

IMPACT OF CHANGING ENVIRONMENT

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Abstract

The Earth's environment lends the most favourable conditions for different forms of life to exist. In our environment, there is a very delicate balance between all the elements like breathing air in the form of oxygen, clean water, cultivable land which produces food items for us etc. Unfortunately, this delicate balance is getting terribly disturbed by the contamination of natural resources like air, water, soil etc.

Our environment is eroding very fast due to reckless pollution caused by mankind in the name of development. We all have knowingly or unknowingly contributed to pollution in some way or the other. A single family living in a metropolitan city dumps more than a ton of garbage every year. Most of this is plastic waste which is not recycled at all like mineral water bottles or soft drink bottles.

At this moment, we are posing the greatest threat to our sustaining environment. Degrading our environment at this speed is like marching on a suicide mission. The global warming, ozone layer degradation, contamination of our water bodies, pollution of the air and excessive noise pollution are the things that are affecting and deep impacting to our surrounding and environment.

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Psychological Impact

The potential impact of environment change are familiar for us. We see or hear news about extreme weather events, droughts, flooding and impacts on agriculture and infrastructure. Natural disasters have harmful effects on health and mental health. The mental health consequences of events linked to a changing global climate include mild stress and distress, high risk coping behavior such as increased alcohol use and, occasionally, mental disorders such as depression, anxiety and post-traumatic stress. Climate change related impacts can also lead to job loss, force people to move, or lead to a loss of social support and community resources, anticipation of extreme weather events and concern about the phenomenon of climate change can be stressful.

Changing environment is one of the great challenges of our time. Rising temperatures, heat waves, floods, tornadoes, hurricanes, droughts, fire, loss of forest, and glaciers, along with disappearance of rivers and desertification, can directly and indirectly cause human pathologies that are physical and mental. The phenomenology of the effects of changing environment differs greatly – some mental disorders are common and others more specific in relation to atypical environment conditions.

Changing environment also affects different population groups who are directly exposed and more vulnerable in their geographical conditions, as well as lack of access to resources, information and protection.

These mediators include economic strain, migration and acculturation stress, lowering social capital, and traumatic events among others. Efforts to increase access to mental health and changing environment with time would be appropriate responses to deal with the challenge of changing environment in the time to come.

Social Impact

Changing environment affect our society through impacts on a number of different social, cultural, and natural resources. Changing environment may especially impact people who live in areas that are vulnerable to coastal storms, drought and sea level rise of people who live in poverty, older adults, and immigrants communities. Similarly some types of professions and industries may face considerable challenges from changing environment. Profession that are closely, linked to weather and climate, such as outdoor tourism, commerce and agriculture, will likely be especially affected.

1. People who live in poverty may have a difficult time to survive with change environment. These people have limited financial resources to protect with heat, relocate or evacuate, or respond to increase in the cost of food.
2. Older adults may be among the least able to save with changing environment.
3. Young children are another sensitive age group, since their immune system and other bodily systems are still developing and they rely on others to care for them in disaster situations.
4. Living in rural areas or places most affected by environment change.
5. Relying on surrounding environment and natural resources for food, cultural practices, and income.
6. Coping with higher levels of existing health risks when compared to other groups.
7. Changing environment having high rates of uninsured individuals, who have difficulty accessing quality health care.
8. It also affects living in isolated or low income communities.

In the absence of well-designed and inclusive policies, changing environment mitigation measures can place a higher financial burden on poor households for example, policies that expand public transport or carbon pricing may lead to higher public transport fares which can impact poorer households more.

It is critical that people are brought along in the choices to be made the requires transparency, access to information and citizen engagement on climate risk and green growth in order to create coalitions of support or public demand to reduce changing environment impacts and to overcome behavioral and political inertia to decarbonization, as well as to generate new ideas for and ownership of solutions.

Economical Impact

Changing environment is one of the biggest threats of economic stability. Warmer temperatures, Sea level rise and extreme weather will damage property and critical infrastructure, impact human health and productivity, and negatively affects sectors such as agriculture, forestry, fisheries and tourism. The demand becomes less reliable, and water supplies will be stressed. Damage to other countries around the globe also affect business through disruption in trade and supply chains.

In the annual report, India's central bank stated that the country is witnessing more intense droughts, downward shifts in average rainfall as well as a higher frequency of cyclones. In 2019 alone, eight cyclones along with sharp volatility in rainfall led to an increase in the extent of crop area damaged. This is the first time that India's central bank has taken note of environment change in its annual report, according to Saudamini Das, a professor at the Institute of Economic Growth. "The issue of changing environment needs to be taken seriously. According to my estimates, around 3% GDP will adverse impact."

This severity of climate change can have dire consequences for India's agri-sector, inflation, and the overall economy especially in these tough times.

Educational Impact

The world is facing changing environment, the greatest challenge of our time, and India is the seventh most affected nation by environment change's devastating impact in 2019 according to the Global Climate Risk Index 2021 report.

