

Environmental concerns with special reference to Climate change and Land Aspect

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ABSTRACT

Land provides the principal basis for human livelihoods and well-being including the supply of food, freshwater and multiple other ecosystem services, as well as biodiversity. Climate and climate change are strong drivers of biotic systems. The distribution and survival of many species being moderated by climate. UN High Commissioner for Refugees Antonio Guterres has staunchly and consistently advocated for States to take the issue of climate change seriously and expressed his view that this is a mega-trend that will compound others, such as food and water insecurity and competition over resources. In *Samaj Parivartana Samudaya v State of Karnataka*, (2013) 8 SCC 154., the Apex Court of India has held that the satellite imageries placed before the Court with regard to environmental damage and destruction has shocked the judicial conscience. There is now widespread scientific consensus that climate change is happening and that the warming of the earth's atmosphere is mainly attributable to human activity. In this Research Paper, the Author deliberates on various issues effecting environmental concerns with particular to global climate and various reasons that led to climate change.

Key words : Environment, Climate change, Supreme court, Protocol, Land

Introduction

This paper explores the issues of climate change and its impact on land. Climate change is a substantial security concern because of direct flooding and natural disasters. Due to this, there was amassive damage to livelihood of people across the world and leading to severe impacts on food security, health, and environmental refugees. Though climate change is certainly a global phenomenon, in many ways it is becoming a problem.

Research Questions

1. Are human activities responsible for the recent observed warming, or might it be caused by some natural process?

2. Does world countries need stringent policies to bring more framework for the environmental concerns?
3. Does Judicial Response to environmental concerns is adequate?

Land- Predictable Evidence for Climate Change

Land provides the principal basis for human livelihoods and well-being including the supply of food, freshwater and multiple other ecosystem services, as well as biodiversity. Human use directly affects more than 70% of the global, ice-free land surface. Land also plays an important role in the climate system. Land is both a source and a sink of greenhouse gases (GHGs) and plays a key role in the exchange of energy, water and aerosols between the land sur-

face and atmosphere. Land ecosystems and biodiversity are vulnerable to on-going climate change and weather and climate extremes, to different extents. The Earth has entered a period of hydrological, climatological, and biological change that differs from previous episodes of global change in the extent to which it is human in origin. It has become little difficult to explain or predict the course of the present global changes. Human systems and environmental systems meet in two places: where human actions proximately cause environmental change, that is, where they directly alter aspects of the environment, and where environment changes directly affect what humans' value. Almost all human activity has some potential relevance to global change. Changes in land-use can also affect the climate. Cutting down a forest and replacing it with farmland, for example, replaces a dark vegetation surface with a lighter one, reflecting more sunlight and cooling the climate. The dominant climate effect of land-use changes is local, but these can be significantly globally when the scale of land-use change is global. Adding up all the non-greenhouse gas climate effects of human activities, they are causing a net global cooling that is probably offsetting about 30% of the warming from greenhouse gases, with most of this cooling coming from reflective aerosols. Since they are major component of air pollution, efforts to reduce air pollution will reduce this offsetting cooling effect and cause additional warming.

Climate Change

Climate and climate change are strong drivers of biotic systems. The distribution and survival of many species being moderated by climate. Although species have responded to climatic changes throughout evolutionary time, the primary concern is the projected rapid rate of change. High species richness appears to be related to stable conditions, while abrupt impoverishment of species has occurred during times of rapid change. When changes in climate are gradual, species may have enough genetic variability to allow them to adapt. However, current projected rate of temperature change is likely too fast for many species to naturally adapt successfully to climatic change. If the climate changes abruptly then the likelihood of natural adaptation is quite small. There is now widespread scientific consensus that climate change is happening

