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A Study On Human Activities And Environmental Challenges

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Abstract:

Humans and environment are connected in an intimate way because they both directly and indirectly rely on nature for the necessities of life, such as food, water, and shelter. They can get both non-renewable and renewable resources from nature to meet their needs. In the twenty-first century, people are simplifying their lives and complicating natural resources . In one way or another, people misuse natural resources, which damage the ecosystem. They are tampering with natural resources and negatively affecting both the plant and animal kingdoms in an attempt to make their way of life more sustainable. These repercussions include depletion of the ozone layer, global warming, and contamination of the air, land, and water, among many more. These actions are the cause of numerous diseases, including cancer, hepatitis, malaria, cholera etc. As technology advances, people create new gadgets and appliances to make their lives easier. However, they are unaware of the potential consequences of their inventions, as products like air conditioners and refrigerators, are used extensively in homes and release harmful substances that affect both humans and the environment. Additionally, excessive use of these products can lead to mental and physical health issues. Furthermore, these health issues are making it more difficult for the government to provide the necessary medical facilities, forcing it to invest large sums of money in the development of new medications and vaccinations that have the potential to save lives. Thus, it can be concluded that any nation's sustainable development is closely linked to its environment. This essay explores how urbanization, industrialization and modernization is the cause of environmental problems.

Index Terms: Depletion, sustainable, vaccination, contamination, environment

1. INTRODUCTION

An organism's habitat encompasses everything that surrounds or influences it during its life, whether it be man-made or natural. In earlier days early man included only physical environment, such as water, air, forests, rivers, and land and lived an enjoyable life. However, man expanded his surroundings, including his social, economic, and political roles, as civilization developed and time went on. Physical environment provide vital

resources for production and sustenance, such as soil, water, and minerals. By providing air and water it supports life, it also provides leisure and aesthetic advantages through the beauty of nature.

: Human activities

From viruses to humans every species engages with their surroundings and rely on them for a variety of necessities, such as food, water, shelter, etc.

The term "human activities" describes the diverse acts that people engage in, such as employment, leisure, social relationships, and cultural customs. These pursuits include agriculture and industry to recreation and communication, and they have the potential to affect the environment, economy, and society.

The natural environment has been negatively impacted by the shifting human-environment relations. Although human actions to satisfy their selfish desires have begun to harm the environment in many ways, such as through misuse of natural resources resulting in air pollution, water pollution, land degradation, soil erosion, sound pollution, global warming, etc., The interdependence of people and the environment is not new. Ecological systems, according to Berkes et al. (2003), are self-regulating communities of living things that communicate with their surroundings and with each other; social systems ,however deal with human-led governance using human knowledge, ethics, and worldviews that define the use of natural resources and the relationship between humans and their environment; and social ecological systems, which refer to the integrated concept of humans in nature, express the interconnected nature of social systems and ecosystem.
Anthony Giddens, a sociologist, distinguished between two types of risk in 1999: created risk and external risk. External risks involve earthquakes and other natural calamities, floods, and volcanoes; human-made hazards include nuclear reactors, large dams, chemicals like pesticides, and illnesses like silicosis. These are the outcomes of human society's modernization process, which was brought about by both an increase in human involvement in production and a reduction in these hazards.

1.2 Meaning of sustainable development

Sustainable development is the ability to meet present needs without endangering the ability of future generations to meet their own needs. This idea highlights striking a balance between social justice, environmental preservation, and economic progress. With frameworks like the United Nations Sustainable Development Goals (SDGs), which were formed in 2015, it seeks to integrate these three dimensions in order to ensure long-term sustainability and solve global issues like poverty and climate change.

Economic expansion, social inclusion, and environmental preservation are its three primary foundations. The objective is to preserve ecosystems and resources for upcoming generations ,while establishing a just and balanced society. By tackling issues like poverty, inequality, and climate change, this strategy seeks to improve everyone's quality of life and create a healthy planet.

Sustainable development also aims at development of a nation. Three important processes of social change that help to explain the development process are modernization, industrialization, and urbanization. With the discourses of enlightenment, modern societies began to form in Europe in the eighteenth century. Modernity, a social life style that defines contemporary societies, was associated with industrialism (the industrial way

of life) in the nineteenth century of social life) and the profound shifts in society, the economy, and culture that go along with it. Scientific advancements resulted to the Industrial Revolution, which changed the world's agricultural system to one that was primarily industrial. In the nineteenth and twentieth centuries, the establishment of factories caused a huge number of individuals who worked in agriculture to migrate to cities in search of jobs.

