



LEX TERRA

Center for Environmental Law, Advocacy and Research
National Law University and Judicial Academy, Assam

ISSUE 38

APRIL 2022

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ISSN: 2455-0965

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This issue shall be cited as

CELAR:NLUJAA, Lex Terra 38 (2022) <page number> doi: <http://nluassam.ac.in/celar.php>.

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ABOUT CELAR

The fundamental aim of the Centre for Environmental Law, Advocacy, and Research (CELAR), National Law University and Judicial Academy, Assam, is to participate in advocacy and research on public interest environmental concerns. It endeavours to do so by holding workshops and seminars to educate and improve skills, convening conferences to encourage an exchange of ideas, conducting training programmes for capacity building in environmental law issues, undertaking legal research, and publishing newsletters and journals regularly.

The main objectives of CELAR can be elucidated as follows:

- Providing students with hands-on advocacy experience and direct exposure to the issues to inspire and educate them.
- Strengthen access to justice by conducting high-quality multi-disciplinary research on current environmental legal issues.
- Advocate for reforms in environmental law through scientifically sound legislative proposals.
- Organize training programmes for civil servants, law enforcement agencies, non-governmental organisations, and media professionals to improve their legal capacity on environmental laws and policy.
- Publish environmental law publications and bulletins on a regular basis.

Thus, to meet the last objective, Lex Terra is an initiative undertaken by CELAR. Through Lex Terra, we strive to provide a voice to various aspects of the environment, published every month, to create a community of environmentally conscious individuals from the legal and non-legal fraternity. Each issue of Lex Terra features important environmental news from across the world and from within the nation. This bulletin is meticulously compiled by CELAR members dedicated enviro-legal enthusiasts.

MESSAGE FROM THE PATRON-IN-CHIEF

It is, unfortunately, true that inadvertently, we humans are responsible for the deterioration of this planet without recognising the negative consequences of minor things we do to contribute towards its dilapidation. Education and awareness generation can be one of the positive moves to fix the irreparable damage that we have done to our Mother Nature, and in furtherance to such moves, we as a legal institution, are continuously striving to bring environment related news and views for several environmentally sentient readers.

In this context, it delights me to note that the Centre for Environmental Law, Advocacy and Research (CELAR), National Law University and Judicial Academy Assam, is releasing a new issue of its webzine, 'Lex Terra'. Lex Terra aims to be an e-forum that involves, promotes and engages students, scholars and anyone interested in environmental law, to express and share their opinions and ideas. It is our fervent expectation that this webzine will keep providing an academic forum to bring all ecologically conscious minds together to deliberate on environment related developmental decisions.

I congratulate the entire team of CELAR for bringing out this webzine which justifies one of the significant mandates of National Law University and Judicial Academy, i.e., rendering a socially relevant legal education. I appreciate the efforts made by the student editors and peer reviewers in bringing out this webzine. I also bring on record the constant guidance being provided by CELAR teacher members to the students.

I am certain that this modest endeavour of CELAR will continue to stimulate and proliferate enviro-legal awareness.

**Prof. (Dr.) V.K. Ahuja,
Vice-Chancellor, NLUJAA**

EDITORIAL

Every breaking news ticker you see, every newspaper you pick up, and almost every dinner table conversation you're part of probably mentions the Russia-Ukraine conflict. However, unfortunately (but understandably) amid the violence and bloodshed, Ukraine's environmental crisis because of the war has been under-reported.

Ukraine has multiple industrial and energy sites which means it already ranked low on environmental indicators like air quality. Now, the present attacks have led to further pollution and environmental issues. And the pollution in question is a result of military actions like missiles and shelling which make it that much more dangerous. These environmental repercussions will continue to affect Ukrainian citizens long after physical conflict subsides. Couple this with the COVID-19 pandemic and the fact that only a third of Ukraine's population is fully vaccinated and there is an even graver problem at hand.

At Lex Terra, we strive to provide a platform for environmental matters that are not necessarily spotlighted in media like Ukraine's environmental issue. And on that note, the Lex Terra editorial board is pleased to present its 38th issue of Lex Terra that highlights environmental problems that, unfortunately, don't get the attention they should.

For example, the first paper in this issue, by Mannat Marwah and Nandini Gupta, aims to analyse why Northeast India stands on the cusp of going dry despite its high rate of rainfall. They go on to link water scarcity with rising temperatures which, in due course, lead to droughts. The authors call for awareness on the problem of groundwater depletion in the Northeastern states since urbanisation has resulted in a heightened dependence on groundwater. They note that the heavy rainfall in the Northeast causes soil erosion and affects the Earth's ability to retain groundwater, also leading to droughts. The authors also mention the problem of arsenic contamination in the Northeast which renders the already scarce resource toxic. Finally, the authors advocate for the formulation of a policy specifically for the Northeast with the factors that lead to water scarcity in the region in mind.

In the next article, G. Priyadarshini criticises the legislative measures in place for the protection of environmental human rights in the Northeast and suggests the need to address business activities that eventually adversely impact ecology. The author outlines three categories of resources in the Northeast namely Water, Forest and Mineral. They then explain how the resources have been impacted negatively and the subsequent human rights violation the indigenous people face as a result of the lack of environmental protection. Afterwards, the author describes the existing international, national and regional legislative protection in place and points out that though there is legislation governing environmental protection and human rights issues separately, there are insufficient laws for environmental human rights violations as a result of business activities. The author concludes by drawing attention to the need for strong legislation for ecological protection.

Authored by Himanshi Goel, the third paper analyses the existing legal framework on solid waste management in India which includes Constitutional Provisions, Solid Waste Management Rules and Judicial Intervention. The author lists the gaps in the present legal framework which need to be addressed like the lack of governmental assistance or failure to specify exact penalties in case of default. In conclusion, the author emphasises that we should integrate waste so as to become a circular economy instead of a linear economy.

The fourth piece, by Sanchit Meena, is a study with three major objectives i.e. examining the impact of construction on the environment, determining the importance of green construction in preserving our environment and understanding the importance of smart cities in promoting Sustainable Development Goals. The research was done based on both primary and secondary data. Based on the study, the author found that the participants were also mostly of the view that sustainable development should be fostered via constructing cities that do not harm the ecology and that steps should be taken at the grassroots level to preserve the environment. The author concludes by once again emphasising the problem of rapid population growth since it strains natural resources as revealed by the study and suggests ways to deal with this phenomenon.

In the final piece, Supriya Malviya analyses public interest litigation and traces its evolution. She commends the custodian of the Constitution of India, the Indian judiciary, which has provided a beacon of life to the cause of environmental protection while positively interpreting the Constitution.

Reading these papers while putting together this issue of Lex Terra was equal parts educational and enjoyable for the Editorial Board and we hope that it proves to be just as exciting an experience for you, the reader.

There are a few people the Editorial Board would like to thank without whom this issue would not be possible. We extend our heartfelt gratitude to Dr Chiradeep Basak, Prof (Dr) V.K. Ahuja and Dr Indranoshee Das for their constant guidance and encouragement. We are also grateful to the contributing authors and the peer reviewers who selected the articles for this issue.

Thank you.

Zara Hannah Kabir
Editor
Lex Terra Editorial Board 2021 - 2022

WATER, WATER EVERYWHERE AND NOT A DROP TO DRINK: THE CURIOUS CASE OF THE WATER-SCARCE NORTH-EAST

Mannat Marwah* and Nandini Gupta**

I. Introduction

Everybody grows up reading about the heavy downpour experienced by Mawsynram and Cherrapunji in Meghalaya. The Brahmaputra River Basin, encompassing North-East India, receives heavy precipitation averaging around 2500 mm annually.¹ Curiously, despite the intensive orographic rain they receive, North-Eastern states are faced with alarming water scarcity today.² Households and hotels, even on the wettest place on Earth, are now forced to purchase water to fulfil their day-to-day necessities.³

These unprecedented dry spells in the North-East pose an increasingly alarming threat as they are indicators of the much bigger issue of climate change. 'Industrialisation' and 'urbanisation' have become the sole criterion for 'development' in contemporary times.⁴ The North-Eastern region has started succumbing to deforestation, soil erosion, depletion of groundwater levels, and sporadic rainfall, all of which add to its impending water crisis. This paper aims to analyse how the Seven Sister states, synonymous with soothing petrichor, stand on the cusp of going dry.

II. Understanding the Water Scarcity in North-East India

The 'water poverty' of the North-Eastern regions of the country was unheard of, until recent times when there was a drastic shift from an eco-centric to anthropogenic perspective towards the environment. As nature rapidly became a resource to be exploited to meet ever-increasing

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¹ U.C. Sharma & Vikas Sharma, *Groundwater Sustainability Indicators for the Brahmaputra Basin in the North-eastern region of India*, 302 IAHS PUBLICATION 43 (2006).

² *The Problem of Water Scarcity in Northeast India*, INSIDE NE (July 2, 2019), <https://www.insidene.com/the-problem-of-water-scarcity-in-northeast-india/>.

³ *Id.*

⁴ Dietrich Vollrath, et. al., *Urbanisation with and without Industrialisation*, INTERNATIONAL GROWTH CENTRE (Mar. 9, 2016), <https://www.theigc.org/blog/urbanisation-with-and-without-industrialisation/>.

human greed, as opposed to being revered during the earlier times, civilisations developed technologies that allowed them to tap into a plethora of resources in an unfettered manner.⁵

Since the late 19th century, the average global temperature has risen by a little more than 1 degree Celsius and has had an increasingly adverse effect on natural resources worldwide.⁶ The rainfall patterns in the North-East are no strangers to the same.⁷ As the climate crisis went from bad to worse, a stark change was observed in the region's rainfall patterns, which happens to be its predominant water source. However, one might wonder how this slight change in temperature can lead to a problem of scarcity. The answer, though simple, is problematic.

