

## **Impact of Global Warming on Earth**

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### **Abstract**

*The global warming is the increase in the average temperature of earth. It happens when greenhouse gases (carbon dioxide, water vapor, nitrous oxide, and methane) trap heat and light from the sun in the earth's atmosphere, which increases the temperature. Maximum human efforts are responsible for this global warming. Global warming may be the more dangerous to our planet earth than the affect of a huge asteroid, world war or a fatal plague. It has affected our environment, our weather and our health in the different ways.*

*So in order to minimize the effect of global warming, we have to change our life style, we have to live in green. My paper discusses the various measures to stop the effect of global warming. It is the high time to decrease carbon dioxide emissions worldwide in order to turn down the earth's rising temperatures and avoid any catastrophe. We should look for governments' efforts to find a solution for this problem. Each individual can help by adopting a more responsible lifestyle starting from little, everyday things. It's the only reasonable way to save our planet, before it is too late.*

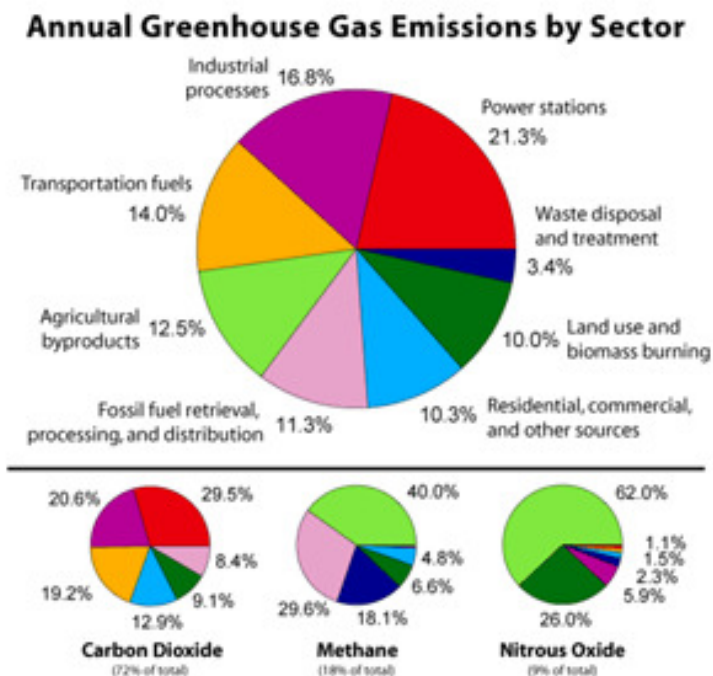
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## Prologue

On heating up of the earth, the Global warming takes birth. In other words, increase in earth's average temperature is called Global warming. It happens when greenhouse gases (carbon dioxide, water vapor, nitrous oxide, and methane) trap heat and light from the sun in the earth's atmosphere, which increases the temperature. Global warming affects many people, animals, and plants. If these cannot bear the change of atmosphere, they die. The average facade temperature of the globe has augmented more than 1 degree Fahrenheit since 1900 and the speed of warming has been almost three folds the century long average since 1970. Human actions, mainly the discharge of green house gases from smokestacks, vehicles, and burning forests, are perhaps the leading power driving the fashion. The gases append to the planet's normal greenhouse effect, permitting sunlight in, but stopping some of the ensuing heat from radiating back to space. Global warming may be the more dangerous to our planet earth than the affect of a huge asteroid, world war or a fatal plague.

## Causes of Global Warming



There are many things and activities which causes the global warming. Emission of green house gases like carbon dioxide, methane, nitrous oxide etc into the atmosphere is the main culprit of global warming. Power plants are the main source of carbon dioxide as they burn fossil fuels for the purpose of

electricity generation. Its percentage comes 21.3%. Then industrial processes come to emit the carbon dioxide in the atmosphere and its percentage is 16.8%. The emission of carbon dioxide by the various sectors is depicted in the following chart:

Methane is more than 20 times as effectual as carbon dioxide at entrapping heat in the atmosphere. Methane is obtained from resources such as rice paddies, bovine flatulence, bacteria in bogs and fossil fuel manufacture. The main sources of nitrous oxide include nylon and nitric acid production, cars with catalytic converters, the use of fertilizers in agriculture and the burning of organic matter. Deforestation is also a cause of global warming.

