

## AN ENVIRO LEGAL STUDY ON CLIMATE CHANGE AND ITS DEADLY IMPACT ON HUMAN HEALTH

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### **ABSTRACT**

Climate change has become one of the major issues threatening the worldwide environment and its sustainability. Besides the environment, climate change has impacts on human health. Since the inception of civilization, it has been proved that human health was always influenced by climate and weather. In other words, we can say that human health is reciprocally connected with the consequences of climate change. Throughout the world, it is proved that various climatic variations and their outcome spread diseases like Malaria, West Nile virus or Lyme disease. Apart from this, global climate change has a great impact on the mental health of human beings. According to the Universal Declaration of Human Rights, 1948 health is also recognized as human rights mentioned in Art.25. Moreover, in 1966 the right to health was recognized as a human right in the International Covenant on Economic, Social and Cultural Rights again. The International recognition of the right to health was first mentioned in the Constitution of the World Health Organization (WHO) in 1946. Other than these international recognitions the Indian Constitution under Art.21 mentioned the right to health as one of the essential fundamental rights. In summary, we can state that health and health care cannot be ignored in any circumstances. The author in this paper tried to focus on the role of international institutions and the attention of WHO in this important concern. Since the 20th century to the present age, various conferences have been adopted to combat climate change. Only in 1991, the first report of IPCC was concerned about health. Henceforth this research paper is aimed to light upon the consequences of climate change upon human health.

**KEYWORDS: Climate change, IPCC, Human health, Disease.**

### **INTRODUCTION**

The world community has witnessed massive destruction due to the Second World War and its aftermath. But climate change and its impact is now a more serious issue throughout the globe than the destruction caused by World War II. India is enriched with its flora and fauna

but it is a great concern that it is most vulnerable to climate change. According to the United Nations Framework Convention on Climate Change (UNFCCC) is that an issue related to climate change is common but responsibilities are different. The question of solidarity among different nations is important regarding this particular matter. Globally we can cite numerous examples that developed states are more responsible for this climate change issue which is becoming a climate crisis all over the world. Recently the World Resources Institute(WRI), a Washington based private research group published a report that India and China must share the blame for heating the earth or in other words we can say that developing countries like India and China are solely responsible for global warming. But experiment shows that the study published by the World Resources Institute (WRI) is politically motivated rather than a scientific one. The detailed data presented by WRI itself proved that the developed countries particularly the USA is solely responsible for the highest level of contributing gases like Methane and Carbon dioxide in the atmosphere which results in global warming. It is noteworthy that the world community shall be the focus on human health rather than the filthy politics between the developed and developing countries. According to the World Health Organization (WHO), more than 140,000 excess deaths happened due to global warming since the 1970s. It is major evidence for climate change and its impact on human health.

### **CLIMATE CHANGE AND ITS AFTERMATH UPON HUMAN HEALTH**

Climate change can be expected to influence the earth's atmospheric system.<sup>1</sup> Nowadays throughout the globe, the rate of premature mortality and the spread of diseases are increasing day by day. If we want to trace the cause behind this phenomenon then it is no other than global climate change. Climate change, directly and indirectly, contributes to the spread of diseases like diarrhoea, cholera, malaria and dengue and many more. The potential health impacts of global warming can be categorized as direct and indirect. The direct effect of climate change on human health was observed in 2003 from the most memorable event namely "Heat Wave Episode" in Europe. During this period, the European Countries recorded an unusually high temperature. As a consequence of this unprecedented temperature increase more than 14,947 deaths occurred in France. Now if we postmortem the cause behind this mortality which happened in France it is nothing but heat. Various heat related problems such as hyperthermia, dehydration, heatstroke could be directly connected to heat.

