

Environmental Crimes in India: A Comprehensive Review

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Abstract: Environmental crimes in the recent past have become a major concern in India as many natural resources, health and sustainable development in the country are at risk. This review article discusses the different types of environmental crimes that take place in India such as illicit felling of trees, wildlife smuggling, pollution and disposal of hazardous wastes. It acknowledged the contextual variables that press these activities like poverty, ignorance and weakness in the application of legal provisions. Although the country has developed and adopted appropriate legal and regulatory instruments for environmental compliance, compliance difficulties including corruption, inadequate resources and institutional capacity impede implementation and enforcement. The article moves on to discuss more of the consequences of environmental crimes to the ecosystems and the communities and thus the approach of a multi disciplinary one that is enforcing more stringent laws, education to the public and proper conservation and management of the resources. This review outlines the extent of ECs in India and makes recommendations that will help policymakers, researchers, and stakeholders to rise to the challenge of fighting these crimes in the interest of environmental protection.

I. Introduction

Ecological offenses refer to all the unlawful activities that negatively impact the environment, these include pollution, foreclosure, sale of endangered species, and discharge of dangerous wastes. Given the variety of geographical regions and fauna and flora present in India, the country is a prime target for environmental crimes which endanger both resources and population wellbeing.

Environmental crimes have thus taken root in India as an intersection between economic liberalisation, legal, and ecological concerns. India, one among the fastest growing economies in the world, is under tremendous pressure to enhance industrial development while preserving the environment. This review paper will endeavor to look at the diverse facets concerning environmental crimes in India which include the causes, effects and the legal measures developed to curb the crimes. Environmental crime as an issue has now come to light in India which depicts the interaction between the economic liberalization, population and legislation failure. Being one of the most populous countries in the world India suffers from tremendous pressure on their resources which poses serious threats to ecosystems, pollution control and biodiversity. Illegal use of natural resources; deforestation, poaching and illegal mining presents a serious menace not only to the natural resources but also to the general populace and their health as well as their source of income.

However, noncompliance persists as a major issue even with the many environmental laws and policies that exist. Lack of knowledge, corruption, inadequate funding and knowledge hamper monitoring and prosecution of environmental related offenses. In addition, these socio-economic factors that intervene in these crimes make the situation very dreadful because some of the people commit crimes due to poor living standards, hence are part of the society . Not only do environmental crimes affect their immediate environment, but their effects are global problems like climate change and loss of species.

The legal systems of India, though well developed in papers, may suffer from such problems as ill-protection on the practical level, corruption, and the absence of public awareness. The challenges of social economic factors however deepens the already daunting situation, as marginalized populations may engage in environmentally harmful practices out of necessity. This dynamic creates a cycle of exploitation that poses significant challenges to conservation efforts and sustainable development.

This review paper focuses on reviewing the existing body of literature on environmental crimes in India and how they occur, their varieties, and consequences. To protect victims of these heinous crimes, the paper will analyze the available legal measures, their efficiency, and enumerate the complicated strategies that require community involvement, law enforcement enhanced, and sustainable results. Providing a clearer understanding of the many kinds of environmental crime in India, the need to address environmental conservation and living resource sustainably is a matter of serious concern in addressing the ongoing environmental challenges. This paper, therefore, aims to present an overview of environmental crimes in India, the type, and the factors contributing to environmental crimes as well as the impacts of environmental crimes development practices. By understanding the complexities of environmental crimes in India, we can better address the urgent need for conservation and sustainable resource management in the face of ongoing environmental challenges. This article aims to provide a comprehensive analysis of environmental crimes in India, exploring their various forms, underlying causes, and far-reaching impacts. It will also evaluate the efficiency of legal and institutional systems used to fight those crimes, to reveal the necessity of improving them with the help of a more united approach including stronger measures, people's participation, and the usage of long-term effective practices. Thus, commenting on the variety of aspects of environmental crimes in India, the article considers its contribution to the continuous discussion of the problems of environmental protection and action to preserve the country's environmental legacy for the generations to come.

Environmental crimes include pollution, deforestation, wildlife tracking, and the illicit disposal of toxic waste among others. Regarding the environmental crimes, India has the following critical challenges due to it having a large biodiversity, fast industrialization and urbanization.