Electrical pollution is also responsible for global warming. We use more energy than its source. Energy is generated from fossil fuel as coal and petroleum products etc. On burning the fossil fuels they produce a chemical which is called green gases. Some other examples of using energy and polluting the air are as: Turning on a light, Watching T.V., Washing or drying clothes, Riding in a car, Heating a meal in the microwave, Using an air conditioner, Playing a video game etc. More using of these items means that we are generating more greenhouse gases and emitting them into air. This turns pollutants into air.

Throwing of garbage away, creates stink. If sometimes we are burning the garbage, it sends an enormous amount of greenhouse gasses into the air and makes global warming worse. On the other side this situation worsens when people cut down trees. Trees and other plants collect carbon dioxide (CO<sub>2</sub>), which is a greenhouse gas. If the trees are cut down, it will be harder for us to take breath because we inhale oxygen and exhale carbon dioxide. So it is must to protect the trees so that those may stop the effect of greenhouse gases.

### **Impact of Globalwarming**

#### **Impact on Weather:**

- Scientists say that the earth could warm by an additional 7.2 degrees Fahrenheit during the 21st century if we fail to reduce emissions from burning fossil fuels, such as coal and oil. Hot, dry weather led to a record-setting 2006 wild land fire season with close to 100,000 fires reported and nearly 10 million acres burned, 125 percent above the decade's average.
- The 2005 Atlantic hurricane season was the most active Atlantic hurricane season in recorded history, with a record 27 named storms, of which 15 became hurricanes. Hurricane Katrina of August 2005 was the costliest and one of the deadliest hurricanes in U.S. history.

- Warmer temperatures could increase the probability of drought. Greater evaporation, particularly during summer and fall, could exacerbate drought conditions and increase the risk of wildfires. The 1999-2002 national drought was one of the three most extensive droughts in the last 40 years. The 2006 wildland fire season set new records in both the number of reported fires as well as acres burned. Close to 100,000 fires were reported and nearly 10 million acres burned, 125 percent above the 10-year average.
- Hurricane Katrina forced the evacuation of 1.7 million people in 2005, and led to deaths and long-term health problems for 200,000 New Orleans residents.
- A combination of rising sea levels, reduced snowfall and increased rainstorms threatens to flood the homes.
- Alternating drought and floods have led to food and water shortages, malnutrition, mass migrations and international conflict. Some researchers suggest that 50 million people worldwide could become “environmental refugees” by 2010.

**Impact on Health:**

- **In July 2006, severe heat waves in North America contributed to the deaths of at least 225 people.** In 2003, extreme heat waves claimed as many as 70,000 lives in Europe. In France alone, nearly 15,000 people died during two weeks of soaring temperatures, which reached as high as 104 degrees Fahrenheit.
- Global warming could increase smog pollution in some areas and intensify pollen allergies and asthma. Scientific studies show that a higher level of carbon dioxide spurs an increase in the growth of weeds such as ragweed, whose pollen triggers allergies and exacerbates asthma. Air pollution makes allergies worse: Diesel exhaust particles can interact with pollen and deliver it deeper into the lung.
- Warming temperatures, alternating periods of drought and deluges, and ecosystem disruption have contributed to more widespread outbreaks of infections like malaria, dengue fever, tick-borne encephalitis, and diarrheal illnesses. Disease-carrying mosquitoes are spreading as the climate allows them to survive in formerly inhospitable areas. Mosquitoes that can carry dengue fever viruses were previously limited to elevations of 3,300 feet but recently appeared at 7,200 feet in the Andes Mountains of Colombia.

- Higher outdoor temperatures can cause increased outbreaks of food borne illnesses such as salmonella, which reproduces more rapidly as temperatures increase.