As temperatures increase, the first consequence is the drying of land and soil, leading to increased dry stretches and droughts. As the moisture content increases and the ground dries up, the region experiences a rather strange phenomenon of increased intensity in rainfall, combined with an irregular spread. This is triggered by the increased snowfall in the Eurasian area. Snowfall affects the climate of the North-East and acts as a coolant. Consequently, the summer and the winter monsoon suffer in the region.⁸ The sporadic nature of the rain leads to unpredictable rainfall patterns, which in turn lead to the depletion of the mountainous springs, aggravation of soil erosion, and lowering of the groundwater levels.⁹

The region primarily relies on its groundwater levels to fulfil its household, industrial, and agricultural water needs, which in turn, depend majorly on the 200 plus springs located throughout the North-East.¹⁰ More than 50% of villages in Meghalaya, Mizoram, and Manipur depend on these hot and cold springs, which trickle down from the mountainous regions, while close to 90% of the villages in Sikkim bank upon them.¹¹ The contribution of these springs is

⁵ Akshit Sangomla, *Climate crisis in North East India: What is behind water scarcity in the region*, DOWNTOEARTH (Sept. 09, 2021), <https://www.downtoearth.org.in/news/climate-change/climate-crisis-in-north-east-india-what-is-behind-water-scarcity-in-the-region-78910>.

⁶ *Climate change widespread, rapid, and intensifying – IPCC*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Aug. 9, 2021), <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>.

⁷ *Supra* note 2, at 2.

⁸ Akshit Sangomla, *Climate crisis in North East India: Why are rainfall patterns changing?*, DOWNTOEARTH (Sept. 07, 2021), <https://www.downtoearth.org.in/news/climate-change/climate-crisis-in-north-east-india-why-are-rainfall-patterns-changing--78879>.

⁹ North Eastern Region District SDG Index, NITI Aayog (Aug. 15, 2021), https://www.niti.gov.in/sites/default/files/2021-08/NER_SDG_Index_NITI_26082021.pdf.

¹⁰ Chandan Mahanta, *Water Resources in the Northeast: State of the Knowledge Base*, World Bank (Aug. 2006), https://web.worldbank.org/archive/website01062/WEB/IMAGES/PAPER_2_.PDF.

¹¹ Akshit Sangomla, *Climate Crisis in North East India: Monsoon variations should ring alarm bells NOW*, DOWNTOEARTH (Aug. 30, 2021), <https://www.downtoearth.org.in/news/climate-change/climate-crisis-in-north-east-india-monsoon-variations-should-ring-alarm-bells-now-78707>.

not just limited to the daily needs of these settlements. They also add to the roaring Himalayan Rivers, on the likes of the Brahmaputra, fuelling their levels more than glacier melts or snow.¹²

Assam banks upon the Brahmaputra for a substantial portion of its water needs and is the worst affected, followed closely by Meghalaya.¹³ The Dilao, as it is referred to in Assam, has a mere 90-metre altitude difference between entering plains and forming its delta, thus becoming a major, if not the determining factor, of the region's groundwater levels. As rainfall decreases, so does the volume of water in the river, having a direct detrimental effect on the livelihood of the surrounding settlements.¹⁴

With a proportional increase in population density, the increasing 'urbanisation' has led to a heightened dependence on the groundwater levels. As industries developed and more and more people developed housing settlements, 'groundwater boring' became the go-to match for water requirements, thus worsening the problem.

The climate crisis of the developed nations always affects the developing countries more, and the North-East stands testament to that. As the rains cause soil erosion and human actions continue triggering deforestation, the ability of the Earth to retain groundwater dwindles, leading to droughts in arguably the 'wettest' lands of the nation.

III. The Falling Water Tables of North-East India

India uses the most groundwater in the world, more than a quarter of the world's usage.¹⁵ During non-monsoon seasons, groundwater makes up for the water needed to irrigate crops. It also is mainly responsible for fulfilling the drinking water needs of both urban and rural India. Groundwater indeed forms the backbone of India's water ecosystem, and a shortage can prove to be detrimental, both socially and economically.

¹² Bharat Sharma, M. Riaz, et. al., *Water Poverty in the North-eastern Hill Region (India): Potential Alleviation Through Multiple-use Water Systems: Cross-learnings From Nepal Hills*, Research Gate, (January 2010), https://www.researchgate.net/publication/254426163_Water_poverty_in_the_northeastern_hill_region_india_potential_alleviation_through_multiple-use_water_systems_cross-learnings_from_nepal_hills.

¹³ Groundwater Sustainability Indicators for the Brahmaputra Basin in the North-eastern region of India, *supra* note 1, at 1.

¹⁴ B.R. Parida & B. Oinam, *Unprecedented Drought in North East India compared to Western India*, 109(11) CUR. SC. 2121-2126, (2015).

¹⁵ Abhijit Mukherjee, Dipankar Saha et. al, *Groundwater systems of the Indian sub-continent*, 4 J. HYD. REG. ST. 1, 1-14 (2015).

Out of the many environmental issues plaguing the North-Eastern parts of India, the groundwater crisis is one of the most significant, owing to the paradox which it creates. Renowned for their water affluence, North-Eastern states are now falling prey to rapid groundwater depletion. When coupled with extremely slow replenishment, these falling rates mean that the North-East could become victim to droughts and famines in the coming years. Having lost nearly 2% of its usable groundwater resources in the last few years, Assam finds itself at the epicentre of this issue.¹⁶

Extracting more groundwater than can be recharged is an unsustainable practice that has given rise to this burning crisis.¹⁷ Moreover, the inhabitants of North-East India practice shifting cultivation, which leads to large-scale deforestation and more than 60% of the rainwater running off.¹⁸ This furthers the problem of already sluggish groundwater recharge.

For the North-East, the problem only begins there. Today, cases of arsenic contamination are rampant across the North-Eastern strip of the country, rendering the already depleting resource not just useless, but also toxic.¹⁹ In Assam alone, twenty-one of the twenty-seven districts have been found to have contamination levels that surpass the safety standards set by the World Health Organization, hence posing a severe threat to life.²⁰

IV. Formulating a Groundwater Policy

India has a shortage of legislation that can govern and regulate groundwater exploitation, with there being no law at the central level. The ones that exist make the mistake of fixating on surface water instead of groundwater. Some states have specific statutes based around the Model Bill of 1970, such as Tamil Nadu, which had the Tamil Nadu Groundwater Development and Management Act.

¹⁶ Usable groundwater 'rapidly depleting' in north, east India, THE TRIBUNE (Apr. 11, 2019), <https://www.tribuneindia.com/news/archive/nation/usable-groundwater-rapidly-depleting-in-north-east-india-756487>.

¹⁷ Deb A. Roy & Tushaar Shah. *Socio-ecology of groundwater irrigation in India*, 307-335 (2002).

¹⁸ Groundwater Sustainability Indicators for the Brahmaputra Basin in the North-eastern region of India, *supra* note 1, at 1.

¹⁹ Saurav Das, Sudipta Sankar Bora, et. al., *Groundwater arsenic contamination in north eastern states of India* 9(3) J. ENV. RES. & DEV. 621 (2015).

²⁰ Nilotpal Das, Arbind Kumar Patel, et. al., *Geochemical controls and future perspective of arsenic mobilization for sustainable groundwater management: a study from Northeast India*, 1(2) G. SUS. DEV., 92-104 (2015).

The said Act was never implemented and was later repealed in 2013, exacerbating the State's groundwater crisis.²¹ Assam is on the same boat, with its Assam Ground Water Control and Regulation Act yet to be enforced, nine years after it was notified.²² The notification would also not resolve the pressing issue as the statutes are not equipped to deal with depleting water tables due to increasing use.²³

Water is a State subject as per the Constitution of India, and preserving it is, therefore, the onus of the State. However, the Environment Protection Act, 1986 (the Act) empowers the Central Groundwater Authority (the Authority) to issue guidelines to States under Section 5.²⁴ The Authority can also punish for the contravention of the Act under Sections 15 and 16.²⁵ Of late, however, the Authority has been reduced to a mere licensor, handing out No Objection Certificates to industries to continue groundwater over-extraction.²⁶

Moreover, even the Indian Penal Code, 1860, is silent on illegal groundwater extraction, making it a largely unregulated practice, devoid of any sort of accountability. A dedicated policy is therefore the need of the hour today. The key to solving this perplexing crisis is undoubtedly the incentivisation of conservation. Water needs to be treated like a public resource upon which life depends. Water cannot be treated as an individual's property anymore, much like it is done in the Indian Easement Act, 1882, which empowers landowners to collect and then dispose of all water under the land within their limits.²⁷ The North-East needs legislation that moves away from the command-and-control fashion of Indian statutes to one that relies on and rewards community participation.

V. Conclusion

The 'human right' guaranteeing ease of access to safe, sufficient and clean drinking water has been understood as an extension of a 'dignified' life as guaranteed under Article 21 of the

²¹ The Tamil Nadu Groundwater (Development and Management) Repeal Act, No. 23 of 2013, INDIA CODE (2013).

²² The Assam Ground Water Control and Regulation Act, No. 16 of 2012, INDIA CODE (2012).

²³ Philippe Cullet, *A gathering crisis: the need for groundwater regulation*, THE HINDU (Aug. 08, 2017), https://www.thehindu.com/opinion/op-ed/a-gathering-crisis-the-need-for-groundwater-regulation/article19446507.ece?utm_source=pocket_mylist.

²⁴ The Environment (Protection) Act, No. 29 of 1986, INDIA CODE (1986).

²⁵ *About Central Ground Water Authority*, MINISTRY OF JAL SHAKTI, <http://cgwb.gov.in/aboutcgwa.html>.

²⁶ Vijayta Lalwani, *As the water crisis deepens, can India afford to leave groundwater unregulated?*, THE SCROLL (Jul. 11, 2019, 09:00 AM), <https://scroll.in/article/929433/as-the-water-crisis-deepens-can-india-afford-to-leave-groundwater-unregulated>.

²⁷ The Indian Easement Act, No. 5 of 1882, INDIA CODE (1882).

Constitution of India, securing its position as a fundamental right.²⁸ Finding protection under Part III of the Constitution of India imposes a duty on the State to ensure such access; however, such a right exists only in theory as effective implementation finds itself stuck in a tug of war between the State and the centre. Water, precisely water supplies, irrigation and canals, drainage and dams, and water storage and power, is provisioned under Entry 17 of the State List, making it a State subject.²⁹ It is subject to Entry 56 of the Union List, which caters to inter-state rivers and their regulation.³⁰

The rationale behind water being a State subject is simple: the geological, socio-political and demographic differences put states in a better position to ideate and implement region specific policies to deal with the region-specific needs. However, as mentioned above, the Environment Protection Act, 1986 vests the authority with the power to make policies relating to water with the Central Government, thereby creating a dichotomy about who must uptake this pressing issue, thus side-lining the main issue in itself.

