

Global warming assignment



In each chapter I tried to give the official statements first, mainly EPA and White House documents, and then to contrast these statements with the views of non-government experts and organizations. The sources cited in this research paper are mainly taken from the internet. I decided to use these sources instead of books because global warming is a relatively recent topic. It would not have been possible, for instance, to find information about the COP-5 meeting in Bonn in books, as this meeting took place only three months before I began writing the chapter.

During my preparation for this paper, I had a look at dozens of web sites concerning global warming. I am well aware that there are two groups of “experts”: one says that the human influence on global warming is hardly discernible at all, the other one says exactly the opposite. As I am not a scientist, I tried to compare those two views, as mentioned above. I do not know, and doubt that anyone exactly knows, how significant human influence on the climate really is.

However, as the main focus of this paper is on policies and not on science, I hope that this research paper does not contain any ambiguities concerning policies.

II Basic Workings of the Greenhouse Effect

The cause of the warming of the earth's average temperature is called “greenhouse effect”. The basic workings of this phenomenon are not hard to understand. Normally, a percentage of the sun's rays, which heat the earth's surface, is “reflected back into the atmosphere”. Those rays which are not reflected are “absorbed by the oceans and the soils and warm the surrounding areas to create the climate conditions we live in.” [2] “Without this [natural] greenhouse heating, the Earth's average temperature would be only about -73 [degrees] a

temperature which would not allow mankind to exist. Since the Industrial Revolution however, the amount of carbon dioxide (CO₂) has increased dramatically. CO₂ These molecules form a barrier which prevents the irradiated rays of the sun from traveling farther into space. As a result, the sun's rays are irradiated again to the earth's surface. In other words: the heat is trapped. The more heat that is trapped, the more intense the greenhouse effect is aggravated by processes known as feedback mechanisms: the polar ice shelf has a bright surface, which reflects the sun's rays effectively. Due to the rise of the average global temperature, the polar ice shelf begins melting and is eventually replaced by dark soil or blue ocean. This new dark surface is capable of absorbing more heat than the bright surface of ice and snow. As a result, the ice surrounding the warm soil can melt much faster, creating more dark soil.

Finally, the melted ice causes a sea-level rise. [6][6] Impacts Although "[s][s]cientists generally agree on the likely rise in the average global temperatures over the next century", however "projecting the change in particular regions is more difficult." [7][7] It is not possible "to provide reliable forecasts of how the climate may change; because the general circulation models "are still not accurate enough The following three examples re of course only a small sample of possible effects.

Others, such as desertification, salination or the flooding of coastal areas cannot be discussed in this paper. A) Impacts on Health The rise of the average global temperature can be very dangerous for human beings because "[e][e]xtreme temperatures can directly cause the loss of An increase In "the concentration of ozone at ground level" due to "[h][h]igher air

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temperatures” can lead to serious “ problems for people with asthma and other lung Higher air temperatures could have serious impacts on those who live in the southern areas of the united States.

It is estimated that in Atlanta, for example, even a warming of about two degrees (F) would increase heat-related deaths from 78 today to anywhere from 96 to 247 people per year. “[1[1 1]n addition to these direct impacts, there could also occur indirect ones. “[E[Elf warmer temperatures enabled insects to become established farther north”, infectious diseases such as malaria, dengue fever and yellow fever could occur in those areas which today are too cold for these insects to survive. [1 2]) Impacts on Agriculture As the changing climate could cause soils to become drier and drier, crop failures could become more widespread. 3] Agriculture could also be affected by “[I[I]creased heat stress, more frequent flooding, and colonization Of soils due to sea level rise On the other hand, global warming could have “ beneficial effects,” which could “ offset the adverse impacts, at least in the United States. “[1[1 5]ne “ beneficial effect” is the “ fertilizing effect” of carbon dioxide, which “ enables plants to grow more Another positive impact on agriculture is the possible lengthening of the growing season in colder areas[1[1 7] which would allow farmers to plant crops in latitudes that are normally not suitable for these crops.

The EPA claims that [s[s]dies assuming that farmers will be able to effectively adapt have concluded that changing climate could have important regional dislocations, but that nationwide food production will not decline 8] In contrast to this rather positive view, Boston Globe editor Ross Galilean, who has covered environmental conferences, points out that global <https://assignbuster.com/global-warming-assignment-essay-samples-9/>

warming “ could result in insect related crop damage, leading to a significant disruption in the food He further admits that a higher concentration of carbon dioxide “ in the short term may indeed increase yields and growth rates of food crops in the mid-northern latitudes [[...

