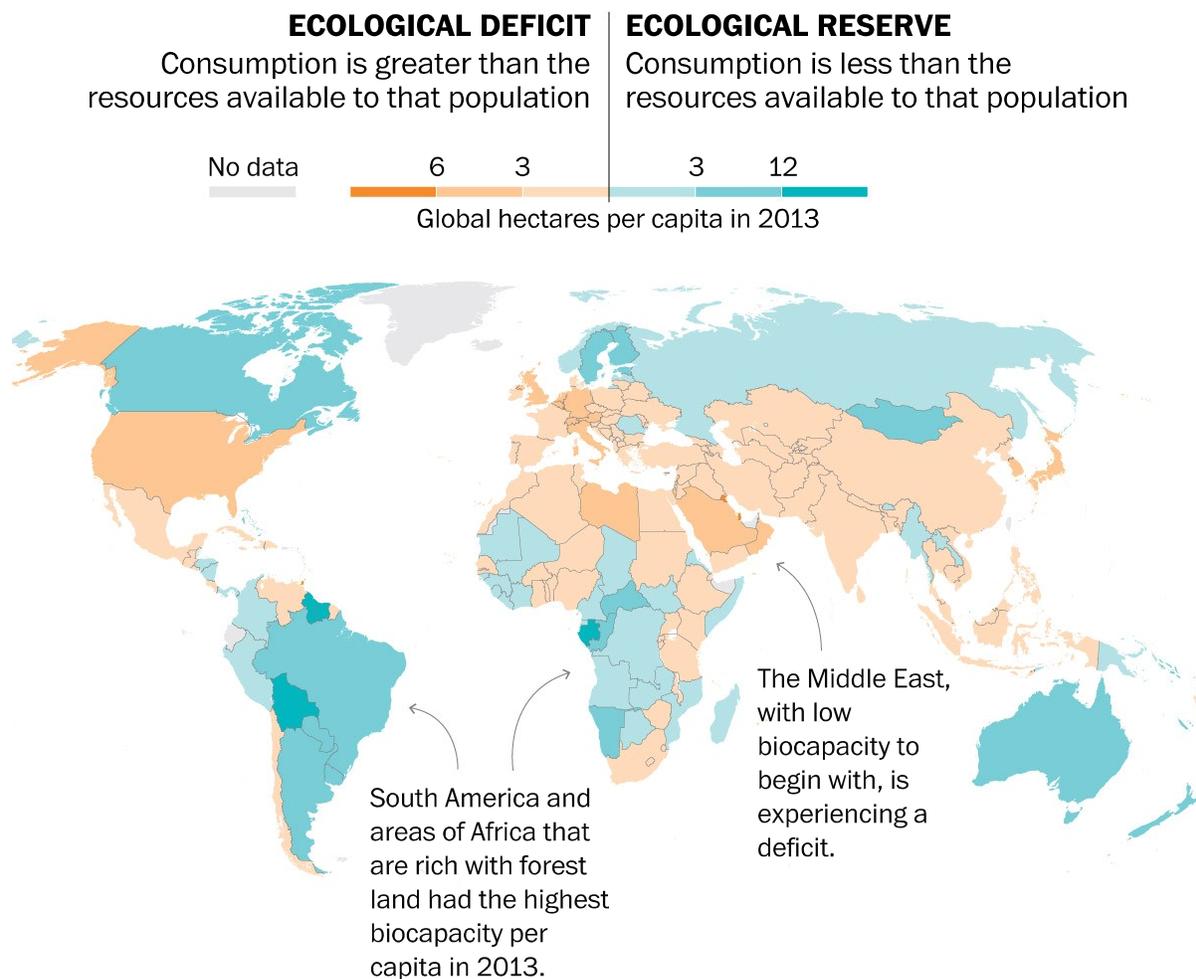
By **Denise Lu**

May 4, 2017

**P**resident Trump has acted on his campaign promises to [reverse Obama's environmental policies](#) and proposed a budget that would significantly [slash the Environmental Protection Agency's funding](#) in an effort to take federal responsibility out of environmental regulations. More recently, White House officials have met to discuss whether the United States should [leave the Paris climate agreement](#).

