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The Human as Bigfoot

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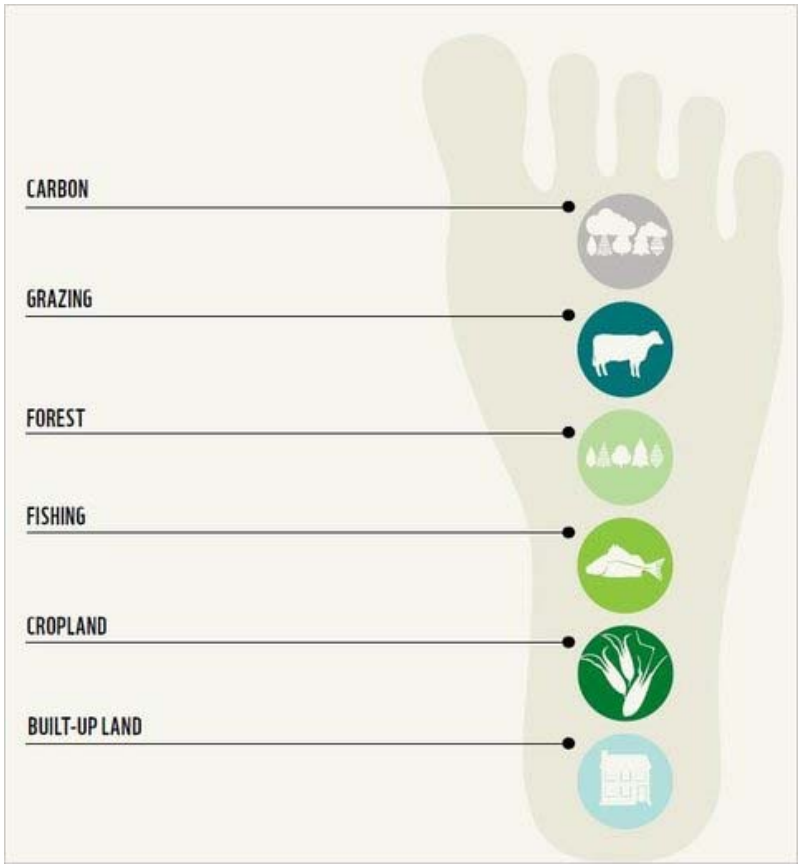

World Wildlife Fund

From fishing to crops, the ecological footprint from human activity has mushroomed.

"I hear in the chamber above me
The patter of little feet..."
— Henry Wadsworth Longfellow, "The Children's Hour"

Ah, if only the feet — or, to be more precise, the footprints — contemplated in the World Wildlife Fund's latest edition of its biennial Living Planet Report were small. But as

development marches on throughout the world, the footprints of the Earth's inhabitants grow ever larger.

Think carbon footprint, only with multiple dimensions. A carbon footprint, plus a grazing footprint, plus a fishing footprint and so on. Or, as the report sums it up: "Every human activity uses biologically productive land and/or fishing grounds. The ecological footprint is the sum of this area, regardless of where it is located on the planet."

If business continues as usual, the report predicts, "humanity will be using resources and land at the rate of two planets each year by 2030, and just over 2.8 planets each year by 2050."

The editorial team that produced the latest report writes that human demand on the planet's ecosystems more than doubled between 1961 and 2007. Humankind is now consuming the planet's resources at a rate that outstrips the natural replenishment of those resources by 50 percent.

"During the 1970s, humanity as a whole passed the point at which the annual Ecological Footprint matched the Earth's annual biocapacity — that is, the Earth's human population began consuming renewable resources faster than ecosystems can regenerate them," the report's authors wrote.

However depressing some of the new metrics are, the report aims for a more upbeat note in its later sections, offering scenarios of how a "green economy" could alleviate some of the problems.

But first, the problems themselves:

The long-term trend of shrinking biodiversity continues. From 1970 to 2007, biodiversity declined 30 percent, although the drop was unevenly divided between the temperate (and generally richer) countries and the tropical (and generally poorer) nations. Biodiversity in tropical countries declined 60 percent; biodiversity grew 29 percent in temperate countries.

The authors suggest that this could be because in North America, for example, the rise of farming and urbanization, which led to a decline in biodiversity, came decades if not centuries ago. So the improvement is measured against a low base.

Humanity's contribution to the concentration of heat-trapping gases in the atmosphere makes up more than half of the ecological footprint over all.

Then there's the water footprint, or human activity that consumes freshwater. The report says that global water use "is now well beyond levels that can be sustained even at current demands," while forecasts indicate that demand will rise in much of the world.

Current estimates indicate that by 2025, 5.5 billion people will live in areas facing moderate to severe water stress.

Of all the different ecosystems now under stress because of rising human demand, the marine ecosystem is showing the most stress of all, in terms of species. Over all, species declined 24 percent from 1970 to 2007. But tropical marine species plummeted 62 percent.

Colby Loucks, deputy director of the World Wildlife Fund's conservation science program, attributes most of this to overfishing, but said he suspects that the bleaching of coral reefs in the warming tropical seas also plays a role. And in temperate regions, where great strides were made in protecting species in the later decades of the 20th century, the trend was reversed in the first decade of the 21st century, in large part because of the increase in fisheries.

The report closes with proposed solutions: increasing forest acreage and crop yields (if the latter is possible in a warming world), doubling protected areas, managing urbanization to minimize the impact on resources and making changes in diets. It suggests that governments and the private sector factor in the economic value of the services that an ecosystem provides (pollination, for example) when doing cost-benefit analyses or making investment decisions.

"We need to move to a situation where products include the cost of externalities — such as water, carbon storage and restoring degraded ecosystems — in their price," the report said.

In a concluding section, the authors turn from government and corporate prescriptions and write, "For individuals, there are many personal choices ahead, including purchasing more goods produced in a sustainable manner, making fewer journeys and eating less meat."

Or, as Longfellow might have said, let the little feet leave footprints that are as small as possible.

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