A recent survey by educational company brainly found that 79% of Indian students feel it's important to study changing environment and environmental conservation. Environmental education is paramount to equip the new generation with the knowledge, awareness and skills needed to tackle changing environment and environmental challenges. India's first endeavor to include environmental education informal education was made under the National Policy on Education in 1986. The National Curriculum Framework, in 2005, further stressed the integration of environmental issues and recommended project-based learning.

In 2016, the UGC introduced a six-month compulsory course on environment studies for undergraduates from all disciplines. Environmental education in India is strongly influence by rapid economic development, which has led to a pile of environmental issues due to natural resource depletion. When students realize how closely linked environmental issues are to their lives and future, they will be motivated to conceive solutions. It will develop a behavioural change in them. Teachers also need training programs to give them confidence and knowledge in facilitating climate change and sustainability education inside and outside the classroom.

Political Impact

India is one of the most climatically vulnerable countries in the world, where there are stark socio-economic and climate settings. Most scientists believe that we need to take immediate action to mitigate the effects of changing environment. But politician at both the national and international level have done little to curb carbon emissions.

Addressing the world leaders at United Nations COP 26 at Glasgow, Modi listed out five commitments of India to combat climate change with a bold announcement that it will achieve the target of net zero emissions by the year 2070 achieving 500 giga watt non-fossil energy capacity by 2030'. India led from the front on environmental issues grabbing eyeballs across the world.

Scientific Impact

Changing environment is one of the most important global environmental challenges facing humanity with implications for food production, natural ecosystems, freshwaters supply, health etc. According to the latest scientific assessments, the earth's environment system has demonstrably changed on both global and regional scale since the pre-industrial era. Further, evidence shows that most of the warming (of 0.1° C per decade), observed over the last 50 years, is attributable to human activities.

Sources of Changing Environment

We feel hot during summer and cold during winter. These are the different environment conditions that we experience. The factors that determine the climate at a location are the rainfall, sunshine, wind, humidity, and temperature. However, the last 150-200 years environment change has been taking place too rapidly and certain plant and animal species have found it hard to adapt. Human activities are said to be responsible for the speed at which this change has occurred.

The causes of environment change can be divided into two categories- Natural and Man-made.

Natural Causes- Some of the important factors are continental drift, volcanoes, ocean currents and the earth's tilt.

- ❖ Continental drift changed the position of water bodies of the land mass and the flow of ocean currents and winds. These changes affect the environment.
- ❖ When volcano erupts it throws out large volume of sulphur dioxide (SO₂), water vapour, dust, and ash in the atmosphere. The gases and dust particles partially block the incoming rays of the sun, leading to cooling.
- ❖ The oceans cover about 71% of the earth. The oceans absorb the sun's radiation about twice as much as the atmosphere.

Human Causes

- ❖ The earth receives energy from sun, which warms the earth's surface and passes through many gases. These gases like carbon dioxide, methane, and nitrous oxide along with water vapour, comprise less than one percent at the atmosphere. They are called 'Greenhouse Gases'. The resulting enhanced greenhouse effect is more commonly referred to as global warming or climate change.
- ❖ Changing environment affect agricultural yield directly because of alterations in temperature and rainfall, and indirectly through changes in soil quality, pests, and diseases.
- ❖ Global warming will directly affect human health by increasing cases of heat-related mortality, dehydration, and spread of infectious diseases.
- ❖ Continuation of changing environment increase, extinction of various species of plants and animals could happen.

Environmental Impact

India has a reason to be concerned about environment change, as a vast population depends on climate sensitive sector like agriculture, forestry and fishery for their livelihood. The adverse impact of climate change in the form of decline in rainfall and rise in temperature has resulted in increased severity of livelihood issues in the country. Changing environment would represent additional stress on the ecological and socioeconomic systems that are already under tremendous pressure due to rapid industrialization, urbanization and economic development. The continuous and unabated emission of millions of tons of carbon dioxide into the atmosphere, even if originating mainly from a few countries or regions can lead to global and permanent environment changes with potentially consequences such as rise of sea water and submergence of numerous island and coastal areas and rise in ambient temperatures leading to significant impact on cropping patterns and agricultural productivity.

(The Hindu survey of Environment 2009)

Sustainable Development

India has the tenth largest forest area in the world. In 2020, India ranked third globally in increasing its forest area during 2010 to 2020. India's forest has increased by more than 3% during 2011 to 2021. The plastic waste Management Amendment Rules, 2021 seeks to strengthen the circular economy of plastic packaging waste, promote development of new alternatives to plastic and sustainable plastic packaging.

The ground water resources management and the findings indicated that our country need to manage its ground water resources carefully, including recharge and to stem over-exploitation. The need to start the one-word movement 'LIFE' which means 'Lifestyle for Environment' urging mindful and deliberate utilization

instead of mindless and destructive consumption was underlined.

Solid Waste Management

With rapid urbanization, the country is facing massive waste management challenge. Over 377 million urban people live in 7,935 towns and cities and generate 62 million tons of municipal solid waste per annum. Only 43 million tons of the waste is collected, 11.3 MT is treated and 31 MT is dumped in landfill sites. Almost all municipal authorities deposit solid waste at a dumpyard within or outside the city haphazardly.

