

Humans, An Invasive Species?

(An Essay by Ashley Yount)

One of the best known arguments in the global warming debate is over whether or not humans actually contribute to the problem. Skeptics of anthropogenic (man-made) global warming or AGW state that climate change and spikes in greenhouse gases are natural parts of the terrestrial cycle. Many scientists, however, point out that while there is a natural warming and cooling cycle, the highs and lows of the cycle have become increasingly more pronounced as a result of human industrialization. Another social predicament is how to balance human developmental progress and decrease the pollutants caused by said progress. Paul Crutzen and Eugene Stoermer's article titled "The 'Anthropocene'" addresses the definite impact the human race has on its environment and our responsibility to fix it.

Ten to twelve thousand years ago was the end of the last ice age. Environmental scientists such as Sir Charles Lyell in 1833 and the International Geological Congress in 1885 use this as a reference point and call the post-glacial epoch from then to the present the "Holocene," or "Recent Whole." During the Holocene, mankind has grown into a significant force on its environment. Crutzen and Stoermer propose that this time frame be renamed the "Anthropocene" because of human geological and environmental impact. Their article "The 'Anthropocene'" shows that, as the human species has evolved, we have taken over our environment and shaped our ecosystem. Starting from one continent, we have spread across the world. A human has lived in or visited almost every place on Earth. We have even been to the moon. This mass globalization has led to an overabundant population. "During the past three centuries human population increased tenfold to six billion" (Crutzen et al 70). That was fourteen years ago. Currently there are estimated to be well over seven billion of us world-wide, outnumbering every other species known (Worldometers 2014). This overabundant population uses a vast amount of resources. Nitric oxide (NO) leaked into the

atmosphere from fossil fuel and biomass combustion is much greater than natural inputs, which creates photochemical ozone (smog) in large parts of the world (Crutzen et al 70).

While in more recent years there have been policies to curtail smog creation, it is still a prevalent problem. “More nitrogen is now fixed synthetically and applied as fertilizers in agriculture than fixed naturally in all terrestrial ecosystems” (Crutzen et al 70). In other words, as our farmers try to meet the demand of such a large population, they create and use nitrogen-based fertilizers, which introduce more nitrogen into the ecosystem than is natural. In the rainforest, human activity has raised the extinction rate from one to ten-thousand fold (Crutzen et al 70). In the year 2000, records indicated that carbon dioxide (CO₂) had risen by more than thirty percent, and methane (CH₄) by more than one hundred percent since the 1800’s (Crutzen et al 71). This research shows that we as humans are without a doubt affecting our environment.

Once solving the question of *if* we are disturbing our environment, we can work on how to stop polluting, right? Wrong. The other social issue debated about AGW is how to protect the environment without sacrificing industrial and economic progress. James Inhofe, in his 2003 Senate floor statement, said that energy suppression to combat global warming would lead to higher food, medical care, and electricity prices as well as massive job loss and drastic reductions to the gross domestic product (GDP) with little to no environmental benefit (170). What Inhofe and others fail to realize is that, if AGW continues unabated, our economy and industry will be hit hard anyway. In *An Inconvenient Truth* with Al Gore, he shows that many environmental scientists predict that continued rapid climate change could lead to horrendous storms, rising sea levels, and higher extinction rates (2006). How much did Hurricane Katrina and Sandy cost the economy? How are industries going to cope with less land resources to use and build

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on? If we are already overpopulated, how are we going to eat if we make most of all other species extinct? If we don't begin curbing AGW then we will have to face these challenges, and this will hurt our industry and economy more than reforms ever would.

The issues of human involvement and progress pertaining to AGW are simple. Humans are the most successful invasive species known. We dominate and shape our ecosystem, the world. For our own sakes and for the Earth's, we have to take responsibility for the Anthropocene. As Crutzen and Stoermer said, "[a]n exciting, but also difficult and daunting task lies ahead of the global research and engineering community: to guide mankind toward global, sustainable, environmental management" (72).

Works Cited

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