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

by

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Are We Heading for a Collapse of Life on Earth?

About 70 years ago, researchers conducted an experiment on St. Matthews Island, a small island in the Bering Sea by Alaska, consisting entirely of vegetation with no predators. It was determined that this island should be able to maintain indefinitely a population of about 1,500 to 2,000 reindeer. So the researchers introduced 29 reindeer in 1944, and 13 years later the population grew to 1,350. And six years later, in 1963, it was up to 6,000 reindeer. Did the scientists make some wrong calculations relative to the reindeer capacity of the island? No they didn't, because three years later the population dropped to 42 reindeer. The population collapsed due to starvation and disease. Is this a metaphor of what could happen here on earth?

The Global Footprint Network (GFN), an organization in Oakland, CA, has been calculating the consumption of the earth's natural resources since 1965. They determine how much of the earth's surface area is required to provide the basic needs for one person consisting of the natural resources plus the ability to handle the waste. Of course, this depends on where that person lives. So GFN collects thousands of pieces of data to determine this ecological footprint for each person living in each country and update the footprint almost every year. The resulting metric from these data is the number of acres required per person in each country as well as a metric for the entire planet earth and compares those numbers with the capacity of that country or the capacity of the earth.

GFN determined that around 1960, the earth's population was consuming about 50% of the natural resources. By 1980, we were consuming 100% of the earth's resources as well as its ability to dispose of the waste. But with the population growing rapidly along with some of the developing countries improving their economies resulting in the people increasing their consumption, we have already exceeded the capacity of Earth to sustain life on the planet.

One of the calculations that GFN makes is the day of the year that humanity has used up all of the resources Earth is able to produce in one calendar year along with the generated waste that Earth can absorb. The most recent report indicates that by August 13, 2015 humanity had used up all of the resources Earth is able to produce in one calendar year, and had produced more waste than Earth can absorb in that time. They have called August 13 as "Earth Overshoot Day", and we are now operating in the red. If Earth's resources—farmland, fresh water, waste and carbon absorption—was money in a bank account, it would mean we've overdrawn that account by a huge amount. The budget that should have lasted us for 365 days has only lasted

225 days this year. Stated another way, by the end of the year, we will have used the resources of 1.6 Earths.

GFN calculates the date of Earth Overshoot Day using 6,000 data points per country for roughly 200 countries, and then aggregates that data into a single figure. Each country, then, also has its own overshoot day. The United States, for example, had its overshoot day on July 14, meaning it uses the resources of 1.9 United States each calendar year. China uses the equivalent of 2.7 Chinas each year. For some other countries, the number of countries each is using is: France – 1.4, India – 2.0, Germany – 2.1, Greece – 2.6, U.K. – 3.0, and Egypt – 3.2. If consumption patterns continue to increase, by 2030 overshoot day for Earth will be sometime in June.

If global emissions could be cut by 30% by 2030, overshoot day could shift to September. But the shift in consumption that would be required is politically unprecedented and unlikely to be achieved. So far, GFN's data show that the biggest changes in consumption patterns have all come from calamities rather than proactivity. Using Greece as an example, the country was building up its resource demand quite quickly, and then it became more difficult to spend, which resulted in a radical drop in its resource demand due to the crisis following the 2008 economic crash. GFN data recorded a drop of about 20% in the ecological footprint of Greece after that. So Greece is going in the right direction, but not by choice.

Of course, these projections do not take into account the potentially favorable impact that new technologies could have on reducing consumption. If we had more information about the future, we could incorporate that information.

With the approaching U.N. climate talks next month in Paris, we'll see how serious our political leaders take this continually deteriorating environment. It is not just about the climate – the problem includes other environmental issues like water, consumption, and population growth.