

Land Value Capture Financing for Implementing Transit Oriented Development in Indian Cities



FINANCING SUSTAINABLE CITIES INITIATIVE (FSCI)

The Financing Sustainable Cities Initiative (FSCI), funded by the Citi Foundation, is a partnership between the WRI Ross Center for Sustainable Cities and C40 Cities Climate Leadership Group that helps cities accelerate and scale up investments in sustainable urban solutions through the development of innovative business models. The Initiative consists of three key components:

- A peer-to-peer learning community through which cities can exchange experiences on developing sustainable projects,
- Technical assistance to cities developing sustainable urban projects, and
- An online platform that enables cities to explore sustainable urban projects around the world and develop their own business models.

By identifying the ingredients of successful sustainable urban projects around the world, this groundbreaking partnership is helping city governments and investors develop business models that enable all stakeholders to bridge quickly from innovative ideas to their implementation. It is not just about finding more money; investors and city decision-makers need new ways of seeing eye-to-eye on what makes urban investment a sustainable and financially viable solution.

INTRODUCTION

To encourage sustainable development in cities, the Indian government is promoting Transit-Oriented Development (TOD) as an urban growth strategy to create vibrant, livable neighborhoods along efficient public transit. This requires significant investments at various stages of implementation, making it necessary to find alternate, innovative financing strategies to supplement traditional funding sources. Both the National TOD Policy and the Metro Rail Policy mandate the adoption of TOD and the use of Land Value Capture Financing (LVCF) to leverage premiums from the provision of transit and other public infrastructure and reinvest some of it back into financing transit and TOD.

Key stakeholders in this process of value creation and sharing include government and transit agencies, financing institutions, land owners and developers who will need to work together to help finance and achieve sustainable urban development.

BENEFITS

Optimising land

TOD optimises the use of urban land and the underlying infrastructure, leading to efficient service delivery. It allows the use of innovative mechanisms to generate revenues from land other than from its direct sale.

Financial sustainability

LVC from TOD raises revenue for urban local bodies, which become less dependent on government funding and/or government-backed loans and therefore, also less liable. Private parties to TOD would also shoulder some costs and risks, thereby ensuring that benefits are fairly distributed.

Social and environmental gains

TOD creates safe, inclusive environments while promoting mass transit ridership, which, in turn, reduces emissions and improves local air quality.

CHALLENGES

Institutional coordination

Absence of incentives and mechanisms for institutional coordination among various government and transit agencies. Lack of clear, fair and transparent rules for cost, profit and risk-sharing among stakeholders.

Planning frameworks

Lack of an integrated and tiered planning framework with suitable development control regulations, undermine the potential of TOD and LVC.

Awareness and capacity

Common language and understanding of LVC implementation and benefits are lacking among stakeholders. They also lack capacity for planning and execution of financial arrangements.

Implementation

TOD implementation typically entails long gestation periods and requires significant capital investments, often without definitive returns. Lopsided fiscal flows/ intergovernmental transfers and inelastic taxation structures inhibit value creation and revenue generation.