Types of Environmental Crimes:

1. **Pollution:** Recognizable here are air and water pollution through the industrial wastes and automobile gases as well as the soil pollutive effects of agriculture.

The depletion of plant and animal life through destructive methods with unfavourable impacts on species variety middle There are just so many instances where the major cities such as Delhi or Mumbai are pointed to as having very poor decline in air quality.

Deforestation: And deforestation as caused by timber poaching and also changes in land use for farming and human settlement. These forest resources are harnessed to the ecological status and also brings forth climate change.

2. **Wildlife Trafficking:** Ivory, tiger, elephant, and rhino hunting and sales and buy of these animals' body parts. India is signatory to many of the international treaties meant for the conservation of wildlife.
3. **Hazardous Waste Management:** Disposal of electronic wastes and industrial hazardous wastes without careful disposal. Various industries pollute the soil and water body because most of them do not follow the standard regulatory measures.
4. **Illegal fishing:** Fishing activities that violate national, regional or international laws . Unauthorised fishing in protected areas using banned gears , catching species without proper permits , or exceeding quotas are often included . The fish population is being depleted resulting in damage in the marine ecosystem .
5. **Illegal mining:** Unregulated and unauthorised extraction of minerals by violating the environmental laws and property rights . It occurs globally including gold mining, diamond, coal and other valuable minerals.

II. Legal Framework

1. **Environmental Protection Act, 1986:**

Outlines a structure that enables the enhancement and preservation of the environment. The authorities are established to enforce, administer and implement environmental laws and regulations.

2. **Wildlife Protection Act, 1972:**

Aspires to preserve big and small animals and their natural environment.

Conservation of wildlife through restrictions of hunting and controlling the sale of wildlife commodities.

3. **Air (Prevention and Control of Pollution) Act, 1981:**

Majorly deals with the prevention of air pollution and formation of air quality standards.

Challenges in Enforcement

1. **Corruption:** Officials themselves misuse their authority, and thus many times these rules remain unimplemented or poorly implemented.
2. **Lack of Awareness:** This is because; Many communities do not know about environmental laws and even their legal provisions being exploited.
3. **Resource Constraints:** The environmental agencies mostly don't have adequate power provision, manpower, and organizational framework to observe and implement the laws. Some recent trends in this field assist to enhance the public awareness and participation towards environmentalisms .The government actions related with stewardship of environmental governance and sustainable business.

Measures That Has To Be Taken To Reduce The Incidence Of Environmental Crimes

Some key methods are taken to make people aware and also prevent the happening for the environmental crimes, some of the key steps or methods includes :

Strengthening Legislation and Enforcement Specialized Environmental Laws: Appropriate measures include putting and enforcing into operation legal instruments like Wildlife Protection Act, 1972, Air and Water (Prevention & Control of Pollution) Acts. **Regulatory Framework:** Policies should be put in place and supported by proper law and regulation together with proper penalty if breached and ways of ascertaining breaches.

Improving controls over Monitoring and Reporting

Self-Monitoring and Reporting: Sounds which should be promoted and used include; self regulation by industries reporting periodically on their environmental performance and their compliance record.

Use of Technology: Make use of current technology like satellite images and quadcopter in monitoring environmental offenses in real time.

They include Community Engagement and Awareness.

Public Awareness Campaigns: Organize awareness creation on environmental laws and foster conscious protection of natural resources.

Involvement of NGOs: Working with non-governmental organizations to educate citizens / community and ensure that they fight environmental crimes.

This sub-sector in intervention entails promoting the capacity development among individuals, communities and organizations and enhancing their training.

Training for Law Enforcement: Offer sensitisation programmes in respect to environmental laws to the police and the judiciary, as well as other environmental officers.

Workshops for Industries: Conduct seminars for industries to get the knowledge concerning legal measures and environmental conservation.

