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STRATEGIC ENVIRONMENTAL ASSESSMENT: A LEGAL NECESSITY BEYOND THE ENVIRONMENTAL IMPACT ASSESSMENT IN INDIA

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"The best way to predict the future is to create it."

- *Alan Kay*

ABSTRACT

India is a country that has grown remarkably over the years, transforming from a primarily agrarian economy to a global hub of technology and innovation. It continues to make strides in infrastructure, education, and digital advancement steadily working towards inclusive growth and sustainable development. With all the advancements in different sectors it is important to consider the implications of such development projects on the environment. Environmental Impact Assessment (EIA) has long served as India's primary legal mechanism for integrating environmental considerations into developmental decision-making. EIA has been a pivotal tool in evaluating the probable environmental effects of suggested development initiatives, before they are carried out, to ensure that economic progress does not come at the cost of environmental degradation. However, its project-specific, regulatory inconsistencies, gaps in data collection and often political meddling have rendered it inadequate in addressing the broader ecological and social impacts of policy-level decisions in India. This article critically examines the challenges and limitations of the EIA functioning and framework in India, particularly its failure to protect vulnerable ecosystems and affected communities, and argues for the urgent incorporation of Strategic Environmental Assessment (SEA) as a legal and

institutional imperative. By offering a proactive, participatory, and sustainability-driven approach in evaluating the environmental consequences of policies, plans, and programs (PPPs) at an early stage of decision-making, SEA can help in bridging the gaps between economic development and environmental sustainability. By analysing the judicial interpretations, and Indian environmental governance practices, this article highlights the pressing need for a legally binding SEA regime in India.

Keywords: *Environmental Impact Assessment, Strategic Environmental Assessment, Environmental sustainability, Environmental Governance, Urbanization*

I. INTRODUCTION

Development is an unavoidable process, especially in cities where the demands of economic growth, population expansion, and technological advancement constantly alter the urban landscape. Uncontrollable heightening of urban populations globally is considered as the primary reason directly responsible for the unusual rate of urban sprawl. This has eventually lead to unchecked expansion of city boundaries often extending to vast tracts of agricultural lands. However most of these expansion and development has failed to consider proper urban planning. From the past few years people have witnessed how the natural environment of cities have been hampered by the ongoing urban retrofitting projects and infrastructure developments. Improper expansion of the city boundaries have left no land for farming and agriculture. Every urban planning project be it the construction of highways, smart cities, or industrial zones has the potential to significantly alter the natural and social environment. To ensure that such developments are sustainable and do not cause irreversible harm to the environment, they must undergo an Environmental Impact Assessment (EIA). EIA, a vital regulatory tool that assesses the possible environmental consequences of proposed projects before they are implemented. It is a multi-step process that ensures that environmental factors are taken into account while determining about projects that could have an effect on the

environment. By evaluating the consequences of a development project on the environment, it gives green signal for the implementation of such projects.[1]

Climate change has emerged as a pressing concern for the people of India, especially in rapidly urbanizing cities. While development has undoubtedly brought modernization, improved infrastructure, and increased opportunities, it has come at a significant environmental cost. Urban areas are increasingly turning into heat chambers, with extreme summer temperatures claiming the lives of both humans and animals. The relentless construction and expansion of cities have led to the disappearance of much of the remaining green cover, leaving concrete jungles in place of natural ecosystems. This unchecked urban growth, combined with rising global temperatures, has intensified the Urban Heat Island (UHI) effect, making city life increasingly unbearable during peak summers. UHI effect describes a situation in which urban temperatures consistently climb above those of nearby rural areas. In metropolitan locations, this phenomenon affects a large number of people both directly and indirectly and is recognised as a human-caused aspect of global warming due to the expansion of cities worldwide.[2] Therefore, conducting a proper Environmental Impact Assessment (EIA) is crucial to ensure that urban development does not come at the expense of ecological balance. A well-implemented EIA can help cities retain their green cover, protect natural habitats, and maintain a healthy ecosystem while still accommodating the needs of a growing population.

