

Climate Change and Governance Issues: Critical Review

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Abstract: *The rapid urbanization and industrialization in every part of the world is taking place along with the deforestation. All governments are trying to fulfil the requirement of their citizens by various activities with the least concern of environmental issues and same time the developing countries are also not providing technical support to other countries to protect the natural environment of the earth. The excessive use of energy is creating disturbances in the natural energy balance of the earth which is ultimately responsible of climate change.*

Key words: *Climate Change, Governance, Green House, Global warming*

1. INTRODUCTION

Climate is the average weather at a given point and time of year, over a long period (about 30 years). It is a measure of the average pattern of variation in temperature, humidity, wind, precipitation, atmospheric pressure and other meteorological variables in a given region over long periods of time. The climate of a location is affected by its latitude, terrain and altitude, as well as nearby water bodies and their currents. Climates can be classified according to the average and the typical ranges of different variables, most commonly temperature and precipitation where as Weather describes whatever is happening outdoors in a given place at a given time. It is measured through wind, temperature, humidity, atmospheric pressure, cloudiness, and precipitation.

We expect the weather to change a lot from day to day, but we expect the climate to remain relatively constant. If the climate doesn't remain relatively constant (significant change in climate), we call it climate change. Whereas "Climate variability" refers to changes in climate from one year to another. It can be caused by changes in ocean conditions far away, which can affect climate all over the world. Climate variability is natural and occurs on a regular basis whereas climate change involves both natural changes and changes caused by people. Average increase in the Earth's temperature, is called Global Warming, which in turn causes changes in climate. A warmer Earth leads to a wide range of impacts on plants, wildlife, humans, evaporation of water, rain cycle and rising sea level etc. Global climate change is a significant challenge to structures of governance at all temporal and spatial scales, particularly in the area of managing natural resources¹. The effect of CC may lead to disaster. Disaster management requires multilevel governance systems that can enhance the capacity to cope with uncertainty and surprise by mobilizing diverse sources of resilience². Like many environment and resources issues facing policymakers, the problem of climate change is plagued with uncertainty regarding the magnitude of its severity³. No country can solve the global climate change problem by acting alone. If only one country in the world tried to solve climate change—even one of the wealthier countries of the world—this would be a grossly inadequate effort⁶.

2. FACTORS AFFECTING CLIMATE CHANGE:

a. Natural Factors :

(i) Sun: The amount of energy coming off the Sun is not constant but keeps changing and slow changes in the Earth's distance from the Sun affect the amount of energy received from the Sun.

(ii) Volcanoes: when a volcano erupts it throws out large amounts of sulphur dioxide (SO₂), water vapour, dust, and ash into the atmosphere which absorb the energy and affect the energy balance of earth in a significant area.

(iii) Other components: ocean currents, atmospheric circulation, sea ice and land covers (trees, grass...) etc, are also responsible for disturbing the energy balance.

b. The Greenhouse Effect :

When energy from the Sun enters the Earth's atmosphere, about a third of it is reflected back to space. Of the remainder, most is absorbed by the Earth's surface. Some also stays in the atmosphere, absorbed by water vapor and greenhouse gases. This natural Greenhouse Effect is vital to life. Right now, the average temperature on the Earth is 15°C. If there was no greenhouse effect, the average temperature would be -18°C.

c. Main Human Factors :

(i) Increase of greenhouse gases concentration:

Human activities send gases (for example methane, carbon dioxide, CFC etc) into the atmosphere that enhance the greenhouse effect. Many of the gases come from fossil fuels such as oil, coal and natural gas to run vehicles, and generate electricity for industries or households.

(ii) Aerosols:

Tiny solid particles or liquid droplets that remain suspended in the atmosphere for a long time also absorb and reflect the energy coming from the sun and affect the energy balance.

(iii) Land Use Change:

Humans continue replacing forests and natural vegetation with agricultural lands and huge concrete structures. Development of new residential township, industrial areas and commercial centre, all are consuming & releasing huge amount of energy in one way or other. This energy consumption phenomenon is responsible for imbalance of natural energy balance of area.

3. GOVERNANCE ISSUES

(A) Global Governance:

(i) Reduction in global greenhouse gas (GHG) emissions by at least 50 per cent by the middle of this century. Achieving such a goal will require the engagement of all major economies.

(ii) Countries need some time and opportunity to seriously figure out what they can do domestically; how regional or international coordination can help.

(iii) Transfer of technology for Industrial development, food production, treatment of waste etc.

Table-1: World carbon emissions, by country per capita tonnes of CO₂

Name of country	Carbon emissions per capita tonnes of CO ₂ in 2016
USA	19.78
China	4.58
Japan	9.78
U.K.	9.66
Canada	18.81
Germany	10.40
Russia	12.0
South Korea	10.53
Holland	15.79
Australia	20.58
India	1.16
Pakistan	0.78
Nigeria	0.77

It is clear from the per capita CO₂ contribution (Table-1) by population of various countries indicates that good condition of living and good infrastructure is available in the countries those are contributing more CO₂. Hence before resolving the issue of CC, answers of these questions are required:

- a. Who is responsible?: poor countries of developed countries
- b. population of poor or developing countries have right to live in good condition or they don't have?
- c. Value of human beings of developed countries are different then value of human beings of developing or poor countries?

Main problem is that the existing system of global governance suffers from significant deficits of accountability and inclusion, of less economically powerful states and, hence, their entire populations being marginalised or excluded from decision making.

How can Global Governance help in the issue of climate change:

- Providing free of cost technology
- Providing economic aid
- Helping in disaster management
- Providing Food security
- Providing social security

(B) Local Governance:

The main objectives of governance for any government are:

- (i) Provide sufficient food to population
- (ii) Provide shelter (House) facilities
- (iii) Provide clothes
- (iv) Good environment & living conditions
- (v) Disaster Management

(vi) Security

To achieve above objective: we need:

- Industrial development
- Development of infrastructure
- Agricultural development
- Technology development

How can local governments interface with climate change:

* Local planning and regulation, largely in the form of by-laws and land use planning and zoning.

* Delivering goods and services that impact on adaptation to CC. (This refers to the choice of investment, public expenditure management)

* Local fiscal revenues, raised in the form of taxes, fees and charges. (This refers instruments which can provide incentives or disincentives for the ways in which CC issues are managed (or mismanaged)).

4. CONCLUSION

Considering the governance issues at various levels of governance and considering the minimum requirement of every human being residing in any part of the world either belonging to the developed countries, developing countries or under developed countries there is a need of development of Environmental Governance Model at International level and at National Level to address the environmental issues along with issue of climate Change. By taking a multilevel perspective that can fully capture the social, political, and economic processes global environmental governance can be addressed⁴. Similarly to protect the natural resources of the country, adaptive governance may be used as this addresses wicked problems through a framework to engage stakeholders in a participative process to create a long term vision⁵.

5. REFERENCES

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