Water, both qualitatively and quantitatively, is becoming scarcer day by day in North-East India. Time isn't far when the area receiving the most rainfall, renowned for its ever-flourishing flora and fauna, will be plagued with year-long droughts, toxic water supplies and an overall scarcity. There is a resounding need for a policy, specifically for the North-East. It must be formulated considering the peculiar events that lead to a lack in the region. They cannot be assumed to be congruent with scarcity in other parts of the country. The enactment in isolation, however, is futile, if not coupled with practical implementation.

The need of the hour calls for states to wake up to the slow poison of groundwater depletion that is eating away at the heart of North-East India. Benjamin Franklin had rightly said, "When the well is dry, we'll know the worth of water". Let us act before it's too late.

²⁸ Wasim Ahmed Khan v. Govt. of AP, 2002 (5) ALT 526 (D.B.) (India); Mukesh Sharma v. Allahabad Nagar Nigam & Ors., 2000 ALL. L.J. 3077 (India); Diwan Singh and another, v. The S.D.M. and other 2000 ALL. L.J. 273 (India); S.K. Garg v. State of UP, 1999 ALL. L.J. 332 (India); Gautam Uzir & Anr. v. Gauhati Municipal Corpn. 1999 (3) GLT 110 (India).

²⁹ INDIA CODE. schedule 7.

³⁰ *Id.*

ENVIRO-HUMAN RIGHTS AS AN INDUSTRIAL SUBJECT - A SPECIAL FOCUS ON NORTH-EAST INDIA

G. Priyadharshini*

“Man’s paradise is on earth; this living world is the beloved place of all; it has the blessings of nature’s bounties; live in a lovely spirit”¹

I. Introduction

The biodiversity hotspot of India, sobriquet popularly as the ‘Eight Sister States’, constituting 7.98%² (2011) of the country’s geographical area and 3.77%³ (2011) of its total population, is blessed by Mother Nature with greenery hills, wildlife sanctuaries, water bodies and many more. Right to livelihood⁴ and Right to Environment,⁵ being the *sine qua non* of Article 21 of the Constitution of India,⁶ corporate compliance towards the protection of human rights is overlooked, notably in North-East India (‘NEI’).

Environment protection is a major concern in the North-East; the Article criticizes the legislative measures as to the extent of protection of environmental human rights and also suggests the need to address the issues as a result of business activity that adversely impacts the ecology.

II. Business and Human Rights in NEI

Human capacity undoubtedly leads the way towards technology and has progressively freed mankind from the shackles of nature. Yet, it has significantly contributed to the depletion and degradation of the environment by the act of business enterprises affecting the enjoyment of human rights. India has failed to access, “*right to resist unwanted development*” which the country is in dire need of, in order to protect the environment from unfavourable effects, resulting in the infringement of human rights.

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¹ ATHARVA VEDA, Saunaka Samhita

² NITI AAYOG, Ministry of Development of North Eastern Region, https://mdoner.gov.in/contentimages/files/NER_SDG_Index_NITI.pdf (last visited Aug 15, 2021).

³ *Id.*

⁴ *Olga Telis & Ors. v. Bombay Municipal Corporation*, 1985 SCC (3) 545.

⁵ *Rural Litigation and Entitlement Kendra v. State*, AIR 1988 SC 2187.

⁶ INDIA CONST. art 21.

III. Constitutional Provisions

“Welfare state and healthy environment”, are dynamic goals of our Constitution. Article 19(1)(g)⁷ empowers a person to practice any business, at the same time Part III entitles the individual to move directly to either Supreme Court or High Court by the way of Article 32 and 226 respectively in case of infringement of their fundamental rights.

The Constitution of India ensures, in its preamble, ‘fraternity’ assuring the *dignity of the individual* and the Directive Principle of State Policy ensures the protection of human rights of its mankind. ‘*Protection of environment*’ is a fundamental duty under Article 51A, which every human must adhere to. Part III,⁸ and Part IV,⁹ and various judicial precedents prevent the business from violating human rights norms and impose a duty to protect the environment.

IV. Resource Extraction – Human Rights Infringement

Environment protection is also an essential instrument to secure the effective universal enjoyment of human rights. Therefore, resource extraction in the green-belt region of India not only affects the ecology, but also results in the violation of human rights. The richness of NEI and its environmental impact along with human rights violations are discussed below:

4.1 Water resource

NEI has immense water resources, with the Brahmaputra being one of the world’s largest rivers, with 33% of the flow in its home country (5,80,000 sq. km), along with Barak River being the largest river basin. Apart from this, NEI also has abundant groundwater resources. ‘The Power-house of India’ potentially harnessed 3.78% of hydropower as per 2019 census.¹⁰ Apart from the other major effects, the setting up of hydropower projects has a catastrophic impact on biodiversity, river ecosystem, and the environment at large. Due to the exploitation of water resources by tremendous industrial activities in NEI, the agricultural sector is declining gradually. As a result, the right of the individual to enjoy the water resource in NEI is affected adversely.

⁷ INDIA CONST. art. 19, cl. 1(g).

⁸ INDIA CONST. Part III.

⁹ INDIA CONST. Part IV.

¹⁰ Central Electricity Authority, Ministry of Power, Government of India, https://cea.nic.in/wp-content/uploads/2020/03/hydro_review-2018.pdf (last visited Nov. 17, 2021).

4.2 Forest Resource

The forest resource of NEI contributes 65.05% of the geographical area.¹¹ The forest cover marked a continuous decline by 765 sq. km. in 2019. As per the 2015 data, one-third of the forest area in NEI is considered to be reserved and sacred. Forests act as a carbon sink by absorbing the carbon released into the air through different anthropogenic activities. Deforestation is one factor increasing rapidly which contributes to the release of carbon into the atmosphere. Shifting of cultivation also impacts the reduction of forest cover.¹²

Increased industrial projects in these areas, by way of deforestation, are the major reasons for the exploitation of forest resources. As a result, it has a major impact on the environment, animals, and the whole ecological biodiversity affecting the livelihood of humans as well.

4.3 Mineral Resource

NEI has abundant mineral resources, composed chiefly of limestone, coal, natural oil and gas, uranium, and others. For instance, the overall hydrocarbon reserves (oil and gas) in the NEI make up 20% of India's total land area.¹³ It is reported that a substantial account of mineral resources has been mined in NEI, as per the Geographical Survey of India, 2015.¹⁴ Mining activities are done in the name of development projects, adversely resulting in resource depletion in the NEI. Although some initiatives have been taken to reduce the impact of development projects, they do not adequately consider the social and environmental impacts. The government plans to implement various mining projects by exploiting the natural resource. In spite of various protests and oppositions, mining activities are still in progress. This is a serious offense of human rights violation of the indigenous people of the region.

V. Legislative Protection

5.1 International Protection

International concern for human rights and environmental protection created a vast array of international legal instruments, specialized organs, and agencies at a global and regional level to look into the issues concerning human rights. 'Protection of Human Rights' is one of the

¹¹ India State of Forest Report, <https://fsi.nic.in/isfr19/vol1/chapter2.pdf>. (last visited Nov. 18, 2021).

¹² Mirinchonme Mahongnao, Noklrnyangla & Subhash Kumar, *Natural Resources and Socio-Economic Development in North East India*, JNEIS, (2017), <http://www.jneis.com>.

¹³ *Id.*

¹⁴ *Id.*

basic objectives of United Nations.¹⁵ In addition, a subordinate body of the UNHRC called the 'Social Forum' looks into the promotion of the enjoyment of human rights vis-a-vis the environment. Also, the resolution of human rights and climate change declares a clean, healthy, and sustainable environment as a human right.

Geneva is the main international hub for issues of human rights and is the basis for international universal human rights organs. The Universal Periodic Review provides the opportunity for each State to declare the measures taken to improve and fulfil the human rights obligations of their country. The human rights and the environment mandate, created in March 2012, in the name of Special Rapporteurs, examines the human rights obligations as they relate to a safe, clean, healthy, and sustainable environment.¹⁶ It also promotes best practices relating to the use of human rights in environmental policy-making.

On 9th March 2021, at the 48th session of the Human Rights Council, for the first time, States recognized that, "having a clean, healthy and sustainable environment is a human right". In 2019, United Nations Environment Programme and the Office of the United Nations High Commissioner for Human Rights, by signing a new cooperation agreement, have prioritized efforts to promote and protect the environment and human rights. The agreement supports the national governments to promote human rights-based policies, in terms of sustainable management of natural resources, development planning, and action to combat climate change.¹⁷

5.2 National Laws

The Stockholm Convention, 1972, is the first major attempt to conserve and protect the human environment at the international level. Consequently, the States were required to adopt legislative measures. Accordingly, the 42nd amendment of the Constitution inserted Article 48A and 51A as an effort to protect the environment. Also, a separate ministry called, 'Department of Environment' was established in 1980. Consequently, various legislations were enacted for the protection of the environment in India. Apart from this, the UN Guiding

¹⁵ UN Charter, art. 1.

¹⁶ United Nations Human Rights Office of High Commissioner, *Special Rapporteur on the situation of human rights defenders*, (Nov 20, 2021), <https://www.ohchr.org/en/special-procedures/sr-human-rights-defenders>.

¹⁷ Geneva Environment Network, *Human Rights and the Environment*, (Nov 22, 2021), <https://www.genevaenvironmentnetwork.org/resources/updates/human-rights-and-the-environment>.

Principles on Business and Human Rights, 2011,¹⁸ established the first global stand on the role of the business and government to ensure that the companies respect human rights. In order to influence responsible business guidelines, India adopts timely measures for the protection of human rights. Few of the initiatives taken by the Government of India are-

2009 – Voluntary Guidelines on CSR (Corporate Social Responsibility)

2011 – National Voluntary Guidelines on the Social, Environmental and Economic Responsibilities of Business (NVGs)

2015 – CSR Clause of India Companies Act 2013

2018 – Zero Draft of a National Action Plan (NAP) on Business and Human Rights

2019 – National Guidelines on Responsible Business Conduct (NGRBC)

2020 – Environment Impact Assessment (EIA)

2021 – Business Responsibility and Sustainability Report (BRSR)

Corporate Social Responsibility:

For the first time, in 2009, the Ministry of Corporate Affairs released Voluntary Guidelines on CSR. India mandates the companies to spend 2% of their return towards Corporate Social Responsibility, by the way of Section 135 of Companies Act, 2013.¹⁹

NVGs and NGRBC:

The Ministry released NVG in 2011, providing guidance on responsible business conduct. To align with the Sustainable Development Goals (SDGs) and UNGPs, the revised NVGs were released in 2019 as NGRBC. NGRBC provides that businesses should respect and promote human rights and also should make efforts to protect and restore the environment.²⁰

Business Responsibility Report:

The Securities and Exchange Board of India (SEBI) required companies to include a separate report on responsible business conduct or Environmental, Social, and Governance (ESG) matters in their annual reports known as the Business Responsibility Report (BRR). BRR,

¹⁸ United Nation Human Rights Office of the High Commissioner, *Guiding Principles on Business and Human Rights*, https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf (last visited Nov. 21, 2021).

