



## Sustainable Approach To Decrease Global Warming

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**Abstract:** Global warming is an increase in atmospheric temperature due to re-radiation prevention of infra-red rays by the atmospheric gases as water vapor, (36–70%), carbon dioxide, ( 9–26%), methane,( 4–9%), ozone,( 3–7%), CFCs,(Re-radiation preventing capacities of the gases). The slow affect of it on the environment particularly increase in temperatures causes change in climate, change in vegetation, ice melting, decrease in land area, decrease in yielding of crops, affect on metabolism of every living being and so on. As the old proverb, addition of every drop of water form oceans, addition of pollution by every person cause global warming, but if we think and opt the sustainable practices, may be slow, but we could reduce the global warming.

**Index Terms** - greenhouse effect/ global warming, sustainable practices, re-radiation, gobar gas,greenhouse gases, bacterial photosynthesis, green Sulphur bacteria, microbiome..

### I. INTRODUCTION

Global warming or in other terms global temperature increase caused by two of the important factors such as infra-red radiation and greenhouse gases. The UNEP has chosen the slogan “global warming” to alert the people on world environment day, June 5, 1989. There is need of decrease in infra-red rays as well as greenhouse gases to control warming. As precaution is the best remedy for any of the problems, we should concentrate on the prevention of sources of greenhouse effect, after that can look after the major health problems and control measures.

### 2. PROBABLE METHODS TO CONTROL GLOBAL WARMING:

It necessary to reduce the two villains as infra-red rays and greenhouse gases of environment causing slowly threats to the life of all living beings.

Infra- red rays:

- i. The rays come from Sun in the wavelengths of more than 700m $\mu$ . So one should develop equipment that may change the wavelengths from it to more or less by that it does not involves an increase in temperature.
- ii. Infra-red rays are the main sources for some bacterial photosynthesis like Sulphur-bacteria, and by exploiting them as absorbers for decreasing levels of infra-red rays is the alternate method.
- iii. Using shiny shields/covers for vehicles/open areas

(Plants produce waxy, shiny leaves to reflect sunrays, mimicking it, we can use shiny or glassy surfaces to buildings, vehicles open areas ...)

(In Indian culture, our ancestors used to paint homes with lime (CaCO<sub>3</sub>+H<sub>2</sub>O which is white and reflects visible light, but is it reflects infra-red light? Scope of research here)

Every person in his/her home instead use the refrigerators, air condition machines, shift to arrange one of the above said method, expected reduction in temperature we may feel.

Greenhouse gases:

Carbon dioxide: Source correction: Many sources like automobile industries, volcanic eruption, industrial emission, natural degradation/decomposition, respiration process of all living beings. One should reduce the man-made pollution of carbon dioxide, by opt the sustainable steps. Ex: 1. Using alternative vehicles that may use fuel in the form of sunlight (solar panels), electricity, condensed air, methane that may form from the gobar gas plant, hydrogen gas produced by Algae and so on.

2. Use of buses than cars (individual) for transportation ( one bus may carry 40-50 people at a time occupying the two car space, while one car can carry 3-8 person( excluding driver) at a time. So shifting from individual vehicle to a vehicle carries more people with same emission, is the best way in some extent to prevent the pollution. Some of the private companies encourage their staff to use cycles in their campus instead cars.

3. Use of air purifying technologies in industries (dry or wet systems)

4. Limiting in usage of resources.

5. Steps to increase vegetation especially in marine habitats (because only 28% of photosynthesis occurs in terrestrial plants than marine plants where 70% of total photosynthesis occurs.

### 3. HEALTH EFFECTS ON HUMAN:

1. Increased respiratory and cardio-vascular diseases-which now we are already experienced in metropolitan cities like Delhi.

This may overcome by wearing masks, improved filter attached emissions in both industries and vehicles.

3. Between 2030 and 2050, climate change is expected to cause approximately 250000 additional deaths per year from malnutrition, Malaria, Diarrhea and heat stress. (According to WHO)

4. Reduction in yielding from crop plants due to climatic fluctuations and increases all types pollution, increase zoonosis (as Covid-19), and increase in food, water borne diseases.

Due to scarcity of water improper cleaning causes diseases, but prevention is better than cure, hence we should go for prevention of global warming.

Fungal spores causes rain from condensation of clouds, we can let use of them for more precipitation.

Contamination, Malnutrition and increased usage of biocides are also causes for most of the health hazards, better we go for organic farming, food habits like our ancestors (we should even look after micro-biome of individual)

### 4. FUTURE DANGER:

Usually wild plants adopted themselves to extreme conditions by associating themselves with fungi, bacteria and other microbes available in the vicinity. Domesticated plants as we use in our fields may not go for it because they depend on us and look for our supervision. But if they go for the microbial association due to climatic changes, to get out the extreme, it may lead to mass death of human in future. Ex: mass death of deer population in Africa due to over grazing which release cyanide in plants (induced by endophytic fungi) source-National geographic channel

Some microbes may convert from normal to harmful by the climate change and cause new diseases

Ex: some bacteria like *Pasteurella multocida* may harmless in normal conditions, but converted to cause death of 120,000 Antelops in Kazakhstan.

### 5. CONCLUSION:

Reduction in pollution and wavelength of infra-red radiation are the two methods we will opt for decrease global warming. From the source if we can eliminate infra-red ray's effect, we could control greenhouse effect. There are several sustainable practices and methods for reducing global warming, pollution and so on. Only the thing is every one seriously think of it and implement the methods can sustain the earth's climate clean and convert as adorable environment.

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