

A Sustainable Environment: Our Obligation to Protect God's Gift

by
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Earth Overshoot Day is Arriving Too Early

As you may have read in earlier articles, I have identified what I consider the four most critical environmental issues. Three of them are climate change, population growth, and water quality and quantity. The fourth one is the consumption of our natural resources.

About eight years ago, Jared Diamond wrote about consumption and the number, 32. He indicated that if the six million people living in the developing countries consumed natural resources with a factor of "1", the one million people living in the fully developed countries consume these resources with a factor of 32. In other words, the developed countries consume 32 times as much of the earth's resources than the developing countries. Just imagine what would happen if the economies of these developing countries approached the level of the fully developed countries. Or can't you imagine?

About 22 years ago, a company called Redefining Progress started a very sophisticated project to calculate the ecological footprint of every country on this earth as well as the available resources in each country. This analytical research was led by Mathis Wackernagel who in 2004 started the "Global Footprint Network" which provides a tool for measuring and analyzing human natural resource consumption and waste output within the context of nature's renewable and regenerative capacity (or biocapacity). It represents a quantitative assessment of the biologically productive area required to produce the resources (food, energy, and materials) and to absorb the wastes of an individual or region. In terms of resources, it includes cropland, grazing land, forest, fishing grounds, and built-up land. The footprint to handle waste output includes the forests required to absorb all the carbon dioxide emissions resulting from the individual's energy consumption.

In order to be sure we don't exceed the carry capacity of the earth, the footprint for humanity must be within the annual regenerative capability of nature. Similarly, we must not exceed the absorptive capacity of the planet for the handling of the waste that is produced. A *sustainable* environment will exist if we live within the earth's regenerative and absorptive capacity. If we remove more from nature than can be provided indefinitely, we are on an unsustainable track.

Unfortunately, we are not doing the right things to live on a sustainable planet. As late as 1960, we were consuming about 50% of what the earth was regenerating each year. This was great. But in the late 1970s humanity's collective Ecological Footprint breached the sustainability mark for the first time, and it has remained unsustainable ever since. In fact, the deficit for maintaining sustainability has grown every year since then,

and it appears that this deficit is on a path to grow further in the foreseeable future. Today, the Ecological Footprint of the world is equivalent to over one and a half earths which means we are consuming much more than the earth can regenerate. So that brings me to Earth Overshoot Day. This is the day of the year that the world will have consumed 100% of the resources that the earth generates in one year. The date of August 8, 2016 marks the date when humanity has exhausted nature's budget for the year. For the rest of the year, we will maintain our ecological deficit by drawing down local resource stocks and accumulating carbon dioxide in the atmosphere. We will be operating in overshoot.

Just as a bank statement tracks income against expenditures, Global Footprint Network measures humanity's demand for and supply of natural resources and ecological services. And the data are sobering. Global Footprint Network estimates that approximately every eight months, we demand more renewable resources and carbon dioxide sequestration than what the planet can provide for an entire year. Last year it was August 13, 2015 and the previous year it was August 19, 2014. I expect that next year, Earth Overshoot Day will fall on August 3, 2017.

At the rate we are going, by the year 2030 we will need the equivalent of two earths to provide the needs of all the living creatures on this earth. We all need to become more aware of this critical problem and become more environmentally conscious of how to reverse this trend.