

Environment Dialogue Group

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The issue: 10,000 years ago, humans and their domesticated animals accounted for 0.1% of terrestrial vertebrate biomass. Today, the figure is 98%! Remarkably, therefore, humans have grown from being a component of the biosphere to being the overwhelming influence re-shaping it. This is important since the stability of ecosystems and the climate depends on a delicate balance among living things. The effects of climate-change from burning fossil fuels have emerged as a significant threat to peaceful life on earth. So far 13 of the 15 hottest years on record have occurred this century, and 2015 is on track to be another record-breaking warm year.

Climate change is already resulting in increases in sea level, which is a direct threat to about 600 million people living at less than 10 meters above sea level. Climate change also increases the frequency and strength of extreme weather events, such as tropical storms, flooding and drought. Crop yields are particularly vulnerable to warmer temperatures. For example during 2012, the reserves of key staple crops such as wheat fell to record lows. Drought, famine, flooding and natural disasters will exacerbate the number of displaced people seeking security and shelter. Europe is already challenged by relatively small numbers of people displaced from conflict in Syria. This could get worse by two orders of magnitude if climate change is left to proceed at its current rate.

Why all is not lost: Interestingly, while the human genome has not changed significantly during the last 10,000 years, human mastery of technology and control of the earth's surface has. While the downside of technological advance in terms of environmental destruction is sometimes most visible, the human species is now so highly advanced, it is near a tipping point of being able to slow down, and ultimately reverse what has so far been a considerably costly experiment on the biosphere. Remarkably, therefore, we have within our grasp the necessary tools to safeguard and protect and indeed greatly increase biodiversity and ecosystem health on the planet.

Since human conflict is rooted in the misallocation of resources (perceived or real), this would have the side benefit of reducing or eliminating human conflict. The technology to live comfortably and healthily on earth, with a fraction of our current carbon footprint, is either already here or being created. Perhaps most importantly of all, long-term human happiness and well-being does not require large carbon emissions. Arguably, the ability of humans to co-exist harmoniously with the equitable apportioning of resources will be the defining issue of the next few decades.

This challenge requires advances on two fronts: scientific and societal. Scientifically: how do we best harness the ingenuity of our species for constructive purposes?

Societally: how do we learn and implement a global ethical code for living sustainably? How do we encourage, grow and support sustainable behaviours?

An important issue is time. Current political solutions alone are unlikely to be sufficiently rapid to prevent large-scale climate change. It is possible, therefore, that we will need to think of mechanisms for empowering individuals to live responsibly and accelerate change through grassroots approaches. Could there be a more interesting or exciting topic to discuss?

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