

# Enhancing Sustainability and Equity: Integrating Environmental and Social Safeguards in Urban Planning Projects

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**Abstract:** *Environmental and social sustainability are crucial factors for promoting economic growth and reducing poverty worldwide. Safeguards policies play a vital role in preventing and mitigating adverse impacts on people and the environment during development processes. Urban developmental activities have significant implications on land, air, water, and biodiversity, leading to environmental challenges like climate change, food security, water security, energy security, and urbanization management. Integrating Environmental and Social Safeguards into urban planning is essential due to the growing population's strain on natural resources, resulting in environmental stresses such as poor air quality, especially in highly polluted cities like Delhi, India. During project implementation, safeguards aid in defining measures and processes to manage risks effectively and enhance positive impacts. Key environmental safeguard considerations include biodiversity conservation, sustainable resource management, pollution prevention, pesticide use, and greenhouse gas emissions. Several international organizations, such as the Asian Development Bank and the World Bank, have safeguard policies that address both environmental and social impacts, emphasizing comprehensive approaches to addressing critical issues. Initiatives like the Smart Cities Mission in India promote sustainability, public participation, and innovation through their smart city plans and implementation of Public Private Partnership (PPP) based projects. Environmental and Social Safeguards plans play a pivotal role in guiding and supporting projects throughout their lifecycle, ensuring stakeholder engagement, and addressing community concerns during project execution. This paper emphasizes the importance of integrating Environmental and Social Safeguards in urban planning projects to foster sustainable and inclusive urban development.*

**Keywords:** Environmental safeguards, Social safeguards, urban planning projects

## 1. Introduction

Environmental and social sustainability is a cornerstone of economic growth and poverty reduction in the world. Safeguards policies are essential tools to prevent and mitigate undue harm to people and their environment in the development process. Developmental activities in urban areas continue to impact land, air, water, and biodiversity at different scales of planning and lead to major key issues related to the environment like climate change, food security, water security, energy security, and managing urbanization. Integration of Environmental and Social Safeguards stems from the environmental and social impacts of urbanization and population growth that have caused excessive stress on natural resources in the cities Bell, J. (1994a). The growing population creates several environmental stresses, poor air quality is one of them. According to the 'World Air Quality Report 2020' published by IQAir, a Swiss organization, twenty-two out of the thirty most polluted cities in the world are in India with the capital Delhi being the most polluted city. There is an urgent need to integrate responses to all these negative environmental trends in urban planning and its management. Management processes will have to focus on creating unique, innovative, and sustainable solutions to check and monitor further degradation of the environment and social impacts on people

During project implementation, safeguards should help define measures and processes to effectively manage risks and enhance positive impacts. The process of applying safeguard policies can be an important opportunity for stakeholder engagement, enhancing the quality of project

proposals, and increasing ownership. Key environmental safeguard considerations include biodiversity conservation, sustainable natural resource management, pollution prevention and abatement, pesticide use, and greenhouse gas emissions.

The Asian Development Bank (ADB), has a single safeguard policy statement that addresses both environmental and social impacts and includes specific requirements that borrowers/clients are obliged to meet when delivering safeguards for projects supported by the Bank. World Bank (WB), adopts separate sets of environmental and social safeguard policies. However, they emphasize the importance of addressing environmental and social impacts and risks comprehensively; the WB has an umbrella environmental assessment policy and specific environmental safeguard policies to address critical issues in natural habitats, forests, pest management, physical cultural resources, and the safety of dams. As in the case of the ADB, these policies must be addressed as an integral part of the environmental assessment process. Many countries have strengthened their own environmental policies and regulatory frameworks.

### Process of Environmental and Social safeguards

The Environmental and Social safeguards applicability and procedures occur during the preparation of the Environmental Assessment (EA) report. EA is a process designed to ensure that decision-makers are made aware of the potential environmental consequences of their actions, with the intention of improving the "quality" of development plans, and ensuring that environmental considerations are

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incorporated into every stage of the planning process. The procedures for applying environmental safeguards vary but the following are the main steps that are involved taken from the EIA notification, dated 17 February 2020, Ministry of Environment, Forest and Climate Change:

- **Screening of the project:** It helps in the categorization of the project and from this, a decision is made on whether or not a full EIA is to be carried out.
- **Scoping of the project-** Scoping is the process of determining detailed and comprehensive terms of reference (ToR) addressing all relevant environmental concerns for the preparation of an (EIA) and Environmental Management Report (EMR).
- **Conducting EA of the project/ program** – In the case of development of the area or project mainstream EIA into the plan's formulation process and ensure meaningful consultation, public participation, and disclosure of the EA report.
- **Reflecting the EA and Environmental Management Plan (EMP)** – in project implementation, appraisal documents, and implementation manuals/plans.