and that the warming of the earth's atmosphere is mainly attributable to human activity. According to the highly influential 'Stern Review on climate change' published in 2006, "an overwhelming body of scientific evidence now clearly indicates that climate change is a serious and urgent issue". The Earth's climate is rapidly changing, mainly as a result of greenhouse gases caused by human activities. According to the Stern Review, "Climate Change will affect the basic elements of life for people around the world-access to water, food production, health, and the environment. Environmental impact as a result of climate change includes drought, changing rain patterns, desertification, deforestation, loss of arable land, flooding, melting glaciers, sea level rises and altering coastlines. India's climate change policy and law primarily flow from global arrangements. India has signed the United Nations Framework Convention on Climate Change (UNFCCC) was adopted on 10 June 1992 and ratified it on 1 November 1993. The Kyoto Protocol to the UNFCCC was adopted in 1997 and India acceded to the Kyoto Protocol, which is hailed as a major milestone in climate change mitigation strategy in 2005. But, because of low per capita emissions, it enjoys a surplus of emission rights.

Environmental Perspective

The expression 'the environment' is often used to refer to the global environment, usually as referred to humanity, the number of biophysical environments is countless, given that it is always possible to consider an additional living organism that has its own environment. Life has to be adapted to its environment conditions. Temperature, light, humidity, soil nutrients etc., all this has an influence in the species that can inhabit a particular environment. But life is not passive, and its activity modifies in various forms the environment conditions. Environmental change is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions, or in the distribution of weather around the average conditions. Environmental change is caused by factors that include oceanic process (such as oceanic circulation), variations in solar radiation received by Earth and human-induced alterations of the natural world. These latter effects are currently causing global warming, and "climate change" is often used to

describe human-specific impacts. Environmental Changes: Environmental changes has many facets as well as synonyms, which has led to misunderstandings in public and scientific debate. Additionally, the meaning of environmental change has changed many times during the past century. "Global Environmental Change" as used today includes not only climate change but also changes of other biophysical and anthropogenic systems, as well as it concerns local and regional scales. Environmental change is measured as an alteration of a system over a period of time, and can either be rapid changes or long-term trends. The lack of reliable long-term data of biological, physical as well as anthropogenic components is a major problem associated with the detection and assessment of environmental change of inherently dynamic/variable systems. Today, people are faced with a situation where current forest management goals has to be tailored against major environmental changes such as:

- Global climate change, causing higher risk of extreme weather situations;
- Land-use change, transferring soil properties and altering water fluxes;
- Alteration of natural disturbance regimes, affecting ecosystem functioning;
- Air and water pollution, leading to increased environmental stress;
- Continued economic growth, acting as a pressure on natural resource management.

Relevance of the 1951 Convention

UN High Commissioner for Refugees António Guterres has staunchly and consistently advocated for States to take the issue of climate change seriously and expressed his view that this is a megatrend that will compound others, such as food and water insecurity and competition over resources. The Intergovernmental Panel on Climate Change (IPCC) has observed that climate change will, in combination with other factors, drive more displacement in future. States have begun exploring the legal gap regarding people who might cross borders as a result, but who would not be covered by the 1951 Refugee Convention. The dynamics of the interaction of mobility with climate change are multifaceted and motivations are complex. Environmental conditions and altered ecosystem services are just some among the many reasons why people move. Climate change impacts may play a role in these decisions, but direct causation is

difficult to establish. As an example, the major influx of Somalis into Kenya in 2012 and 2013 was motivated as much by the drought and famine affecting Somalia as by the death and disruption at the hands of Al Shabab and armed groups. The drought made the conflict worse. Everyone became afraid of everyone. Some raiders came and took away the little food we had raised on our farm. Now we are in a very hard time: the people at home face conflict and famine. They are starving. If we could go back, we would have only dry land and death to greet us", said a pastoralist from Somalia in Shedr Camp, Ethiopia. In view of this complex causality, estimating future global displacement is fraught with uncertainty. However, there is significant quantitative and qualitative data on past displacement associated with natural hazards and disasters. According to the Internal Displacement Monitoring Centre's (IDMC) 2015 Global Estimates report, "Since 2008, an average of 26.4 million people per year have been displaced from their homes by disasters brought on by natural hazards. This is equivalent to one person being displaced every second. Impacts of Climate Change on Displacement:

1. Major extreme weather events have in the past led to significant population displacement, and changes in the incidence of extreme events will amplify the challenges and risks of such displacement.
2. Many vulnerable groups do not have the resources to be able to migrate to avoid the impacts of climate change.
3. Migrants themselves may be vulnerable to climate change impacts in destination areas, particularly in urban centers in developing countries.
4. An increasing incidence and changing intensity of extreme weather events due to climate change will lead directly to the risk of increased levels of displacement.