However, there seems to exist many challenges in the functioning of Environmental Impact Assessment in India. Every government, company or agency, before implementing any major project, is required to carry out an EIA in accordance with prescribed norms and regulations. However, the visible negative impacts of numerous urban retrofitting projects across Indian cities raise two important questions: Is the EIA process truly being conducted as mandated? And if it is, to what extent is it being carried out with thoroughness, objectivity, and genuine public participation? The recurring environmental and social consequences of such projects suggest that either the assessments are being bypassed or they are not being implemented effectively. These inconsistencies and loopholes in the EIA process highlight the urgent need

[1] Vikrant Sopan Yadav, "Environmental Impact assessment: A critique on Indian law and practices" 5 *International Journal of Multidisciplinary Research and Development* 1 (2018)
[2] Anita Yadav, Jaswant Singh, "A Study on Urban Heat Island (UHI): Challenges and Opportunities for Mitigation" 19 *Current World Environment* 436 (2024)

to adopt and implement Strategic Environmental Assessment (SEA), which takes a broader, more integrated approach to environmental planning and ensures sustainability is embedded at the policy and planning stages. As a proactive method of incorporating ecological concerns into higher levels of decision-making, SEA is a methodical examination of the impacts of development policies, projects and other related activities on the natural environment.

II. ENVIRONMENTAL IMPACT ASSESSMENT (EIA): CONCEPT AND CHALLENGES

The development and growth of cities is an unavoidable process that involves a wide range of activities, each with its own set of advantages and disadvantages. It is far from a simple undertaking. In recent times, the process of urban development has become increasingly complex, driven by the growing demands of people for luxury, convenience, and access to every possible modern amenity. Balancing these rising expectations with the need for sustainable and inclusive growth presents a significant challenge for urban planners and policymakers. The more complex the development process becomes, the greater the need for proper assessment. In the past few years environment has been severely affected by the ongoing city advancement projects resulting into climate change and loss of biodiversity.

The entire process of evaluating a development project's effects on the environmental stability is referred to as environmental impact assessment. An EIA focusses on issues, challenges and limitations imposed by natural resources that may impact a project's feasibility. Additionally, it forecasts the potential harm that the project may cause to people, their country, their means of subsistence, and other local development initiatives. After carefully examining and evaluating the possible negative impacts, the EIA offers strategies to increase the project's viability and identifies measures that could balance environmental protection and development. Therefore, environmental impact assessment is merely a process by which the government, developer and other entities collect information to help a local planning authority determine whether or not a development should proceed.[3] The primary aim of Environmental Impact Assessment is to integrate considerations related to both the natural and human environment into the decision-making process concerning the design, planning, implementation, and

[3] *Supra* note 1 at 1

monitoring of development actions. This integration ensures that development is not only effective but also balanced and sustainable in the long run.[4]

The Environmental Impact Assessment process begins with identifying and defining the project, which includes detailing the project's objectives, nature, and other relevant information such as its management and control mechanisms. The next step is screening, which determines whether a particular project requires the preparation of an EIA. If the screening does not clearly exempt a project, a preliminary assessment is conducted. This involves sufficient research, a review of existing data, and expert consultation to identify key environmental impacts, predict their extent, and evaluate their significance for decision-making. Following this, the scoping stage identifies the major environmental issues that need to be addressed in the EIA. This step also opens a channel for public and institutional input, allowing stakeholders to understand the project and raise concerns. Once scoping is complete, the Terms of Reference are prepared, outlining the issues and potential impacts the project may have on the environment. A draft may be shared for public review to ensure the EIA framework is comprehensive and inclusive of community concerns. Finally, based on the approved terms, a Draft EIA is prepared in accordance with the relevant laws and regulations of the country where the project is to be implemented.[5] Public opinions, regarding the concerned project and its consequences, also play a crucial part in the process of EIA. Either through meetings, public hearings or suggestions in writing, EIA is meant to engage public participation and invite comments of public. Finally, after their opinions, the next step towards finalising the EIA report is initiated. It is on the basis of this final report, decision is taken whether to approve or decline the project.[6]