2 .Urbanisation

People's migration from rural to urban regions is known as urbanization, and it results in changes to land use and economic activity as well as larger urban populations. More than half of the world's population already lives in cities, and estimates suggest that by 2050, this percentage will likely increase to almost 66%, especially in Asia and Africa. In India, towns that have a municipal corporation, municipal area committee, notified area committee, or conservation board are considered urban areas. Less than 1000 people per square kilometer, or 400 per square kilometres, is the definition of this density.Natural population increase and rural-to-urban migration, which are impacted by living circumstances and economic possibilities, are the major reasons of this phenomenon. Rapid urbanization, however, frequently leads to problems including poor infrastructure, pollution, and a lack of available housing also lead to hazardous urban development and building; cities also become less viable. This requirement, however, raises the demand for rural areas close to the city and causes these resources to degrade and become more urbanized. .

2.1 Co- relation between Urbanization and deforestation

Because growing urban areas frequently result in the conversion of forests into land for homes, infrastructure, and industry, urbanization and deforestation are intimately intertwined.

The following are important details about their relationship:

Forests are often cut down to create space for residential, commercial, and industrial developments as cities expand. This process splits ecosystems in addition to reducing forest cover. For infrastructure Development roads, transit systems, as well as utilities, are all required for urbanization, and their expansion into forested regions might result in increased deforestation.

Population Pressure :As more people live in cities, there is a greater need for resources like land, lumber, and agricultural products. This frequently leads to deforestation as trees are felled for farming or lumber harvesting.For Economic factors in emerging nations where rapid urbanization is prevalent, economic growth linked to urbanization may encourage logging and land conversion for cultivation .But it has some environmental impact as urban heat islands and pollutants linked to urban areas can make deforestation worse. It also adds to climate change, biodiversity loss, and water cycle disturbance.

2.2 More Effect of Urbanization on Environment

Urban Sprawl

More additional lands are developed for making houses, social facilities, commercial space, and other urban land uses due to the annual increase in urbanization. However, the absence of distinct urban boundaries has resulted in urban sprawl that is encroaching on important agricultural areas, environmentally sensitive areas, and unsuitable locations for development. Besides, the high demand of land use at strategic areas also has led to land use conflicts. These situations have contributed to various urbanization issues such as environmental pollution, traffic congestion, depletion of green areas and degradation in the quality of urban

living. The rate of urbanization which is increasing every year has required more development of new areas for housing, social amenities, commercial and other urban land use and as urbanization continues, solid waste management and disposal have emerged as major challenges. Increased noise levels are also contributing to issues like hearing loss. Air, water, soil, and noise pollution are the four main ways that industries harm the environment.

Urban Area Corresponding Metropolitan Region

Delhi 10 Years: 90% of growth outside core districts

Kolkata 20 Years: 95% of growth outside core municipality

Mumbai 50 Years: 98% of growth outside core districts

The effects of urban growth on the environment extend well beyond cities. as agriculture intensifies on the remaining undeveloped land in fast urbanizing areas and is expected to spread to new areas. Moreover, urban environments evolve patterns of precipitation at hundreds of square kilometer.The global climate will be impacted by urbanization as well. It is estimated that approximately 5% of the emissions overall from deforestation in the tropics

and land-use change will come from direct loss of vegetation biomass from places with a high likelihood of urban expansion.

3. Industrialisation

Use of steam power in Great Britain during the second half of the eighteenth century and significant technological advancements in textile production left a lasting impact on both present and future observers. In hindsight, these changes were referred to as the "industrial revolution" in the nineteenth century.

In many ways, the phrase "industrial revolution" is deceptive. It ignores the significance of growth in other economic sectors, the consistency with previous developments in Northwest Europe, particularly in the Low Countries, and the incremental character of increases in productive capacity. According to Crafts (1983), Maddison (1982), and Maddison (2007), the acceleration of British productivity development did not begin in the eighteenth century as is commonly believed, but rather in the early nineteenth century.

From the middle of the nineteenth century onward, India was largely headed toward industrialization, though it may never have arrived at its final objective.

Economic growth has resulted from industrialization, but it has also increased population, led to urbanization, put clear strain on the fundamental systems that support life, and brought environmental effects closer to the threshold of tolerance.

3.1 Effect of industrialization on Environment

Exhaust from Industrial processes causing air pollution

Fig. 1: Effect of industrialization on Environment

Numerous industries have been formed to meet the daily demands of the expanding population. These industries use raw resources, process them, and then create final goods, choose the final products but a variety of byproducts are created, and these waste materials can be solid, liquid, or gas. Instead of properly disposing of this trash, industries emit gases into the atmosphere, which pollutes the air, and liquid and solid waste are combined with soil or water, which pollutes the land and water. Thus degradation of the land and industrial pollution is caused We can no longer overlook the issue of land degradation brought on by industrial pollution, which affects both industrialized and developing countries.