¹⁹ The Companies Act, § 135, No. 13, Act of Parliament, 2013 (India).

²⁰ Centre of Excellence for Sustainable Development, https://docs.wbcsd.org/2019/08/WBCSD_Business_Human_Rights_India_Issue_Brief.pdf. (last visited Nov. 23, 2021)

replaced by Business Responsibility and Sustainability Report ('BRSR') is made mandatory for the first 500 listed companies.²¹

National Action Plan:

The Indian government's obligation to draft the National Action Plan ('NAP') stems from the country's endorsement of the United Nations Guiding Principles on Business and Human Rights ('UNGP') (2011). The 'zero draft'²² provides an overview of India's legal framework on businesses and human rights. It lists out policy measures adopted by the Indian government and the governmental action to address the issues related to protecting human rights when doing business.

Environment Impact Assessment ('EIA'):

EIA 2020,²³ prevents industrial and infrastructural projects from being approved without proper oversight. It ensures that every project should go through the EIA process for obtaining environmental clearance.

5.3 Regional Law

Apart from international conventions and national laws for the protection of natural resources, the regional laws of North-East India are not much. The North-East Council, under the North-East Council Act, 1971, and the Ministry of Development of North-East Region of the Government of India takes care of the economic and social planning of these states, and also the state laws of NEI protect their environmental resources.

VI. Critique

To ensure the protection of environmental human rights, the Government of India drafted the NAP. However, the draft NAP failed to address - the development of areas affected by extractive industries, the responsibility of investors towards environmental protection, and

²¹ SEBI regulator, *Sebi comes out with disclosure requirements under Business Responsibility and Sustainability Report*, THE ECONOMIC TIMES (May 11, 2021), <https://economictimes.indiatimes.com/markets/stocks/news/sebi-comes-out-with-disclosure-requirements-under-business-responsibility-and-sustainability-report/articleshow/82533681.cms>.

²² *Supra* note 17.

²³ Abhijit Mohanty, *Why draft EIA needs revaluation?*, DOWN TO EARTH (July 6, 2020), <https://www.downtoearth.org.in/blog/environment/why-draft-eia-2020-needs-a-revaluation-72148>.

combating climate change.²⁴ Moreover, resource extraction in the North-Eastern region involved increasing securitization by the government's decision, adversely damaging the sensitive ecological and biodiversity zones.

The government's draft on EIA, 2020, in order to ensure 'ease of doing business', weakens its basic vision, that is, to analyse the impact on the environment by development projects.²⁵ In addition, the ordinance on Micro, Small and Medium Enterprises (MSME), announced in July of 2020, to set up industries without the need of any license or clearance, will definitely have an adverse impact on the ecology.²⁶

The government plans to implement various mining projects by exploiting natural resource despite various protests and oppositions, which is a serious critique. Although there are legislations governing environmental protection and human rights issues separately, there is an insufficiency of laws for environmental human rights violations as a result of business activities.

Besides, legislation promoting industries also has a negative and unfavourable effect on the environment. Consequently, it resulted in the infringement of human rights of the North-East population of the nation and the government has notably failed to address the same. Thus, there is a need to take into account the responsibility of not just corporations but also investors on aspects of environmental protection.

VII. Suggestions

Inadequacy of laws for the human rights protection impacted by the business activities by depleting the environment is one of the major issues for the exploitation of the natural resource. It is high time to save our economy by protecting environmental wealth. Moreover, NEI is rich in resources which essentially require much concentration by the sovereign. Regional laws are comparatively less for human rights protection. Thus, the Article suggests the need to draw strong legislation for ecological protection for the rest of the years.

²⁴ Mayank Agarwal, *India might soon implement a plan to ensure that businesses consider their human rights impact*, SCROLL (Mar 30, 2020), <https://scroll.in/article/956736/india-might-soon-implement-a-plan-to-ensure-that-businesses-consider-their-human-rights-impact>.

²⁵ *Supra* note 22.

²⁶ MSME Scheme, Ministry of Micro, Small and Medium Enterprises, Government of Tamil Nadu, https://msme.gov.in/sites/default/files/MSME_Schemes_English_0.pdf (Nov 29, 2021).

VIII. Conclusion

The right to establish industries to promote economic growth is relatively important, but the growth must in no way affect the rights of an individual. Businesses have the responsibility to respect human rights and are bound to address the adverse impact in the course of violation. Thus, it is the role of the State to address the issues concerning environmental human rights, impacted by the business enterprises and it is high time to protect the ecology from its exploitation.

LEGAL FRAMEWORK ON SOLID WASTE MANAGEMENT IN INDIA: AN ANALYSIS

Himanshi Goel*

I. Introduction

Waste Management is a global problem that affects both developed and developing countries due to increasing population and urbanization. Globally, the solid waste generation is 2.01 billion tonnes, out of which a minimum of 33% is untreated or treated in a non-environmentally safe method. The waste generated is anticipated to jump around 3.40 billion tonnes by 2050, accruing to the rapid increase in population.¹ In India, waste generated is 62 MT/ year, and it is anticipated to reach 436 MT by 2050,² adding to the present havoc. The United Nation Environment Programme's Basel Convention defines waste as, "*substances or objects, which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law*".³

In India, the primary focus is on landfills that are now shifting from waste to energy plants. The methods adopted in managing the waste reaching the landfills are not sanitary. This problem of unsanitary conditions of the landfills increases during rainy seasons because it forms landfill leachate⁴ as the rainwater infiltrates and percolates through the accumulated waste, contaminating the groundwater.

II. Legislative Framework in India

2.1 Constitutional Provisions

The Directive Principle of State Policies and the Fundamental Duties casts a duty on its citizens to protect the environment under the following stated provisions of the Constitution -

- Art 48-A - "*The State shall endeavour to protect & improve the environment and to safeguard the forests and wildlife of the country. The Constitution under Part IV (Article 48 A- Directive Principles of State Policies) stipulates that the State shall try to improve and protect the environment and safeguard forests and wildlife of the country.*"

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¹ *WHAT A WASTE 2.0: A Global Snapshot of Solid Waste Management to 2050*, The World Bank, <https://datatopics.worldbank.org/what-a-waste/>, (last accessed on Jan 1, 2022).

² *Sustainable Processing of Municipal Solid Waste: 'Waste to Wealth'* PIB, Press Information Bureau, Delhi, <https://pib.gov.in/PressReleasePage.aspx?PRID=1667099>, (last accessed on Jan 1, 2022).

³ UNEP, Basel Convention on controlling trans boundary movements of hazardous wastes and their disposal (March 22, 1989).

⁴ Rule 3(29), Solid Waste Management Rules, 2016, Gazette of India, pt. II § 3(i) (Apr. 8, 2016) [hereinafter SWMR].

- Art 51-A(g) - It shall be the “*duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers, and wildlife and to have compassion for living creatures.*”

It cast a duty in the same manner as the World Charter of Nature which promotes the protection of all areas of land, water bodies, and unique habitat⁵.

The priority accorded to the environment has increased due to the judicial interpretations of Article 21 of the Constitution, which now includes the right to the environment under the ambit of the right to life.⁶ The Hon'ble Apex Court has further reiterated that the right to clean, pollution-free air and water is a human right and to be read in consonance of Art. 48-A and 51 (A) (g),⁷ the Constitution of India. Furthermore,⁷ to ensure proper implementation of the provisions and judicial mandate, the government has established various authorities with specific duties to manage the Solid Waste scenario in the country. Therefore, the right to a clean environment is given priority under the laws.⁸ However, the ground reality violates this right ensured to the citizens by its Constitution.

The improper management of the landfills has already crossed a saturated point leading to the emission of toxic gasses and health hazards. The Waste to Energy Plants are fed non-segregated waste adding to the emissions in the atmosphere. Adding on, the disposal of untreated solid waste near the river streams⁹ and discharge of garbage, bio-medical waste, e-waste, the plastic residue has also been a gruelling challenge.

2.2 Solid Waste Management Rules

There have been numerous Rules formulated under the Environmental Protection Act pertaining to Solid Waste, Plastic Waste, E-waste, Construction and Demolition Waste. The Municipal Solid Wastes Rules, 2016 replaced The Municipal Solid Wastes (Management and Handling) Rules, 2000 as they were inefficient and non-comprehensive. The new Rules deal

⁵ World Charter for Nature (1982), UN GA RES 37/7.

⁶ M.C. Mehta v. Union of India, A.I.R. 1987 SC 1086; Subhash Kumar v. State of Bihar, 1991 AIR 420; Shantistar Builders v. Narayan Khimalal Totame, AIR 1990 SC 630.

⁷ Charan Lal Sahu v. Union of India, (1990) 1 SCC 613.

⁸ Ratlam Municipality v. Vardicha, (1980) 4 SCC 162.

⁹ Excelsior Correspondent, *Mankotia urges NGT to act sternly against dumping of waste at Tawi*, DAILY EXCELSIOR, (July 17, 2019), <https://www.dailyexcelsior.com/mankotia-urges-ngt-to-act-sternly-against-dumping-of-waste-at-tawi/>.

comprehensively with the responsibilities of each department and stakeholders concerning waste management in each step of the waste cycle.