Environmental Impact Assessments, though known by different names in different countries, are tools used to understand how a planned human activity might affect the environment and hamper the ecosystem's stability. These assessments often also include what's called a Cumulative Impact Assessment (CIA), which looks at not just the main project, but also related activities and other possible future developments. EIAs can be just for information, or they might be required by law to help choose the option with the least environmental harm or even

[4] Environmental Impact Assessment as a Tool for Sustainable Development, *available at:* https://www.researchgate.net/ (Last visited on April 10, 2025)
[5] *Supra* Note 1 at 1
[6] Ibid

stop a project if it's too damaging. But for them to be truly useful, they must be done early in the planning process, before any big financial decisions are made, so that changes can still be made if necessary.[7] It is mandatory to conduct an Environmental Impact Assessment before undertaking any project, regardless of how beneficial or well-intentioned the project may be. Human nature often tends toward excess when pursuing needs and ambitions, and it is widely acknowledged that any development or urban expansion will inevitably have some impact on the environment. However, the real challenge lies in how effectively the EIA is carried out so that it can fulfil its objective. The process of EIA, though seems simple but is not easy to implement in all cases. Cities are built differently and have dissimilar social, economic or political structure. The successful and effective implementation of an EIA is influenced by a range of factors, which can vary significantly from one city to another. These factors may include local governance structures, institutional capacity, public awareness, regulatory frameworks, political meddling, the level of community participation and many more.

India's current environmental situation is increasingly fragile, marked by sudden climate shifts, unpredictable weather patterns, extreme heat, deteriorating air quality, and rising carbon emissions. At the same time, rapid urbanization is evident through continuous infrastructure development, industrial expansion, and the transformation of nearly every urban space. In this context, a critical question emerges: What role is the Environmental Impact Assessment truly playing? Is there a gap in environmental governance when it comes to striking a balance between developmental needs and long-term sustainability?

In India, enforcement of environmental laws have always faced several significant challenges. EIA being a comprehensive and complex process have also faced numerous obstacles and issues. Lack of transparency in the approval process of EIA, inadequate public participation, and weak enforcement of environmental regulations are some of the issues that have been the major obstacle in the path of attaining sustainability in India. Often, EIAs are conducted merely as a formality, with poor-quality reports that fail to thoroughly assess the true impact of proposed projects. Additionally, there is a shortage of skilled professionals and institutional capacity to carry out rigorous assessments. Many instances have been recorded which shows

[7] Andrew J. Wright, Sarah J. Dolman *et.al*," Myth and Momentum: A Critique of Environmental Impact Assessments "4 *Journal of Environmental Protection* 72 (2013)

the improper functioning of EIA in India. Environmental deterioration persists as a result of inadequate enforcement measures and a lack of monitoring. Insufficient public involvement in the EIA process is another significant obstacle. Despite being required by law, public engagement and consultation are occasionally criticised for failing to adequately take into account local and indigenous populations in EIAs. There are examples that demonstrate how these consultations are carried out in a hurry and how community concerns are not sufficiently addressed.[8]

In January 2024, National Green Tribunal revoked the assent granted to the Gare Pelma II coal mine, highlighting serious procedural lapses. The project, approved by the government, had moved forward regardless of inadequate public consultation and the absence of thorough assessment of its broader impact on the wellbeing of local population. Residents in the affected areas voiced strong dissatisfaction, particularly criticizing the Chhattisgarh Congress government at the time for hastily conducting the public hearing. They alleged that the process was neither fair nor impartial, and failed to provide a genuine platform for community concerns, thereby violating the principles of a valid and unbiased public consultation.[9] India is often characterized by significant political interference and influence, which extends across various sectors, including environmental governance. This political meddling can undermine regulatory processes, including EIA, where decisions are sometimes driven more by political or economic interests than by scientific evaluation or public welfare.[10] EIA in India has been insufficient in many projects which highlights the need to introduce a more effective and holistic option, such as Strategic Environmental Assessment (SEA), which looks at cumulative, long-term, and cross-sectoral impacts, which are often missed in project-level EIAs.

