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Global Climate Change is an entity that most humans are unaware or remain ignorant about. Though most humans are aware of the lesser titles of Global Climate Change, Global Warming and Global Dimming. These two elements make a chemical equation called Global Climate Change. Though most people refuse to believe what the third element in the chemical equation, human beings. As stated the current status of Global Climate Change is currently being questioned as to whether or not it exists or not. I will be going over the scientific facts that prove that Global Climate Change is real and shouldn't be questioned.

Let us begin with Global Dimming this phenomenon is the effect in which aerosol particles such as CO₂, absorb solar energy and reflect sunlight back into space. As a result, Global Dimming is the cause for many catastrophic events of past events such as the 1983-85 famine in Ethiopia. Scientists conclude that this is a result of the clouds having too many of these smaller aerosol particles which prevented the summer rain that usually occurs in this part of the world. A few key experiments have proved that Global Dimming truly exists. One of these experiments is the result of the Pan evaporation experiments throughout the world. The experiment consists of monitoring the rate of which water evaporates, it wasn't until the 1990s when scientists spotted something unusual with the experiment. It was discovered that the rate of evaporation was falling. With this discovery, the world's lead climate scientists believe that this is the result of human air pollution, as the clouds are sending back the sunlight that the planet is supposed to get. Though one of the bigger experiments that proves Global Dimming isn't just a phenomenon, are the experiments done in the Maldives. During this experiment scientists began comparing the atmosphere over the northern and southern islands. The result being, the effect of macroscopic pollutants in the atmosphere caused roughly a 10% reduction in sunlight reaching the surface in the area under the pollution cloud. So what is the big deal. according to Veerabhadran Ramanathan (Atmospheric Scientist), "The energy for the hydrological cycle comes from sunlight. As sunlight heats the ocean, water escapes into the atmosphere and falls out as rain. So as aerosols cut down sunlight by large amounts, they may

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be spinning down the hydrological cycle of the planet". The hydrological cycle can be referred to as Earth's water cycle, the effect of these particles are the reason why we are seeing these droughts appear all over the world. With the endangerment of Earth's water cycle, more droughts and famines are going to appear in the near future.

Next is the phenomenon of Global Warming, which can be defined simply as the rise in temperature due to the result of human pollution. One can't talk about Global Warming without Global Dimming. These two share a relationship that is symbiotic with one another. If we get rid of Global Dimming we have to deal with its counterpart Global Warming. The reason for this being is that Global Dimming has masked the effect of global warming to some extent. Due to the Greenhouse gases being pushed into our atmosphere only a portion of the solar radiation is coming down to Earth. The big oil companies believe that this is helping the planet but in reality it is doing more damage than good. According to the Keeling Curve the increase of CO₂ concentrations are ever so increasing year by year from 1958 – 2013. The continual deforestation can't support the theory that the big oil companies have come up with because without trees what is going to absorb the CO₂ from the atmosphere. As a result the climate will increase 1 degree Celsius by 2050 according to climate scientists. This in turn will lead to the polar icebergs melting and in turn the sea level will rise roughly 100 ft.

Though the situation may look dire and hopeless, steps are being taken by current world leaders to decrease the amount of CO₂ in the air. As recent as 2014 with Obama's Climate Action Plan in which the first-ever national carbon emissions limits for power plants will can come into effect. Though it hasn't been approved yet by Congress it's a great start on the fight against pollution in our atmosphere. Remember though that if we decrease the CO₂ emissions as significantly as proposed by this Action Plan, Global Dimming will go down but Global Warming will go up as a result of the sun's radiation reaching the down on the planet. Will our World Leaders figure this out before it's too late or will they continue to ignore this issue as they always have?

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