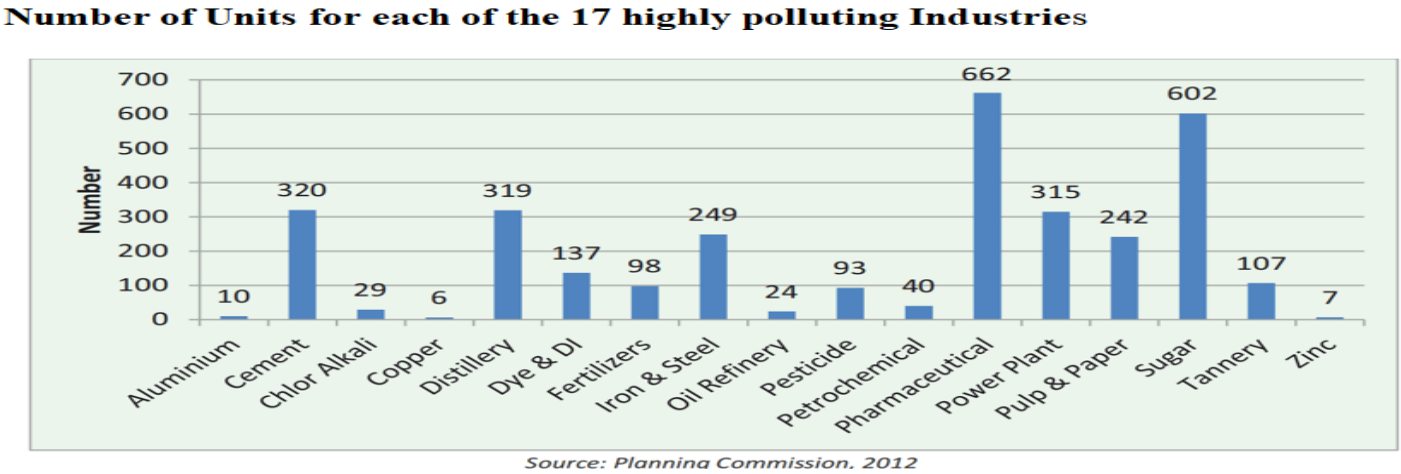


Fig. 2: Highly Polluted Industries

Industries have effected the environment by influencing the quality of the air, water, solid waste, and noise pollution brought on by population expansion. The air is contaminated by excessive use of air conditioners, refrigerators, and household appliances, as well as by harmful emissions. Deteriorated quality of water and increased human activity in metropolitan areas are examples of how humans are interfering with the natural

ecology The air is contaminated by excessive use of air conditioners, refrigerators, and household appliances, as well as by harmful emissions. Deteriorated water quality and increased human activity in metropolitan areas are examples of how humans are interfering with the natural ecology-industries have effectedthe environment by influencing the quality of the air, water, solid waste, and noise pollution brought on by population. Thus air, water, soil, and noise pollution are the four main ways that industries harm the environment.

4. Modernisation

A society's social, cultural, political, and economic structures are all altered by the multifaceted process of modernization. New ideals of capitalism, citizenship, democracy, and progress were brought about by industrialization in Britain and the political upheavals in England, France, and the US.

According to James O. Connell (1976), modernization is the process by which a traditional or per-technological society changes into one that is marked by machine technology, logical and secular ideas, and highly distinct social frameworks. It entailed embracing "Western" political and economic structures. " The social transition process by which less developed societies adopt traits from more developed ones societies; the process is activated by international, or inter-societal, communication," says Daniel Lerner (1958) of modernization. The economic side of development of modernization, which is a social transformation. It suggests a societal process that creates an atmosphere where productivity per person is increasing.

4.1: Modernisation And It's Effect On Environment

Anthony Giddens, a sociologist, distinguished between two types of risk in 1999: created risk and external risk. External risks include natural disasters like earthquakes, floods, and volcanoes; human-made hazards include nuclear reactors, large dams, chemicals like pesticides, and illnesses like silicosis. These are the outcomes of human society's modernization process, which was brought about by both an increase in human involvement in production and a reduction in these hazards. Modernization is done in various fields out of which agriculture is one. Some effects of modern agriculture are discussed below:

4.2: Effect of Modern Agriculture on Environment

The agriculture sector in India supports the livelihoods of around 42.3% of the people and accounts for 18.2% of the nation's GDP3 at current prices. The nation is a major producer of agriculture, ranking second in terms of rice, wheat, cotton, and other crops, and first in terms of milk, pulses, and spices. However, compared to other big producers, the country's crop yields are significantly lower.

Preparing the soil for crop growing, harvesting, greeting, and keeping livestock are all included in agriculture. Modern agriculture began with the introduction of hybrid seeds of a single crop variety, advanced technology for recruiting, fertilizers, pesticides, and water to produce enormous quantities of a single crop. Many issues, such as micro nutrient imbalance, are brought on by farmers' notions of chemical fertilizers for good production. For instance, in Haryana and Punjab too much fertilizers use has resulted in a zinc micro nutrient shortage, which has affected soil productivity. Nitrate pollution is the second, which is caused due to too much nitrogenous fertilizers are used on soil, contaminating groundwater, which can lead to several health issues when ingested. When pesticides are used in crop fields, beneficial or non-target creatures die. Additionally, when these harmful compounds spread from crops to animals, they can cause cancer and other

health risks. A growing challenge in agriculture pertains to sustainability issues like over-exploitation, degradation of natural resources, and addressing climate change effect.