III. REGULATORY LANDSCAPE AND IMPLEMENTATION ISSUES OF EIA IN INDIA

The United States was the first country that introduced an Environmental Impact Assessment framework through the National Environmental Policy Act (NEPA) in 1969. This set a global

[8] Environmental Impact Assessment (EIA): In the Indian context, *available at*: https://www.taxmanagementindia.com/ (Last visited on April 11, 2025)
[9] Why villagers opposing Adani coal mine had a big win in court, *available at:* https://www.adaniwatch.org/ (Last visited on April 11, 2025)
[10] *Supra* note 8

precedent for environmental governance. Shortly after, the international spotlight turned to environmental concerns at the United Nations Conference on the Human Environment, conducted in Stockholm in June 1972. As a result of this conference, the United Nations Environment Programme (UNEP) was established in December 1972 to bring together worldwide efforts towards sustainability and environmental protection. India, having participated in the Stockholm Conference, began its own discourse on environmental conservation the same year. This eventually led to the enactment of the Environment (Protection) Act in May 1986, aimed at safeguarding and improving the quality of the environment. Building on this foundation, India introduced its first Environmental Impact Assessment notification in the month of January 1994, making environmental clearance mandatory for upcoming plans and the expansion of existing ones.[11] However, the EIA Notification of 1994 faced several significant challenges. The process of obtaining a clearance certificate was burdened with complex procedural formalities, making compliance difficult. Additionally, the enforcement mechanisms for penalizing violators of EIA norms were ambiguous, leading to weak implementation. There was also considerable uncertainty regarding the authority and decision-making powers of the Expert Appraisal Committee (EAC). To address these shortcomings, a revised draft of the EIA Notification was introduced in 2006 to strengthen and streamline the EIA process.[12]

However, despite laying the foundation for the functioning of EIA in India, this notification has been widely criticized for containing several loopholes. The provision for public hearings under this Notification has been significantly thinned out, creating a loophole that allows project proponents to bypass public consultations when seeking extensions for project activities. Additionally, the EIA review mechanism has faced controversy, as review reports are often criticized for being futile and poorly prepared. Growing appeals from various stakeholders have pressured the government to amend the EIA Notification of 2006 to ensure its effective implementation leading to preparation of Draft EIA Notification 2020.[13]

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[11] India needs to strengthen, not dilute, environmental assessments, *available at*: https://csep.org/ (Last visited on April 17, 2025)
[12] Ziaul Islam, Shuwei Wang," The progress and prospect of environmental impact assessment system in India: from 1994 to 2020 notification" 50 *International Journal of Environmental Quality* 20 (2022)
[13] Ibid

Draft EIA Notification 2020: Controversies and Criticisms

EIA regulations in India have gone through several changes in the past years with all the objections and criticisms raised by people. To modify and fulfil the gaps government tried to reconsider the 2006 notification once again and introduced a Draft Notification in 2020 when the entire world was going through the Covid 19 pandemic. The Draft EIA Notification 2020, introduced by the Ministry of Environment, Forest and Climate Change (MoEFCC), sparked widespread criticism from environmentalists, civil society groups, and legal experts. While it was proposed as an update to the EIA Notification 2006 to streamline procedures, improve transparency and to bring necessary changes to the existing policy, many of its provisions have been viewed as regressive and detrimental to environmental protection. Critics argue that the new provisions of the Draft EIA Notification 2020 further dilute an already weak framework of environmental regulations. The proposal has drawn sharp opposition from several quarters, who co-signed a letter addressed to the Ministry and the Prime Minister's Office, urging reconsideration of the draft.