The Rules defines Solid Waste by mentioning the type of waste covered within the ambit of “solid waste” to ensure clarity and efficient management. The same is defined below -

*“Solid Waste means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities mentioned.”*¹⁰

2.2.1 Duties of Local Authorities

Primary responsibilities are on the Local authorities and Panchayats. They were to consider State Policy and strategy to prepare an action plan for solid waste management within a set timeline of 6 months,¹¹ which extended due to failure to work out the framework within the stipulated time. The authorities are also vested with additional responsibilities:

- Door to door facility¹²
- Formalizing introduction of the informal sector into the established system¹³
- Promoting the integration of waste by forming self-help groups¹⁴
- Providing an Id card system
- Providing training to waste collectors and pickers¹⁵

2.2.2 Specific Provisions

- Sanitary waste

Present rules deal with sanitary and diaper waste disposal systems extensively. They are categorized as “dry waste”¹⁶ and includes expended diapers, sanitary napkins, tampons, contraceptives like condoms, and products of indistinguishable nature¹⁷ that

¹⁰ Rule 3(46), SWMR.

¹¹ Rule 15, SWMR

¹² Rule 15(b), SWMR.

¹³ Rule 15(c), SWMR.

¹⁴ Rule 15(d), SWMR.

¹⁵ Rule 15(l), SWMR.

¹⁶ Rule 2(19), SWMR.

¹⁷ Rule 2(41), SWMR.

needs to be segregated from biodegradable waste as they are non-recyclable.¹⁸ These rules cast a duty on manufacturers to provide pouches for the waste generated and further extend this duty on the waste generators by ensuring proper disposal.¹⁹

- Awareness initiative

The responsibility has also been cast on various authorities to spread awareness by educating people about the above-discussed provisions through their IEC Campaign.²⁰ It ensures that the manufacturers are devout with financial and social responsibility to assist in the project of setting up of waste management systems²¹ for safe disposal, ensuring a place for collecting back²² the waste of packaging and look for recyclable compositions²³ for their product.

- Shared Responsibility

The Concept of shared responsibility is adopted to cast a responsibility on each stakeholder to ensure more hands-on work on waste segregation with ULBs. The other stakeholders include event managers, Resident Welfare, Market Associations, hotel and restaurants owners²⁴. Both licensed and unlicensed Event organizers²⁵ are responsible for segregation and sorting the waste for gatherings having more than 100 people. The gated communities and institutions with more than 5,000 sq. m area are responsible to effectively manage the waste by applying the practice of segregation and sorting of waste.²⁶ The SEZ, Industrial Park and Real Estate Developers are required under the present provision to reserve 5% of the area or a space consisting of five sheds/plots of the facilities for the operation of recovery and recycling of the waste.²⁷ The street vendors are also bestowed with the duty to provide bins for disposal in the manner notified by the local government.²⁸

¹⁸ Rule 2(44), SWMR.

¹⁹ Rule 4(b), SWMR.

²⁰ Rule 15(zg)(iv), SWMR.

²¹ Rule 17(1), SWMR.

²² Rule 17(2), SWMR.

²³ Rule 17(3), SWMR.

²⁴ Rule 4(8), SWMR.

²⁵ Rule 4(4), SWMR.

²⁶ Rule 4(7), SWMR.

²⁷ Rule 11(i), SWMR.

²⁸ Sch II (A) (d), SWMR.

- Peculiar Provisions Pertaining to Hilly Areas²⁹

These provisions ensure stricter actions towards tourists and lay down provisions for setting up sanitary landfills and waste transfer stations.

III. Judicial Intervention

The landmark decision of *Almitra H. Patel v. Union of India & Ors.*³⁰ addressed the fallacies in implementing the present legislation. Both the Hon'ble Supreme Court and the NGT delivered the guidelines in the present case, which are pursued briefly in this paper. The Hon'ble Supreme Court directed to set up compost plants, prevent water percolation, solid waste management cells to be created in all states/UTs for disposal of the waste in a scientific manner complying with the Solid Waste Management ('SWM') Rules, 2016 as a matter of urgency. The Tribunal observed that the formulation of rules and their implementation have a considerable gap and issued various directions on compliance of Rules, 2016; some of the pertinent ones are –

- Waste segregation
- Buffer zone requirements in the proximity of the landfill areas and waste plants
- RDF market creation by states or ULBs
- Prevention of leachate and methane generation by bio-stabilizing the landfills in the country
- Execution of the Extended Producer Responsibility
- Consistency of Contractual rights and liabilities
- Public awareness regarding the stakeholders' duties
- Awarding Compensation and initiation of the prosecution against the senior most officers under section 15 of Environment (Protection) Act, 1986 for violating the execution within the prescribed timeline

Further guidelines are issued under the supervision of Principal Secretaries of Urban/Rural Development Departments of States/UTs with regards to better compliance vide order dated 20.08.2018, extracted briefly³¹ -

- Technical standards to be specified by states as it will lead to a uniformity
- Dumpsites to be regulated through CCTV cameras

²⁹ Rule 20, SWMR.

³⁰ *Almitra H. Patel v. Union of India & Ors.*, (2004) 13 SCC 538.

³¹ *Id.* at Para 5.

- To install Transport collection Garbage with GPS
- Segregation of waste, door to door services, sweeping, processing of waste, grievance redressal mechanism to be monitored through Performance Audit
- Providing a platform to upload pictures of unmanaged garbage to regulate the non-monitoring of accumulated garbage
- Special Task Force constitution for spreading awareness in every district through the medium of religion, social groups, especially groups working locally

The Tribunal on various occasions has urged the States/UTs to furnish information regarding compliance reports regarding Waste rules, quantum collected under violation of the guidelines and utilization details, model town/cities details which can set up an excellent example for other towns/cities. The States submitted various Action Reports containing information on the thematic issues, but the same did not comply with the directions of the Id. Tribunal as some of the specific information sought were absent in the Action Reports. The failure to comply with specific directions depicts the failed situation of implementation status after repeated guidelines from the judiciary, which is disappointing and worrisome.³²

IV. Conclusion and Recommendations

The Solid Waste Management Rules, 2016 is a positive enactment addressing issues comprehensively such as sanitary waste, sanitary landfills, waste to energy plants, laying down duties of various departments for clarity, extending the act to many other areas/ zones, and giving due importance to segregation of waste. Furthermore, both the Supreme Court and the Tribunal have taken progressive steps by going one step ahead to ensure compliance with these rules and guidelines. Implementing these rules is still laborious because the execution of the primary step of the waste hierarchy i.e., “segregation of waste,” is surrounded by unawareness and inefficiency.

Most cities collect both dry and wet waste together without segregation, including hazardous waste components because of the failure of dual responsibility by both the State and the community. The obliviousness of the waste collectors further aggravates the situation.

³² *Id.*; Research Foundation for Science Technology and Natural Resources Policy v. Union of India, (2005) 10 SCC 510.

There are many apparent lacunae in the present legal framework –

- The government's failure to provide guidelines to keep a check on the collection of waste, inappropriate number of zones with a segregate collection of waste disposal, absence of distinctive containers according to the waste composition, irresponsible behaviour of waste generators has significantly contributed to this issue
- The significant lacunae are the directive/suggestive nature of these rules
- Tender system for Solid Waste Management projects needs to give comprehensive details of technical requirements and impact assessment concerning exposure and potential harm
- There are detailed measures to ensure worker's health hygiene for both formal and informal sectors
- The system to quantify waste does not include the waste given directly to the informal sector in newspapers, bottles, metals, and likewise
- The laws do not emphasize the exact penalty for inefficiency
- Extending deadlines
- The implementation level of the provisions concerning collection and segregation of waste are distant from the desirable standards
- The failure of government in assisting the court concerning information and present implementation stage of the rules
- Various stakeholders have different duties overlapping at times which ultimately lead to chaos and confusion
- The penalty collected has not been notified publicly concerning all the states

India requires more substantial efforts in this direction before it loses the rich biodiversity that protects the country and the world. The recent events make it more vital to protect and preserve the rich heritage as a necessity for survival. The consequences of climate change are evident and necessitate an urgent appeal to hold authorities accountable for the lack of implementation. It should be emphasized that practices should be adopted to integrate waste into its circular economy instead of becoming part and parcel of the linear economy.

To codify the regulations as the law is one thing, and ensuring implementation is another. The following recommendations can be adopted either in the implementation process or the legal framework for a more comprehensive and holistic approach of SWM –

4.1 RWAs (The Resident Welfare Associations)

SWM is a community-based initiative, and the community plays a huge part in management at the source. RWAs inclusion in the legislative framework is essential owing to the accessibility of areas, giving them time and energy to ensure implementation. It is appropriate because people are inclined to listen more profoundly if the information and pressure come from members of their societies. The societies that have RWAs should be responsible for encouraging recycling methods and composting facilities. Furthermore, they should be assisted in recycling, composting, sale in open markets, or using the same for community parks. Also, suppose the RWA fails to segregate waste, after a warning. In that case, the authorities should decide a fixed penalty to keep as in India, punitive measures do set a deterrent in society.

4.2 Need for addressing unemployment and redundancy of labour

Integration is more successful than replacing the whole model. The waste workers should get recognition as paid labour which will provide them benefits such as fixed salaries, specific performance-based incentives, status, and living standards for a shift to a circular economy. The existing labour force should be deployed through an agreement with the private enterprises to approach them first for better opportunities instead of hiring recruits when shifting to the PPP model. Egypt thrived on the discussed model because they seized the significance of the informal sector in waste management. The system had additional economic benefits for the private domain, such as the government being lenient to impose a penalty for defaults, taking into account the Company's work for employing and benefitting waste pickers. The results were impressive as the waste dumped in landfills was reduced owing to the informal sector's contribution in sorting and segregating waste. Ngo's involvement in spreading awareness and training waste workers can benefit them significantly.

4.3 Recycling

The lack of a market for recycling products also requires attention, and a profit-induced market in this sector is required to generate employment opportunities. One of the successful examples of enhancing recycling practices is the Deposit Refund Scheme, a successful model abroad and in the State of Himachal Pradesh in our country. Further, the studies and the R&D projects have measured the success of construction of roads with plastic as a good alternative for cement.

ENVIRONMENT LAWS AND SUSTAINABILITY: LARGE PROJECTS, SMART CITIES, AND ENVIRONMENT

Sanchit Meena*

I. Introduction

Sustainable development outlines a framework for human beings to live and prosper in peace with nature rather than living in conflict with it. Despite the numerous environmental and natural resource regulations that exist, sustainability does not yet have a sufficient or supportive legal base. It is now imperative to establish legal institutions and enforce laws to make significant progress towards achieving sustainable development.

To achieve sustainability, one must acknowledge that while environmental law is critical, it is only one component of the overall legal framework required. Other legal requirements include a variety of other laws, such as land use and property laws, tax rules, laws governing our governmental structure, and so on. Laws related to sustainability are necessary as they provide crucial instruments and institutions for sustainable governance.

