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GLOBAL WARMING IN THE ERA OF INFORMATION TECHNOLOGY

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ABSTRACT
Global warming is the result of human activity. It is manifested in an increase in the average temperature of Earth's atmosphere and oceans in recent decades and the projected continuing increase in the temperature.
According to the scientists estimate, if the concentration of CO_2 reaches 400 ppm, we can expect the temperature rise at the global level by 2 ºC. If the concentration reached 550 ppm, still can be avoided disaster scenarios. However, if it reaches 750 ppm, the disaster scenarios are inevitable. Increase of 2 °C would result in sea level rise and ocean for a few meters. Forecasts and expert team of UN World Meteorological Organization are that there may be an increase in temperature of 1.4 to 5.8 degrees by the end of this century, and that, even if we manage to curb emissions of carbon dioxide, the temperature will continue to rise over the next 100 to 300 years, since the gases remain in the atmosphere for a long time.
Keywords: atmosphere, heat, temperature, concentration

1. INTRODUCTION
Global warming occurs as a chain, which has a lot of links. Temperature increase of only 1oC for a man not of great significance, but at the global level, and as to the nature, things are not like that. There are primary and secondary effects of global warming. The study was published after completion of the Intergovernmental Panel on Climate Change, held in 2001 in the framework of the United Nations predicted that the temperature on the surface to 2100th years could rise by 1.1 to 6.4 ° C. This study predicts that such a rise in temperature could cause melting of glaciers and the Arctic polar blankets, sea level rise, storm phenomenon, destabilization and loss of animal habitats and animal migration to the north, salinization of shallow water, massive deforestation, rapid disappearance of species and severe droughts.
Scientists point to the possibility of heat stroke increases, the spread of tropical diseases north and south of the equator and increased food insecurity. At the seventh Conference of the United Nations Convention on Climate altered held in November 2001th in Morocco, warned that because of global warming food such as wheat, rice and corn fall by 30% in the next 100 years. It is believed that farmers would be forced to migrate to cooler mountainous areas, which would again threaten forests and wildlife. This would affect the quantity and quality of drinking water.

2. GLOBAL WARMING
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Global temperature has increased by 0.74 ± 0.18 ° C over 100 years until the end of 2005. IPCC (Intergovernmental Panel on Climate Change) concludes that the greatest increase in temperature during the mid-20th century caused by increasing concentrations of greenhouse gases is anthropogenic. Natural phenomena such as solar variation and volcanoes probably had a small warming effect from pre - industrial times to 1950 and a small cooling effect from 1950 onward. Projections of climate models indicate that global temperature is likely to rise by 1.1 to 6.4 °C between 1990 and 2100. The uncertainty of these estimates is the result of using different estimates of future greenhouse gas emissions and the use of models with different climate sensitivities. Another uncertainty is how warming and other related changes vary from region to region around the globe. Although most studies focus on the period up to 2100, it is expected that the warming will continue for the next 1000 years, even if greenhouse gas levels are stabilized. These are the results of the large heat capacity of the ocean. Increasing global temperatures may lead to increased levels of seas and oceans due to melting ice caps. The effect of "greenhouse gases" is very important when we talk about climate change as it relates to the gases that keep the Earth warm, which is the greatest credit for the existence of life on it. Some of the gases that make the greenhouse gases people produce in their daily activities. This additional amount produced by humans is the main suspect in the enhanced greenhouse effect.

Most talk about the problem of global warming begins a discussion about ozone depletion and the emergence of the so-called ozone hole. Ozone (O_3) is a form of molecular oxygen. The ozone layer is a relatively thin layer of these molecules placed bottom of the Earth's stratosphere. Ozone protects the earth's surface and the creatures of the devastating impact of solar ultraviolet radiation and other dangerous cosmic radiation. That there is no ozone, life on Earth would be impossible.

