Climate Change And Amount Of Carbon Dioxide In The Atmosphere

Since the start of society, the economy has been growing. As it has grown, the overall goods and/or services we have been able to produce has increased over time resulting in economic growth. Though during pre-industrial times –before the 18th century- economic growth was very slow. Economic growth further increased steadily with the introduction of new technologies such as textiles, energy and transportation that saw the world head into a new era which was titled the Industrial revolution (The Core Team, 2020). During this time more and inventions where being produced but non which would spark a new revolutionary era until 1850, The Second industrial Revolution. This era was one which saw the growth of pre-industries and new ones. With industries developing steel, oil and electricity, it was a much bigger leap forward then the first industrial revolution (Richmond Vale, 2016). Growth was happening at a very high rate, with inventions like the light bulb, radio communication and the internal combustion engine allowing this growth to happen faster. This was an example of hockey stick growth in which the economy experienced long periods of little to no growth followed by sudden rapid growth. As a result of this rapid growth, standards of living improved significantly while the prices of goods fell staggeringly. Countries like Britain which the industrial revolution started are examples of countries that experienced hockey stick growth. Britain however achieved this grow through the sharing of ideas, support from government and free trade. This era ultimately paved the way to modern life as we know it and it could be said that society is continuing to grow exponentially, as we are already heading into the Fourth industrial revolution. With AI, 5G and cloud computing on the rise, this will be another major leap for humanity? But at what cost are these innovations going to come.

Climate change refers to a long-term, large-scale shift in the planet's climate (Met office, 2020). These changes are caused by changes in the total amount of energy in the atmosphere. The graph on the right represents the total amount of Carbon dioxide in the atmosphere from 2005 to now. The gas occurs naturally in nature and is kept in balance by trees using the CO2 in chemical reactions, but because of deforestation and the burning of fossil fuels, the amount of CO2 in the atmosphere has been increasing. Aside from other greenhouse gasses, Carbon dioxide is the primary forcer of climate change due to the sheer amount that's in the atmosphere making it the most dangerous (Madaan, 2018).

Industrial and farming practices also contribute to our greenhouse gas emissions with Agriculture alone accounting for 14% of greenhouse gas emissions. Methane produced from livestock in farms is short lived in the atmosphere by still affects the energy balance as it is very potent and abundant in the atmosphere (Madaan, 2018).

According to whatsyourimpact.org, 87% of human CO2 emissions comes from burning of fossil fuels. Fossil fuels can be found in every aspect of our daily lives, from the petrol in our cars, gas in our gas tanks, fuel for generators and coil for our electricity. We add more energy to the atmosphere daily and this energy keeps piling up which is becoming very dangerous. In 2017, sixteen natural disasters in the USA where linked to being intensified by climate change, some of they being hurricane Harvey, Hurricane Maria and Hurricane Irma which was the strongest hurricane ever recorded outside the Gulf of Mexico or Caribbean Sea. It remained a category 5

storm for a record of three full days. In a report released by the American Geophysical Union, authors concluded that events such as these were much more like to happen in todays climate era then that of 1950.

In Australia, wild bushfires have burnt through 12 million acre of bush land, wiping a huge population of wild life and adding an estimated 350 million tonnes of Carbon dioxide to Australia's total greenhouse gas emissions (Buchholz, 2020). These fires are a result of hot and dry conditions with the country experiencing one of its worst droughts in decades. Scientists warn that climate change increases the likelihood and intensity of wildfires with the Australian fires being the largest ever recorded fire natural disaster. We already know that our climate would not be in this mess that it currently finds itself in, in pre-industrial or early industrial times. That we the people of the world have contributed through our grow to this epidemic but although our growth was a driving factor that ultimately lead us here, it could also be one factor that helps us get out.

Humanity is constantly improving and coming up with new ideas which aim at battling climate change and greenhouse gas emissions. While our current technology catches up to where it needs to be to battle global crises helping us find ways in reducing carbon emissions and reducing carbon dioxide from the atmosphere. Today's rapidly developing countries are able to grow at their rate but still keep a lower carbon emission. Countries like Albania, Armenia and Bangladesh all show a high growth rate with low carbon emission. Countries like China and India which rely heavily on fossil fuels to reduce poverty still boast good growth rates but lack in Carbon emissions with China producing more carbon emissions than any other country. Renewable energy is crucial for developing countries to grow sustainably and have little greenhouse gas emissions and thus far, no country runs wholly on renewable energy.

In conclusion, climate change has been greatly influenced by our evolution, as we continued to drive emissions up doing day to day activities like taking a car to work or even just farming crops and livestock. Economic growth has been driving emissions up, that's what it has done since we started using fossil fuels for energy and alternative agricultural methods. And although economic growth cannot be hindered to stop emission of greenhouse gases, its possible that our growth can impact climate change in ways that reduce emissions and the energy we have put into the atmosphere. As renewable energy sources like solar, wind and nuclear power are being invested in, the world is slowly turning in to a clean energy world with reduced