

Global Warming And Its Impacts On India

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Abstract:

The 21st century unfolds with global warming as an urgent, pervasive challenge. This paper delves into strategies addressing this issue, including greenhouse utilization to regulate gases like carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons. These gases form a greenhouse ensemble, trapping radiant heat and laying the foundation for global warming. The Industrial Revolution's advent in the 1800s brought unintended environmental consequences, with coal combustion, petroleum, and natural gases escalating carbon dioxide levels to 383 parts per million by 1980. With a global population surge to 8 billion in 50 years, projections indicate a 5-degree Celsius temperature rise by the century's end, impacting weather, global retreat, and sea levels. This paper explores global warming's multifaceted impacts, from altered precipitation to increased extreme weather intensity. Repercussions include shifts in agriculture, reduced streamflow's, species extinctions, and disease vectors. Reports attribute glacier retreat, ice-shelf disruption, and sea-level rise to global warming. Forecasts predict a carbon dioxide surge to 541 to 970 parts per million by the century's end. Focusing on India, the fourth-largest carbon dioxide contributor globally, the paper navigates industrialization, coal energy, and urbanization challenges. Illuminating India's unique struggles, it contributes to the global discourse on sustainable solutions amidst the pressing environmental crisis.

Keywords: Global Warming, India, Impacts, Climate Change, Economy

Introduction:

Global warming is a worldwide problem in 21st century. The whole world has taken this problem seriously. Global warming is not an imagination but it is a reality and it is increasing terribly day by day. So we are trying to reduce and control this problem by various ways. We use "green house" for nurturing of various plants (vegetation) by controlling on the rays of sun. As life is possible by sustainable cover of different gases. As Eg: carbon dioxide (CO₂), methane (CH₄) Nitrous Oxide (NO₂), chlorofluorocarbon (CLFL₃) and other gases causes the radiant heat of the sun to be wrapped in the earth's lower atmosphere which causes global warming.

All these green house gases build up in the atmosphere of the earth. All the se gases make it so that is becomes harder for the radiation that sun shines into the atmosphere to escape. The heat continues to build up and this is what causes the temperature to increase.

This natural atmosphere was at able till 1800, but because of the reason of Industrial revolution the coal is burning in millions of tones, in 1990 we got petroleum product and natural gases. After this development of human being paid its price in the form of environment.

In last 250 years Proportion of carbon dioxide increased by 277 to 383 parts out of 10 lakhs parts of air and after 1980, the atmosphere became more hot.

In last 50 years total population is reached up to 8 billion. In these years the population of carbon dioxide in air every year, in the end of 21st century the temperature of earth will increase by 5 Celsius in average. It is difficult to connect specific weather increase in global temperature way it

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turn increase other changes, including global retreat and worldwide sea level rise. Changes in the amount and pattern of precipitation may result in flooding and drought. Other effect may include changes in agricultural yields, reduce summer stream flows, species extinctions and increase in the range of disease vectors. Some effects on both the natural environment and human life are at least in part already getting attributed to global warming. As report suggests that glacier retreat, ice-shelf disruption such as the harsen ice shelf, sea level rise, changes in rainfall patterns increased intensity and frequency of extreme weather events are being attributed in global warning. As the reports of experts at the end of 21st century the proportion of carbon dioxide will be 541 to 970 part of 10 lacs of air today it is 383.

India and global warning

The problem of global warning will affect to India also. The problems of global warming are mainly created by developed Countries, but developing countries also have to face these problems with them. India is ranking 4th in the world in the production of carbon dioxide which causes global warning. The use of coal in thermal power station you production of Energy, industrial development rates urbanization increasing in the comfort goods various vehicles by air, rail and roads these all are the reasons of global warming in India. These all affect badly India.

On one hand these is development and on another hand these are effects of global warming because of these industrial development Government **also** has planned for these levels.

Global warming in India's development growth: A problem

India's estimated population will be 1.35 billion in 2030. If India wants to develop it will have minimum 8% GDP in coming 20 years. India has improved with the production of electricity capacity will be 128000 m.w. To 80,000 m.w. The 80% of electricity is produced only by coal in India so, carbon dioxide is emitted. This situation creates confusion for us because if we control the growth rate of GDP. The standard of living of Indian will be down, as per this we do not concentrate on employment of 25 corer people in coming 20 years because all these matters are uncaused in.

Global warming in the development growth of the country there are many questions of global warming In the comparison of developed countries the green house gas emmission an India is less, Although if we concentrate on other things, the problem of global warming is a big challenge for India's development growth.

Effects of global warming in various sectors:

The effects of global warming in India e.g. Water problems, flooding – hurricane problem and agriculture sector etc. All these topics are discussed as under:

Global warming and water problem:

The scarcity of water for agriculture, industries and house in would 80 countries the 40% of population of the world are facing the scarcity of water. In this 40% population there are 60% people are Indian there are flood; heavy rainfall or less rainfall every year. Very short period of rain fall is there because of global warming. As for example: In 2006 the rain fall was 750 mm in Badmer, Rajasthan. This rain fall was five times more then it average rainfall. On one hand there was a rainfall in desert area and in other hand there is drought in Assam. Cherapunji is not first for maximum rainfall now because of global warming irregular rain fall, extreme rain fall and no rain fall all these question of water problem arise.

One meter sea level rise lead to submergence of 576,400 hectares land in India this would displace 7.1 million people¹. All these problems of sea water also create problem for us.