All projects and activities are broadly categorized into two categories- Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and manmade resources.

- **Category A:** It can be a category A project, which requires the preparation of an EIA report as per statutory requirements and clearance shall be granted by MOEFCC.
- **Category B (B1 or B2):** It can be a category B project, which can be further divided into B1 or B2. The B1 project requires the preparation of an EIA report as per statutory requirements and clearance shall be granted by SEIAA. B2 projects require preparation of an EMP as per statutory requirements and clearance shall be granted by SEIAA. In case the projects do not require an environmental clearance, then the SPV may or may not follow the generic structure specified in the EIA notification 2006 and its amends but needs to make an Environment Impact Assessment and Management Plan (ESIA and ESMP).

#### Importance of Environmental and Social safeguards in planning projects

The management of infrastructure and resource needs of urban areas imposes several challenges on policymakers and governments. These challenges include greenhouse gas emissions, lack of infrastructure, unemployment, high waste generation, unplanned land use, ecosystem degradation, and loss of green space.

The Government of India initiated many missions and programs that are in the vision to improve the environment. Smart Cities Mission is a path-breaking program of the Government of India that aims to foster a paradigm shift in the country's approach to urban development. The smart city mission pioneered sustainability, public participation, and innovation through its smart city plans, challenge-based selection process, and extensive implementation of Public Private Partnership (PPP) based projects which form the cornerstones of the Smart Cities Mission and have now also been adopted by the CITIIS program by NIUA. City

Investments to Innovate, Integrate and Sustain (CITIIS) is the main component of the 'supporting smart cities mission for a more inclusive and sustainable urban Development in India Initiative launched by the Ministry of Housing and Urban Affairs (MoHUA), Government of India in 2018. The program has been designed to drive urban innovation through a tailor-made approach of technical and financial assistance, this will further lead to Environmental and Social management plan formulation and execution. This approach will also assist SPVs of cities to develop their institutional capacities, thereby allowing them to deliver other projects proposed under the Smart Cities Mission.

With the availability of the Environmental and Social safeguards plans the experts will guide and handhold their project through the three years of the project's lifecycle while engaging in the creation of a roadmap for the project, finalizing the project logical framework (PLF) with the team, mapping stakeholders, suggesting global best practices that have the potential to be contextualized, and guiding the strategy of the projects through their lifecycle.

This process of technical assistance and handholding emphasizes on new strategies for partnerships and collaboration, gauging institutional capacity to be restructured while developing a framework for the SPVs. For the first time SPVs are being staffed for Environmental and Social Safeguards officers as well as Public and Community Engagement Officers who ensure that the voices of the involved communities are heard and their concerns are addressed during project planning.

#### Implementation of Environmental and Social safeguards in CITIIS program

The CITIIS program adopts an approach that considers cities to be a complex ecosystem with diverse social groups engaged in economic and cultural activities. In navigating the interconnected and interdependent dimensions, the SPVs develop a deeper and clearer understanding of what their projects and their people need. These needs are further incorporated into design and implementation. The maturation phase aligns with global standards of project planning and has a number of deliverables prior to project implementation. As knowledge products, these deliverables will equip ULBs, cities, and states with common solutions that can be explored on diverse aspects of urban projects planning and management- ranging from climate change mitigation to procurement, to concerns around existing legislation.

There are 27 projects shortlisted after the challenge process, the project preparedness frameworks for the projects are based on initial visits to the cities for rapid assessments of proposed project components that will include reporting for program compliances based on Environment and social factors. The Environmental and Social status has been well documented for all the projects after visiting each project and understanding its parameters through systematic preparations of different reports and plans related to Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), E & S screening report, etc. The purpose of the project activities is to identify the key environmental and social issues related to

the project such as environmentally sensitive receptors in the project area, impacts on surface/groundwater sources, impacts on community facilities, impacts on ecologically and socially sensitive areas, etc and solving these impacts on the grounds through different projects implementation. The projects selected in 12 cities are based on different themes: Sustainable Mobility, Public Open spaces, Social & Organizational innovation in Low-income settlements, Urban E- Governance & ICT etc., and under these themes different projects are listed down.