**Impact on Wildlife:**

- Increasing global temperatures are expected to disrupt ecosystems, pushing to extinction those species that cannot adapt. The first comprehensive assessment of the extinction risk from global warming found that more than 1 million species could be obliterated by 2050 if the current trajectory continues. Some polar bears are drowning because they have to swim longer distances to reach ice floes. The U. S. Geological Survey has predicted that two-thirds of the world's polar bear sub-populations will be extinct by mid-century due to melting of the Arctic ice cap.
- Over the past 25 years, some Antarctic penguin populations have shrunk by 33 percent due to declines in winter sea-ice habitat.
- The ocean will continue to become more acidic due to carbon dioxide emissions. Because of this acidification, species with hard calcium carbonate shells are vulnerable, as are coral reefs, which are vital to ocean ecosystems.
- Rising global temperatures will speed the melting of glaciers and ice caps and cause early ice thaw on rivers and lakes. According to NASA, the polar ice cap is now melting at the alarming rate of nine percent per decade. Arctic ice thickness has decreased 40 percent since the 1960s.
- Multiple climate models indicate that sea ice will increasingly retreat as the earth warms. Scientists at the U.S. Center for Atmospheric Research predict that if the current rate of global warming continues, the Arctic could be ice-free in the summer by 2040. At the current rate of retreat, all of the glaciers in Glacier National Park will be gone by 2070.
- Global sea level has already risen by 4 to 8 inches in the past century, and the pace of sea level rise appears to be accelerating. The Intergovernmental Panel on Climate Change predicts that sea levels could rise 10 to 23 inches by 2100.

**Impact on Environment:**

- Global warming is affecting the environment in various ways. Global warming makes the rise of sea rise, and when the sea rises, the water covers many low land islands. This is a great problem for many of the plants, animals, and people on islands. Some of these can die. When they die, the animals

lose a source of food, along with their habitat. Although animals have a better ability to adapt to what happens than plants do, they may die also. When the plants and animals die, people lose two sources of food, plant food and animal food. They may also lose their homes. As a result, they would also have to leave the area or die. This would be called a break in the food chain, or a chain reaction, one thing happening that leads to another and so on.

On the other side due to global warming, the water of oceans became warmer as result the algae of the oceans die. An alga is a producer that you can see floating on the top of the water. These floating green algae are food to many consumers in the ocean as small fishes, whales, crabs and other animals. Thus global warming is affecting the ocean life cycles.

#### **What We Can Do to Stop Global Warming:**

In order to minimize the green house gas effect, we should adopt the green living style. The green living style can help to stop the global warming. For it we have to use the following tips:

1. As we know that the power plants are the major source to emit the carbon dioxide in the environment, we should think on the alternate source of energy i.e. Solar Panel to generate energy. Solar panel is best applied to a flat solar thermal collector, such as a solar hot water or air panel used to heat water, air, or otherwise collect solar thermal energy. It is a photovoltaic module which is an assembly of solar cells used to generate electricity. Solar panels can be used in residential, commercial, institutional, and light industrial applications. The largest solar panel in the world is under construction in the south of Portugal. A 52,000 photovoltaic module, 11-megawatt facility covering a 60-hectare south-facing hillside in the southern Alentejo region and it will produce electricity for 21,000 households.
2. Cars and other motor vehicles are a major source of pollutants that create smog and acid rain, and release other harmful substances that exacerbate conditions such as asthma and heart disease, and damage the lungs. So we should use more fuel-efficient, less polluting cars and the condition of the car should good. Regular maintenance of the car helps improve fuel efficiency and reduces emissions. We can reduce CO<sub>2</sub> emissions by readjusting our driving style. We should Check our tires weekly to make sure they're properly inflated because proper tire inflation can improve gas mileage by more than 3%. We should make a habit of riding buses or

trains as often as we can (just think of all the new people we'll meet!). For short distances, we should ride a bike or walk whenever possible. This would mean less congestion, less energy consumption, and less pollution. We should start a carpool with your coworkers or classmates. Sharing a ride with someone just 2 days a week will reduce your carbon dioxide emissions by 1,590 pounds a year.