The rapid growth of the world's population, particularly in emerging nations such as India, has already had and will continue to have an impact on settlement patterns and the expansion of some of the world's greatest metropolises. Human agglomeration situations are expected to worsen because they are the focal points of national spatial structures that, for historical and political reasons, do not sufficiently satisfy the demands of emerging countries.

It is a common assumption that most urbanization strategies are motivated by the interests of governments which seek to balance the concentration of economic activities, populations, and institutions in specific geographic areas.

It has also been acknowledged that governments are ill-equipped to deal with most urban issues. We have squandered too much time, effort, and money on promoting local or metropolitan master plans that have proven to be of less benefit as they failed to emphasize on unplanned economies and/or received insufficient backing from state governments.

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1.1 Impact of Construction on the Environment

Scientists hold the opinion that the Earth is warming at a greater pace because of the existing human activities that go unregulated. Human activities result in climate change and an increase in carbon dioxide emissions on a global scale. Every building project releases numerous harmful gases like carbon dioxide, methane, and other waste products. These endanger our environment and contribute to climatic change.

It has been estimated that on a global level, the cement industry alone accounts for 5% of all the carbon dioxide emissions in the environment.¹ Mining activities are used to extract the minerals needed for building. The companies then ship them to various areas in the world. Both of these procedures require fossil fuels which release greenhouse gases when burned. One of the major environmental challenges related to infrastructure development is energy use. As per the research, it has been estimated that approximately 36% of the world's energy is consumed for construction activities.²

1.2 Importance of Green Construction

Environment friendly construction is essential in today's era as everyone desires to live in a safer environment. This process of environmentally friendly construction is termed as Green Construction.

Some features of Green Construction³ are as follows:

1. Green Roofs: Roofs, where vegetation plantation is fostered, are known as green roofs. Such roofs enable automatic cooling and act as a natural carbon sink.
2. Cool Roofs: Such roofs extensively focus on designs and are constructed in a manner in which the roofs reflect the lights and don't absorb the same. Such roofs are angled and help in automatically reducing the heat and keep the environment cooler.
3. Use of Solar Energy: This practice of using solar panels for electricity generation is widely increasing in India. This helps to conserve fossil fuels. It is also helpful in saving

¹ Tyler, *The Environmental Impacts of Construction Projects and the Next Steps Forward for the Industry*, ESUB, Jan13, 2017 <https://esub.com/blog/environmental-impacts-of-construction-projects/> (last visited Feb. 22, 2022).

² Mariah Venice Afable, *Building Green – Minimizing the Environmental Impact of Construction*, BOLD BUSINESS, Jan. 10, 2019, <https://www.boldbusiness.com/infrastructure/green-construction-environmental-impact/>. (last visited Feb. 24, 2022).

³ Annie Qureshi, *An Important Look to the Future of Green Construction*, BLUE AND GREEN TOMORROW, Oct. 27, 2020, <https://blueandgreentomorrow.com/environment/important-look-to-future-of-green-construction/>. (last visited Mar. 03, 2022).

money, as the installation charges are a one-time investment for a healthy and green future. The Indian Government has implemented various schemes pertaining to solar energy such as Jawaharlal Nehru National Solar Mission (JNNSM) Phase Number 2, Rooftop Solar Scheme, etc.⁴

Environmentally friendly constructions serve various features that are critical to achieving this goal. Construction of such buildings is an imperative,⁵ mainly because:

- It accommodates the utilization of resources like water, air, and land efficiently and effectively.
- It assists in improving the health of society.
- It also helps in reducing the waste and pollution in the environment.

1.3 Concept of Smart Cities

A smart city has generally been characterized as a place where information and communication technology are used in all aspects of life, and where it is necessary to achieve smart city objectives.⁶ It is not, however, a goal in and of itself. High-tech communication capabilities are part of a smarter city's infrastructure. It makes use of digital technologies to improve urban living and well-being, cut expenses and resource consumption, and engage with citizens more effectively and actively.

The concept of Smart City came into being to handle the rising trend of urbanization. Smart cities are gaining popularity as a result of a variety of socioeconomic and technological advancements around the world. Established suppliers from the energy, transportation, buildings, and government sectors are coming into the smart city market as a result of the growing number of smart cities, while start-ups are tackling a variety of emerging opportunities in the same field.⁷

⁴ Christopher J. Rhodes, *Solar Energy: Principles and Possibilities*, 93(1) SCI. PROG. 37, 37–112 (2010), <http://www.jstor.org/stable/43424235> (last visited Mar. 02, 2022).

⁵ Larson Simmons, *How Sustainability is the Future of the Eco-Friendly Building Industry?*, BIO FRIENDLY PLANET, <https://biofriendlyplanet.com/green-alternatives/sustainable/how-sustainability-is-the-future-of-the-eco-friendly-building-industry/> (last visited Mar. 02, 2022).

⁶ Parvez Hayat, *Smart Cities: A Global Perspective*, 72(2) INDIA Q. 177, 177-191 (2016), <https://www.jstor.org/stable/48505495>.

⁷ *Secure, Sustainable Smart Cities and the IoT*, THALES GROUP, <https://www.thalesgroup.com/en/markets/digital-identity-and-security/iot/inspired/smart-cities>.

1.4 Essential Components of Smart Cities

As per the smart cities mission of the year 2015, some features of smart cities are:⁸

- Smart energy innovations to help cities become smarter.
- Smart cities need a sustainable smart urban environment to thrive.
- Cities with smart transportation are smart cities.
- The nerve centre of smart cities is smart IT and communications.
- The lifeblood of smart cities is smart health.
- Citizens for smart cities are empowered by smart education.
- The cornerstone for smart cities is smart buildings.
- Smart governance will be the starting point for smart cities.

1.5 Impact of Urbanisation

While urbanization has had a good impact on pay levels, business, creativity, and market financial matters, it has also brought with it a slew of challenges, including an impact on the environment, which has been steadily deteriorating in Indian cities and towns for decades. In 1901 the urban population was just 11.4% but in 2001 the count increased to 28.53% and over 30% as of the 2011 Census.⁹ By 2030, it is expected that the urban population will shoot up to 40.76%. As per the World Bank, India will become the leader of the world's urban population boom by 2050, followed by China, Indonesia, Nigeria, and the United States.¹⁰ Lack of economic prospects has resulted in an unplanned and chaotic overpopulation of metropolitan regions. Space, housing, water, and other basic amenities are in short supply in disadvantaged metropolitan areas. When there is too much of something, it causes problems and eventually degrades the ecosystem. As a result, air and water quality are deteriorating, garbage is being generated, slums are spreading, and undesired land-use changes are occurring, which has contributed to urban poverty.

1.6 Impact of Huge Population

The country's high population, which has resulted in rapidly rising energy consumption, plays a significant role in global climate change. An increase in global temperature can have

⁸ National Portal of India, *Smart Cities Mission: A step towards Smart India*, INDIAN GOVT. PORTAL, <https://www.india.gov.in/spotlight/smart-cities-mission-step-towards-smart-india>.

⁹ *World Urbanization Prospects*, UNDESA, <https://esa.un.org/unpd/wup/Country-Profiles/>.

¹⁰ Paul R. & John P. Holdren, *Impact of Population Growth*, 171 (3977) SCI. 1212, 1212–17 (1971), <http://www.jstor.org/stable/1731166>.

significant physical, natural, and financial consequences, which can be both beneficial and detrimental. All the changes in 14 precipitation patterns, sea course, marine structures, soil dampness, water accessibility, and ocean level rise get affected by the environmental change.¹¹ Horticulture, ranger service, and distinctive eco-frameworks like wetlands and fisheries would all be affected. Similarly, rising temperatures, with the resultant increased heat pressure and shift in cases of vector-borne illnesses, would render the global population powerless in the face of medical concerns producing disruptions in settlement patterns and large-scale relocation. All of these would have major socio-economic ramifications.

1.7 Effects of Environmental Degradation

Many irreversible negative effects of environmental deterioration might have long-term consequences. Natural corruption has the greatest impact on people's and populations' well-being. Given below is the table which highlights the presence of dangerous gases in the atmosphere of major cities in India.

City	SO ₂	NO ₂	NH ₃	H ₂ S	SPM	RSPM
Chennai	8	13	33	2	101	67
Mumbai	27	26	51	2	226	91
Kolkata	62	39	93	4	394	180
Delhi	33	46	176	1	543	204

Source: Compendium of Environment Statistics, 2000¹²

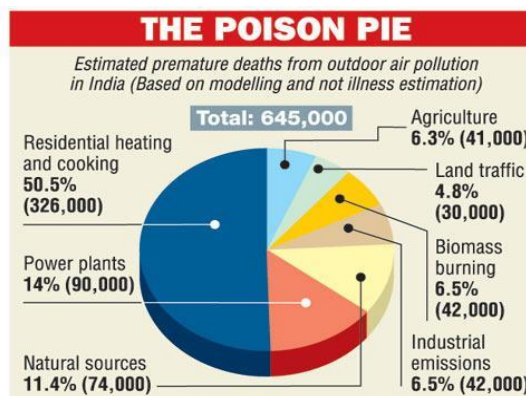
The air in major cities has become very filthy, with pollutant concentrations exceeding the World Health Organization's (WHO) safe level.¹³ The dramatic increase in urban air pollution in India over the previous decade is concerning. Growing industrialization and increasing vehicle pollution are the main causes of urban air pollution. Industrial pollutants, automotive exhaust, and the burning of fossil fuels kill thousands of people and cause many more to suffer

¹¹ María L. Cruz-Torres, *Local-Level Responses to Environmental Degradation in North-western Mexico*, 57(2) J. ANTHROPOL. RES. 111, 111–36 (2011), <http://www.jstor.org/stable/3631563>.

¹² Compendium of Environmental Statistics, *Economic Planning & Information Technology*, MINISTRY OF FINANCE, available at <https://stats.gov.vc/wp-content/uploads/2021/11/Compendium-of-Environmental-Statistics-2020.pdf>.

¹³ Anindya Sen, *Urban Growth and Its Consequences*, 32 (14) EPW 707, 707-709 (1997), <http://www.jstor.org/stable/4405257>.

from respiratory damage, heart disease, and lung illness. The picture below depicts the proportion of deaths caused by various burning activities in an environment.



