Global the earth’s atmosphere. about 160000 years ago,

Design, Architecture

Global warmingIntroductionof global warming The average temperature of theatmosphere is determined by the concentration of the atmospheric gasesmolecules such as carbon dioxide, nitrous oxide and methane. The concentrationof these gases can be changed by various factors including human activities andlead to changes in climate and global warming. The continuous burning of fossilfuels by human result in the rising of the concentration of carbon dioxide, which is known as the greenhouse gases as can allow the entry of sunlight into theatmosphere but not exit the atmosphere, leading to a gradual warming of theEarth’s atmosphere. About 160000 years ago, the average global temperature was5 degree Celsius lower that now. Scientists believed that the temperature willbe increasing at the rate of 0.

3% per decade due to industrialization. Within40 years, the average temperature of the Earth would be raised by 1. 5 to 5degree Celsius with the doubling of the carbon dioxide concentration from theindustries. Causesof global warning High concentrations of greenhouse gases arethe main reason in causing global warming.

Usually, they are important in thebalance of heat of atmosphere as they are able to absorb infrared radiations. First of all, radiant energy from the sun enters the Earth’s atmosphere. Somesolar radiation is reflected back to space. The Earth absorbed most of theradiation and warming the surface of the seas and lands. By this, infraredradiation (heat) is emitted by the surface and radiates back to space.

However, much of the heat does not escape from the atmosphere but remainstrapped by the greenhouse gases, warming the atmosphere. They done this byabsorb some of the infrared energy and emit it back to the Earth’s surface (Figure3. 0 shown in Appendices 3). Only little life would be survived as the Earth istoo cold without this process. However, small amount of these gases is enoughin preventing thermal radiation from radiating out of the atmosphere. In 1960, scientists at the Mauna Loa laboratory on Hawaii’s highest volcano start tomeasure the greenhouse gases concentrations in the atmosphere. This site ischosen as it acts as the Northern Hemisphere atmospheric conditionsrepresentative and is considered free from local airborne contamination.

Theannual lows and high of the carbon dioxide concentration is shown by the crestsand troughs of the graph. From the midline of the graph, we can conclude thatthe concentration is continuously increasing. (Figure 3. 1 shown in Appendices 3) However, some scientist believed thatincreased in the concentration of will not result in global warming. As we know, is soluble in water and not all the will remain in the atmosphere.

is not only absorbed bythe rivers, seas and oceans but also used by green plants during thephotosynthesis process. Examples of the algal blooms in spring and the intakeof in the atmosphere by the leaves of the plantsduring daytime show the ways to eliminate in the air. Thus, it may seem beneficial inagricultural production but harmful to the environment. Ozone depletion is another cause ofglobal warming Gases such as chlorofluorocarbon, CFC that can easily be foundin air conditioners,

refrigerator and aerosol cans depletes the ozone thatprotect the living organisms from harmful high energy ultraviolet radiation. Besides, global warming is alsocaused by deforestation.

Deforestation change the patterns of the land byconverting the forest to buildings , crops and land settlement. Examplesof climate changes due to global warming Scientists have foundthat data from weather stations and balloons, satellite and computer programsshow that the irreversible effects are on their way. The Earth is becomingwarmer and warmer. Paleoclimatological records show that millions years ago theglobal temperature is 5 degree Celsius colder than now. (Figure 3.

2 shown inAppendices 3) . There will be acooling of the stratosphere. Global warming will cause changing in the rainfallpatterns. The polar ice caps and glaciers start to melt due to global warming. TheGlacier in the White Thunder Ridge has acompletely different view in 1941 and 2004. (Figure 3. 3 shown in Appendices 3). This can result in the rise in the sea levels.

It is possible to rise18cm by 2030 and 58 cm by 2090. A rise in sea levels causes low-lyingareas to be flooded, alter coastlines and contaminate fresh-water supplies. Oneof the examples is wet lands between Timbalier Island and Galliano LA aredisappearing because of the rising in sea levels. (Figure 3. 4 shown inAppendices 3). All of these will have effects in increased tidal range andestuarine salt- front intrusion and recession of wetlands and shorelines. Global warming willincreases the frequency of drought.