*[\[Local programs get the biggest hit in proposed EPA budget\]](#)*

The United States is one of the world's biggest consumers, and U.S. policies can have global environmental effects. As of 2013, the world's population would need 1.7 Earths to support its demands on renewable natural resources, according [Global Footprint Network](#), a nonprofit organization that calculates human demands on the planet's ecosystems.



Global Footprint Network measures human consumption relative to what the planet can regenerate with a measure called the **ecological footprint**. The footprint takes into account how much in biological resources, such as fishing grounds and forest land, are necessary to fulfill the consumption of a country and absorb its waste. This includes imports and excludes exports. The smaller a country's footprint is, the better.

A country also has a **biocapacity** — that is, the country's capacity to renew the resources demanded from its ecosystems. Because this measure is based on technology and land-management practices, biocapacity may change from year to year. The bigger a country's biocapacity is, the better.

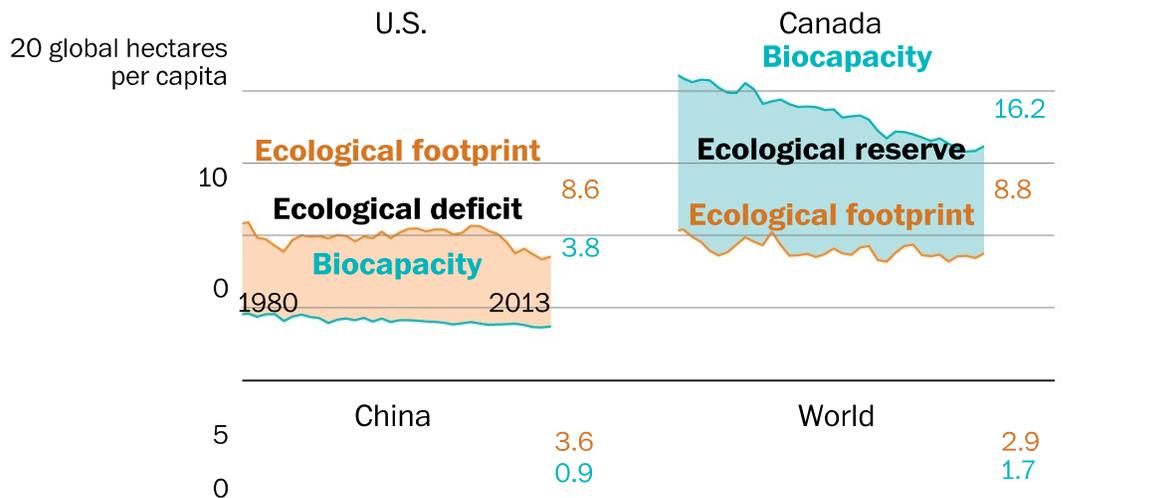
Therefore, a country has an **ecological deficit** if its ecological footprint is

greater than its biocapacity and **ecological reserve** if its biocapacity is greater.

*[Scientists are looking at these indicators to measure climate change]*

### How we got here

Of the countries running the highest ecological deficits, the United States has one of the highest biocapacities. This means that even though the country has a lot of resources, its consumption is still highly unsustainable.

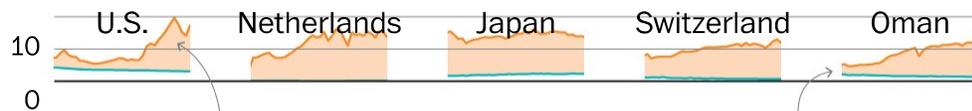


### Largest ecological deficits per capita in 2013



Oil and natural gas industries fueled a spike in economic growth in the 2000s in Trinidad and Tobago.

South Korea's economy relied more heavily on manufacturing starting in the 1980s.

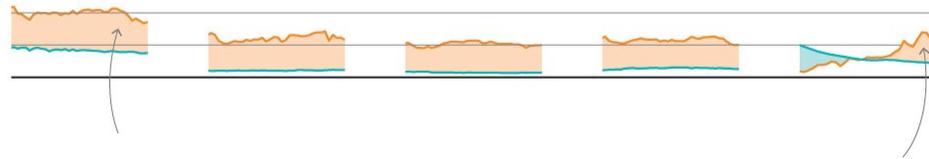


The ecological footprint of the U.S. has been decreasing since 2005.