This Draft was criticised on four main points. Both Notification 2006 and the Draft Notification 2020 classify projects into categories based on their potential environmental impact. These categories help determine the level of scrutiny a project must undergo during the Environmental Clearance (EC) process. The 2020 Draft Notification was criticised firstly, on the ground of exempting list of projects falling under B2 category, from EIA and public consultation. These may include some important projects such as extraction, sourcing or borrowing of ordinary earth for roads, pipelines, etc.; Solar Photovoltaic (PV) Power projects, Solar Thermal Power Plants and development of Solar Parks, and many more.[14]

Secondly, it introduced a provision for granting post-facto environmental clearances, wherein projects that have commenced operations without obtaining prior Environmental Clearance (EC) can still be considered for regularisation. If convinced that such a project can operate sustainably without causing significant environmental harm, it may approve the grant of EC, subject to the payment of legally mandated remediation costs and penalties. This provision has sparked considerable criticism, as it is seen to legitimise environmental violations rather than

[14] *Supra* note 11

deter them.[15] Public consultation is considered as one of the important step of EIA which is necessary to make local people aware about the projects, provide them an opportunity to put forward their opinions, eventually aid project proponents understand and mitigate any local impact by those projects. Another major criticism of the Notification 2020 is that several of its provisions undermine the fundamental principles of public engagement. Notably, the timeframe for public consultation has been brought down from 30 days to 20 days, thereby limiting the opportunity for meaningful community engagement and feedback. Objections were also raised against the Draft for reducing compliance monitoring requirements. While earlier regulations mandated biannual submission of compliance reports by project proponents, the draft allows for only annual submissions. Given that uncovering non-compliance is time-sensitive, this relaxation weakens oversight.[16] It is very crucial to include every stakeholder who might be impacted by such projects, their opinions matter and voices must be undertaken. However, the draft was lacking any such provision for affected communities to report violations, thereby excluding a vital stakeholder group from the monitoring process.

The Draft EIA Notification 2020, introduced as an update to the 2006 Notification, has faced strong opposition from environmentalists, many of whom have called for its immediate withdrawal. Critics argue that its regressive provisions and dilution of environmental safeguards are in direct conflict with established legal principles. As a signatory to the Rio Declaration adopted at the United Nations Conference on Environment and Development (UNCED) in 1992, India is obligated to uphold key environmental principles, including sustainable development and the precautionary principle. Assessing the impact on environment, being a crucial component of environmental governance, should be conducted in a manner that aligns with these internationally recognized principles.

EIA's Lapses in Major Development and Climate Initiatives

Over the years, numerous large-scale urban development and climate change policy implementation, such as urban infrastructure and expansion projects, river valley infrastructure, mining operations, and renewable energy initiatives, have proceeded without

[15] Ibid
[16] EIA and Public Participation in India: Shortcomings and Way Forward, *available at*: https://tclf.in/ (Last visited on April 19, 2025)

adequately addressing the environmental consequences as well as rights and concerns of affected communities. In many of these cases, the Environmental Impact Assessment (EIA) process has either been bypassed, poorly implemented, or rendered ineffective, failing to safeguard environmental and social interests. These lapses highlight serious shortcomings in the existing EIA framework in India.

An audit by the Comptroller and Auditor General (CAG), released on August 8, 2022, revealed widespread violations of the Coastal Regulation Zone Notification, 2019, across several projects in India. The report highlighted that the Ministry of Environment, Forest and Climate Change granted clearances without genuine approvals from accredited EIA consultants. It also noted instances of illegal construction, unregulated effluent discharge, and serious procedural lapses, such as the use of outdated baseline data and the failure to assess environmental impacts and disaster vulnerabilities in project areas. The CAG audit revealed several irregularities in the EIA approval process by the MoEFCC. In 2017, a hotel project in Mangalore received clearance despite the absence of an accredited EIA consultant, with the project proponent preparing the environmental and disaster management plans independently. Similarly, 12 projects were approved using outdated baseline data, some as old as 11 years, despite Ministry's guideline that such data should not exceed three years. The audit also found that 14 out of 43 sampled projects failed to identify risks to biodiversity in their EIAs. The 2018 clearance for the Mormugao Port Trust project in Goa overlooked the impact on endangered marine species near Chicalim Sancole Bay. Furthermore, several projects were cleared by Expert Appraisal Committees (EACs) despite the absence of required domain experts and with less than half the committee members present during discussions.[17]