In 2012, almost 81% of the United States isfacing drought due to climate changes. (Figure 3. 5 shown in Appendices 3). Theland will become dry and infertile and this leads to a drop in crop yields. As aresult, the people will suffer from hunger.

The probability of hurricanesoccurring will also increase. Besides, the high temperature will causes a greatevaporation of water. Knowing that water vapour is a greenhouse gases, furtherenhanced will increases the rate of precipitation of snow at poles. This willleads to the formation of polar ice sheets. Global warming will leads to the change in thewind direction and wind stress over the sea surface. This affects thedistribution of species which may leads to extinction of species in certainregions as the changes in ocean currents and nutrient mixing zones. Effect of global warming on humansettlement Millions of people from the worldwho are living in low-lying coastal plains, sea-sides and islands would bedisplaced by the inundation as the sea levels are continuously rising from yearto year.

Families in Kiribati have no chose but to live near marginal areas, facing the problems of the continuously rising of sea levels. (Figure 3. 6shown in Appendices 3).

Effect on human health Changes in thetemperature will bring lots of disease to human such as respiratory diseases, cerebrovascular and cardiovascular. The situation will be worst especially in theelderly, the very young and the chronically. Our body thermo-regulatory systemwill be overloaded by high temperature causing in frank heat-stroke. In United

States, the doubled amount on carbon dioxide concentration hasresult in the death of 1150 to around 7400.

From the result, most of the deathoccurs in the elderly. In the case of hat fever, the levels of troposphericozone are also the reason beside of the released of pollen. The changes inclimate also caused the long term effects on mental health. In 1972, 125 peopledied and around 4000 people to become homeless because of the collapsing dam inthe USA. 80% of the survivors were found that they are having trauma from thatincident.

All of this can changes the change in the characteristics andbehaviour of a person and lead to depression and stress throughout their life. Almost all the children were facing development problems due to the incident. Effect on animal behaviour andsettlement Rising in sea levels caused byglobal warming will result in the loss of settlement for animals. We could seethat see turtles are losing their nesting beaches especially in the Caribbeanbeaches. The period of hibernation varies, becoming longer or shorter and theeggs will be laid earlier compare to previous years. The migratory journey willbe affected due to global warming.

Moreover, populations will also be displaceddue to the warming of the Earth surface. In the late 1970s, polar bears areincreasingly food-stressed as the have longer fasting periodduring open-water season. The rising in sea levels will also endangered speciesthat are living in the water like whales and dolphin. Mediterranean monk seals start to appear in Egypt, Lebanon and Israelthat they have not been found before.

This could be due to the need of raising their pups on a beach. Effect on plants Due to the large changes in theclimate, some plants may get benefit from that as the rate of the activities ofmicroorganisms living in the soil increases based on the journal NewPhytologist while some may experience bad effect as plants are moving to coolerregions. Increasing in the temperature and strong wind are beneficial forplants that used wind to spread their seeds or pollens, for an example, Taraxacum Mongolicum species.

Warmer temperature will stimulate growth rate butonly at the initial. The growth rate decreases as it increases will time. Asmention earlier, the hightemperature will causes a great evaporation of water resulting in the formationof the large root system to obtain sufficient water. Changes in the treestructure in the form of leaf structure, shape and size architecture of theroot system are obvious to be seen. Furthermore, due to the rising of the sealevels coastal species like Arctic and alpine species will now have nowhere togo and. They will be located between the living places of human and rising sealevels.

Plantswill be playing their roles as ‘ sinks’ more frequently to reduce theconcentration of carbon dioxide. How much one has to payResearchershave found that in 2. 4 million to 3.

1 million jobs will be lost and 177 billiondollars to 318 billion dollars of gross domestic product will be reduced inorder to reduce and stabilize one greenhouse gas carbon dioxide to 93% of1990’s levels in USA.