

1. The world will meet in Copenhagen in December 2009 for the COP 15 of the United Nations Framework Convention on Climate Change. The expected outcome is a replacement for the Kyoto Protocol as the world's response to climate change. It is difficult to overestimate the importance of the Copenhagen Conference but it is also wrong for us to put all our hopes into this one meeting. The best case is for the World to use Copenhagen to focus attention everywhere on this issue and to emerge with a workable global strategy. Everyone on Earth has a stake in the outcome of this meeting and we all have both the right and the responsibility to participate.
2. Two strategies will be strongly represented at Copenhagen. One of these can be described as enhanced CDM to continue and expand the support of energy efficient technology, energy from renewable sources, and carbon credits to offset emissions in one place with capital to support reductions elsewhere. The other is under the banner of Reduction of Emissions by the Decrease in Deforestation and Degradation or (REDD). REDD is essentially conserving the last remaining forest ecosystems. These positions have strong lobbies and are expected to be part of any agreement that emerges from Copenhagen.
3. While both enhanced CDM and REDD are needed and important initiatives there is a flaw in the logic of depending on Enhanced CDM and REDD as a global response to Climate Change. When analyzed dispassionately it is fairly clear that the best these strategies can accomplish is to lower human impact on climate (which is an admirable goal), but they cannot rebalance the carbon cycle or address the fundamental issues of human impact on Climate change. This suggests that while necessary these measures are insufficient to be called a solution.
4. The question of what to do about anthropogenic influence on climate change has to a large degree been focused on the notion that human impact on the climate is simply the emission of CO<sub>2</sub> and other greenhouse gas emissions into the Atmosphere. As long as the attention of the world is focused solely on CO<sub>2</sub> emissions then CDM and REDD seem logical and adequate. As soon as the question is reframed in a more accurate way then these quite worthy and important efforts must be seen as only part of the eventual solution.
5. When we look at the CO<sub>2</sub> emissions we are basically looking at human impact since the beginning of the industrial revolution. It is possible to see ecological trends with a much longer time frame and in much greater complexity. We can look much further back in human history and see that human beings have caused massive impacts to the Earth's ecosystems over our entire history. Imagining the distant past it seems that the earliest impacts began with the reduction of biodiversity. At some point in the distant past tens of thousands of years ago, human beings as social animals learned to hunt in packs and eventually drove certain species to extinction and altered the food chain. Then approximately 400 to 500 generations ago many human beings began to live by settled agriculture. Cultivation further lowered biodiversity reducing diverse forests and grasslands to a few food crops and domesticated animals.

While it is scientifically arguable that reduction of biodiversity does not necessarily lead to reduction in biomass, the fact remains that in many parts of the world it did. Reducing biomass means that photosynthesis is lessened, altering the exchange of gases, reducing carbon uptake, reducing accumulated organic matter, reducing fertility and lowering the infiltration and retention of rainfall. This development trajectory can be shown in many places around the world, the constant across all regions is the lowering of ecosystem function, the alteration of weather patterns and ultimately changes in the climate. This type of development eventually led to several accelerated impacts, including urbanization, the industrial revolution, dependence on fossil fuels and the widespread use of industrial agriculture. This progression describes human impact on the Earth’s ecosystem and climate that is historic as well as contemporary and that is accumulative in that it is a much more accurate picture of human impact on the climate than simply the emission of CO<sub>2</sub> and other greenhouse gases into the atmosphere.

6. When we analyze human impact on Climate in a comprehensive way we see that human beings have actually altered several vital systems including the carbon cycle. The hydrological cycle jumps immediately to mind. In the face of the overwhelming evidence that we are effecting the climate, the real question that we should be asking, is it possible to restore large-scale degraded ecosystems? And the answer to this question seems to be yes.
7. It is possible to increase infiltration and retention of rainfall. If I were forced to choose one thing that I think is the determining factor for sustainability I would have to say “Infiltration and Retention of Rainfall in Situ”. In other words if the rain when it falls infiltrates where it comes down then I think we will survive. If it doesn’t then it looks very bad for human beings and for the planet. If the rainfall infiltrates where it comes down then you know that the vegetation cover, the soil organic matter, and microbial communities are intact. If it doesn’t infiltrate then you can extrapolate that these things have been disrupted.
8. This suggests a global strategy at a species and planetary level to respond to climate change. We can consciously and actively restore all degraded lands wherever they are in on Earth. We are forced to react but can use this as an opportunity to address many of the problems that have long plagued humanity. We can address biodiversity loss, fresh water stress, soil fertility, poverty, disparity, population growth, and conflict simultaneously with human impact on climate change because in actuality, they are all part of one phenomenon.
9. The Environmental Education Media Project (EEMP) and the Earth’s Hope Project are working to convey this message through public speaking, broadcast and educational films. We have documented compelling evidence on broadcast video all over the world to help tell this message. You can help. Contact [Johnliu@earthshope.org](mailto:Johnliu@earthshope.org) or Linda Sills at [lindasills@earthshope.org](mailto:lindasills@earthshope.org)