The Kyoto Protocol

The Kyoto Protocol, the first international treaty to limit human contributions to global climate change, entered into force in February 2005. With this milestone, binding obligations to reduce the greenhouse-gas emissions that are contributing to global climate change came into effect for many of the world's industrial countries. This event has also

deepened pre-existing divisions among the world's nations that have been growing for nearly a decade. The most prominent division is between the majority of rich industrialized countries, led by the European Union and Japan, which have joined the Protocol, and the United States (joined only by Australia among the rich industrialized nations), which has rejected the Protocol as well as other proposals for near-term measures to limit greenhouse-gas emissions. Even among the nations that have joined Kyoto, there is great variation in the seriousness and timeliness of the emission-limiting measures they have adopted, and consequently in their likelihood of achieving the required reductions. There is also division between the industrialized and the developing countries. Neither the Protocol nor the Framework Convention on Climate Change, an earlier treaty, provides any specific obligations for developing countries to limit their emissions. This has emerged as one of the sharpest points of controversy over the Protocol- a controversy that is particularly acute since the Protocol only controls industrialized-country emissions for the five-year period 2008-12.

Of all the environmental issues that have emerged in the past few decades, global climate change is the most serious, and the most difficult to manage. It is the most serious because of the severity of harms it might bring. Many aspects of human society and well-being-where we live, how we build, how we move around, how we earn our livings, and what we do for recreation-still depend on the relatively benign and narrow range of climatic conditions, even though this dependence has been reduced and obscured in modern industrial societies by their wealth and technology. This dependence on climate can be seen in the economic harms and human suffering caused by climate variations of the past century. Moreover, climate does not just affect people directly: it also affects all other environmental and ecological processes, including many whose connection to climate change will represent an added threat to other environmental issues such as air and water quality, endangered ecosystems and biodiversity, and threats to coastal zones, wetlands, and the stratospheric ozone layer.

Greenhouse Gases

Greenhouse gases are just one of several ways that human activities can change the climate. Human activities also increase the atmospheric abundance

of aerosols-tiny particles, either solid or liquid, suspended in the atmosphere, which can neither warm or cool the Earth's surface depending on their composition. Inefficient or incomplete combustion, as occurs in two-stroke engines and in low-temperatures cooking fires burning traditional fuels such as dung or crop residues, releases back carbon aerosols, which absorb both incoming sunlight and upwelling infrared radiation, thereby warming the surface. Burning of fuels containing sulphur forms liquid sulfate aerosols, which reflect incoming solar radiation back to space and so cool the surface. Aerosols also interact with clouds, increasing their reflectivity and thereby cooling the surface.

Judicial approach towards environmental concerns

- (i). In *Samaj ParivartanaS amudaya v State of Karnataka*, (2013) 8 SCC 154., the Apex Court of India has held that the satellite imageries placed before the Court with regard to environmental damage and destruction has shocked the judicial conscience. One the result of the survey undertaken and the boundaries of the leases determined by the Joint Team has been accepted by the Court and the basis of categorisation of the mines has been found to be rational and constitutionally permissible it will be difficult for the Supreme Court to visualise as to how the Category "C" mines can be allowed to reopen. There is no room for compassion: fervent pleas for clemency cannot have even a persuasive value.
- (ii). In *Municipal Corporation of Greater Mumbai v Kohinoor CTNL Infrastructure Co (P) Ltd.*, (2014) 4 SCC 538, the Supreme Court of India held that the right to a clean and healthy environment is within the ambit of Article 21. Furthermore, the right to a clean and pollution free environment is also a right under our common law jurisprudence.
- (iii). In *Rural litigation and Entitlement Kendra v State of U.P.*, 1986 (Supp) SCC 517, para 20., the Apex Court of India held that the preservation of the environment and keeping the ecological balance unaffected is a task which not only governments but also every citizen must undertake. It is a social obligation and let us remind every Indian citizen that is his fundamental duty as enshrined in Article 51A(g) of the Constitution.
- (iv). In *Association for Environment Protection v*