**Sustainable Mobility**

- 1) Amritsar: Development of Sustainable & Green Public Transportation in the Amritsar City
- 2) Dehradun: Child-friendly & Commuter-Centric Dehradun Smart City Sustainable Mobility Plan

**Public Open spaces**

- 1) Hubballi-Dharwad: Green Mobility Corridor
- 2) Bhubaneswar: B-Active

- 3) Agartala: Howrah River Front Development (Phase-II)
- 4) Surat: Creating “Wild Valley Bio-Diversity Park” as City Lungs by Rejuvenation of Existing Wasteland along the Creek
- 5) Ujjain: Mahakal Rudra Sagar Integrated Development Approach (Phase-II)

**Social & Organizational Innovation in Low-income Settlements**

- 1) Amaravati: Basic Infrastructure Development at Low-Income Settlements
- 2) Chennai: Model & SMART Corporation Schools
- 3) Puducherry: Our Neighborhood is Your Neighborhood Too – A Participatory Planning Approach for Low-income Settlements
- 4) Visakhapatnam: Social Inclusion Through Modernizing Public Schools as Smart Campus

**Urban E-Governance & ICT**

- 1) Kochi: E-Health Solution

**Inferences from the different cities’ projects and their Implementation**

Project Name	Background of the Project	Social Environmental Safeguards
Our Neighborhood is Your Neighborhood Too – A Participatory Planning Puducherry Approach for Low-income Settlements  Puducherry smart city Development Limited	The project aims to benefit the social & environmental concerns that lead to the improvisation of shared community infrastructure as well as augmenting social and technological capacity to achieve the goal of a ‘slum-free’ Puducherry.	Construction of 110 nos. of housing units each with a size not less than 30 Sq. mt. (with community amenities namely UG drainage, internal roads, solar-powered, LED streetlight, and development of greenery.  Retrofitting of the fascia/fin of the balcony/sun shades  Provision of in-house toilets in the Housing units  Forming Resident Welfare Association (RWA), capacity building of RWA members on participatory governance.  Providing underground drainage system, power cabling system, Solar powered LED street lights,  Installation of a Rooftop solar system on the roof of the entire housing complex buildings & provision for the usage of solar power for the common area of all housing units.  Construction of a water treatment plant (RO plant) and construction of a wastewater collection pond.  Providing skill development training program to improve employability and entrepreneurship among the residents in the Low-income settlements.  Provision of livelihood support and solar-powered ironing equipment, enhancing market linkages of washermen at Dobhi Khana.
Agartala: Howrah River Front Development (Phase-II)	The project has been conceptualized as an urban project to significantly improve the habitat, structure, and conditions of the river and its adjoining areas.	Environmental and Social impacts due to the project design and location are not significant as various mitigation measures are already included in site planning and detailed design.  The emissions from construction activities are confined to the project area as the construction area has plantations that act as a barrier to fugitive emissions.  To avoid this dust mitigation measures will be enforced which will include shrouding of the construction area, sprinkling of water in possible dust emission areas.  The proposed HRFD will not have much impact on flora and fauna as there is no cutting of trees involved.