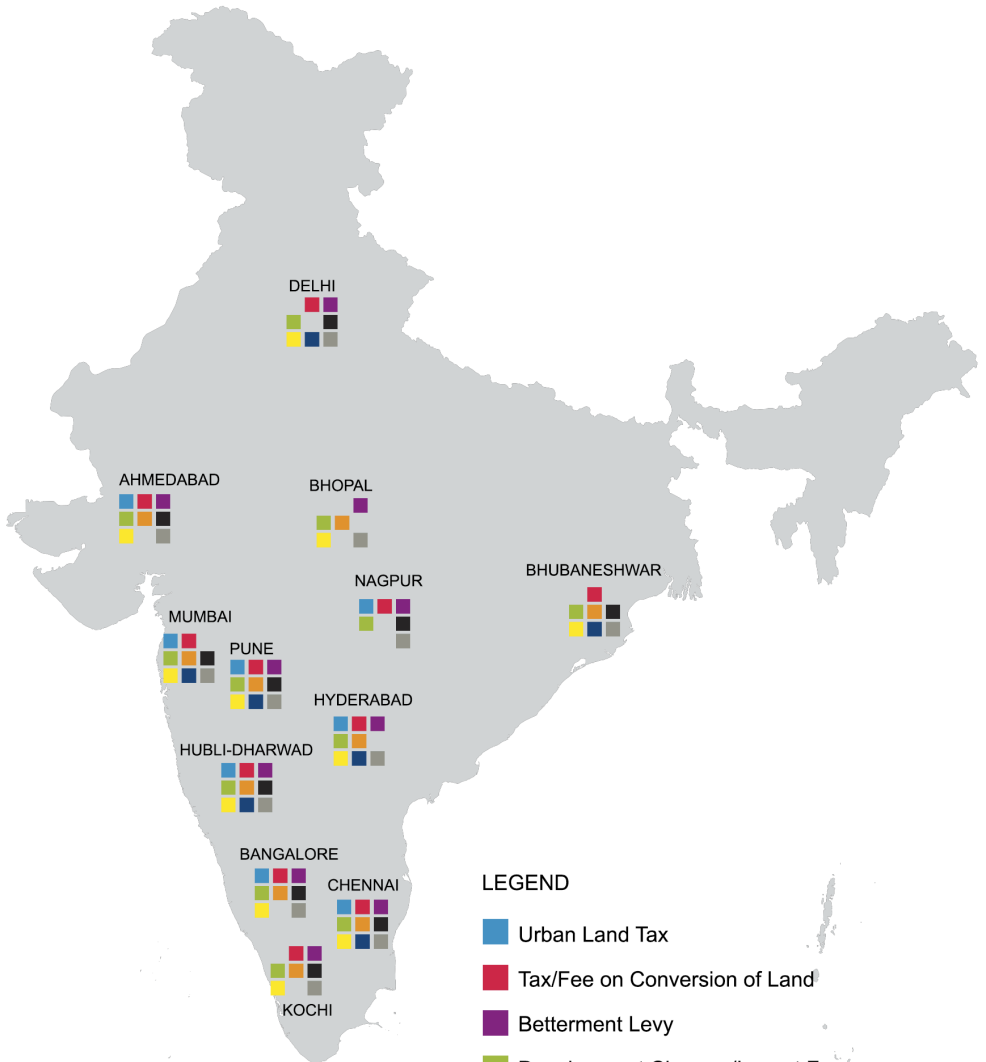
LAND VALUE CAPTURE MECHANISMS

LVC mechanisms can be of three types: tax-based, fee-based or development-based, providing either one-time or recurring revenues.

	Value Capture Mechanisms	Indian and Global Examples
Tax based	Land Value Tax / Urban Land tax	Indian: Mumbai, Bengaluru, Ahmedabad, Pune Global: London, Pittsburgh, Melbourne
	Vacant Land Tax	Indian: Mumbai, Hyderabad, Chennai, Hubli-Dharwad Global: Washington D.C., Melbourne, Bogota, Seoul
	Property Tax*	Indian: Delhi, Mumbai, Bengaluru, Ahmedabad Global: Washington D.C., New York, Hong Kong, Singapore
	Tax Increment Financing	Indian: Nil Global: Portland, New York, Chicago, London
	Transit-focused Development Fees	Indian: Nil Global: London, Paris, San Francisco
	Payroll-based Tax	Indian: Nil Global: Paris, New York
Fee based	Fees for Change of Land-use (from agriculture to non-agriculture)/ Zoning fee*	Indian: Mumbai, Ahmedabad, Bengaluru, Kochi Global: New York
	Betterment Levy or Tax	Indian: Mumbai, Bengaluru, Ahmedabad, Pune Global: London, Sydney, Singapore, Bogota
	Development Charges/Impact Fee*	Indian: Mumbai, Ahmedabad, Pune Global: Arlington, Cape Coral, Fremont, Paris
	Special Assessment Districts	Indian: Nil Global: Washington D.C., New York
	Fees for Regularising Unauthorised Development*	Indian: Delhi, Mumbai, Ahmedabad, Kochi Global: Nil
	Additional Cess/Surcharge on New Building Permits	Indian: Bengaluru Global: Miami, Portland
Development based	Transfer/Sale of Development Rights or Air Rights	Indian: Mumbai, Bengaluru, Ahmedabad, Pune Global: Sao Paulo, Hong Kong, London, Paris
	Premium on Additional FAR	Indian: Delhi, Mumbai, Ahmedabad, Kochi Global: Charlotte, New York, Minneapolis, Portland
	Land Acquisition & Development	Indian: Hyderabad, Bengaluru Global: Hong Kong, Tokyo
	Town Planning Schemes (TPS)/ Land Pooling/ Land Readjustment	Indian: Delhi, Ahmedabad, Amravati, Mumbai, Pune Global: Bangkok, Jakarta, Tokyo, Berlin
	Joint Development	Indian: Delhi, Hyderabad Global: London, Paris, New York, Hong Kong