T’, but he adds that these “ initial increases” “ will soon flatten, and a long-term diet of concentrated carbon dioxide will weaken the plants, making them less robust. “[20] Impacts on Forests As already mentioned, a warming Of the earth’s average temperature can initially have positive effects. In the case of the North American forests, for example, this could “ enable the trees to colonize north into areas that are currently too cold, On the other hand, southern areas will become “ too hot and dry for [many No[many North American forest] to survive. |[22] As [22]sult, a 2 degrees Celsius warming in 100 years could cause the species “ to grate about 2 miles every As not all species of trees are able to move at this pace], “ the range over which a particular species is found may tend to be squeezed A side effect of global warming are insect attacks. A study shows that “ Alaskan forests have suffered from severe outbreaks of bark beetles, which have devastated several million acres of forest. [26] Ano[26] aspect which has to be mentioned in this context is that “[t]he pl[t]s and trees of the terrestrial ecosystem are the largest absorbers of carbon dioxide, which otherwise rises into the atmosphere. “[27] Thi[27]ary shows how strange the situation really is. Climate change destroys the trees, which would normally mitigate the effects of climate change. Now that the basic principles of the scientific aspects of global warming should be clear, am going to focus on environmental summits and environmental policies.

IV Summary of the Kyoto Summit Between December 1 and 11 1997, a Framework Convention on Climate Change took place in Kyoto, Japan. As the positions of the developed countries varied considerably, the negotiations were “ long and grueling Unlike the European Union, which “ proposed a 15 per cent cut; 29] of carbon dioxide by 2012 under the level Of 1 990, “ the United States proposal was for a zero In the end the parties agreed on a 6 per cent to 8 per cent reduction, “ with the United States agreeing to a 7% reduction. [31] As [31]al warming is a global issue, the united States, as a part of the developed world, did not want to pay the costs of the protocol alone, but wanted the developing countries to “ meaningful[ly] participate in solving the global warming After having failed to include this idea into the protocol, the United States wanted developing countries to “ voluntarily assume binding emissions More important than the other low reduction-rates, however, were the WAP by which the goals were to be accomplished.

It was the goal of the United States “ that countries [could] [could] flexible market mechanisms to reach their targets rather than the mandatory ‘ policies and measures’ such as carbon taxes, favored by the E. IS. And many other developed countries. ‘ TTT] The term “ flexible market mechanisms” means that “ companies or countries can purchase less expensive emissions permits from companies or countries that have more permits than they need (because they have met their targets with room to According to this trading scheme, called the “ Clean Development

Mechanism” (CDC), a rich United States company, for instance, “ can get credit for ‘emissions avoided’ by paying for low-cost reductions in a

developing country – planting trees in Costa Rica, upgrading old Chinese generating plants or financing coal cleaning equipment in India. “[36] As [36]sult, the economies of the developed countries are not seriously harmed, and that is all the Clinton administration seems to be interested in.

While Under Secretary of State for Economic, Business and Agricultural Affairs, Stuart Scientist, claimed this mechanism not only to be “ economically sensible, but environmentally Ross Jellybean’s opinion was that “ the administration is pandering to the fossil fuel lobby, alienating allies in Europe and the developing world, and ignoring what nature requires to keep this planet hospitable to Galilean further criticized “ emissions trading” as being a “ loophole-riddled paper system of international carbon trading which is “ no more than an expression of institutional denial. He added that “ scientific research states unambiguously that to stabilize the climate requires cuts of 60 to 70 percent in emissions. ” In Jellybean’s opinion “ we need a global project to replace coal-burning power plants, oil-burning urinates and gas-burning cars with low-carbon and renewable energy. ” instead of a trading-scheme “ with no meaningful reductions at home. “ CO] At first glance the position of the United States seems economically understandable. The main concern of the U. S. S that by cutting emissions at home the economy will suffer, jobs will disappear, and people will become more and more discontent. On the other hand, a transition to renewable energy “ would create millions of jobs all over the world and allow poor nations to raise living standards without compromising economic achievements in the As the Kyoto Protocol had not been ratified n 1 997, the

parties of the United Nations Convention on Climate Change met for the fourth Conference of the Parties (COP) in Buenos Aires, Argentina in 1998.