5. Environmental Challenges Due To Industrialisation, Urbanisation And Modernisation

Minerals, water, forests, and other essentials natural resources depletion is a result of excessive consumption and unsustainable activities. Biodiversity and ecosystem services are at risk. Some environmental issues are discussed below:

5.1: Climate Change:

The quantity and quality of natural resources are impacted by climate change. Agricultural productivity, water supply, and energy resources can all be disrupted by extreme weather events, which makes sustainability initiatives more challenging.

Carbon dioxide (CO2) and other greenhouse gas (GHG) emissions are the major cause of unfavourable climate change. The Panel of Intergovernmental Experts According to the IPCC's Climate Change report, emissions are a major concern since CO2 can linger in the atmosphere for 300–1000 years, leading to global warming and environmental damage such the melting of polar ice caps.

Carbon dioxide, methane, and nitrous oxide concentrations in the global atmosphere have significantly increased since 1750 due to human activity, and they currently far above pre-industrial levels seen in ice cores dating back thousands of years.(Alley et al., n.d.)

Climate change also effects agriculture.Due to climate change and raising of carbon dioxide and temperature,rainfall is effected which directly affects crop production.According to Aggarwal ,2003 in the year 2020 the crop production was about 75 thousand million tonnes and it has been projected the crop production to decline in 2070 to about 60 million tonnes. If the climate change is not looked after this will decrease from decades to decade.

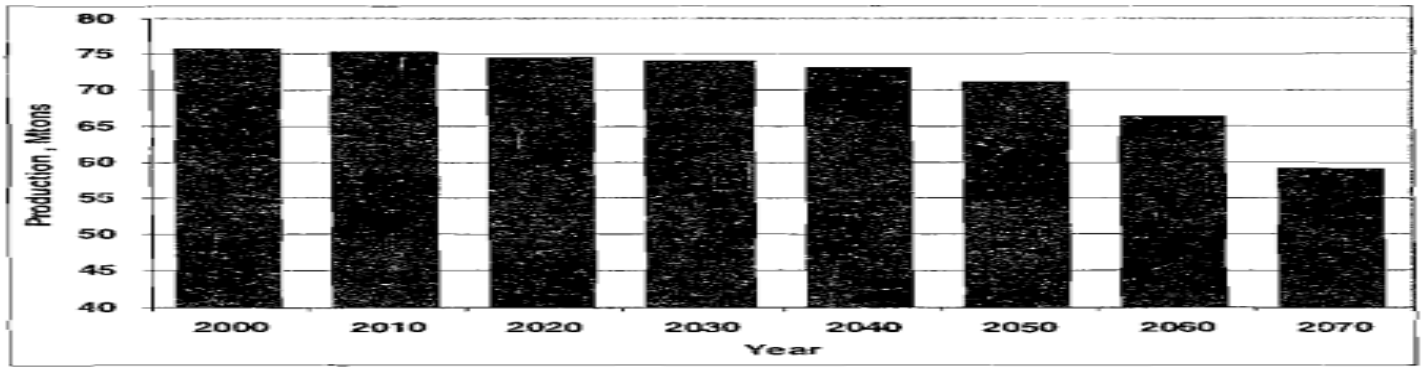


Fig. 3: India's Production of crops in million tons

Source: (Aggrawal,2003)

Possible measures

During the UN Climate Action Summit on September 23, 2019, India unveiled the Coalition for Disaster Resilient Infrastructure (CDRI). By strengthening the capacity of both new and existing infrastructure systems to withstand the risks of disasters and climate change, it is an international partnership between national governments, multilateral development banks, UN programs and agencies, funding sources, the commercial sector, and educational and research institutions with the goal of promoting sustainable development.

The National Mission for Sustainable Agriculture, a part of the National Action Plan on Climate Change (NAPCC), aims to create and implement strategies that would make Indian agriculture more resilient to climate change. One of the most crucial steps in combating climate change is ensuring that farmland receives guaranteed irrigation. This is relevant to Rainfed Area Development (RAD), which is implemented under the NMSA to boost productivity and lower risks associated with climate uncertainty. Under the RAD initiative, 7.33 lakh hectares of land have been covered and ₹1.74 thousand crore has been released. '(The 2024 Economic Survey)

5.2: SCARCITY OF WATER

The quality of natural resources can be lowered by industrial operations and waste disposal that contaminate the air, water, and soil. Pollution makes sustainable management more difficult by endangering ecosystems and human health.

India's population growth is causing rapid urbanization, which is a serious problem because of shortage of drinking water and the country's population is expanding quickly.,(Kumar and Gautam,2014).