Oman's carbon footprint has increased dramatically since 1980 due to oil and natural gas activity.

Note: Only countries with a population of more than 1 million and data for more than one year

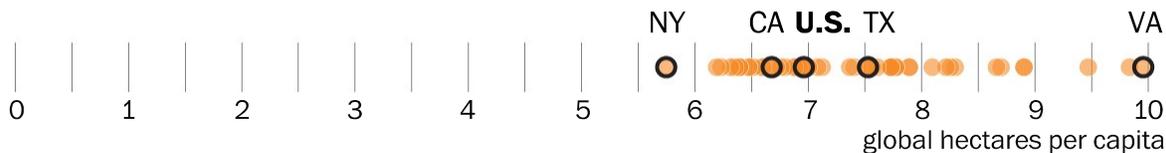
are included.



Since 2005, however, the United States has been decreasing its ecological footprint. Its fossil fuel use is the largest component of the nation's ecological footprint. In 2013, the country's carbon footprint per capita reached its lowest since 1980. This may be the result, in part, of a [smaller role](#) that coal plays in the U.S. economy.

*[Appalachia comes up small in era of giant coal mines]*

**Ecological footprints by state in 2010**



Within the United States, Virginia has the biggest ecological footprint per capita, nearly twice that of New York.

According to a [report](#) from Global Footprint Network, this is partly because of the greater density of New York, which allows for more efficient use of infrastructure, such as public transportation. Virginia also has a larger housing and personal transportation footprint per capita.

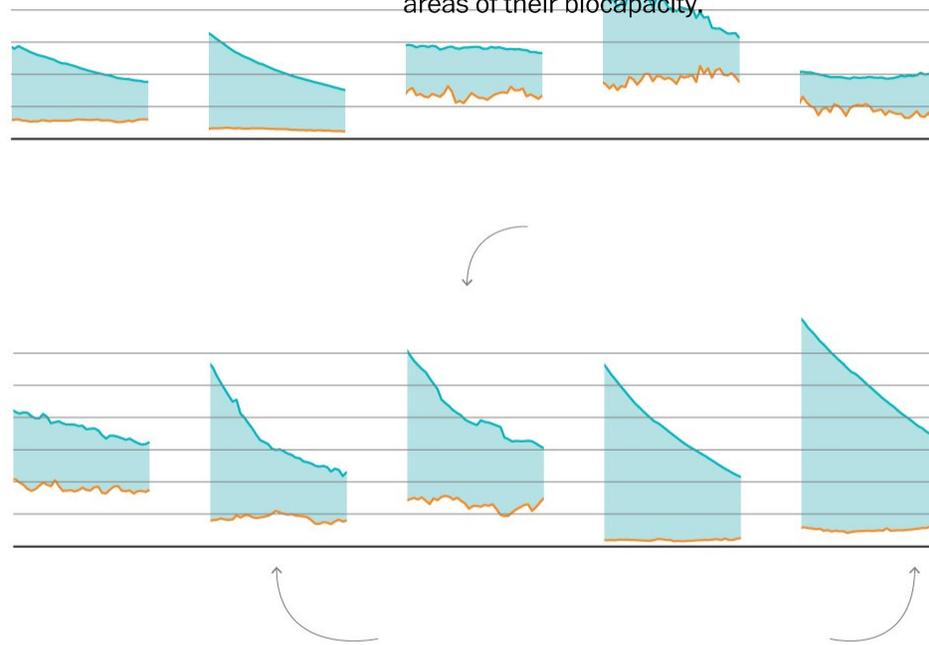
**Largest ecological reserves per capita in 2013**



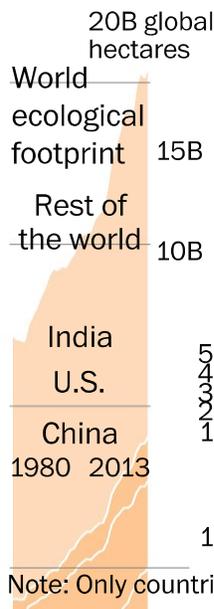
Pastureland in Mongolia has deteriorated over time due to Deforestation in South American

are included.

countries is rapidly depleting these areas of their biocapacity.