It is concerning that critical projects such as solar parks and solar thermal power plants have been excluded from detailed scrutiny under the Draft EIA Notification 2020. This exemption is problematic, as numerous solar power projects have been reported to cause significant environmental degradation and have violated the rights of indigenous communities by displacing them from their lands and livelihoods, eventually violating their Constitutional rights. As large areas are developed for industrial infrastructure, particularly for renewable

[17] Coastal area projects got Centre's nod without proper environmental impact assessment, finds CAG, *available at*: https://www.downtoearth.org.in/ (Last visited on April 20)

energy, governments are expected to assess environmental and social impacts. However, critics argue that this seems to be lacking in the case of Adani's expansive solar complexes in India. While Adani Green Energy was established to shift the country towards a low-cost, low-emissions power system, its projects have sparked concerns over environmental degradation and displacement. Land acquisition for solar arrays has led to protests and legal challenges, with farmers and villagers claiming loss of fertile agricultural land and inadequate, short-term compensation for their long-term assets.[18] Their only source of livelihood and identity was snatched away from them and compensation was not something that could repay their loss.

The hydropower lobby in India often promotes hydropower as clean, green, affordable, and climate-friendly. However, these claims lack backing from credible, independent studies and often mask the serious risks involved. Disasters such as the 2013 Uttarakhand floods, the 2021 Chamoli tragedy that damaged the Tapovan Vishnugad project, and the 2023 Sikkim Glacial Lake Outburst Flood that devastated the 1,200 MW Teesta-III project, highlight the environmental and human toll of such ventures. These events have resulted in severe ecological damage and significant loss of life, often due to altered river courses and poor disaster preparedness. Despite repeated calls for transparency, there remains no evidence of a single honest Environmental Impact Assessment or Social Impact Assessment for large hydropower projects in India. The Ministry continues to approve such projects without critically reviewing the submitted reports, raising serious concerns about the integrity of the regulatory process.[19] Another concerning matter is the Green Credits Programme by the government, which aims to incentivize environmentally friendly actions by granting credits for activities such as afforestation. However, a major concern is that this initiative may be misused by corporations to bypass forest conservation obligations and can be highly problematic, as artificial afforestation efforts cannot replicate the natural structure and effectiveness of original natural forests thus, leading to environmental degradation under the guise of sustainability.[20] Looking

[18] The Ugly Side of Adani's Solar Success Story, *available at*: https://www.adaniwatch.org/ (Last visited on April 20, 2025)
[19] Dam(n) it, what's wrong with India's hydropower push? *available at*: https://psuwatch.com/ (Last visited on April 21, 2025)
[20] India's Environment Policy Needs a Fix, but the BJP's Election Manifesto Does Nothing, *available at*: https://thewire.in/ (Last visited on April 22, 2025)

at such numerous incidents it can be perceived that EIA framework in India is lacking in many ways to maintain the balance between development and ecological sustainability.

IV. ANALYSING THE NEED FOR STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) IN INDIA.

Given the repeated failures of project-specific EIAs to anticipate and mitigate large-scale environmental and social harms, there is an urgent need to understand and analyse the importance of adopting Strategic Environmental Assessment (SEA) in India and whether it can bring positive results in the area of assessment of environment as well as other associated impacts of any project. An important breakthrough in Indian environmental policy was the EIA Notification of 1994, which mandated Environmental Impact Assessments (EIAs) for specific development projects. The fact that EIA was only used at the project level, frequently too late in the planning process to avert harm, was one of the shortcomings that experts found when they examined how this notice was being utilised. As a result, specialists suggested implementing Strategic Environmental Assessment to strengthen the Environmental Assessment (EA) system in India and to fill existing gaps by allowing environmental considerations to be integrated at the policy, planning, and programme levels.[21]

Researches show that SEA or SEA like practices in India can be traced back to 1996 where in many projects environmental considerations have been recognised and dealt at the planning level of different sectors including waste, transport, tourism, conservation and hydro power sectors. Since the term SEA was not popularly utilised in many countries as early as that time so people were unaware about it. Instances that reflect the characteristics of SEA include: the identification of potential environmental and social risks at the design stage; the establishment of clear eligibility criteria for project appraisal in 'India Hazardous Waste Management Project', comprehensive analysis of impacts arising from activities, investments, and policy proposals on biodiversity conservation in The 'India Eco development Project', and the evaluation of calculated substitutes for sectors such as urban transport in the Mumbai