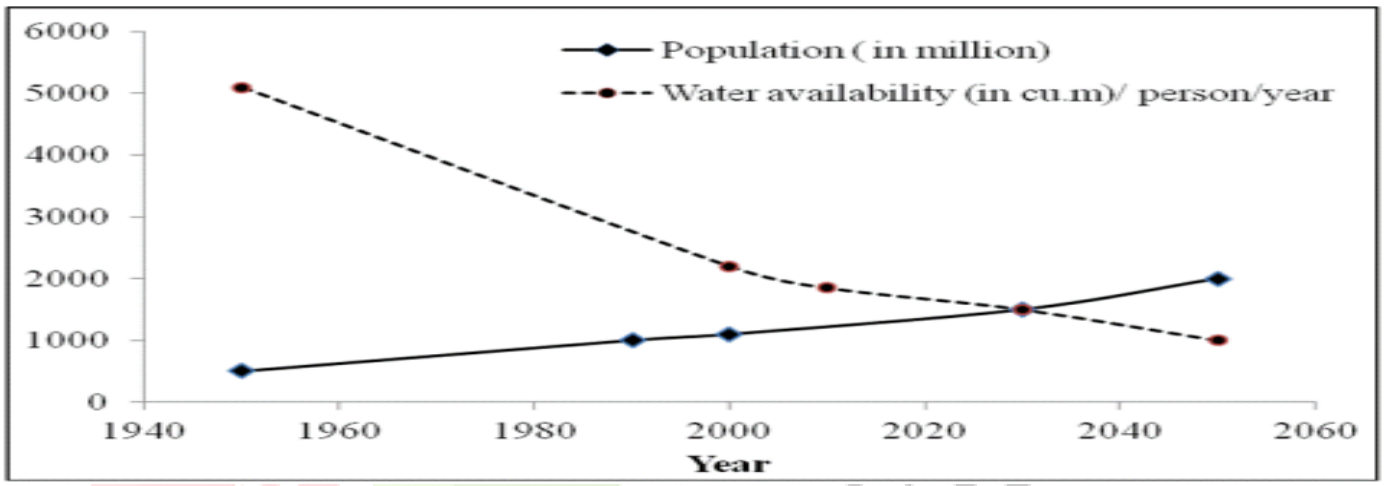


Fig. 4: Scarcity of Water

Observed and projected decline in per capita average annual freshwater availability and growth of population from 1951 to 2050.(Kumar & Gautam,2014)

India requires 60% of its water for irrigation, which primarily uses groundwater, and 85% for drinking. Compared to the United States, which has 0.2 million bore wells, India has over 20 million. The biggest victims of coal mining operations are the water bodies in the affected areas.(EdS. Indra N. Sinha, Mrinal K. Ghose and Gurdeep Singh)

The quality of ground and surface water may decline in the future due to extensive mining operations in and around the coalfield districts.(Kaur & Sharma 1996)

The Accelerated Irrigation Benefit Programme (AIBP) and Har Khet Ko Pani (HKKP), the two main components of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), encourage the expansion of area of irrigation.(Economic Survey 2024).

Namami Gange believes that reforestation is essential to the Ganga's recovery which will add to underground water storage.(Joshi, n.d.)

5.3: POLLUTION

Unwanted materials that are bad for the environment are called pollutants. Several studies have shown that different forms of pollution negatively impact human reproduction and health. Reduced prenatal growth is a result of noise pollution from driving; lead is one example of this undesired energy in the environment. The main pollutants emitted by human activity are sulfur dioxide (SO2) from volcanoes and factories, and nitrogen oxide (NOx), which is created when combustion occurs at high temperatures.When fuel, such as coal, wood, etc., is not completely burned, carbon monoxide (CO) is emitted. Vehicles also emit CO. Ozone layer damage is caused by CFCs, or chlorofluorocarbons, which are emitted during refrigeration.

Besides water and land, air is necessary to each organism's ability to survive. However, not all places have the same level of air quality due to pollution, which has increased due to urbanization and industrialization. Numerous illnesses in both humans and animals are brought on by this contaminated air. Any nation's progress is reliant on the air quality, which has an impact on people's lives directly or indirectly.

The pressure of xenobiotics, man-made chemicals, or other changes to the natural soil environment is what causes soil pollution. Industrial waste deposits, chemicals used in agriculture, the use of pesticides and weedicides, dry sludge, and sewage are major causes of soil contamination. Urbanization has also resulted to an increase in commercial and domestic waste, such as household rubbish. (Dr. Dinesh Kumar and Kuldeep Kaur, 2020).

Mining is also a cause of pollution.The valleys of the Damodar and Subernrekha rivers were the starting point for the industrialization of the Chotanagpur plateau region. Ironically, India's most polluted river is the Damodar. The Damodar drainage system receives 130 million liters of industrial effluent and more than 65 million litres of untreated domestic water daily. Up to eleven coal washeries with an installed capacity of 20.52 million tons per year are located in the region. One coal washery alone was dumping more than 45 tonnes of fine coal into the Damodar each day, according to a study conducted in the area. (*Impact of Mining and Industries in Jharkhand - South Asia Citizens Web*, n.d.)