This meeting was important because “ it set COP-6 [in The Hague in December 2000] deadline for nations to take decisions on the unresolved details of Kyoto Among these “ unresolved details” were the “ Clean Development Mechanism” and the “ flexibility mechanisms”. At the COP-5 meeting in Bonn, held in October and November 1999, the parties could not agree on “ a final text before COP-6 to serve as the basis for further negotiations. 42] The parties failed to find a solution mainly because the “ developing countries thought it was premature to take that In Bonn, the US again repeated that in order to ratify the Kyoto Protocol “ cost effectiveness and meaningful participation of developing countries” were “ of paramount importance The problem concerning the participation of developing countries could not be solved in Bonn and will be further discussed at COP-6 in The Hague. Since March 2000 however, the pressure on the US Senate has increased, because Russia has agreed to ratify the Kyoto Protocol.

With Russia's decision over “ 50 nations representing 55 percent of industrialized nations' emissions” [45] have agreed to ratify the protocol. Thus the protocol could “ enter into force without US participation and this country would be isolated in global environmental efforts. “[46] Clinton Administration's Policies regarding Global warming On the local level, the Clinton administration introduced the Climate Change Action Plan (CAP) in 1993.

According to this plan, the government asked businesses to reduce their emissions on a voluntary basis. Other policies included a higher productivity of power plants and an increase in its energy efficiency. In other words, the U. S. Did not want to harm its economy. Emission reductions are voluntary, which means that the government claims that it is trying to mitigate the effects of global warming. In reality, however, the U. S. Still is the biggest emitter of greenhouse gases in the world.

President Clinton's statements concerning global warming are unequivocal: "Clearly, to me, this climate change issue is one of the principal challenges that we face", " a challenge that should we fail to meet it, could imperil the lives of our children and, if not our children, our grandchildren on this The President adds that "[t]his i[t] scientific mission even more important in its implications than our race to the Moon in the 1 Clinton argues that "[w]e wan[w]he American people to understand the importance of the challenge and to allow outside experts to help inform the policy progress so we'll make the best decisions. [49] The[49]nnouncements were made on October 1, 1997, two months before the Kyoto Conference began. If one considers the US position during this conference, for instance the proposal Of no reduction of carbon dioxide emissions, it is unbelievable that these statements were made only two months before the conference. In the opinion of many environmental organizations, such as Greenback, the Clinton Administration's measures to mitigate the effects of global warming are not sufficient. 50] One important aspect to remember is that fossil fuels and nuclear energy are subsidized in order to make them able to compete in the international market. A government can subsidies a commodity by lowering

the labor costs. Thus the product is cheaper than it would normally be. As a result, the product, I. E. Fossil fuels or nuclear power, can be sold cheaper and thus is able to compete with other products. According to

Galilean, “ the United States spends \$20 million a year subsidizing fossil fuels In other words: “ The United States is massively subsidizing fossil fuel and nuclear energy, creating a serious competitive and economic disadvantage to renewable energy sources, which in turn is preventing their development and use in the marketplace. “[52] Thi[52]atement indirectly includes a possible solution for the global warming problem. “ If those subsidies were diverted to renewable energy (with a portion set aside to retrain coal miners), it would create a big incentive for oil companies to develop solar, wind and hydrogen technologies. 53] If the developed countries could agree on this shift of subsidies, away from fossil fuels and to renewable energy, they “ would create the mass market renewable energy needs to become economically competitive with fossil How much the Clinton Administration was committed to end climate change can be shown in another example. Not only did they subsidies fossil fuel and nuclear energy, but they also allowed companies to produce oil in areas which had not been used before.

Greenback reported that “ the Clinton Administration succumbed to pressure from fossil fuel companies and opened up 20% about the size of Indiana) of Alaskan National Petroleum Reserve [althoug[although]ent we are experiencing no urgent need for new oil. “[55] VI [55]usion In my opinion there are no arguments in favor of U. S. Policy, that is reductions of emissions on a voluntary basis. The results of America’s unwillingness to <https://assignbuster.com/global-warming-assignment-essay-samples-9/>

really mitigate the effects of global warming became apparent during COP 6 in the Hague in December 2000. This meeting took place long after the main part of this research paper was written.