* mechanism widely used in many Indian states

VALUE CAPTURE: Case examples from Indian cities



LEGEND

- Urban Land Tax
- Tax/Fee on Conversion of Land
- Betterment Levy
- Development Charges/Impact Fees
- TDR & Incentive FSI
- Charges for Additional FSI
- Charges for Unauthorised Development
- Vacant Land Tax
- Town Planning Schemes

Disclaimer: The map is for illustrative purposes and does not imply the expression of any opinion on the part of WRI, concerning the legal status of any country or territory or concerning the delimitation of frontiers or boundaries.

INDIAN CASE STUDIES

DELHI		
Government Level	Planning & Transit Agencies, Framework	Finance
1. Government of India (GoI)	Ministry of Housing and Urban Affairs (MoHUA)	<u>Transit Funding / Financing:</u> <ul style="list-style-type: none"> • Equal equity from GoI, GNCTD • Land and Central taxes • Interest free subordinate debt for land cost • Japan International Cooperation Agency soft loan • Dedicated Urban Transport Fund (proposed for Phase 3)
2. Government of the National Capital Territory of Delhi (GNCTD)	Delhi Development Authority (DDA) <ul style="list-style-type: none"> • Delhi TOD Policy • Master Plan of Delhi – 2021 • Draft TOD regulations 	<u>LVC Mechanisms:</u> <ul style="list-style-type: none"> • Property Development Rights – advertising; station retail licenses; concession agreements and long-term lease for development of depot, standalone, govt. allotted sites <u>Proposed for TOD fund</u> - Sale of Premium FAR, External Development Charges
3. GoI and GNCTD partnership	Delhi Metro Rail Corporation Ltd. (DMRC)	<u>Use of Revenue from LVC:</u> <ul style="list-style-type: none"> • Towards transit capital costs, operations

BANGALORE		
Government Level	Planning & Transit Agencies, Framework	Finance
1. Government of India (GoI)	Ministry of Housing and Urban Affairs (MoHUA)	<u>Transit Funding / Financing:</u> <ul style="list-style-type: none"> • Equal equity from GoI, GoK
2. Government of Karnataka (GoK)	Bangalore Development Authority (BDA) <ul style="list-style-type: none"> • Revised Master Plan - 2031 Directorate of Urban Land Transport (DULT), Urban Development Dept. GoK <ul style="list-style-type: none"> • Station Accessibility Plans with Development Control Regulations for 14 metro stations 	<ul style="list-style-type: none"> • Domestic/foreign bank loans • Metro bonds <u>Proposed LVC Mechanisms (Phase 1+2):</u> <ul style="list-style-type: none"> • Additional Cess+Surcharge - on new building permits in BDA area to Metro Infrastructure Fund; shared by BMRCL (65%), BWSSB (20%), BDA (15%) • Cess - 10% (residential), 20% (commercial) on additional FAR in 150m zone; shared by BMRCL (60%), BBMP (20%), BWSSB (10%), BDA (10%) • Impact Fees - on additional FAR • TDR - issued by BMRC for land acquisition compensation <u>Proposed (Phase 2A)</u> – Property Development Rights, Joint Development (PPP) for stations, Sale of Premium FAR, Betterment Charges
3. GoI and GoK partnership	Bangalore Metro Rail Corporation Ltd. (BMRCL)	<u>Use of Revenue from LVC:</u> <ul style="list-style-type: none"> • Towards transit capital costs, operations; infrastructure services