Dense plantations should be properly constructed next to coal mines to reduce soil erosion and air pollution. Since any disruption in biodiversity results in a significant shift in the flora and fauna and ultimately the ecosystem, it,s necessary to establish a variety of types of plants that are both environmentally friendly and preserve the biodiversity in the coal mine area (Priyadarshi,2008).

Reduced soil fertility, decreased nitrogen fixation, increased eradibility, and an imbalance in soil fauna and flora are all consequences of soil pollution. The effects of soil pollution include the discharge of polluting gases, the release of radioactive rays that cause health issues, the entry of industrial hazardous substances into subterranean water, and disturbance of ecological equilibrium.

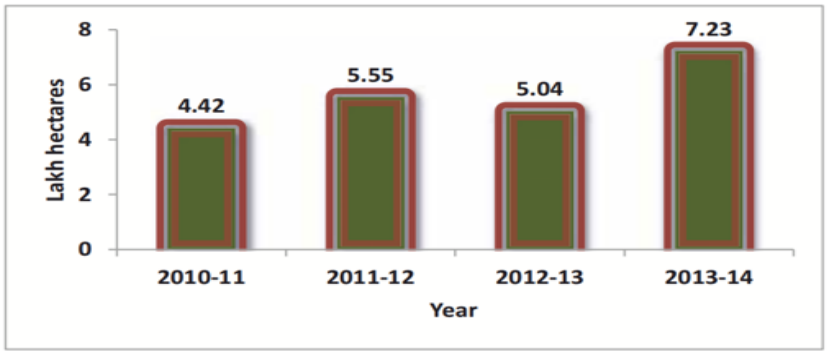
One type of pollution caused by cooler and industrial emissions is smog. According to the WHO, air pollution claims the lives of 2.4 million people annually. According to a University of Birmingham study, motor vehicle air pollution and pneumonia-related mortality are strongly correlated (Shyam Bihari Sharma et al)

Five primary technologies—diversion systems, containment ponds, groundwater pumping systems, subsurface drainage systems, and subsurface barriers—should be employed to maintain the quality of the water (Priyadarshi,2008)

Control of soil pollution:

To reduce solid waste pollutants, materials such as glass containers, plastic bags, paper, cloth, and other items can be repurposed at home rather than thrown away. Climate change has an impact on agriculture because it causes temperature fluctuations, carbon dioxide levels to rise, and rainfall, which crops require for healthy growth.

Organic Farming is one of the measure to control soil pollution,as in organic farming only natural made manure are used instead of chemical fertilizers which causes the least soil pollution, natural and organic farming improves soil health and lowers pollution levels by producing food grains and other crops without the use of pesticides or chemical fertilizers



Source: Department of Agriculture and co-operation, Central Statistics Office, Ministry of Statistics &Programme Implementation, Govt. of India; (from Annual Report of Agriculture 2014-2015)

Fig. 5: Area under Organic Farming (2010-2014)

According to Annual Report of Agriculture 2014-2015 area of organic farming is increasing, which will add on to positive environment.

The PM Programme for Restoration, Awareness Generation, Nourishment, and Improvement of Mother Earth (PM-PRANAM) initiative encourages states to use less chemical fertilizer. It promotes eco-friendly techniques such the use of organic fertilizer, nano DAP, and nano urea as fertilizer substitutes. Under the aforementioned program, a State or UT that reduces its usage of chemical fertilizers (Urea, DAP, NPK, and MOP) in comparison to the average use over the previous three years will get a grant equal to 50% of the fertilizer subsidy saved during a particular fiscal year. Utilizing "Urea Gold," which is urea that has been infused with sulfur to address sulfur deficiencies, is another method for improving the nutritional balance of the soil.(The 2024 Economic Survey)

Under the Namami Gange Program some measures to be taken are:

Zero Budget Natural Farming: In which within ten kilometers of the Ganga River, the emphasis will be on organic farming devoid of chemical fertilizers.

Gobardhan: this location will employ cow dung as soil manure and rich agriculture.(Joshi, n.d.) For proper waste management -Reuse of treated water in which aims to generate revenue for Urban Local Bodies (ULBs) by reusing slug and waste water in transportation, agriculture, and commerce.

Practicing sustainable agriculture through more usage of local seeds and natural farming practices. Agriculture residue to be used for mulching and composting are also some measures.

5.4: BIODIVERSITY LOSS

As the demand for raw materials rises, global supply chains can cause certain nations to overexploit their natural resources while ignoring sustainable practices. Cities in India, such as Chennai, Delhi, Mumbai, and Kolkata, have developed into metropolitan areas. India is fortunate to have a vast natural biodiversity, but as the country develops, it is being destroyed. National parks, wildlife sanctuaries, and reserved forests are examples of preservation in the modern era.

The loss of biodiversity brought on by resource exploitation and habitat destruction can make ecosystems less resilient and less able to adjust to changes, which makes sustainability initiatives more difficult.