The main cause of global warming is CO_2 emissions. It is released into the atmosphere at an incredible rate. 8 billion tons of CO_2 is released into the air last year. Of course, part of this is a result of natural activities such as volcanic eruptions and human breath. However, the country is able to absorb all of this as a normal process, but the beginning of global warming is the result of burning large quantities of fossil fuels and therefore large amounts of CO_2 emissions.

- To date, 40% of the total CO2 emissions produced power. They burn coal, natural gas and diesel fuel. Some plants burn garbage, while another valuable methane gas created from waste.
- 33% of CO_2 emissions come from cars and fossil fuels.
- 3.5% of total emissions come from aircraft. Unfortunately, planes and other aircraft pollution discharged directly into the troposphere.

3. THE GREENHOUSE EFFECT

The causes of the recent warming are an active area of research. The greenhouse effect was discovered in 1824 by French physicist Joseph Fourier. It is a process in which the absorption of infrared radiation by the atmosphere warms the Earth. That there is no natural greenhouse effect the Earth would be up to 30 º C cooler. Wrong analogy, this effect is named after the method of growing plants in enclosed greenhouses using solar energy while preventing the energy lost by air flow. Earth receives energy from the Sun in the form of thermal radiation. If it is assumed that the Earth is in a stable energy balance energy coming to Earth has the same scale to be radiated back into space. The radiation leaving the Earth has two forms of the reflected solar radiation and emitted infrared radiation. Earth reflects about 30% of the energy coming from the sun, while the remaining 70% is absorbed, warming the soil, atmosphere and oceans, and to life on Earth. The reliance of the whole of civilization to produce energy by burning fossil fuels has increased the broadcasting of greenhouse gases in the atmosphere. One of the most common greenhouse gases is carbon dioxide. The gas produced when any fossil fuel combustion or burning wood, gas, petroleum, natural gas, etc. If you reduce the amount of fossil fuels and slow down / stop the cutting of forests is likely to be reduced and the amount of greenhouse gases around the Earth. Whatever drastic measures taken, it is too late to stop global warming and climate change, although it may affect the intensity of these changes.

Considered to be largely due to global warming are:

- Carbon dioxide (CO_2) - is considered to become involved with this gas is about 50 - 55% of global warming. The main reason for the increased concentration of this gas in the atmosphere is increasing use of fossil fuels (coal, oil, and gas) and deforestation.

- Chloro-Fluoro-Carbonate (CFC) - account for about 25% of global warming. CFC compounds are used to make plastics and in refrigeration units.
- Methane (CH_4) - about 12% of money generated by decomposition of organic compounds, but the greatest amount of methane in atmosphere comes from industrial plants.
- Nitrogen (I) oxide (N_2O) - accounts for 6% of global warming. Mostly released in the industry, but a large amount of this gas is released in volcanic eruptions.

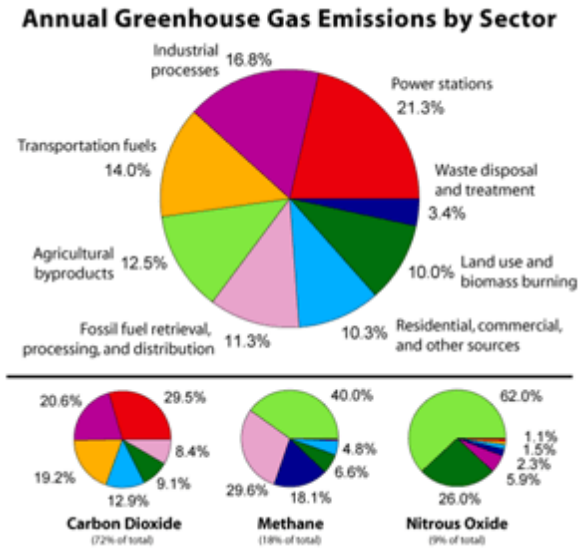

Figure 1. Annual Greenhouse Gas Emission by Sector.

