19/MHS01/341 | OLUWALE OLUFEMI ADESOLA | MBBS

*THE EVIL OF GLOBAL WARMING*

Global warming is a term many are familiar with. Unfortunately, the in-depth of its meaning is still unclear to most. So, what exactly is global warming?

For the purpose of clarity, global warming is simply the gradual rise in the overall temperature of the atmosphere of the earth. According to an extract from Wiktionary, global warming is a sustained increase in the average temperature of the earth, sufficient to cause climate change.

Global warming generally occurs when Carbon dioxide (CO2) and other air pollutants collect and absorb sunlight and solar radiation in the earth’s atmosphere. These pollutants can last for years in the atmosphere and because of the heat they have trapped, they make the planet hotter. Causes of global warming are classified into natural and man-made causes. The natural causes include eruption of volcanoes which release large amounts of CO2, green-house gases, release of methane etc. Man-made causes are numerous: mining, cattle rearing, deforestation, burning of fossil fuels, chlorofluorocarbons(CFCs) which also deplete the Ozone layer, to mention but a few.

CFCs are produced from products and machines used by man in his everyday life, rather unfortunately. Refrigerants and coolants are the most common emitters of CFCs. Refrigerators which we use to preserve foods, air conditioners used in our homes, offices and cars (which we make use of almost everyday) and other machines are things which leak or release CFCs into the atmosphere. Some types of aircrafts use fire suppression systems which make use of a coolant containing CFCS. Also, aerosols - cleaning agents, paints, inhalers, disinfectants, car paints – have the propensity of containing and consequently releasing CFCs into the atmosphere.

Deforestation is another one of man’s activities which leads to global warming. Trees and vegetation utilize Carbon dioxide in the earth’s atmosphere as it is an essential factor needed for their growth. Therefore, trees help to recycle the amount of Carbon dioxide present in the earth’s atmosphere. When trees are felled without being replaced or trees are cut down on a large scale, there are less trees to absorb the excess Carbon dioxide in the earth’s atmosphere released by our daily activities. As a result, these gases can last in the atmosphere for a long time, absorb and trap heat and lead to the overall heating of the earth.

Cattle rearing or the general rearing of ruminant livestock which is a popular and essential practice in Nigeria is another factor which can cause global warming. Ruminant animals have a forestomach, otherwise known as the rumen, which contains microbes known as methanogens that digest coarse plant materials, thereby producing methane as a by-product. This methane is released to the atmosphere through the animal’s belch or fart. Cattle and other ruminant animals are significant producers of methane and contribute to 37% of the methane emissions as a result of man’s activities. Between 70kg and 120kg of methane is produced by just a cow every year.

Fossil fuels (coal, petroleum, bitumen etc) are found in almost every product we use daily. There are found in fuels for running cars, heating oil, natural gas used to generate electricity and so on. When fossil fuels are burned to produce the products we make use of, they release large amounts of Carbon dioxide into the atmosphere and this gas traps the heat in our atmosphere, causing global warming.Mining involves the use of large diesel trucks and other large and heavy machineries which emit Carbon dioxide. Also, mining operations also involve cutting down of trees, which consequently reduces the amount of Carbon dioxide that can be absorbed.

Global warming has serious adverse effects and human health is not excluded. Direct health impacts arise from extreme heat waves, droughts, wildfires etc. High temperatures can trigger incidences of tropical diseases in Nigeria’s tropical climate such as heat strokes, meningitis, malaria etc. In areas like Nigeria’s Northwest, cases of meningitis will increase due to the rising temperature. In the Savanna regions of Nigeria, global warming could increase drought and high temperatures, reduce the quantity of fresh water and ultimately compromise hygiene therefore increasing the risk of malaria, diarrhea and other water borne diseases such as typhoid fever and cholera. In Coastal zones or Southern Nigeria, windstorms, heavy rainfall, flooding, can lead to contaminated water from sewage, industrial and chemical wastes, outbreak of infections and so on.

Nigeria is a country that relies much on forestry. Unfortunately, global warming affects the forestry sector in Nigeria. Some native forests have already been lost or are close to being lost. Climate change due to global warming has made tree planting much more difficult. There’s also been death of trees and a decline in species diversity. Prolonged periods of warmer temperatures typically cause the soil to be drier for longer periods, increasing the risk of wildfires. Hot, dry conditions heighten the tendency for wildfires to break out and also the tendency that they will be more intense and burn longer. An exponential increase in desertification is also another possibility to be faced.

The effect of global warming on water bodies has a vast range of consequences. The climate change caused by global warming leads to changes in the weather. Unusually heavy rainfall could lead to rise in sea levels, thereby causing flooding of nearby settlements. If global warming gets to an extreme level and is stopped, sea levels could still continue to rise for centuries. Warmer water does not contain as much oxygen as cold water. As a result, there would be a decrease in the amount of Oxygen present in water bodies due to global warming. This would inadvertently lead to the death of aquatic life and even more to the loss of a source of food for man. Oceans absorb CO2 but as the temperature of these oceans rise, they are unable to absorb as much CO2 as they would normally. As a result, increased levels of CO2 can lead to ocean acidification.

Preventing global warming is admittedly challenging but not impossible. It can be stopped when combined efforts are made by individuals, industries and governments. A journey of a thousand miles surely has to begin with a step.

The first step is to promote public awareness of the existence, causes, effects and solutions to global warming. Ignorance, in this case, is far from being bliss.

Deforestation must be discouraged. Heavy bans and penalties must be put up for felling of trees without permission.

Even now, there are some automobile industries which are working on cars, such as hybrid cars and electric cars which will not need fossil fuels to operate.

Another step every individual can take is to limit the amount of electricity used in their homes. An enormous use of electricity prompts even higher production of electricity by means of natural gas, which we have learnt help induce global warming.

On the government’s part, they must regulate industrial waste and the release of harmful gases (CFCs, CO2, greenhouse gases) into the atmosphere.

We have to admit the fact that the earth is not well and it is on the most part as a result of our direct and indirect activities. We can heal the earth together. Every effort, no matter how small, is a step towards stopping global warming.

Let us rise to the occasion before it becomes too late.