		For a settlement containing 37 households, the proposal has been made to accommodate the families on humanitarian grounds through a housing scheme for Economically Weaker sections being implemented
Amaravati Guntur, Andhra Pradesh - Social and Organizational Innovation in Low-Income Settlements (Basic Infrastructure Development at Low-Income Settlements)	This project focuses on the development of basic infrastructure in the existing settlements. The basic infrastructure includes 4 components of which 3 components i.e. model Anganwadi centers (AWCs), selected government schools, e-Health sub-centers & wellness centers, and nodal primary health centers are proposed at the village	The project is in low impact category, a baseline environment study is not required and therefore, a generic ESIA is done based on the secondary environment baseline data of the EIA study  secondary baseline data indicate that few parameters of groundwater like nitrates, TDS have exceeded the acceptable limits, and the groundwater and surface water and requires treatment if used for drinking purposes.  The Soil needs the addition of potassium as part of greenery development.
Development of Sustainable and Green Public Transportation in Amritsar City	The green development project aims at replacing old diesel autos plying on the city roads with lithium-ion batteries-based electric autos. The project aims to replace approximately 07 thousand old autos with EVs.	Positive impact on the environment as the project involves the replacement of old diesel autos with electrical autos with zero tailpipe emission EVs.  No plastic waste will be generated during any one of the sub-component implementations. Plastic waste will be generated during the scrapping of old diesel autos at the Scrapping agency's premises. Scrap dealers will ensure compliance with this Rule  Few construction workers- skilled, semiskilled, or unskilled will be employed temporarily during the Construction of table tops crossings, installations of bollards, and Wayfinding Signages at a few BRTS junctions.
Bhubaneswar- B-Active	Project B-Active is to scale the successful pilot public open space projects implemented in the Area Based Development (ABD) to other neighborhoods in the city. The focus is laid on the 5 assets viz. Streets, Water, Parks, and open spaces, sports and playgrounds and heritage.	Positive impact on the environment by restoring the blue ways, and water promenade.  Active lanes for cycling activities, improved accessibility & walkability conditions.  Water-sensitive urban design leads to more living classrooms, active areas, and social interactions.  Parks, open spaces, and public space upgradation leads to creation of gender-neutral open spaces.
Chennai: Model and smart Chennai corporation schools	Chennai Smart City's proposal for revamping the schools, operated and managed by the Greater Chennai Corporation, under the theme: "Social and organizational innovation in Low-Income Settlements" and captioned as 'Model & SMART Corporation Schools in Chennai'	the project presents mainly positive impacts on the livelihood, as, during the course of project execution, employment opportunities will be generated for the local people in terms of required labor  This project is also a novel attempt to improve the lives of low-income households, by providing an improved and elevated education experience for next-generation children.
Dehradun- Child-friendly city	The project is well-positioned to complement the city's smart city proposal within the ABD area by improving mobility for children through user-centric design approaches.	Improvement in air quality due to increasing walkability Less Noise pollution due to a decrease in the usage of personal vehicles.  A place to sit and socialize Behavioral change in road users Streamlined Traffic
Hubli: Green mobility corridor	The Green mobility corridor sector with a concept of developing the existing Unkal Nala as a Green corridor with a thrust on Environmental sustainability.	Improvements of the multifunctional & green edge of the lake. Detention tanks or a buffer zone will hold the surplus water cascading system in the water management.  A green mobility corridor is also being developed along the Nala to improve the traffic conditions in the city improves accessibility and transportation
Kochi: E-health project for Kochi	E-Health is an ambitious initiative conceived with the objective of modernizing the public	Improved participatory approach and Gender Inclusivity.  Stakeholder engagement includes understanding and agreement around solutions

	healthcare domain in the city to ensure optimum use of resources.	on complex issues and large projects. Stakeholders include Doctors, District medical officers, E-Health District coordinators, Hospitals and E-Health PMU
Creating 'Wild Valley Biodiversity Park' as City Lungs by rejuvenation of existing wasteland along the Kankara Creek, Surat.	the project envisages making the wasteland accessible to the public by developing it into a recreational space having approximately 4.5 km of walking trails and 9 km of cycling tracks.	Improved native flora and fauna, increased ecological diversity, and facility propagation of natural environment.  Improvement of physical environments: Water, Air, Land.  Enhancement of Social, environmental, and physical culture of Surat city.
Ujjain: Mahakal Rudrasagar Integrated Development Approach)	It is a comprehensive development project for the Mahakaleshwar Temple precinct, which includes proposals for the circulation of vehicular and pedestrian movement and holding areas for better crowd management.	Improved safety on pedestrian streets for pilgrims, residents including children, aged and differently-abled. Improved safety on pedestrian streets for pilgrims, residents including children, aged, and differently-abled. Ecological restoration of the Lake- Improved management of water quality through sustainable practices

## 2. Conclusion

Environmental and social sustainability are critical components for fostering economic growth and reducing poverty globally. Safeguards policies play a crucial role in preventing and mitigating adverse impacts on people and the environment during development processes, particularly in urban areas. Urban developmental activities significantly affect land, air, water, and biodiversity, leading to environmental challenges such as climate change, food security, water security, energy security, and urbanization management. Integrating Environmental and Social Safeguards into urban planning is imperative, given the increasing strain on natural resources caused by the growing population, which results in environmental stresses like poor air quality, especially in highly polluted cities like Delhi, India. During project implementation, safeguards are essential in defining effective measures and processes to manage risks and enhance positive impacts.

The CITIIS program's implementation showcases successful projects in various cities across India that address social and environmental concerns. These projects focus on aspects like sustainable mobility, public open spaces, social and organizational innovation in low-income settlements, and urban e-governance & ICT. By implementing these projects, cities aim to achieve sustainable development and improve the overall well-being of their residents.

Overall, integrating Environmental and Social Safeguards in urban planning projects is crucial for fostering sustainable and inclusive urban development. These safeguards play a key role in protecting the environment, addressing social concerns, and ensuring that development initiatives benefit both the present and future generations.

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