

Climate Change: A Poison To Our Lovely Planet

Introduction

Over the last hundred years or so, the instrumental temperature record has shown a trend in climate of increased global mean temperature i.e. global warming. Other observed changes include Arctic shrinkage, Arctic methane release, releases of terrestrial carbon from permafrost regions and Arctic methane release in coastal sediments and sea level rise. Global average temperature is predicted to increase over this century with a probable increase in frequency of some extreme weather events and changes in rainfall patterns. Moving from global to regional scales, there is increased uncertainty over how climate will change.¹ The probability of warming having unforeseen consequences increases with the rate, magnitude and duration of climate change. Some of the physical impacts of climate change are irreversible at continental and global scales. Sea level is expected to rise 18 to 59cm (7.1 to 23.2 inches) by the end of the 21st century. For a global warming of 1—4°C (relative to 1990—2000) there is a moderate chance that partial deglaciation of the West Antarctic Ice Sheet, sea level would rise by 4—6m.²

Impacts on Health : Global Aspect

Climate change currently contributes to the burden of disease and premature deaths. According to the Intergovernmental Panel on Climate Change (IPCC) report,³ it is likely that :

- a) Climate change will bring some benefits such as reduced cold deaths.
- b) The balance of positive and negative health impacts will vary from one location to another.
- c) Adverse health impacts will be greatest in low – income countries.
- d) The negative health impacts of climate change will outweigh the benefits, especially in developing countries. Some examples of negative health impacts include increased malnutrition, increased deaths, disease and injury due to heat waves, floods, storms, fires and droughts and increased frequency of cardio-respiratory disease.

Direct Effects of Temperature Rise

The most direct effect of climate change on human might be the impacts of hotter temperatures themselves. Extreme

high temperatures increase the chance of cardiovascular and respiratory diseases. Higher air temperature also increases the concentration of ozone at ground level. In the lower atmosphere, ozone is a harmful pollutant. It damages lung tissues and causes problems for people with asthma and other lung diseases.

Rising temperatures have two opposing direct effects on mortality : higher temperatures in winter reduce deaths from cold ; higher temperatures in summer increase heat related deaths. The net local impact of these two direct effects depends on the current climate in a particular area.

A government report shows decreased mortality due to recent warming and predicts increased mortality due to future warming in the United Kingdom. The 2003 European heat wave killed 22,000—35,000 people, based on normal mortality rates. Peter A. Stott from the Hadley Centre for Climate Prediction and Research estimated with 90% confidence that past human influence on climate was responsible for at least half the risk of the 2003 European summer heat—wave.⁴

Spread of Disease

Global warming may extend the favorable zones for vectors conveying infectious disease such as dengue fever, West Nile virus, and malaria. In poorer countries this may simply lead to higher incidence of such diseases. The World Health Organization (WHO) says global warming could lead to a major increase in insect-borne disease in Britain and Europe, as northern Europe becomes warmer, ticks—which carry encephalitis and Lyme disease—and sandflies—which carry visceral leishmaniasis—are likely to move in. However, malaria has always been a common threat in Europe past, with the last epidemic in as much as 36 states (including Washington, North Dakota, Michigan and New York) until the 1940s. By 1949, the country was declared free of malaria as a significant public health problem, after more than 4,650,000 house DDT spray applications had been made. The World Health Organization estimates 150,000 deaths annually as a result of climate change, of which half are in the Asia—Pacific region. In April 2008, it reported that, as a result of increased temperatures, the number of malaria infections is expected to increase in the highland areas of Papua New Guinea.^{5,6,7}

Climate Change and Health Crises Pattern in Bangladesh

Climate factors, including maximum and minimum temperatures, annual and seasonal rainfalls and salinity concentration are likely to unleash various diseases like diarrhea, skin problems and kala-azar in Bangladesh, according to a study. The study says waterborne diseases will remain a major public health concern in the country with changes in climate factors. Bangladesh Centre for Advanced Studies (BCAS) and National Institute of Preventive and Social Medicine (NIPSOM) recently conducted the study titled ‘ Climate Change and Health Impacts in Bangladesh’ with support from the Climate Change Cell under the Environment and forests Ministry. In addition to climate variability, the study found changes in the trend of climate factors, particularly yearly maximum and minimum temperatures over the last three decades.

The analysis of the primary data from survey on 300 households reveals that variations in temperatures is considered to be the main cause for most of the diseases (diarrhea, pyrexia, malnutrition) by the highest percentage of the respondents. Rainfall variation comes next as the main cause of such diseases and is followed by hazards and disorders. It is said the percentage of respondents having a clear understanding of climate change was not very satisfactory.

Conclusion

Climate change is a term we can no longer escape and many will say that is exactly the type of thinking that got us into the situation we are in now. The reason being we are directly in the line of fire when climate change finally raises its head and takes aim. Interestingly the analogy of being in the line of fire does precisely explain the affects of climate change on the world. There will be no single shot that will be able to identify as a bullet from climate change, there will be no single event that we will be able to point to and say, “that is the beginning of climate change”.

In fact climate change will not affect us in a single display or action. It will poison our environment slowly but surely and chip away at the very fabric of our existence.

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