State of Kerala. (2013) 7 SCC 226, it was held that since time immemorial, people across the world have always made efforts to preserve and protect the natural resources like air, water, plants, flora and fauna. Ancient scriptures of different countries are full of stories of man's zeal to protect the environment and ecology. Our sages and saints always preached and also taught the people to worship earth, sky, rivers, sea, plants, trees and every form of life. Majority of people still consider it as their sacred duty to protect the plants, trees, rivers, wells, etc, it is believed that they belong to all living creatures.

- (v). In *Lafarge Umiam Mining (P) Ltd v Union of India*, (2011) 7 SCC 338, it was held that since the nature and degree of environmental risk posed by different activities varies, the implementation of environmental rights and duties requires proper decision-making based on informed reasons about the ends which may ultimately be pursued, as much as about the means for attaining them. Setting the standards of environmental protection involves mediating conflicting visions of what is of value in human life. Universal human dependence on the use of environmental resources for the most basic needs render it impossible to refrain from altering environment. As a result, environmental conflicts are ineradicable and environmental protection is always a matter of degree, inescapably requiring choices as to the appropriate level of environmental protection and the risks which are to be regulated. This aspect is recognised by the concept of "sustainable development". Environment has different facets and care of the environment is an outgoing process. These concepts rule out the formulation of across-the-board principle as it would depend on the facts of each case whether diversion in a given case should be permitted or not, barring "no go" areas (whose identification would again depend on undertaking of due diligence exercise). In such cases, the margin of appreciation doctrine would apply.
- (vi). In *U.P. Pollution Control Board v Dr. Bhupendra Kumar Modi*, (2009) 2 SCC 147, it was held that the courts cannot afford to deal lightly with cases involving pollution of air and water. The message must go to all persons

concerned whether small or big that the courts will share the parliamentary concern and legislative intent of the Act to check the escalating pollution level and restore the balance of our environment. Those who discharge noxious polluting effluents into streams, rivers or any other water bodies which inflicts detriment on the public health at large, should be dealt with strictly de hors the technical objections. Since escalating pollution level of our environment affects the life and health of human beings as well as animals, the courts should not deal with the prosecution for offences under the pollution and environmental Acts in a causal or routine manner.

- (vii). In *T.N. Godavarman Thirumulpad v Union of India*, (2006) 1 SCC, the Apex Court has held that any threat to the ecology can lead to violation of the right of enjoyment of healthy life guaranteed under Article 21, which is required to be protected. The Constitution enjoins upon the Supreme Court a duty to protect the environment.
- (viii). In *N.D. Jayal v Union of India*, (2004) 9 SCC 362, it was held that all environment-related developmental activities should benefit more people while maintaining environmental balance. This could be ensured only by strict adherence to sustainable development without which life of the coming generations will be in jeopardy. An adverse impact on the environment can have disastrous consequences for this generation and generations to come.
- (ix). In *Virender Gaur v State of Haryana*, (1995) 2 SCC 577. The word 'environment' is of broad spectrum which brings within its ambit 'hygienic atmosphere and ecological balance'. It is, therefore, not only the duty of the State but also the duty of every citizen to maintain hygienic environment. Therefore, hygienic environment is an integral facet of right to healthy life and it would be impossible to live with human dignity without a humane and healthy environment. Environmental protection, therefore, has now become a matter of grave concern for human existence. Promoting environmental protection implies maintenance of the environment as a whole comprising the man-made and the natural environment. Therefore, there is a constitutional imperative on the State Government and the municipali-

ties, not only to ensure and safeguard proper environment but also an imperative duty to take adequate measures to promote, protect and improve both the man-made and the natural environment.