Therefore the following sustainable practices should be encouraged -:

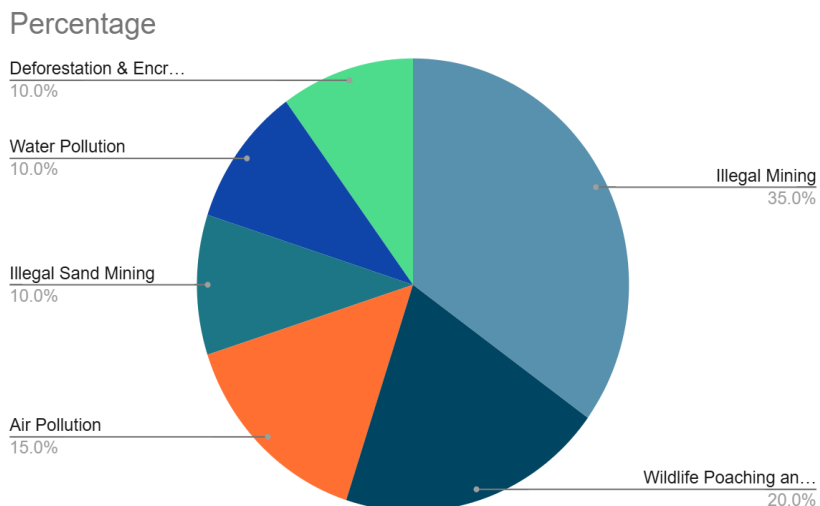
Eco-Tourism and Ethical Products: Proper conservation is self-achievable only when ecotourism and other ethical products are promoted to support environmental conservation and sustainable growth. Support for Green Technologies: Offer rewards for industries to embrace environmental managers and pro environment technologies and innovations.

Enhancing Courts' Work

Fast-Track Environmental Courts: Tried capital crime courts to deal with environmental issues to cover much ground swiftly. Judicial Sensitization: Raise awareness of the judiciary and other legal professionals on matters of environmental concern in order to enable them to produce accurate results in cases of environmental crimes.

Forensic drug detection sits at the intersection of analytical science, law, and ethics, demanding careful attention to both regulatory standards and societal considerations. Accreditation, method validation, and stringent chain-of-custody protocols are essential for ensuring the reliability and legal defensibility of results, while ethical principles—including privacy protection, informed consent, proportionality, and equitable treatment—safeguard against misuse and bias. The field has expanded beyond traditional biological specimens to include diverse sample matrices such as saliva, sweat, hair, nails, and even wastewater, offering new avenues for detection while introducing challenges in stability, contamination, and interpretation. Simultaneously, innovative technologies—including portable mass spectrometers, biosensors, and AI-assisted analytical platforms—enable rapid, on-site screening and complex data analysis, yet necessitate rigorous validation, operator training, and robust data governance. Contemporary best practices advocate a two-tiered approach, combining rapid screening with confirmatory laboratory analysis, supported by matrix-specific protocols and transparent reporting of analytical uncertainty. By integrating technological innovation with regulatory rigor and ethical oversight, modern forensic drug detection not only enhances public safety and judicial outcomes but also opens pathways for emerging research in continuous monitoring, wearable biosensing, and non-invasive sampling, underscoring the dynamic, multidisciplinary nature of the field.

Statistical Data of Environmental Crimes In India (2020-2024)



III. Discussions

Some recent discussions on Environmental crime in India included several topics, like unauthorized mining, cutting down the forests, atmospheric and water pollution, and smuggling of wild animals. These give rise to negative effects on the environment and health of the people in the nation, and compounding worries on the sustainability of the country. This has focused on the worrying State of affairs of increasing degradation of natural resources and the inability of the legal frameworks to deal with these vices. These have sparked rising apprehensions on the escalating usage exploitation of natural resources and inefficiency of existing laws to mitigate such difficulties. smuggling. These have negative effect on the environment and health of the people living in the nation, and on compounding worries on sustainability of the country. This have emphasized on the worrying trends of escalating exploitation of natural resource and the failure of legal system in containing these problems. e crimes have significant environmental and public health impacts, with rising concerns over the country's sustainable development.

These have revealed an increasing tendency in exploitation of natural resources and the incapability of the current legal system in addressing these issues. y. One of them is the increase of the illicit mining especially in the states of Orissa, Jharkhand and Rajasthan where acute illicit mining is causing threat to forest and water supply resources base and increasing the level of corruption. Another deplorable industry is of sand miners which many have taken to as they are involved in exploiting aesthetics of the ecosystem while aggravating the extent of erosion, degrading the river beds and disturbing the entire natural pyramid.

