

Climate Change: Need to know our Environment

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ABSTRACT

If we look at what the school education system has done in the last decades, perhaps we have much to be satisfied with. The present world is witnessing a number of environmental crises, which are the result of the un-mindful exploitation of natural resources by human being. There is an urgent need to create environmental awareness among all human beings to conserve, protect and nurture our environmental resources. It is everyone's responsibility to educate and train the future citizens of the world on the issue of global warming and climate change. Possibility of advancement in the right direction to check climate change is possible if the enduring and responsible efforts of the students and teachers are channeled sensibly by providing the knowledge of climate change to pupils. The teachers and the student teachers can do so if they themselves are aware of the problems and consequences of climate change and global warming. For this purpose, environmental education can be included in school curriculum right from the very beginning. Education is supposed to encourage the students to analyse and evaluate their experiences, to doubt, to question, to investigate – in other words, to be inquisitive and to think independently.

1. Introduction

Climate change: refers to the statistically significant change in the average weather that a given region experiences. The predictions of the report such as flooding of coastal cities and extreme food shortages in the years to come due to climate change has been accepted by all the countries and the climate change has become a matter of great concern for the whole Universe. The Inter government panel on climate change, a United Nations climate effort estimated in its report on 17th January 2009 that sea level might rise by about as much as 2 feet by 2100.

Global warming: It is the major cause of climate change. Green House Gas(GHG) are the gases present in the earth's atmosphere which warm near-surface global temperatures through the greenhouse effect. While greenhouse effect is necessary for human inhabitation, an excess of GHG can raise the temperature of our planet to a level which would adversely affect human habitation.

Process of climate change: Climate change is slow, but it may be "unstoppable"—all the more reason to act quickly so that the long term situation does not get even worse. Carbon Dioxide is allowed to peak at 450-600 ppm level the results would include persistent decrease in dry season rainfall. The initiative will not only protect the planet but will also generate growth, drive innovation and create highly skilled jobs. In the current economic down turn it could help to stimulate recovery. The global crisis is not an excuse to turn back on this vital challenge.

Factors accelerating climate change: Aquatic ecologist Katey Walter explains the complex science of Arctic methane—released due to the thawing of permafrost—which is one of the factors accelerating climate change. This phenomenon can be termed as "METHANE TIME BOMB". The Arctic is warming faster than any area of the globe. As

reflective ice and snow cover shrink, the ocean ice cap melts and permafrost soil thaws, releasing methane, a potent heat trapping gas which is ominous. Methane has at least 20 times the heat-trapping effect of an equivalent amount of carbon dioxide. As warmer air thaws Arctic soils, as much as 50 billion metric tonnes of methane could be released from beneath Siberian lakes alone, according to Walter's research. That would amount to 10 times the amount currently in the atmosphere.

2. Need of the study

Most people in our society are still unconcerned and ignorant about the issue of climate change. The students and the teachers are the guardian of our future generations and they are going to be the architects of our society. There is a need to bring at awareness among the people regarding what is climate change? How it affects our life, our economic prosperity and health and other welfare. How all of us together can save the environment for the benefit of present and future generations and achieve the ultimate objective of stabilizing the atmosphere by way of bringing awareness among the children.

Climate change awareness programs: The International community is in the process of serious discussion to tackle the most complex issue of the process of climate change and to take necessary action due to its threat to the fate of human race. The fact is that, unless timely measures are taken by the countries to put in place an effective mechanism for limiting emission of CO₂ and check its level of concentration in the atmosphere; it would be difficult to protect the mankind and wildlife. Domestically, India has blazed a trail by drawing up an ambitious National Action Plan (NAP) for mitigation.

Key elements of the plan are as follows:

- ❖ To boost solar energy

- ❖ Promote research and development into renewable energies
- ❖ Enhance energy efficiency.

The plan foresees effective adaptation measures, such as helping farmers by boosting the development of drought and pest-resistance crop varieties. Now, the road ahead is for an effective and efficient implementation of the ambitious plan.