Effect of climate change on sea coast line:

With the acceleration in the global warming on the earth the glaciers and ice shelves around the world especially at the polar region are melting. In immediate result of melting glaciers would be rise in sea levels even a modest rise in sea levels could cause flooding problem for now lying coastal areas as per the report of Inter government panel on climate crisis.

The sea level will be up to 19 to 50 cm high in coming 100 years. Over and above proportion of typhoon will be 15% in sea area of hot country.

These are some on effects of global warming:

In Gujarat kutchh mandavi to mundra and in south Gujarat - Mahi, Purna and delta area of Daman Ganga river's the sea level are coming up. Gujarat has extreme effect of global warming although it has longest sea coast. In type of geographical location sea coast is submergence. In the past year 1920 "sindri" village was submerged 1.5 meter under the land because of earthquake. Gujarat's 180 thousand hectare lands will be drowned into sea and it affect - vely on 4 lakh people.

More over the **sodic** land will increase because of increasing in the sea level. Drinking water problems also been created. Coral and mangroves will be destroy. Because of this the production of fishes will be decrease. It affect the life of fisherman and there family.

Various industries have been established and developed near the coastal areas of Gujarat past few years. Before 10 years the investments on coastal line was 6% but now it increased to 30-40%. Trade carried out through sea was at a great success but due to climate change such trade is not been maintained. Due to such problems, migration from coastal areas is carried out a large amount and people are shifting to interior parts.

Climate change: Agriculture

There is an adverse effect of global warming on agriculture. With an increase in the amount of CO₂ level in the atmosphere, the heat and light radiated out from the sun is not reflected back and thus it is absorbed in the earth's atmosphere, resulting to change in climate as well as fluctuation in seasons. Thus rainfall has also become irregular affecting the growth of crops in India, wheat and rice are the two most important cereals consumed by people. It is the staple diet of the entire country but with the increase in heat the growth of food grains is affected. If the heat level in atmosphere. Increases from 2.5 C^o to 4.9 C^o. Then the production of rice will be decreased by 15% while that of wheat will be decreased by 25%². Wheat is produced in large quantity climate change the production of wheat is decreased by 45 lac tones.

According to an estimate soil erosion would increase due to sharp and heavy rain and due to increase in (global warming) temperature. More irrigation facilities would be needed for agriculture. This would result in the increase of saline land and the fertility of soil would also decreased, which would effect both on the quality and quantity of sand.

According to an economist, a very important thing which must be discussed is that there would be change in the time scheduled of rainy season in India due to global warming. Due to delay in the rain the agricultural product of India would not reach the market in the due prescribed time, which otherwise it could. We would not be able to meet the demand of our agricultural products at the starting (first) stage resulting in the decrease in the income of foreign currency.

India and Gujarat may have to pay big amount to this changing condition.

On one hand world's most developed countries are worried about India's economic progress and on the other hand India is on the top of the world in natural disaster³. This is the situation when climate change has not taken place.

Due to natural disaster highest amount of loan taken by any country from World Bank (capital?) is India and the loan amounts to 8,257 million dollars. If this is the situation, in the absence of global warming then what will happen when global warming would reach to its peak. We should think on this matter. Majority of the people of our country which are poor have to compulsorily live around the areas which are more affected by natural disaster. The thought of the situation due to this in the heat upcoming days is horrible.

Impact of global warming on Indian economy

Suggestions:

- Looking at the fluctuation and irregularity in the rainfall, we think there is a need of conserving water, storing it and using it judiciously. Thus it is a matter of concern and it should be brought under the notice of our country.
- Due to increase in the water level at the sea frequent floods are occurring in the costal areas. Thus measures should be taken to avoid rise in water level and gushing of water towards the costal region.
- Due to global warming at the costal areas, there are changes of high risk of natural disaster. Thus people residing over there should be made aware the problems and train them to overcome such disaster.
- Neither person is responsible for the global warming nor the effort of any one person will bring on end to the problems. Bring combine efforts can at least reduce the impact of the disaster. Growing more trees, electricity, conservation and its **judiciously** use. Recycling wastage of paper, **judiciously use of their** material, using water wisely.
- Reducing over use of petrol in the vehicles etc. are there different measures taken to protect our environment.
- Electricity is the basic need of human being. Due to increase in the population, the use of electricity is extensively increased thus Government is establishing electricity plant to generate more megawatts electricity .the fuel from coal let out to generate electricity is also being reduced by various techniques. According to the study of centre for global Development, Vanakbori thermal power station of Gujarat stands at 10th number in emitting out CO₂ . Government should consider this problem and take immediate steps.
- According to Inset survey to protect the environment 33% of the land area should be covered under forest cover but in India only 14% of land area is under forest cover. And in Gujarat only 7% area is under forest cover. Thus there is a great need and increasing afforestation.
- Agriculture is the spinal cord of India's economy. Thus we should take responsibility of decrease the impact of global warming. Use and artificial fertilizers should be reduced and instead manure should be used. Instead of growing one crop every time, crop rotation should be formulated such as growing cereals and then pulses. Green house gas can be controlled by taking these measures.
- Since past one decade agricultural scientists all over the world have informed not to have the land barren, not to give fire to the remains of production after harvesting to use natural fertilizers. In Gujarati we called Rishi Kheti (Organic farming) is our traditional farming in which no modern techniques are used. This will improve the production level and reduce global warming.
- Urbanization and industrialization has increased used a lot of after independence. Industrialization and Urbanization has increased the pollution directly. Taking these things in education rural employment should be increased.
- There is a way to save our earth from the effects of global warming. Gandhiji said that use more man power than machines. This is not for the recent generation but then what about the future generation??

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