Of the 3831 breeds of sheep, pigs, cattle, goats, horses, and water buffaloes, 618 are thought to have gone extinct.The countries with the highest per capita income, like Switzerland, have historically had the highest breed extensions in Europe and the former USSR, as demonstrated by Hall and Ruane.

Population in cities are becoming environmentally conscious, though, and this step could add in preserving biodiversity.

The Namami Gange Project has put a lot of effort into protecting biodiversity. They look after the endemic and endangered species.(Joshi, n.d.)

5.5: GREENHOUSE GAS EMISSION

Globally, the transportation and power sectors contribute the most to greenhouse gas emissions, followed by the waste, agriculture, and industrial combustion sectors.

The compound annual growth rate of greenhouse gas emissions was 4.2% between 1990 and 2000. Emissions increased from 988 to 1228 to 1484 million tonnes in 1990, 1994, and 2000, correspondingly. Emissions from the industrial sector increased at the fastest yearly rate over this period. In 2000, India's emissions made up 24% of US emissions, 31% of Chinese emissions, and 80% of USSR emissions, in comparison to some of the world's largest emitters.(Sharma et al., 2006).

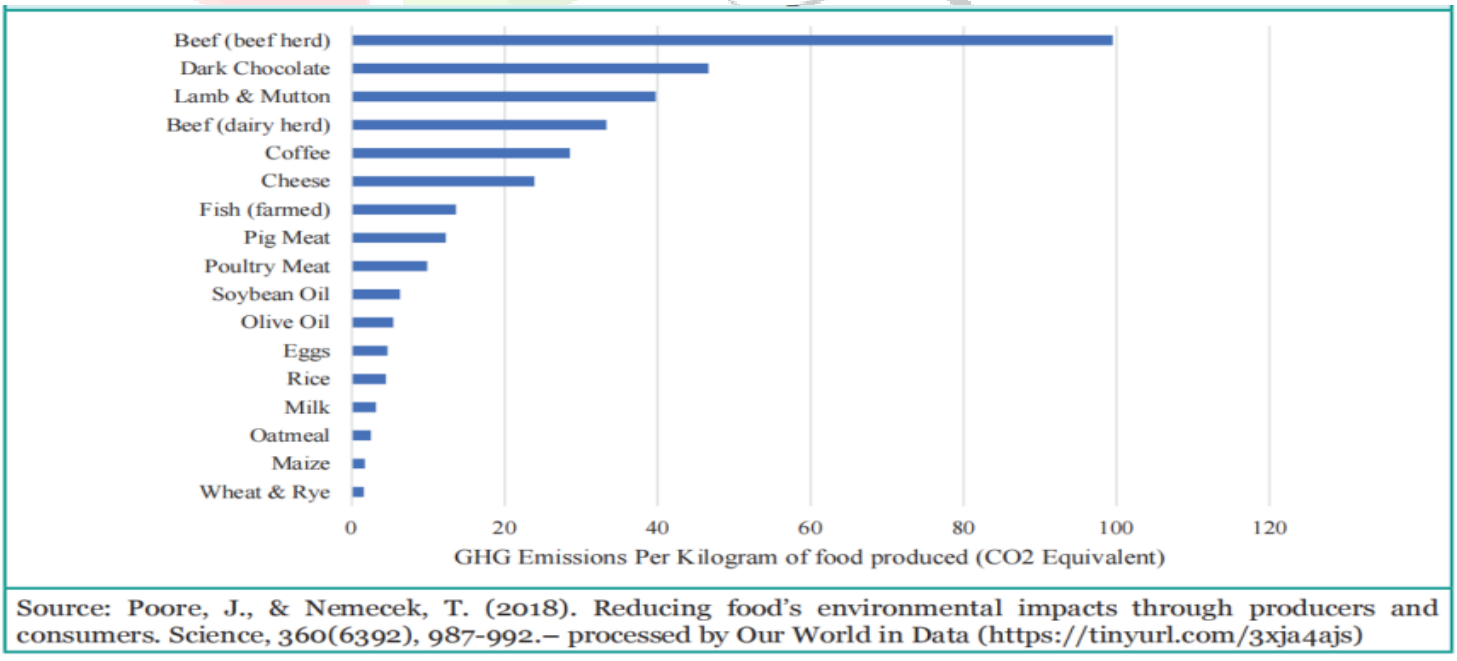


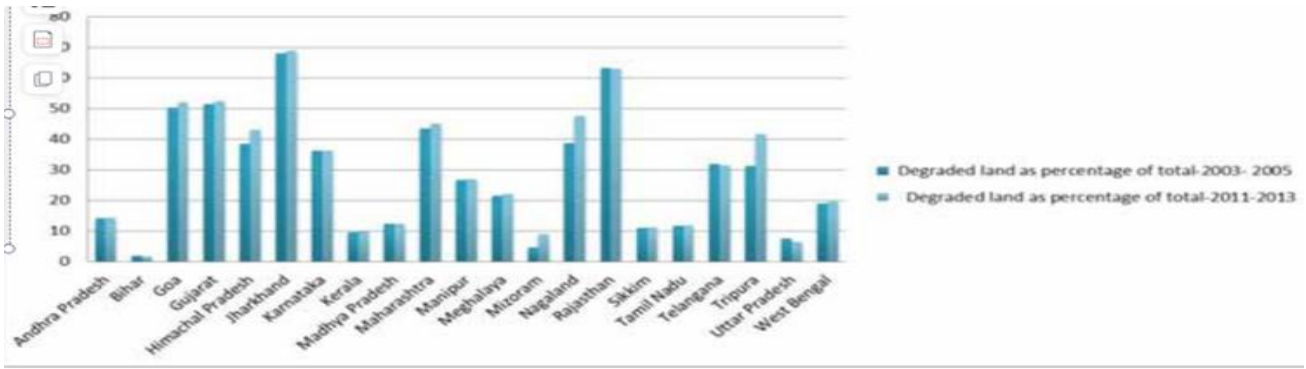
Fig. 6: Greenhouse gas emission across the supply chain for various food products

A diversified strategy involving community involvement, policy reform, and cutting-edge technologies is needed to address these issues. The following list includes some policy recommendations for encouraging GHG mitigation in Indian agriculture. Support for new institutions and creative payment methods for agricultural mitigation. Agricultural production is distinct from other sources of greenhouse gas emissions due to its small size, geographical dispersion, and frequent lack of institutional and physical infrastructure. These variations must be reflected in cost-effective payment systems that promote agricultural mitigation (IFPRI, 2009). Create an extension system to aid in climate change mitigation. Providing farmers with information on new regulatory frameworks, new government goals and policies, and connections to new markets—particularly those for carbon—may all be part of this support. financing for studies that advance knowledge and forecasts of how agriculture and climate change interact. Permit funding methods that acknowledge the link between good climate change policies and pro-poor development policies for sustainable growth. Provide money for institutional innovations and infrastructure that will increase the productivity of water and nutrients. Encourage creative institutional systems that incentivize water conservation among agricultural users. investments in institutional and physical rural infrastructure to strengthen agriculture's ability to withstand the impacts of climate change.

5.6: Land Degradation

Land degradation is considered one of the negative result of human activities, in this the land becomes less productive and has many reasons like unsustainable land management practices such as overgrazing, deforestation, etc some natural causes can be flood, earthquake, landslide, volcanic eruption. Beside this includes population density, poverty land tenure and access to agriculture extension.