3. Causes and consequences of climate change

The earth's climate has changed over the last century. There is new and stronger evidence that most of the warming observed in the last 50 years is attributable to human activities. Evolving computer models predict that, as a result of greenhouse gas emissions, temperatures will continue to rise over the twenty first century, impacting nature and mankind both positively and negatively. Climate always varies due to natural processes. However, human activities are constantly increasing from manual to mechanized mode. As a result of this they release some gases such as chlorofluoro carbon, halogens, methane, nitrous oxide and carbon dioxide etc. (majority is CO₂) in to the atmosphere. These gases tend to warm the earth surface. It is quite evident that both natural and human systems are vulnerable to climate change because of their limited adaptive capacity. This vulnerability varies with geographic location, time and social, economic and environmental conditions. Human activities include:

1. **Burning of fossil fuels:** Burning of fossil fuels like coal, oil and gas burning and deforestation leads to higher carbon dioxide concentrations. Land use change (mainly deforestation in the tropics) account for up to one third of total anthropogenic CO₂ emissions.
2. **Livestock enteric:** Fermentation and manure management, paddy rice farming, land use and wetland changes, pipeline losses, and covered vented landfill emissions leads to higher methane atmospheric concentrations. Many of the newer style fully vented septic systems that enhance and target the fermentation process are also sources of atmospheric methane.
3. **Use of CFCs:** Use of CFCs in refrigeration systems, and halogens in fire suppression systems also contributes to climate change.
4. **Agricultural activities:** Some agricultural activities including the use of fertilizers that lead to higher nitrous oxide concentrations, etc.

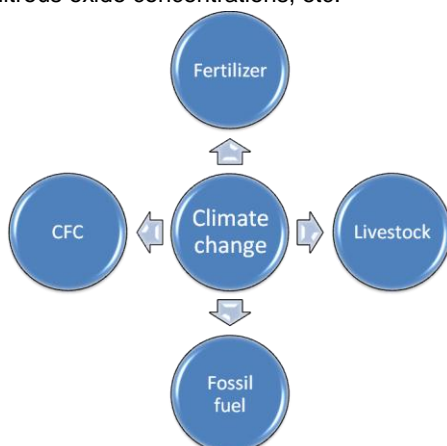


Fig. Major sources of climate change

4. Role of Environmental Education in climate change

Environmental education is a way of implementing the goals of environmental protection. Environmental education is not a separate branch of science or subject of study. It should be carried out according to principle of lifelong integral education. United Nation Environmental Program (UNEP) while making other recommendations specially constituted the foundation of framework for cooperative efforts on international level which states that environmental awareness may be adopted by:

- ❖ Identifying, analysing and understanding the needs and problems of personal life including healthy vocation, etc.
- ❖ Social life at different levels, viz. family, caste, community, religion, town or village life, state and country
- ❖ National life including civic, economic etc.

5. Environmental Awareness

Environmental awareness is the characteristic quality of man to understand and know the ins and outs of working forces and conditions of the environment. Environmental awareness is indicative of one's conscious state of being concerned towards one's own environment. Environmental awareness is an attitude towards environment which manifests itself in terms of the awareness towards:

1. Physical pollution
2. Psychological pollution
3. Social pollution
4. Cultural pollution

6. Implications of the Environmental Education in educational system

- 1) Educationists, educational administrators, and teachers must acquaint their pupils about environmental pollution.
- 2) Formal system of education should also incorporate Environmental Education in its curriculum. Elements of environmental awareness programs should be a compulsory part of the curriculum.
- 3) The concept of environment and its protection should be published and popularised with the help of various mass media and modern means of communication viz. newspapers, radio, TV and films etc.
- 4) It would be more beneficial and effective if special programs are launched to develop environmental awareness among the students.
- 5) Value-oriented education in the light of environmental pollution and environmental awareness should be provided.

7. Conclusion

Climate change is the most serious threat facing mankind in the twenty first century. It has been linked to human activities and the impact of the global climate change will persevere for the years to come. No one can deny the measures required to be taken for the improvement of climate for peaceful survival of mankind on this earth. In the day-to-day activities people ignore the changes of the weather and in the event of any natural calamities only; they realise the problem

and its consequences. Though the students and teachers are aware of the problem of climate change, they lack in having sufficient knowledge of climate change with regard to its causes and consequences. Moreover, although the students and teachers have some information about the problem of climate change but their level of knowledge and attitude towards climate change are inadequate. It is desirable that the students and teachers are imparted with adequate knowledge

to address the problems associated with climate change. In order to increase public awareness and knowledge of climate change our teachers need to be re-focused on encouraging people to act voluntarily in this regard. Education as a planned endeavor, at a personal level on a small scale or institutional level on a large scale, aims at making children capable of becoming active, responsible, productive, and caring members of the society.

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