

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

by
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Population Growth and Its Future Impact on All Environmental Issues

Over the past several years, there have been many news articles about climate change. They deal with whether it is real or a hoax, whether it is anthropogenic (caused by man), is it getting worse, or even do we have a chance to save the planet. The change in the concentration of carbon dioxide in the atmosphere started after the industrial revolution. That is when we started using more fossil fuels and emitting more carbon dioxide. But in recent decades it has accelerated because of the rapidly increasing population.

I have been talking about the increasing concern for the quantity and quality of water available to us. In previous articles, I have indicated that of all the water on the earth, only 0.01% is available for agricultural, industrial and human consumption with agricultural and industrial use requiring 90% of this amount. The criticality of water availability is not only due to the limited availability, but also to the rapidly increasing population.

The availability of agricultural land to feed the world is becoming insufficient. Why? Because of the rapidly increasing population. Some other environmental issues that are being impacted by the population are the consumption of valuable natural resources and overcrowding of cities. A study by Redefining Progress, a California-based research firm on ecological footprinting, indicates that we are consuming our natural resources 50% faster than they are being renewed. In other words, we are using one and a half earths today, and it is getting worse as the economies of China and India continue to grow.

Humans have been on this earth for tens of thousands of years with the population during the time of Jesus Christ being around 150 million. It took close to 1850 additional years for the world population to reach one billion people, but it has been growing much more rapidly ever since. If you were born in 1940, you will soon be 75 years old, and in just your lifetime, the population has gone from two billion people to slightly under eight billion. And it is growing at a rate of 10 million people every six weeks. So where are we heading?

A recent study of population growth considered three factors that impact the population growth: 1) fertility – the average number of children per woman, 2) mortality – the likelihood that people die by a certain age, and 3) primiparity – the average age at which women have their first child. The study first assumed that each of these factors remained constant at 2013 levels, and the result was a population of 10.42 billion people by 2100.

In a scenario the study considered as "realistic," mortality was cut in half by 2100 to model improving diets and the availability of medicine. Additionally, the study shifted primiparity to older ages and lowered fertility from its 2013 value of 2.37 children per woman to two. The model still predicted 10.35 billion people by 2100, a negligible difference in terms of

sustainability. Based on the ecological footprint studies, there is no way that the earth can provide for that many people.

To model what would happen if all governments globally restricted families to just one child, the study examined two scenarios: smoothly reducing global fertility to one child by 2100, or more aggressively by 2045. In the former case, the population peaked in the middle of the century and then declined to around seven billion by 2100. In the more draconian case, population by 2100 shrank more quickly, ending at 3.45 billion.

Some estimates of a truly sustainable human population is somewhere between one and two billion people. This number is really questionable because it is difficult to predict social and technological developments that would truly impact the population. In any event, there is no way that we will come close to the predicted sustainable population unless we experience a worldwide catastrophe. We need to address the environmental issues before us and start implementing the strategies. It must come from our governments, but most are more concerned about getting reelected than doing what is best for the people.