Source: The Telegraph¹⁴

In recent years, the air quality in mega-cities such as Chennai, Mumbai, Kolkata, and Delhi has deteriorated, resulting in a slew of ailments among the population. Indoor air pollution, on the other hand, may pose an even bigger threat to human health. Smoke from cooking with wood, crop leftovers, animal dung, and low-quality coal contains harmful particles and gases. Biodiversity is also essential for maintaining the environmental balance, such as combating contaminants, re-establishing nutrients, safeguarding water sources, and settling the atmosphere. Deforestation, global climate change, overpopulation, and contamination are only a few of the major factors that contribute to biodiversity loss. Humans have negatively affected the planet's biodiversity, through various activities such as angling and chasing, evolving biogeochemical cycles, and swapping species from one territory to the next.

1.8 Linking Sustainable Development Goals (SDGs) To Smart Cities

The idea of sustainability refers to boundaries that are implemented on a resource base by analysing the current state of technology and social organization, as well as nature's capacity to sustain the effects of human activity. But, to pave the path for a new period of economic growth, technology, and social structure can be managed and enhanced. This helps in meeting our demands of advancements and also keeps the resources secure for the future generation. The

¹⁴ G.S. Mudar, *Lakhs of early deaths tied to home emissions*, THE TELEGRAPH ONLINE, Sep. 17, 2015, <https://www.telegraphindia.com/india/lakhs-of-early-deaths-tied-to-home-emissions/cid/1513045>.

idea of sustainable development has its basis in meeting the demands of everyone and eventually fosters the development of society as a whole without exhausting the resources.¹⁵

Smart cities help us in achieving Sustainable Development Goals (SDGs), mainly because these cities are constructed in an environment-friendly manner after thoroughly analysing the existing resources base and climatic conditions of the particular area in which such cities need to be constructed. Apart from this, these cities consist of a proper sewage system and don't have a major impact on environmental degradation.¹⁶

IV. Suggestions

An effective legislation is required to deal with the problem of rapid population growth in relation to the existing resource base. The concept of Smart Cities is developing in our country but there is no specific law in place to foster the construction of smart cities in an environment-friendly manner. Thus, in the current scenario having a law on smart cities is also an imperative.

To control the population, the central government should start a drive that aims to enhance proper birth control measures among citizens. Apart from this, every citizen should use the resources as per one's need and should set aside his/her greed. Taking care of the environment should be the duty of each and every citizen, so it is also important for the government to promote awareness about the existing environmental issues at the grass-roots level so that the common citizen can contribute their part in preserving our environment.

At an international level, the United Nations can also assist in formulating specific policies for every country after analysing the factors of population growth and the nature of resources found in a country, the national government can then implement laws on similar lines.

V. Conclusion

The high population growth rate results in the increase of population density, an increase in the number of people living in poverty, and a strain on natural resources, all of which contribute to environmental degradation through the complete exploitation of natural resources. The study

¹⁵ *Report of the World Commission on Environment and Development: Our Common Future*, SUSTAINABLE DEVELOPMENT KNOWLEDGE FORUM, <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>.

¹⁶ *Supra* note 11.

reveals that rapid population growth continues to be a source of concern for the country since it has several negative consequences, the most serious of which are land corruption and soil disintegration, deforestation, falling per capita land, woodlands, and water resources.

Through particularly tailored Information, Education, and Communication (IEC) programmes, efforts should be made to inform and educate the people and local authorities about the negative effects of huge populations. Afforestation and social forestry programs should be conducted at the local level to increase green cover and conserve existing forests. Water contamination caused by chemical fertilizers, pesticides, and other contaminants requires both preventive and curative interventions.

There should be a greater emphasis on mandatory environmental education at the school level to raise public awareness about environmental conservation. Environmental protection should not be only the responsibility of the government, the members and leaders of the community should be encouraged to work together to address environmental concerns.

Appendix – I

Research Methodology

The sources of research are based on both, primary as well as secondary data. The primary data has been collected via an online survey which was conducted through Google forms and had '105' respondents which consisted of people of the age groups of "15-20", "20-25", "25-30", and "30 & above".

This questionnaire was distributed *via* the internet randomly and contains responses from people residing in Northern India. Secondary data is also used in the research and has been collected through numerous journals, articles, reports, research papers, and books about the same topic available online. The findings from the sample were interpreted thoroughly and have been generalized to a bigger crowd falling in the same age group.

Findings and Discussions

From the study it was concluded that most of the participants acknowledged the various threats to the environment. In furtherance of this, it was found that the participants knew that global warming is caused by both industries, at a macro level and common people, at a micro level. Most people who participated were of the view that sustainable development should be fostered

via constructing cities which do not harm the ecology. Further, steps should be taken at the grass root level to tackle the problems of environmental deterioration.

Appendix – II

Questionnaire (tick the suitable option)

1. Age

- 15-20
- 20-25
- 25-30
- 30 and above

2. Which of the following is the worst environmental challenge faced by the planet?

- Ozone depletion
- Global warming
- Water pollution
- Air pollution

3. Who are the worst polluters?

- Industries
- Government
- Individual people
- There are many reasons.
- All of the above
- No one specific, each and every one as a whole
- Industries as well as individual people

4. Sustainable development means?

- Development that protects the most jobs
- Development that will save the environment even if it means lots of people will lose their jobs
- Development that takes into consideration the economic and environmental needs of the future generations

5. In which of the following ways do you conserve the water where you live?

- Limit shower time
- Turn off the sink while teeth brushing, hand washing, shaving, etc.
- Report sinks lead to landlords or resolve the issue

6. Will smart cities be an effective idea for sustainable development?

- Yes
- No

PUBLIC INTEREST ENVIRONMENTAL LITIGATIONS IN INDIA: A STUDY

Supriya Malviya*

I. Protection of Environment and PIL

The relaxation of the standard process of standing in court and the introduction of the principle of Public Interest Litigation have become one of the most significant legal developments in environmental jurisprudence. In 1976, it was decided by the Supreme Court of India that “where a wrong against common interest is committed, the presumption of locus standi would not always be a pre-requisite to draw the attention of the judiciary against public bodies for their failure to discharge constitutional duties.” Since then, India’s approach to tackle such issues has been expanded; the rule that when wrong against common interest is committed, the presumption concerning locus standi cannot be considered a real barrier to public interest litigants.

Any Indian citizen may now file a petition on behalf of any citizen or community of people who are unable to reach the court themselves. In the 1970s, the scope and scope of PIL grew to include a spectrum of issues such as sexual harassment, child labour, prevention of corruption, environmental protection, etc. PIL has been used as a major tool for environmental conservation and resolving problems involving environmental conflicts in India since the relaxation of the locus standi principle in the 1970s. Nonetheless, the Court’s approach to hearing PILs in environmental cases has been inconsistent.

PIL must be studied from a wider legal and economics perspective to define the basic factors and situations that can be regarded as constructive roles in fostering an improvement in social welfare, reduction in the level of pollution. That approach to PIL analysis has yet to be taken, but it is needed to determine when PIL will perform that beneficial function.¹

Theoretical methods shall be used to address the prevalent questions. Theoretically, certain advantages exist for dealing with such issues. For instance, the current approaches to tackle environmental issues, the benefits of the procedure followed by India to tackle such issues. One of the merits of such theoretical methods is to construe the traditional methods that have been

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¹ Jamie Cassels, *Judicial Activism and Public Interest Litigation in India: Attempting the Impossible?* J. COMP. L., 495, (1989).

adopted by people and the flaws present in those methods. Consequently, it becomes easier to see the motive behind a PIL as to how it could be useful in environmental jurisprudence.

1.1 Significance of PILs

In several respects, the Court's approach to hearing PILs for environmental protection is important. Prior to the definition of a PIL, such as those found in the IPC, civil law remedies under tort law, and criminal law provisions such as those found in the Indian Penal Code were used. There was a Procedure Code in place to include solutions for cases involving air, water as well as noise pollution.

However, there were difficulties in attracting the Court's attention to environmental issues due to a lack of public understanding of environmental issues and insufficient knowledge of environmental laws. As a result, in case of environmental justice, the most significant stumbling block in the way of litigation is the conventional definition of 'locus standi'. The policy of the Court has shifted, it has been decided that a person who is interested can be contacted authorised to begin legal action to claim diffused and meta-individual rights.

In general, people affected by pollution could be a broad, diffused, and unidentified group in environmental litigation. There is a spectrum of cases of these sorts when the issue of locus standi comes into picture when an individual who does not suffer any personal injury files a PIL. Moreover, the natural world and inanimate objects are unable to defend themselves in a court of law.²

Hence, the Courts have stated that an individual having sufficient interest can be allowed to participate and initiate a legal framework to claim diffused and meta-individual environmental rights, problems, as well as ensuring that the natural environment is protected and improved.

II. Implications of Environmental PILs

There is persuading observational proof that PIL can be powerful in environmental cases.³ However, PIL brings up a couple of intriguing issues: What explicit highlights of the lawful establishments of a State make it workable for the Apex Court to assume this positive part in granting environmental protection? How has the judiciary had the option to actually safeguard

² Tom Ginsburg, *Judicial Review in New Democracies, Constitutional Courts in Indian Cases*, at 98, 99 (2003).

³ Michael G. Faure & A.V. Raja, *Effectiveness of Environmental Public Interest Litigation in India: Determining the Key Variables*, Vol. 2 No. 2, FORDHAM ENVIRONMENTAL LAW REVIEW, 240 (2010).

the climate, yet courts in certain developing nations have not? To respond to these significant inquiries, which might have significant ramifications for the role of legal institutions in nations is important to recognize the key factors that make a PIL work.

The implications and effectiveness of environmental PILS are highlighted below by tracing the judicial history of environmental PILs; landmark judicial pronouncements wherein a spectrum of issues, changes and implementation with respect to environmental protection have been witnessed.

2.1 Reflections on Indian PILs for Environmental Protection

- *Rural Litigation & Entitlement Kendra (RLEK) v. Union of India*⁴: In 1983, it was India's first public interest litigation for environmental protection. RLEK, the plaintiff, requested that a large number of leases for lime-stone quarries that polluted the environment be terminated, causing ecological imbalance and endangering the health of not only humans but all living things stuff that are both inanimate and animate. The respondents, which included the State as well as units related to lime-stone, claimed, "shutting down such units would put the owners out of business and result in job losses for the people who work in these quarries."