<sup>1</sup> M.Z.A. Khan & Sonal Gangawala, Global Climate Change Causes and Consequences 81 (2011)

Apart from the direct effect of climate change on human health another effect i.e. indirect effect is also a matter of great anxiety. This effect has a deadly impact on the human being. Infectious diseases and their transmission are solely dependent on environmental conditions and hence are indirectly affected by climate change. Infectious diseases can be classified into vector-borne and water-borne diseases. Vector-borne diseases are mediated through intermediate organisms to the host whereas water-borne diseases are spread due to the contamination of dirty water. According to WHO it is evident that newly borne infectious diseases are increasing rapidly in the entire world. It is proved that climatic conditions affect diseases from long before the role of infectious diseases and their related agents were discovered. The study revealed that Roman aristocrats fled away to hilly areas each summer to avoid malaria. Malaria is one of the most sensitive to long term climate change among the other vector-borne diseases. If we observe the link between malaria and climatic change the best example we can cite in an Indian perspective is Punjab, the river irrigated state that experienced periodic malaria epidemics. The major change in climatic conditions like heavy rainfall, high humidity has a direct impact on mosquito breeding and its enhancement<sup>2</sup>. Climate change may have a significant impact on vector-borne diseases. The spread of such disease generally happens by mosquitoes, flies, ticks and other vectors. For this incident, the global rise in illness incidence will increase. The increase of vector-borne disease risk the most substantial is due to the effects of climate change because it is already proved that the spread of these diseases is the most sensitive to influences of climate factors. Disease vectors and pathogens themselves are sensitive to environmental factors such as temperature, air and soil humidity, wind, seasonality. Regionally spread of vector-borne diseases can be stopped by the use of pesticides to eradicate vectors and proper vaccination to affected persons. Apart from the vector-borne disease, climate change also affects the spread of ticks. Due to climate change-induced warmer winters tick population may increase and thus to a greater extent than in the past may threaten people with Lyme disease and tick-borne encephalitis. If we discuss the symptoms of encephalitis then it is more or less similar to flu but due to possible complications such as inflammation of the lining of the brain, the illness can result in disability or even death. Airborne allergens are also an impact of climate change. The aero-allergens are rapidly grown in the environment due to the rising level of carbon dioxide.

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<sup>2</sup> Source: World Health Organization, [Climate Change\(17th April 2005\)](#)  
<https://www.who.int/globalchange> (Last accessed on 4th April 2020)

Likewise, the ratio and length of changes in seasons are also playing an increase of these aero-allergens. Allergy is a hypersensitivity to specific substances.

### **ANALYSIS OF IPCC'S ASSESSMENT**

The IPCC was established in 1988. It is the initiatives of the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to establish this famous institution for the protection of the climate. The main objective of the IPCC is to provide all scientific data and information to governments for the betterment of climate policies worldwide. Presently IPCC has 195 members<sup>3</sup>. More than hundreds of scientists, throughout the globe voluntarily contributed to IPCC's mission of reviewing, discussing and writing drafts. The first major report was published in 1991 by IPCC. This report in nutshell reflected threats to human health. After 5 years span time, IPCC submitted its second Assessment Report with a chapter where the climate change and its impact on health with potential risks described in detail. The Third Assessment Report of IPCC has more importance than previous reports concluded by this international organization. It is expressed in its Third Assessment Report that in lower-income populations particularly within tropical or subtropical countries human health is threatened by global climate change. From the above discussion, it can be concluded that climate change would cause increased heat-related and decreased cold-related mortality. Weather disasters like floods, storms, bush fires are very frequent occurrences due to climatic conditions throughout the year. Due to the frequent occurrence of floods and storms the rapid increase of infectious disease are reported at present in the entire world.

### **INTERRELATIONSHIP BETWEEN THE GLOBAL BURDEN OF DISEASE AND CLIMATE CHANGE**

The World Health Organization (WHO) and the Harvard School of Public Health conjointly have produced a comprehensive project report on the global burden of disease. In this project, five geographical regions have been allotted for research. Various kinds of models linking climate change to quantitative, global and health impacts were reconsidered. Apart from the global models local or regional models are also considered in this regard. The application of

<sup>3</sup> Source: IPCC, The Intergovernmental Panel on Climate Change(IPCC)is the United Nations body for assessing the science related to climate change. (2007)  
<https://www.ipcc.ch/about> (Last accessed on 28th April 2020)

these various models to current disease burdens indicates that the relationship between climate and disease is proven and matter. From extensive research, it is proved that the patterns of deaths are also severely affected by climate change. However, in comparison to several other risk factors, climate changes are increasing day after day<sup>4</sup>.