Of the countries with the largest ecological reserves, most have biocapacities that are declining at a sharp rate. In other words, they may run into ecological deficits soon if the trend continues. In some countries, this can be attributed to a combination of rapid population growth and deforestation.



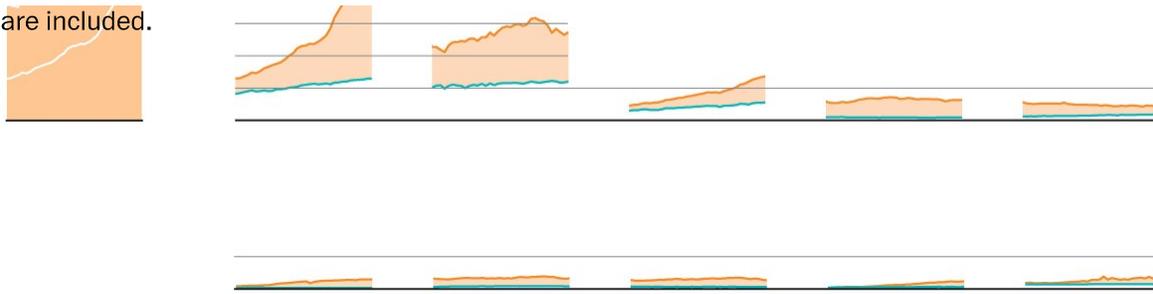
The United States makes up 13 percent of the world's total footprint and has the second-largest deficit in the world, trailing China's deficit, which is driven by its accelerated growth. While the United States' total footprint has been decreasing since 2005, it is still twice the size of India's and far greater than that of other developed countries.

**Largest ecological deficits in 2013**



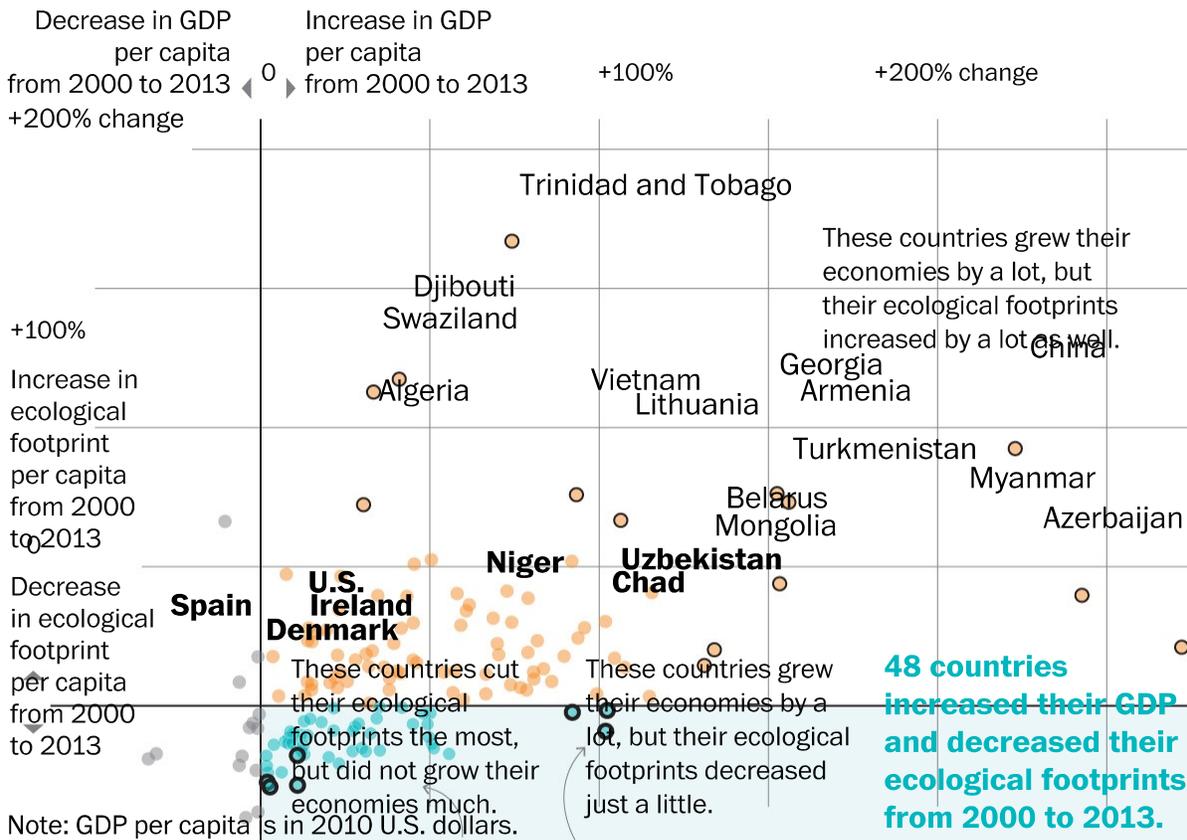
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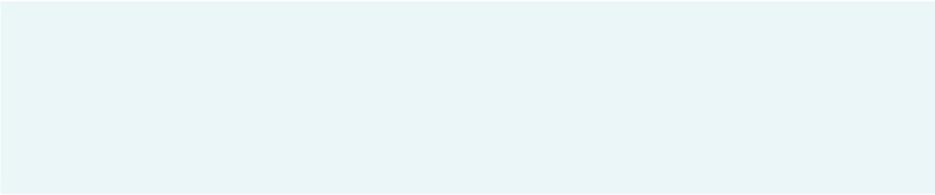
are included.