"The result of this order made by us would be that the lessees of lime-stone quarries that have been guided to be permanently closed down under this order would be thrown out of business in which they have invested substantial amounts of money and spent significant time and effort⁵," the Court said. This will certainly put them in a difficult position, but it is a price that must be paid in order to protect and preserve rights of public to have a healthy atmosphere having lesser disturbed balance in ecology. Moreover, absence of any risk to oneself, livestock, houses, agricultural property, and under the influence of air pollution.

- *M.C. Mehta v. Union of India*⁶: A writ petition was filed under Art. 32⁷ in the year of 1985 to shut down Kanpur tanneries that were alleged to discharge beyond permitted

⁴ AIR 1985 SC 652.

⁵ Rural Litigation & Entitlement Kendra (RLEK) v. Union of India, AIR 1985 SC 652.

⁶ AIR 1988 SC 1037.

⁷ INDIA CONST. art. 32.

limits into the Ganga. The Court ordered all industrialists, public authorities concerned with jurisdiction over areas where the Ganga flows and directed them to appear before the Court, as requested by the petitioner, prohibiting the trade of effluents and sewage without treatment.

In the aforementioned case, the evidence discovered that some tannery owners continued discharging effluents from their factories in the Ganga despite being asked to refrain from doing the same for many years.⁸ The Court stated that the tanneries' financial ability should be ignored, it cannot be permitted to carry on operations solely because it says it lacks the financial means to construct primary treatment plants.

- *Vellore Citizens Welfare Forum v. Union of India*⁹: Vellore Citizens Welfares Forum filed a PIL under Art. 32 against enormous soil and water pollution caused by different ventures in Tamil Nadu. The SCI opined that, “although the leather industry is a significant earner for Indian foreign exchange and provides employment, yet it doesn't imply that this industry has the right to put ecology at stake and create health hazards.” The Apex Court commanded the Government to make a quick move under Sec. 3(3) of India's Environment Protection Act of 1986 to manage contamination as well as safeguard the environment.
- *Indian Council for Enviro-Legal Action v. Union of India*¹⁰: The petitioner, the Indian Council for Enviro-Legal Action put forth an activity to stop and cure the contamination brought about by certain types of chemical industrial plants founded in a village called Bichhri in Udaipur District. Calling them as rebel enterprises the Court held that the compound enterprises incurred untold hopelessness upon poor people, clueless residents, de-ruining their land, their water sources as well as their whole climate all in compatibility of their private benefit and neglected for agreeing with statutory actions for preventing and controlling contamination. Consequently, the Court requested the closure of all those plants.

⁸ Shyam Divan, *Cleaning the Ganga*, 30(26) ECONOMIC & POLITICAL WEEKLY, 1557 (1995).

⁹ 1996 AIR 2715.

¹⁰ 1996 AIR 1446.

- *The Delhi Vehicular Case*¹¹: The SCI advocate M.C. Mehta recorded another PIL suit against the Union of India in 1985, charging those current ecological regulations committed the public authority to find ways to assist with lessening the pollution in Delhi in light of a legitimate concern for public wellbeing. In 1986, the Court guided the Administration of Delhi so that it could file an affidavit determining measures it took for maintaining emanations of smoke, residue, etc. from vehicles employing in Delhi to “safeguard the health of the present and people in the future.”

1990 was the year when the Court recognized that heavy vehicles including trucks, buses, etc. were found to be the principal supporters of air pollution. In 1994, control the kind of fuel utilized in the transports, the Court ordered the transitioning away from in India's four biggest urban areas. Later in the year of 1996, the Court held, “government vehicles in Delhi shall be converted to CNG.”

- *Tehri Bandh Virodhi Sangharsh Samiti v. the State of U.P.*¹²: A PIL was filed in 1985 by the Tehri Bandh Virodhi Sangharsh Samiti before the SCI, looking for a restriction request against the development of dam. The complaint of the candidate was concerning specialists who had not thought about the security viewpoint because the venture represented a genuine danger to lives, biology as well as climate. This is because of the fact that the dam was inclined to seismic tremors.
- *Tarun Bharat Sangh, Alwar v. Union of India*¹³: Tarun Bharat Sangh put forth allegations that regardless of different warnings and orders against continuing mining works in the Protected region under the Wild Life, Environmental Protection and Forest Conservation of Government of Rajasthan, gave 400 mining licenses to different people empowering them to continue mining activities of lime and dolomite stones inside the safeguarded region. As a result, it lessened the ecology of that particular area, other than endangering natural surroundings of Wildlife. Consequently, the SCI held, “that mining operations of any sort shall be prohibited within the protected area.”

¹¹ AIR 2002 SC 1696.

¹² 1992 SUP (1) SCC 44.

¹³ AIR 1992 SC 514.

- *Narmada Bachao Andolan v. Union of India*¹⁴: The NBA documented a writ petition testing different perspectives of Indian government and issues encircling the Sardar Sarovar Project. The NBA request contended different things, that the Government of India had not thought about every single applicable issue, specifically, that it had not given venture impacted individuals to make portrayal before it.

The request insinuated that these exclusions had prompted an imperfect undertaking with terribly underrated social and natural expenses and infringement of common freedoms and harm to the climate. All the more explicitly, it urged the law to either put an end to venture and carry out alternative proposal or command the UOI to act on another council to audit the task so that it could incorporate support of undertaking impacted individuals or that the court should set up a free group to survey the entire task.

III. Complications and Contributors

In recent years, the judicial consideration of PILs involving environmental issues has revealed some practical difficulties. There has been a flurry of PILs on environmental issues since the locus standi concept was liberalised. PILs are being submitted with little to no notice, taking advantage of the Court's lack of experience on technicalities. Complaints are filed without sufficient evidence to support them, and actions are taken as a result¹⁵. It is expected that once a petition is filed, the Court will take care of the rest. But, at the heart of the matter, the Court's time, energy, and money are being redirected to gather information on a variety of environmental issues, to the point that the justice delivery system is under severe stress, and cracks are beginning to appear.¹⁶

It is important to remember that the progress of 'environmental PIL in India' must be seen in the context of the drastic increase in environmental degradation.¹⁷ According to recent reports, the deteriorated quality of environmental explicitly contributes up to 25% of numerous preventable illnesses in India, that also covers acute respiratory diseases. Aside from that, the

¹⁴ AIR 2000 SC 3751.

¹⁵ Prashant Bhushan, 39(18) *Supreme Court and PIL*, ECONOMIC & POLITICAL WEEKLY (2004).

¹⁶ G. L. Peiris, *Public Interest Litigation in the Indian Subcontinent: Current Dimensions*, 40(1) INTERNATIONAL & COMPARATIVE LAW QUARTERLY 66 (1991).

¹⁷ Michael R. Anderson, *Individual Rights to Environmental Protection in India*, HUMAN RIGHTS APPROACHES TO ENVIRONMENTAL PROTECTION 199, 216 (1996).

aim of implementing PIL was to resolve public concern. However, there are some concerning and evolving patterns.¹⁸

One of the most important aspects for a PIL method is to make it personalised, individualistic, and noticeable. They have been known to identify the issue with the understanding of a judge or a litigant.¹⁹ When the outcome of a case is determined by the judge to whom it is presented, it becomes a travesty of justice.²⁰ Without a question, the judge's and litigant's personalities, as well as their strong commitment to social justice and environmental conservation, have played a significant role in developing of the subject's jurisprudence.

2.1 The Current Scenario

A careful examination of the term PIL on environmental issues shows that third-party participation has resulted in a profound shift in environmental jurisprudence. The relaxation of locus standi has contributed to the evolution of a set of environmental values, as well as expanded the spectrum for environmental justice groups to serve impacted people and inanimate objects. Environmental NGOs and social activists have done a great service by putting issues relating to environmental issues before the Supreme Court through the PIL process.

However, in recent years, there has been widespread public dissatisfaction with the judiciary's apprehension of filing PILs against infrastructure projects for violations of environmental laws. There has also been an effort in the legal system to bind PILs with rules so that environmental lawsuits can be heard. There is a pressing need to record the jurisprudential successes of decisions made in the public interest, as well as the societal gains that have resulted. PILs, for example, have bolstered environmental jurisprudence, resulting in the creation of a number of environmental principles and the extension of constitutional protections, for instance, right to life.

¹⁸Atiyah Curmally, *Environmental Governance and Regulation in India*, 89, 90 NEW DELHI: INDIAN INFRA-STRUCTURE REPORT (2002).

¹⁹

Jamie Cassels, *Judicial Activism & Public Interest Litigation in India: Attempting the Impossible?* 36(3) THE AMERICAN JOURNAL OF COMPARATIVE LAW (1989).

²⁰ *Id.*

The SC's Public Interest Litigation (PIL) cell should be provided with all tools necessary to thoroughly examine and analyse the petition, as well as to investigate the petitioners' motivation for bringing the matter to the Court's attention. Its purpose should be more straightforward than it is now. Arbitrariness and injustice will result from guidelines. This is also applicable of environmental cases involving the public interest.

IV. Conclusion

Over the years, the discipline of environmental jurisprudence has seen the emerging significance of PILs which has encouraged more and more people to raise their voices against the varied issues of the environment thereby contributing towards its protection and preservation. The people who do not have the requisite locus standi in order to bring up their matter before the judiciary can still go ahead and file a PIL in circumstances where they infer that a certain wrong has been committed which is contrary to the common interest. Through this, the ever-increasing environmental concerns receive adequate attention after which possible solutions can be offered to resolve them. However there lies the biggest challenge - the lack of awareness and comprehension regarding the environmental issues and the laws implemented to regulate them. For this, courts need to do away with the traditional definition of locus standi; there needs to be certain exceptions to this definition so as to give a platform for those people not only personally aggrieved but also those interested to bring legal actions to claim their fundamental right to environment under the widened scope of Article 21 of the Constitution of India. Therefore, the question of who can approach the court claiming environmental damage where the damage is not personally has to be done away with and instead the factor of 'sufficient interest' needs to be looked into. It has also been witnessed that the concept of PILs in environmental matters gained importance only in the light of the emerging cases of environmental degradation. The extended scope of PILs have granted several environmental NGOs and interest groups with the right to put forth issues pertinent to the environment before the Indian judiciary. Thus, since its liberalisation, PILs have strengthened environmental jurisprudence providing for the inclusion of new environmental principles including the widening of the scope of the right to life.



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