[21] Thomas B Fischer and Ainhoa Gonzales (eds.), *Handbook on Strategic Environmental Assessment* 389 (Edward Elgar Publishing, United Kingdom, 2021)

Metropolitan Region, based on environmental and social considerations in 'Mumbai Urban Transport Project'.[22]

In India, regional and city planning and development initiatives that are meant to aid in prospective growth often lacks a comprehensive approach to spatial, socio-economic, and environmental concerns, leading to regional structural imbalances, unsustainable land use, and ecosystem degradation. Integrating Strategic Environmental Assessment into the land use planning process offers a viable solution, as it can help mitigate negative impacts while enhancing the positive outcomes of development initiatives.[23] Even today, it can be witnessed that how the urban development and expansion projects like infrastructure development, housing and construction of fly overs have disrupted not only the regular lives of people but also caused severe environmental damages often leading to sudden change of climate in the effected urban regions. Urban development and unplanned expansion in India is witnessing growth, often without strategic planning. This has contributed to numerous environmental and social issues, including soil deterioration, water resource depletion, climate change impacts, biodiversity loss, settlement imbalances, and increased pollution. In this context, applying SEA to urban planning seems the most crucial requirement, as it promotes environmental sustainability, helps in identifying and mitigating risks especially early in the planning process, and enhances stakeholder participation, making urban advancements more inclusive and sustainable.

The Indian Himalayan Region, recognized as an ecologically sensitive zone, has been under significant pressure from the rapid expansion of hydropower projects. The absence of a systematic and strategic planning framework for utilizing the Himalayan River systems has led to challenges in maintaining the ecological, economic, and cultural integrity of these delicate river ecosystems. This has reinforced the urgent need for Strategic Environmental Assessment in hydropower sector, especially in states like Uttarakhand, where such developments are concentrated. SEA was undertaken for several hydropower projects in Uttarakhand, specifically in the Alaknanda and Bhagirathi River basins. Commissioned by the MoEFCC and

[22] *Id* at 390
[23] Debojyoti Mukherjee, Asha Rajvanshi," Application of Strategic Environmental Assessment as a Land Use Planning Tool in India: A Case of Gurgaon-Manesar Development Plan, Haryana, India", 18 *Journal of Environmental Assessment Policy and Management* 2 (2016)

the National Ganga River Basin Authority, the study was carried out by the Wildlife Institute of India. Adopting a hybrid approach of Cumulative Impact Assessment at the basin level, the SEA assisted in determining different extent of repercussions of previous, ongoing and upcoming hydropower developments on earthly and aquatic lives. The findings significantly influenced decision-making, leading to the disbarring of 24 suggested projects from the future development list.[24]

It was also conducted for the Sustainable City Plan for Pune, following available international guidelines, since SEA was overlooked as a required necessity in India. By proactively embedding environmental considerations into the decision-making process, the assessment emphasized the importance of stakeholder consultations and the submission of ESR annually to the state government. These reports, based on key criteria such as public health, air quality, and availability of green lands, aim to support and promote sustainable development goals.[25]

Urban progression in India has brought about a significant transformation, driving growth and development across various sectors. Cities have seen continuous expansion in recent years, offering increased opportunities and improved livelihoods for both existing residents and incoming populations. However, this rapid development has also led to irreversible environmental and social changes, highlighting the gaps and inefficiencies in the current system of impact assessment and planning. The uncoordinated approach to urban development underscores the urgent need for more robust and integrated assessment mechanisms. Dearth of comprehensive urban planning in India, have resulted into excessive-exploitation of natural resources because of the unprecedented growth of population and urban sprawl. Uneven distribution and congestion of population has caused disparity in the settlement pattern of the urban areas as well as several other issues of shortage of land, pollution, inappropriate waste management, water logging, landslides etc. The escalating risks to biodiversity, marked by rapid species loss and the degradation of ecosystems, have become a serious cause for concern. Such unchecked degradation severely hampers our collective efforts toward achieving long-

[24] *Supra* note 21 at 293
[25] *Id* at 395

term environmental sustainability, making it imperative to strengthen conservation strategies and integrate biodiversity protection into all levels of policy and planning.

