Non-technical

From breaking news in the Weather Channel to the frontline of researches in climate change, the continual rise in atmospheric CO2 levels constantly attracts billions of views. Since being connected to climate change and global warming, it has haunted us as a possible threat to our survival on Planet Earth. Evidence is now adequate for us to safely conclude that CO2 has been increasing in density at a growing speed since the Industrial Revolution until the present day. Mainstream researchers blame human activities for current rise in CO2 levels and global temperature, calling for precautions to minimize negative impacts. However, opposing voices have never ceased to claim its mendacity. Predictions to the changes in CO2 concentration and the effect of CO2 emissions on global temperature are yet to be confirmed before policy makers are persuaded to take immediate actions.

In our efforts to raise a unique perspective, we the researchers sought for relationship between human activities and recorded CO2 levels with multiple models. For us, there are two possibilities: we either connive at CO2 concentration and let it rise to 650 PPM until 2100, or witness the table turned around in approximately 2050, after which the CO2 concentration stay around 460 PPM as the result of lasting restraining efforts. Even assumed from our wildest prediction, statistics do not agree upon previous claims about the 2050 concentration reaching 685 ppm, which proves them exaggerated. However, the future depends heavily on how fast and how effectively we will answer to the threatening CO2 increases before 2050. After that, we are afraid that the best chance to avoid losing control will vanish.

It is also to necessary to urge the public about the rising temperature. Upon the data from various sources, we predicted that without interference, land-ocean temperature will have risen steadily by 4°C until year 2100. Some may claim that earth is slowly exiting the previous ice age and entering a new interglacial period. However, the recent change is happening much faster. Who is to blame for the disorder then? You might be curious about the connection between CO2 and global warming, as the two terms are inevitably connected to the phrase ‘greenhouse effect’. Among CO2 concentration, CH4 concentration and changes in solar radiation, CO2 topped the ranking of proportional influence. This indicates that greenhouse effect caused by CO2 is indeed taking major responsibility for global warming, making its resolution our priority in dealing with global warming.

Additionally, it may worry many that when quantifying the long-term influence of CO2, we found that after 2060, the three CO2 level models we constructed started to reveal great diversions correlation to temperature, which was originally highly synchronized. What is the factor that replaced CO2 to determine the rising temperature? Can effective measurements be carried out in less than 40 years’ time to prepare us for the unpredictable challenge?

The window of opportunity is closing sooner than most believe. To deal with the consequences, we propose following suggestions:

1. Take stricter control on population

Global population, based on our calculation, is one of the most influential factors to CO2 emissions. Larger population means more carbon emission in factories, more emission in the roads and larger needs for unnecessary side production of CO2 caused by overconsumption in global economy. As trends of sub-replacement fertility and aging of population spreads across the world, this should be starting point of our efforts.

1. Develop cleaner energy resources

Renewable energies are generally passing experimental stage and entering the power market in certain areas. With the help from subsidies and customers’ support, petroleum will expose its weakness in limited storage and loose its users to new resources.

3. Change farmlands back to forests

We observed positive influence on CO2 from farming areas. If they are transformed into forests, negative effects will switch to positive absorptions of CO2, making double contribution to the reduction of emissions. Moreover, forest ecosystems are able to decrease the overall CO2 concentration in the area in the long term.