## Which countries are developing sustainably?

Economic development often means using more resources and increasing carbon emissions. From 2000 to 2013, most countries increased their GDP and ecological footprints at the same time. However, there are 48 countries that managed to develop sustainably: They increased GDP while decreasing their ecological footprints, though most of these countries saw small economic growth.





For developing countries, an increase in ecological footprint may be necessary to bolster their economies. Footprints per capita in these countries may not be high to begin with, so small changes can cause a comparatively big jump. Sustainable technology may also not be as widely available in developing countries.

For developed countries, the opposite may be true: Because their rate of growth is decreasing and most already have large footprints, fluctuations might not be so obvious.

Though there are many solutions, the fastest way for a country to reduce its ecological footprint, according to Global Footprint Network, is to switch to greener energy sources. Even though the United States has been decreasing its ecological footprint, its consumption rate is still far from completely sustainable.

Sources: Global Footprint Network, United Nations and World Bank.

An earlier version of this story indicated that the data by state is from 2015. It is from 2010.

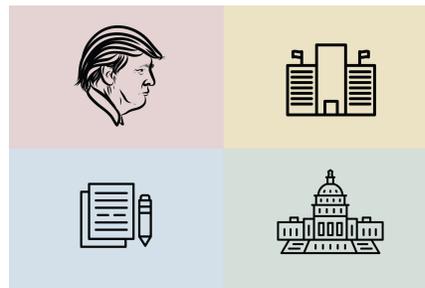
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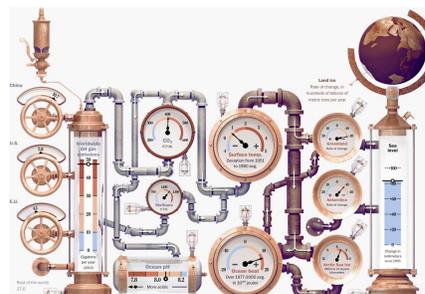
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so far.



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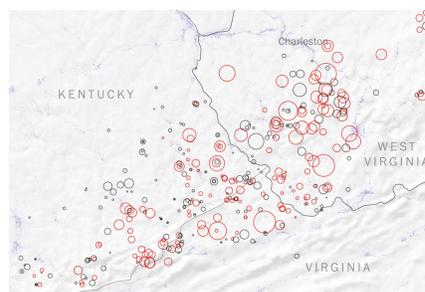
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