- (x). In *Dahanu Taluka Environment Protection Group v Bombay Suburban Electric Supply Co. Ltd.*, (1991) 2 SCC 539., The Apex Court has held that it is primarily for the governments concerned to consider the importance of public projects for the betterment of the conditions of living of the people on the one hand and the necessity for the preservation of social and ecological balances, avoidance of deforestation and maintenance of purity of the atmosphere and water free from pollution on the other in the light of various factual, technical and other aspects that may be brought to its notice by various bodies of laymen, experts and public workers and strike a just balance between these two conflicting objectives. The court's role is restricted to examine whether the government has taken into account all relevant aspects and has neither ignored nor overlooked any material considerations nor been influenced by extraneous or immaterial considerations in arriving at its final decision.
- (xi). In *M.C.Mehta v Union of India* (1991) 2 SCC 353., the Apex Court has held that law alone also cannot help in restoring a balance in the biospheric disturbance. Nor can funds help effectively. The situation requires a clear perception and imaginative planning. It also requires sustained effort and result oriented strategic action.
- (xii). In *State of Bihar v Murad Ali Khan.*, (1988) 4 SCC 655., the Supreme Court has held that the tragedy of the predicament of the civilised man is that 'Every source from which man has increased his power on earth has been used to diminish the prospects of his successors. All his progress is being made at the expense of damage to the environment which he cannot repair and cannot foresee.

Conclusion and Suggestions

Thus, after going through research, the author has found the solution for first research question that human activities responsible for the recent observed warming and led to the effect on natural process on globe. The world countries should need to bring out

with stringent policies and more framework for the environmental concerns. Systems managed for human use, such as agriculture, commercial forests, rangelands, and aquatic and marine systems are also sensitive to climate and related changes, but are dominated by human management. This has two implications for projecting climate-change impacts, which work in opposite directions. On the one hand, disruption of these systems by climate change may have severe human impacts because we depend on them so much. On the other hand, the ability to adapt management practices to changing conditions offers the possibility of mitigating these harmful impacts. Climate change ranks among the most serious problems facing the world today. There is now a strong scientific consensus that emissions of carbon dioxide and other greenhouse gases into the atmosphere have changed, and will continue to change, the world climate, increasing average temperatures more rapidly than has been seen since long before human existed. The main source of carbon dioxide emissions is the production and consumption of fossil fuels, but there are many other contributing factors associated with industrial activity and agriculture. In addition, land use changes, including the destruction of forests for farmland, have reduced natural sources of carbon dioxide absorption, further increasing the concentration of carbon dioxide in the atmosphere. The most optimistic forecast is that climate change will be mild and the changes will happen slowly. Even in this case, local variations in the climate will disrupt traditional economic activities such as agriculture, resulting in the wasting of capital investments, significant migration, and so forth. Even if the sea level rises very little, the dangers from storms will increase, and people will need to build seawalls, to move farther from the coast, and to face other burdens and incur other costs. Warm-weather diseases such as malaria will spread, kill many people, and consequently will need to be seriously addressed. There is a genuine risk of a truly catastrophic outcome—for example, significant increases in global temperatures and massive sea level rises that would change human life in terrible ways that are difficult to imagine. There is clear evidence of climate change leading to global warming and effect on land. Proper strategy has to be planned for adaptation and mitigation. Thus climate change will add one more dimension to the problems created by uncontrolled population growth and inappropriate devel-

opment policies.

Suggestions

1. Adopting a more pluralist understanding of the values governing climate change regime, one that goes beyond common but differentiated responsibilities.
2. Equity in climate responses within developing countries.
3. Bringing about an equitable and fair solution to climate change problem will required that though historical aspect to be given consideration one cannot ignore the present level of emission which needs to be reduced for any practical solution to climate change problems.

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