The conversion of natural lands to croplands, pastures, urban areas, reservoirs, and other anthropogenic landscapes represents the most visible and pervasive form of human impact on the environment .We can conclude from this that large-scale landcover change is largely a rural phenomenon, but many of its drivers can be traced to the consumption demands of the swelling urban middle classes.



Source: Desertification & Land Degradation Atlas of India (based on IRS Advanced Wide Field Sensor data of 2011-13 & 2003-05)

Fig. 6: State wise Percentage of Land Degraded Area

Source: (Sreenivas et al., 2021)

According to Sreenivas,2021 in 2003 -2005 Bihar is the state with lowest land degraded and Jharkhand state highly degraded reasons can be mining industries. According to Md.Afsar Alam and Zubairul Islam in their study "Spatial Distribution of different types of degraded and wastelands in India : A Case Study of Bihar state that the Total Graphical Area is 94163.3 and land degraded area is 1371.0 percentage of land degraded was 1.46 while Jharkhand's Total Graphical Area 79714 .0 and land degraded area was 3943.0 and the percentage of land degraded of total graphical area percentage of land degraded area was 4.95.

Green spaces, reforestation initiatives, and sustainable land-use planning are some of the sustainable practices being used in some metropolitan areas to reduce the negative effects of urbanization on forests. Overall, urbanization can promote economic growth, but it also poses significant challenges to environmental sustainability and forest protection.

6. Conclusion

Natural resources, such as forests, agricultural land, and water supplies, are essential to human survival. Cities emerge from villages, and then metropolitan areas. Examples of altered natural features include hills, valleys, rivers, ponds, streams, seashores, and beaches. Rapid urbanization, industrialization, and modernization are a few examples of human endeavours' that are intended to advance civilization and society but have some negative effects on the environment. Rapid population increase has altered land use, leaving only parks and gardens in metropolitan areas. Rapid urbanization, modernization, and industry have enhanced the world's environment, but the environment and human health have suffered throughout this brief period of human economic growth. The main drivers of India's third-largest greenhouse gas emissions, which make up around 5.3% of global emissions, include emissions from factories and human modernization efforts like urbanization. Urbanization is accelerating in India's largest cities. The quality of air in India's main cities is one of the most significant environmental issues. It affects the local climate and population health, leading to diseases like cancer. To improve the environment and make life sustainable for future generations, new urban planning techniques, environmental protection strategies like boosting afforestation and decreasing deforestation, situating industries far from populated areas to eliminate pollution, involving the public in decision-making, etc., can be used.

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