INDIAN CASE STUDIES

AHMEDABAD		
Government Level	Planning & Transit Agencies, Framework	Finance
1. Government of India (GoI)	Ministry of Housing and Urban Affairs (MoHUA)	<u>Transit Funding / Financing:</u> <ul style="list-style-type: none"> • JnNURM funds for BRTS • Smart Cities funds for projects in TOD zones
2. Government of Gujarat (GoG)	Gujarat Urban Development Mission (GUDC) Ahmedabad Urban Development Authority (AUDA) <ul style="list-style-type: none"> • Development Plan by AUDA; • Town Planning Schemes (TPS) and Local Area Plans (LAP) by AUDA-AMC 	<ul style="list-style-type: none"> • Proposed government grant (INR 12.5 per bus service km for 30 cities including Ahmedabad)
3. Ahmedabad Municipal Corporation (AMC)	Ahmedabad Janmarg Ltd. (AJL) <ul style="list-style-type: none"> • BRTS high-priority under AMC's "Accessible Ahmedabad" Vision 	<ul style="list-style-type: none"> • Urban Transport Fund (UTF) revenues include AJL's parking and advertising charges, grants, LVC <u>Proposed LVC Mechanisms:</u> <ul style="list-style-type: none"> • Sale of land parcels from TPS • PPP - for public spaces, advertising • Lease/rent/fees - retail spaces, on-street parking, vending • Guidance value property tax (3 yearly update) • Impact fees, TDR, sale of premium FAR (city-wide) <u>Use of Revenue from LVC:</u> <ul style="list-style-type: none"> • AJL part financed (viability gap funding from UTF) for transit improvements, operational deficits • AMC-AUDA can use to implement TOD plans
HYDERABAD		
Government Level	Planning & Transit Agencies, Framework	Finance
1. Government of India (GoI)	Ministry of Housing and Urban Affairs (MoHUA)	<u>Transit Funding / Financing:</u> <ul style="list-style-type: none"> • Equal equity from GoI, GoT - viability gap funding only • L&T equity and debt financing (bank loan) - transit + property
2. Government of Telangana (GoT)	Hyderabad Metropolitan Development Authority (HMDA) <ul style="list-style-type: none"> • GHMC master plan • Comprehensive Transport Study - 2041 • TOD policy and zone plans framework All yet to be adopted by GoT	<u>LVC Mechanisms:</u> <ul style="list-style-type: none"> • Rail + Property through Joint Development - lease/rentals from development of depot, station sites; station retail licenses; rights business; advertising <u>Use of Revenue from LVC:</u> <ul style="list-style-type: none"> • Towards capital costs, operations
3. GoI, GoT and L&T partnership	Hyderabad Metro Rail Ltd. (HMRL) L&T Metro Rail (Hyderabad) Ltd.	

Institutional Set-up

What institutional set-ups help deliver Land Value Capture for TOD?

- Streamlined institutional structures where transit agencies and urban local bodies work jointly on planning for value creation.
- Appointment of a nodal agency that coordinates between multiple stakeholders.
- Clear-cut agreements between stakeholders and aligned mandates for different agencies, determined early in the process.

Implementation

How to structure implementation?

- Relevant stakeholders should jointly evaluate and determine transit routing, developable lands, planning/zoning parameters and LVC estimates.
- FAR thresholds and premiums should be carefully considered, fixed and operationalised in a timely manner.
- Town Planning Schemes, typically employed in new growth areas, is an efficient and equitable self-financing mechanism to deliver planned and serviced land for development, while also providing space for public good.

Regulatory Framework

How should planning and regulatory frameworks be constituted?

- Institute local/station area plans, define TOD zones and their development control regulations and incorporate these into city master plans.
- Incentivising a holistic approach to TOD (which goes beyond premium FAR) would lead to desirable development and optimal LVC around transit stations.
- A tiered planning system aids in the creation of contextual plans with area-specific regulations at the micro level. These detailed plans help identify gaps in infrastructure carrying capacities and augmentation needed to support TOD.
- Regulations should be flexible and responsive to diverse local needs, carrying capacities and changing market demands.

Financial Arrangements

What financial arrangements are needed for delivery?