As much as other forms of illegal imports and exports the sale of wildlife and trophies still goes on and tigers, elephants and rhinos have been known to be hunted and slaughtered directly by the Indian organized crime organizations. Many authorities and non-governmental organizations' have attempted to prevent the sale of endangered animals but recent research has revealed that the demand is still strong and this is why species are being wiped out.

Another important question concerning impact on water supply is The question connected with the problem of large amounts of pollutants in large cities: They are caused by the unauthorized industrial effluent, uncontrollable construction.

Some states such as Delhi and Mumbai continue experiencing Air and water pollution which have a negative impact on the health of the public given their existing health state. Lately the dialogues have appealed for even higher stringency of norms related to environmental degradation, more meticulous approach and enhanced shifting to the technical methods that can track violation.

Moreover, there has been growing concern in the requirement for extended public participation in environmental preservation as many people have supported an opinion that the public, especially the localized communities, should be engaged more in the management of natural resources. Consequently public awareness campaigns and grassroots activism are considered vital in fighting environmental crimes as well as improving the nation's people's interaction with nature.

In summary, however, the deliberation portrayed a very grim picture of how environment crimes have risen in India and there are still inadequate measures to deal with them, how the legal systems need a stern improvement, and how all the stakeholders must join hands to safeguard India's environmental future.

This paper maps recent developments of environmental crime in India and distinguishes advancements and continuities in the field. The government is trying to curb the menace of the mining act and operations against these undeclared mines are being carried out in different states including Madhya Pradesh, Odisha and Chattisgarh. However, there is still a great tendency of illicit mining since powerful criminal organizations control the process and demand for minerals remains very high. Wildlife protection agencies involved include the Wildlife crime control bureau (WCCB) has made several arrests relating to sale of endangered species though poaching especially of tigers and elephants is still rampant. Due to the extreme air quality index in Delhi and other cities the government has implemented the Graded Response Action Plan (GRAP) focusing on prevention of burning crop residues and controlling emission from industries. The legal measures are too being sought the Ministry of Environment, Forest and Climate change have suggested tighter norms for industrial discharge and waste management. The National Green Tribunal (NGT) has been more proactive in the assessment of fines and penalties to industries which pollute the environment. Also, local and international environmental NGOs and grassroots movements have increased political awareness and demand for effective local legislation of banned activities such as sand mining and deforestation, which for monitoring use technology. However, it is alarming to note that despite these developments there are increasing action challenges like corruption, inadequate resources, political influence that retard the efforts in addressing the environmental crime within the country.

IV. Conclusion

Therefore, environmental crimes are one of the emerging and highly dangerous problems of India that progressively negatively influence the condition of the country and its potential for sustainable development. Increased cases of social evils like, Illegal mining, Poaching, deforestation, water pollution, and dumping of hazardous waste call for legal reform, strict vigor, and increased public awareness. Despite India having come up with new environmental laws such as the Environment Protection Act or inaugurating new environmental authorities like the National Green Tribunal, these laws are hardly enforced, and whenever the cases are taken to book, they are hampered by corrupt officers, lack of resources, and poor implementation. Much efforts from both governmental and non-governmental organizations and the public should be directed towards the development of environmental responsibility. The way forward is to impose further and actual enforcement of laws as well as policy changes and parity improvements; the way forward also involves coming up with more creative and involving professional and social

approaches involving communities, trading firms and anarchist and postmodernist policy makers for the sake of environmental conservation for the benefits of several generations to come.

The various criminalities against the environment are resulting in many environmental problems, issues, such as the environmental challenge of the depletion of biological diversity and natural resources, a sideshow to the seeds, an ecosystem, global climate change, acid rain and so on. In its early stages environmental crimes has not been considered as major concerns owing to the absence of the effective response proportionate to their emergence from the governments. Over the course of the last few years the people have witnessed heightened judicial and legislative concern to accord rights to individual species and the rights of the environment in its own right to be free from human interference and exploitation. This is because environmental rights activists and animal rights activists work in creating perceptions and laws concerning the natural environment and NON-humans.

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