Given these challenges, it becomes evident that Strategic Environmental Assessment is essential alongside traditional EIAs. Unlike EIA, which is often project-specific and conducted too late in the designing process, SEA allows for a broader, more proactive evaluation of environmental and social impacts at the policy, plan, and program level and crucially, at an early stage of decision-making. Past instances where SEA has been applied demonstrated more informed, sustainable, and inclusive outcomes, reinforcing the need for its systematic integration into India's development framework.

V. CONCLUSION

India, with its vast diversity and complex social fabric, presents unique challenges in the enforcement and implementation of laws. The country's population is not homogeneous people belong to varied economic, social, and cultural strata, which often influences how laws are interpreted, implemented, and received at the ground level. Effective enforcement mechanisms have long been a concern, as both enforcement agencies and the judiciary frequently face structural and operational hurdles. Among the most significant challenges is political influence and interference, which can skew the priorities of enforcement bodies, delay judicial processes, and sometimes lead to selective application of laws. Additionally, lack of coordination between central and state authorities, resource constraints, bureaucratic inefficiencies, and limited public awareness further compound these issues. As a result, even well-intentioned legal frameworks, including environmental regulations, often fail to achieve their intended impact, especially when powerful interests are at play. These systemic flaws are also reflected in the implementation of Environmental Impact Assessment regulations, which have often failed to act as an effective environmental safeguard. Despite the existence of legal mandates, EIAs have been undermined by weak enforcement, procedural lapses, non-transparent approvals, and pressure from vested interests. As a result, many environmentally and socially disruptive projects have proceeded unchecked, highlighting the urgent need for strengthening India's environmental governance framework.

Deforestation in India has always remained a critical concern, even as official reports indicate a gradual increase in overall forest cover. This apparent growth, however, often masks the reality of large-scale forest degradation, particularly in ecologically sensitive regions, where forests are routinely cleared for mining, infrastructure development, agriculture, and urban expansion. The construction of roads, railways, and dams in the name of development has led to significant fragmentation and loss of natural forests. Disturbing instances such as the Aarey forest controversy in Mumbai, the massive tree cutting in Hyderabad, and the Mollem National Park protests in Goa are just a few among many that triggered widespread public outrage and protests. Thousands of citizens raised their voices, but by the time awareness and resistance gained momentum, lakhs of trees had already been felled. These events raise serious questions about the state of environmental governance in India. If Environmental Impact Assessments were indeed conducted, how were such massive environmental damages overlooked or permitted?

Certain instances where SEA-like strategies have been adopted in India indicate that its value is increasingly being recognized, as an essential mechanism for promoting sustainability and supporting decision-making. The country being a home to several ecological hotspots, is simultaneously undergoing rapid and large-scale developments carrying long-term environmental implications making the case for strategic-level assessments even stronger. While India has been implementing the EIA framework for decades, and it has indeed led to some positive outcomes, persistent challenges continue to hinder its effectiveness on the ground. These include late-stage assessments, procedural gaps, and limited consideration of cumulative and strategic impacts. In this context, building a strong foundation for Strategic Environmental Assessment becomes imperative to complement and enhance the current environmental assessment system.[26] Instances clearly establish the need for a legally mandated inclusion of Strategic Environmental Assessment within India's environmental governance framework.

To move forward effectively, India must invest in detailed research and evaluation of projects where SEA has been applied. Such analysis will provide valuable insights into its practical

[26] *Supra* note 21

utility, highlight best practices, and help institutionalize SEA as a core component of environmental governance. To address these systemic gaps, there is now a legal and institutional need to incorporate SEA into the existing environmental assessment regime. Establishing SEA through a robust legal framework will not only strengthen India's environmental governance system but also align it with international best practices and obligations under global environmental agreements.