- As recommended by the National TOD Policy, cities should set up a TOD fund so that LVC is used to finance TOD and not just transit systems.
- A fair sharing model which does not accrue disproportionate benefits to certain stakeholders over others should be determined through collaborative engagement.
- An authority should be identified for the collection and disbursement of LVC revenues and its utilization in accordance with share ratios.
- Local governments should find convergence with and leverage funds from other national/state programs to finance transit and TOD.

HOW DIFFERENT ACTORS CAN SUPPORT TOD IMPLEMENTATION ?

GOVERNMENT

Incentivise and create effective mechanisms for institutional coordination and cooperation between and within various tiers of government to balance divergent interests and facilitate implementation.

Promote integrated transit and land use master plans that include clear budgets for implementation.

Establish funding arrangements and fair rules for cost, profit and risk-sharing among stakeholders. Set up city level Urban Transport and TOD Funds and leverage public-private partnerships for value creation and revenue generation.

Identify locally appropriate LVC mechanisms. Timely land banking and mandating compulsory implementation of TOD on government-contributed lands with provisions for affordable housing and public amenities.

Project/transit agencies can improve their operational and entrepreneurial capabilities by partnering with domain experts in the short term. In the longer term, agencies should develop standard toolkits and knowledge to augment their capacities.

FINANCING INSTITUTIONS

Develop and align financial products to the city's growth strategies that promote the larger public good.

Provide financial incentives for schemes/projects in TOD zones.

Push for taxation and policy reforms that ring-fence revenues to transit influence areas.

Assist development entities access and leverage domestic capital.

PRIVATE SECTOR/DEVELOPERS

Bring technical, business and asset management expertise in providing public amenities/services and solutions for achieving high quality TODs.

Partner in and share risks on mutually beneficial projects and contribute to financing capital intensive public infrastructure.

Implement market-responsive TOD projects that align with the city's growth strategy.

WHAT ARE THE EXPERTS SAYING ?



" Land value should not be the only indicator; it should also be about quality of life. While LVC is significant for TOD, it is only one part. In areas with low carrying capacity, if you allow high-rise complexes only because of transit connectivity, it could lead to chaos. TOD is dependent upon the development of higher order infrastructure – one cannot promote high-rises, without aligning other infra-structural services and resource management."

Dr. Sudhir Krishna, *Chairman, Technology Information Forecasting and Assessment Council's (TIFAC) Committee on Technology Needs Assessment for Sustainable Habitats and Secretary, Ministry of Urban Development (MoUD) (Retd.)*



"Property tax can be used for financing TOD, but that needs political and bureaucratic will. Even without LVC, based purely on current property tax values, as indicated by a study for 13th Finance Commission, we can collect four times the amount we do now. In a core area, for special benefit taxes to be implemented, there will be resistance, because all perceivable quality should improve. While there have been successful global cases, in India, there is a lack of robust TOD financing models that have been implemented."

Mr. Ravikant Joshi, *Team Leader to technical support group, National Urban Livelihood Mission, Ministry of Housing and Urban Affairs (MoHUA)*



"There is need for a common understanding about LVC for TOD; not only among various government agencies at city level, but outside that too. To bridge such gaps, we need formal and informal platforms where all stakeholders can interact about strategic planning for the city. This would need to be followed by restructuring our institutional governance and identifying other necessary structural reforms. Finally, in the new set up, roles should be clarified and institutions suitably empowered to discharge their responsibilities."

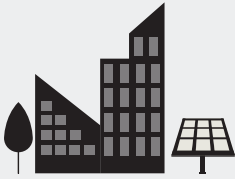
Mr. Dilip Karmarkar, *Industry Mentor, School of Infrastructure, Royal Institute of Chartered Surveyors (RICS)*



"While the principles of LVC can be applied across all transit corridors, certain instruments like extra FAR, fees, charges, etc may vary from location to location. While at the corridor level, some elements can be universal, the details will have to be location specific."

Prof. V.K. Phatak, *Dean faculty of Planning, Centre for Environmental Planning and Technology (CEPT) university and Chief Planner, Mumbai Metropolitan Region Development Authority (MMRDA) (Retd.)*

We work on several technical areas in Land Use, Urban Energy and Mobility



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