The results of the research at the University of Missouri, St. Louis in the United States, published this spring, according to the increased temperatures, rain forest thinning may begin to emit into the atmosphere a considerable amount of carbon dioxide rather than absorb it as far. Deborah Clark and her colleagues from the University of Missouri measured the annual growth of six tree species in tropical forests of old La Selve in Costa Rica from 1984 to 2000. Tree growth and carbon dioxide emissions are considerably varied, and it is correlated with the temperature - the hottest in the "El Niño" years (1997-98). Growth of trees was the weakest, and the absorption of carbon dioxide reduced. From this we can conclude that tropical forests much more sensitive to temperature increases than previously believed, which could cause a feedback loop to raise the temperature. According to the researchers from Missouri, this means that the lungs of the planet in the future to accelerate the greenhouse effect and global warming process, rather than slowing down.

4. GLOBAL WARMING AS A CHAIN OF EVENTS

Global warming occurs as a chain, which has a lot of links. Increase of only 1 °C for no man of great importance, but on a global scale, and as to the nature, things is not like that. There are primary and secondary effects of global warming. The study was published after completion of the Intergovernmental Panel on Climate Change, held in 2001 in the framework of the United Nations predicted that the surface temperature of the earth by 2100 could rise by 1.1 to 6.4 ºC. This study predicts that such a rise in temperature could cause melting of glaciers and the Arctic polar blankets, sea level rise, storm phenomenon, destabilization and loss of animal habitats and animal migration to the north, salinization of shallow water, massive deforestation, rapid disappearance of species and severe droughts.

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food such as wheat, rice and corn fall by 30% in the next 100 years. It is believed that farmers would be forced to migrate to cooler mountainous areas, which would again threaten forests and wildlife. This would affect the quantity and quality of drinking water.
Some studies show that the air temperature in Alaska to increase up to 5 ºC. If the water temperature is increased proportionally, fish the local waters will be significantly affected. With rising temperatures in Alaska some animal and plant species will adapt, and some - such as polar-bears are threatened with extinction. Since the temperature rise also means more energy in the atmosphere, there is a risk of more frequent natural disasters in all parts of the world. According to the data ocean warming around the country resulting in forming of numerous and stronger hurricanes that occur once, only need hot water to maintain.

5. THE CLEAN DEVELOPMENT MECHANISM

Reduce emissions by 5.2% in general is not easy. Assuming that the emission of a country listed in Annex 1, in 1990 was 10 million tons of carbon dioxide, 5.2% of those is only around 52,000 tons of CO_2. However, since 1990 to 2005th developed countries have increased their emissions of carbon dioxide because they were having a rising rate of economic development, including the country in the 2005th be issued 15 million tons of CO_2 emissions in the period 2008-2012 need to reduce emissions by at least 5.05 million tons of CO_2
As a source of "emissions" are treated as power plants, industrial plants, transport, agriculture and waste. Contrary to broadcasters, forests are considered sinks because they bind carbon dioxide in the wood mass. When calculated at a national level, the total emissions subtracted the amount absorbed by forests.
To the Member States under the Kyoto Protocol to facilitate acceptance of the provisions of the agreement, the document allows the use of several "flexible mechanisms":

- Emissions trading, which is addressed to the non-Annex 1 countries
- Joint implementation mechanism, which also applies to non-Annex 1 countries
- The Clean Development Mechanism which can be developed to invest in clean and energy efficient technologies in developing countries, and in return those countries provide favorable or non-refundable credit arrangements, provided that the effect of reducing investor attributes, then a developed country
- Adaptation Fund founded in 2001 is the mechanism through which developed countries to assist developing countries to adapt to climate changes that could lead to drought or excessive rainfall.

6. CONCLUSION

After decades of measurements, it is concluded that the changed amount of carbon dioxide in the atmosphere, which is ten thousand years previous was usually 280 ppm. Twenty years ago it was observed that the amount of shifted and growing. It was in 1980 reached 340 parts per million by volume, with projections to grow to 580 ppm by mid-century. According to the scientists estimate, if the concentration of CO_2 reaches 400 ppm, can be expected to rise global temperatures to 2 ºC. If the concentration reached 550 ppm, one can still avoid disaster scenarios.

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