3. In order to conserve energy, we should buy energy-efficient products. We should buy new appliances or electronics from the shops of the highest energy-efficiency rating. . In India, appliances like refrigerators and ACs have efficiency rating labels ranging from 1 to 5 stars, the higher number being more efficient. We should change the most using bulbs in your house with the compact fluorescents lamps (CFL). In order to stop the wastage of energy, we should check thermostats in your home time to time. We should turn off lights and other electrical appliances such as televisions and radios when we're not using them.

4. In order to save the energy we should try to make our house weatherized so that there may be the minimum use of A.C. We should also choose an electric utility that uses renewable power resources, such as solar, wind, low impact hydroelectric, or geothermal. We should make efforts by doing so can save a lot of the energy needed for preparing the dish. Even better are pressure cookers and steamers: they can save around 70%!
5. We should use the recycled resources because recycling saves resources, decreases the use of toxic chemicals, cuts energy use, helps curb global warming, stems the flow of water and air pollution, and reduces the need for landfills and incinerators. We should also make the efforts to buy recycled and less packaged products. We should try to carry the reusable bags in the place of plastic bags and replace plastic and paper cups with ceramic mugs, disposable razors with reusable ones and refuse unneeded plastic utensils, napkins, and straws when you buy takeout foods.
6. In the office also we should be eco-friendly by using the energy efficient equipments and shouldn't print out each memo or email you receive. Read and delete the ones you don't need to save and electronically file others you might refer to later. Make sure your office copier can make two-sided copies, and badger everyone to get into the habit of doing so. We should also bring our food in reusable containers rather than wrapping it in foil or plastic in the office.

7. In order to stop the wastage of water in the bathroom, the low-flow showerheads can be use which will save about 20,000 gallons of water per year. We can also turn off the water while soaping up or shampooing, and keep a bucket in the shower to collect excess water. We can use this extra water to irrigate your plants.
8. We should fix leaking and dripping faucets as soon as possible to save water and lower our water bill. A dripping faucet can waste up to 20 gallons of water per day. A leaking toilet can waste up to 200 gallons every day. We should install low-flush toilets residential use.
9. The use of pesticides is one of the worst environmental threats to children's health. . In addition, pesticides contaminate water and often poison wildlife. We should ask for organic food .Often, organic produce costs more and is more difficult to get, but many supermarkets and greengrocers are willing to stock organic food if they know customers will buy it regularly. For the organic product, Community Supported Agriculture (CSA) cooperatives should be used which bring together local farmers and consumers.
10. We should be sure that local industries comply with regulations on discharging waste into air or water, or onto land. Join a local clean water or environmental group that monitors industries and sewage treatment plants that are discharging wastes in your water or air.
11. In our life, we must plant a tree. A single tree will absorb one ton of carbon dioxide over its lifetime. Shade provided by trees can also reduce your air conditioning bill by 10 to 15%.
12. We should make the efforts to be a vegetarian should not eat meat. Methane is the second most significant greenhouse gas and cows are one of the greatest methane emitters. Their grassy diet and multiple stomachs cause them to produce methane, which they exhale with every breath.
13. Virtual March is a non-political effort to bring people concerned about global warming together in one place. Telecommuting can help us drastically reduce the number of miles you drive every week.
14. At any cost the forest must be protected. Forests play an important role to stop global warming as they store carbon. When forests are burned or cut down, their stored carbon is release into the atmosphere - deforestation now accounts for about 20% of carbon dioxide emissions each year.



15. We should behave like a true citizen of earth to stop the global warming. If you are looking any thing is happening wrong around you that must informed to the government and its representatives.
16. We must use a laptop instead of a desktop because it consumes five times less electricity. If you buy a desktop, get an LCD screen which enables the power management function on your computer, the screensaver does not save energy.

### **Epilogue**

Global Warming is a dramatically urgent and serious problem. We must think what type of earth we are going to hand over to the next generation. Otherwise our next generation will not forgive us for our these wrong activities. It is the high time to decrease carbon dioxide emissions worldwide in order to turn down the earth's rising temperatures and avoid any catastrophe. We should look for governments' efforts to find a solution for this problem. Each individual can help by adopting a more responsible lifestyle starting from little, everyday things. It's the only reasonable way to save our planet, before it is too late.

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