The key to efficient waste management is to ensure proper segregation of waste at source and to ensure that the waste goes through different streams of recycling and resource recovery. Sanitary landfills are the ultimate means of disposal for unutilized municipal solid waste from waste processing facilities and other types of inorganic waste that cannot be reused or recycled.

Bio-Diversity Conservation

The loss of biological diversity is a global crisis. There is hardly any region on the earth that is not facing ecological catastrophes. Of the 1.7 million species known to inhabit the earth, one third to one fourth is likely to extinct within the next few decades. It is estimated that about 50 species are being driven to extinction every year, bulk of them in tropical forest, due to human interference species are the primary focus of evolutionary mechanism and therefore the origin and evolution of species are principles agents in maintenance of global biodiversity. Species diversity in natural habitats is a high in warm areas and decreases with increasing latitude and altitude. On land, diversity is higher in areas of higher rainfall and lower indrier areas. Tropical moist forests undoubtedly, are the richer areas. These comprise only 7% of the world surface are, but contain over 90% of all species.

In India, we are endowed with a rich diversity of biogeographically distinct regions due to varying physical conditions and species groupings.

Eco-generation

According to a study conducted by researchers at NASA and California Institute of Technology “By 2100, global climate change will modify plant communities covering almost half of earth’s land surface and will drive the conversion of nearly 40% of land based eco-systems from one major ecological community type-such as forest, grassland or tundra-toward another.” India has already begun experiencing these changes. While Mumbai, a city in Maharashtra, experienced the highest June rainfall breaking all records set in the past 50 years. Some other parts of Maharashtra like Solapur and Latur have witnessed one of the worst droughts experienced in the region.

The rising land and water temperatures have resulted in melting of glaciers at Himalayas and has induced a huge stress over the water, food and energy security in India. The rising water temperatures also increase the intensity of cyclones experience by the country.

During the lockdown, citizens in Delhi have been able to see the Himalayan ranges for the first time. Hence, some might believe that the outbreak of the pandemic has allowed the ecosystem to heal completely. Therefore, it is essential to educate Indian citizens about the importance of a green economy and provide the impetus for people to set up green institutions.

Ecological Imbalances

Ecology is the science of the study of ecosystem. The most important point being that the natural balance is an ecosystem is maintained. This balancing be disturbed due to the introduction of new species, the sudden death of some species, natural hazards or manmade causes.

In the name of development, we remove trees and vegetation, change how we use land, and keep expanding paved areas. All these not only affect the soil ecology, but also the water balance. Increased urbanization also requires more water to feed the city’s population and industry, often requiring deeper and deeper wells to be drilled or water to be moved from even more distant locations. Increase of pavement area not lonely lessens the amount of water vaopur than transpires back from the vegetation but also contributes to ground water

pollution if the salt used to melt road ice were allowed to runoff into the natural drainage system. The following point highlight the five main factors responsible for ecological imbalance in India. The factors are-

1. Degradation of land and soil erosion
2. Deforestation
3. Faulty utilization of water resources
4. Environmental problems form faulty mining practices and
5. Industrial and atmosphere pollution.

The Earth's organisms interact with their environment in a delicately balance cycle. This cycle of life is in jeopardy from humanity's over use of natural resources and damage to the ecosystem form pollution. So we all are take oath about maintain balanced ecosystems for our next generations.

Environmental change and its impact on Literature, Religion & Culture

Literature:- In the recent past literature has predominantly become engaged with the discourse related to the environment. In the midst of 20s, the cultural critics and environmentalists could rightly ask why the authors are not engaged with the subject of nature and environment? This artistic and scholarly attention has gained increased manifestation of environment change. Environment fiction is also known as cli-fi and several scholars related to the field have defined it. The butterfly effect (2018) by Rajat Chaudhri, The Hungry Tide (2004) by Amitav Ghosh, and The God of Small Things (1997) by Arundhati Roy etc. are some good example of cli-fi literature.

Religion:- Changing environment is entangled with humans, it is also entangled with all the ways in which religion attends human ways of being. The connection between religion and environment change includes social science research into how religions identity figures in attitudes towards environment change, confessional and constructive engagements of religions thought with environment change from various communities and traditions, historical and anthropological analyses of how environment affects religion and religion interprets climate, and theories by which changing environment may itself be interpreted as a religions event. Responses to changing environment by indigenous peoples challenge the categories of religion and of climate change in ways that illuminate reflexive stresses between the two cultural concepts.

Culture:- Changing environment is affecting our lives in every possible way. It is 'culture' that determines what we believe, what language we speak, what festivals we celebrate, what habits, art, and tradition we follows what heritageful proud of and how we define our lives symbolically. Not only the presence of changing environment at our doorstep but it is changing even the 'cultural elements' of our lives. Changing environment is hampering something relatively 'invisible' that is our culture- our way of life.

The questions are so many and are ominous about changing environment and its impacts on our earth?, but they are the harsh realities. It's important to understand that our fight against the changing environment and its crisis are not just preventing the immediate and visible alterations to human society, but also to avoid long term impacts that work in deeper ways to affect our earth's environment.

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