### **INITIATIVE OF SOUTHEAST ASIA(SEA) REGION REGARDING HEALTH AFFECTED BY CLIMATE CHANGE**

The case study relating to Southeast Asia is at high risk of climate change. Due to the diversified geographical landmark, this region is extremely disaster-prone. The rising sea levels have a major impact on health in low-lying regions of Maldives, Indian Ocean islands, 7500 km long coastline of India and Bangladesh. The sea-level rise can increase saltwater intrusion which can easily contaminate freshwater could result in an outbreak of diarrhoea<sup>5</sup>. The high altitude Himalayan region may also get badly affected by this climate change. Glaciers are the main source of drinking water not only in Himalayan regions but also in plains<sup>6</sup>. But due to the glacial retreat in the Himalayas, the supplies of fresh water will be shrinking and result in various kinds of disease which can affect human health. Different countries in the SEA Region have already taken specific and strict action to exercise health leadership responsibilities. In this regard, the Royal Government of Bhutan established itself as an icon state in the SEA Region specifically. Bhutan has taken a concrete plan to take active action in specific five areas. They are

- Introducing medical emergency response;
- Programs for controlling vector-borne and water-borne diseases;
- Setting up the various pre-warning system between disease surveillance and climate monitoring activities;
- By empowering local communities reducing the risk rate of vector-borne and water-borne diseases;
- By proposing different kinds of public awareness measures

<sup>4</sup> Joseph Romm, CLIMATE CHANGE 113(2018)

<sup>5</sup> KrishanSaigal, Climate Change The Human Aspect 25( 2010)

<sup>6</sup> Navroz K. Dubash, Handbook of Climate Change and India179(2012)

**INDIA'S PERSPECTIVES ON CLIMATE CHANGE AND HUMAN HEALTH**

To combat climate change and health issues India also undertaken several preventive measures guided by UNFCCC. Some of them are stated below:

- Responsibilities given as a nodal ministry to the Ministry of Environment, Forest and Climate Change (MoEF and CC) to take care of matters related to climate change.
- By the formulation of National Environmental Policy, 2006.
- By the formulation of the Prime Minister's Council on Climate Change to advise scientific measures in relevant areas.

Apart from the above stated preventive measures taken by the Government of India, a National Action Plan on climate change (NAPCC) has been announced by the Hon'ble Prime Minister in 2008. Initially, the NAPCC has identified eight national missions. After positive impact and huge response within 7 years on 19th Jan 2015 four new missions had been suggested for formulation. Health Mission is one of them. This mission was undertaken by the Ministry of Health and Family Welfare and this ministry has constituted a National Expert Group on Climate Change and Health (NEGCCCH). The Ministry of Health and Family welfare has ascertained the National for Diseases Control (NCDC) as the nodal agency for 'Health Mission'. Over and above all countries in the Region must strengthen their all relevant health programmes and preparedness for early response.

**CONCLUSION**

From the research above stated it is evident that climate change has a great impact on human health. Though developed or developing nations are parties to the Kyoto Climate Change Convention, 1997 and they were agreed to reduce emissions of greenhouse gas but it is regrettably to say that carbon dioxide emissions are likely increasing for industrialization worldwide. A concomitant relationship exists between climate change and human health. Different effects of climate change and its consequences on human health is a matter of concern in contemporary discourse. Several countries globally including the World Health Organization(WHO) are very actively issuing protocols and directives to mitigate the climate change issues. Lastly, the issue related to climate change and human health needs special attention. Some strict legislation at the national and state level, multidisciplinary research and high-level committees and policies are needed.