

Technical Assistance Report

Project Number: 51323-001 Knowledge and Support Technical Assistance December 2017

India: Supporting the Preparation of a Comprehensive Master Plan for the Chennai–Kanyakumari Industrial Corridor (Financed by the Republic of Korea e-Asia and Knowledge Partnership Fund)

This document is being disclosed to the public in accordance with ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 15 November 2017)

Currency unit	_	Indian rupee/(s) (₹)
\$1.00	=	₹65.4313
₹1.00	=	\$0.01528

ABBREVIATIONS

ADB	_	Asian Development Bank
CDP	_	comprehensive development plan
CKIC	_	Chennai–Kanyakumari Industrial Corridor
ECD	-	economic corridor development
ECEC	_	East Coast Economic Corridor
GDP	_	gross domestic product
LARR	-	Right to Fair Compensation and Transparency in Land
		Acquisition, Rehabilitation, and Resettlement Act, 2013
SARC	-	South Asia Department's Regional Cooperation and
		Operations Coordination Division
ТА	-	technical assistance

NOTE

- (i) The fiscal year (FY) of the Government of India and its agencies ends on 31 March. "FY" before a calendar year denotes the year in which the fiscal year begins, e.g., FY2016 begins on 1 April 2016 and ends on 31 March 2017.
- (ii) In this report, "\$" refers to United States dollars.

Vice-President	Wencai Zhang, Operations 1
Director General	Hun Kim, South Asia Department (SARD)
Director	Ronald Antonio Butiong, Regional Cooperation and Operations
	Coordination Division, SARD
Team leader	Hoe Yun Jeong, Principal Economist, SARD
Team members	Lani Garnace, Associate Economics Officer, SARD
	Kavita Iyengar, Senior Regional Cooperation Officer, SARD
	Linel Ann Reyes-Tayag, Senior Operations Assistant, SARD

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KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

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Cofinancing 1.60	
Republic of Korea e-Asia and Knowledge Partnership Fund 1.60	
Counterpart 0.00	
None 0.00	
Total 1.60	
9. Effective Development Cooperation	
Use of country procurement systems Yes	
Use of country public financial management systems Yes	

I. INTRODUCTION

1. The knowledge and support technical assistance (TA) will support the preparation of a comprehensive master plan for two priority nodes of the Chennai–Kanyakumari Industrial Corridor (CKIC) in the state of Tamil Nadu as agreed with the Government of India and the Government of Tamil Nadu.¹ The two nodes are Thoothukudi–Tirunelveli and Madurai–Virudhunagar–Dindigul–Theni.

2. The development of economic corridors such as the CKIC is consistent with the objectives of the country partnership strategy, 2018–2022 of the Asian Development Bank (ADB) for India, which aims to support the Government of India's goal of faster, inclusive, and sustained growth accompanied by rapid economic transformation and the creation of jobs.^{2 3}

II. ISSUES

3. India's manufacturing sector is crucial for job creation and economic progress, but its contribution to gross domestic product (GDP) is small and is less competitive than in countries in East Asia and Southeast Asia. ⁴ Major constraints to realizing the full potential of the manufacturing sector include inadequate infrastructure that reduces India's attractiveness to investors, a cumbersome regulatory environment, and complex land acquisition procedures.⁵ The government launched its Make in India initiative in September 2014 to encourage international firms to invest and manufacture in India, thereby contributing to economic growth and job creation.

4. The Government of Tamil Nadu recognizes the importance of the manufacturing sector for improving its economy. As India's fourth largest state, Tamil Nadu ranks among the country's top performers in terms of economic prowess and several social indicators. However, from 2000 to 2010, the state has lost its edge in terms of economic growth and its fiscal position has weakened. In June 2011, the Government of Tamil Nadu identified the need to formulate a succinct strategy to rejuvenate economic growth and social development in the state to reclaim the country's top position. In 2012, it unveiled Vision Tamil Nadu, 2023, a strategic plan for infrastructure development, of which the manufacturing sector is envisaged to be the key driver.⁶

¹ In August 2017, the Government of Tamil Nadu, through the Department of Industrial Policy and Promotion, requested the Asian Development Bank (ADB) to continue to support the master planning of the two priority nodes.

² The TA first appeared in the business opportunities section of ADB's website on 20 November 2017.

³ ADB. 2017. Country Partnership Strategy: India, 2018–2022—Accelerating Inclusive Economic Transformation. Manila.

⁴ Manufacturing accounted for 16% of India's GDP in 2016. This percentage is lower than in Malaysia, where it doubled from 10% in 1960 to 20% in 2016; Thailand, where it increased from 13% in 1960 to 27% in 2016; and the People's Republic of China, where it stood at 31.8% in 2016.

⁵ Land acquisition in India is governed by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Act, 2013 (LARR), which came into force on 1 January 2014. One fundamental change introduced under the LARR is the empowerment of farming families through the right to prior consent to land acquisition, which applies to land acquired for private for-profit projects and public-private partnership projects. The government retained the right of forced expropriation for projects for the public good. To some extent, the LARR also injected market transactions into the process. M. Cernea. 2013. Progress in India: New Legislation to Protect Persons Brookings Internally Displaced by Development Projects. The Institution. 21 October. https://www.brookings.edu/blog/up-front/2013/10/21/progress-in-india-new-legislation-to-protect-persons-internallydisplaced-by-development-projects/; L. Chandan. 2008. Process of Land Acquisition. Legal Service India. 15 August. http://www.legalserviceindia.com/article/l257-Process-of-Land-Acquisition.html.

⁶ Government of Tamil Nadu. 2012. *Vision Tamil Nadu, 2023: Strategic Plan for Infrastructure Development in Tamil Nadu*. Chennai.

5. To help fulfill the national economic policy and strategic objectives of increasing the manufacturing sector's GDP share and creating jobs, the Government of India has adopted economic corridor development (ECD) as a strategy to stimulate economic activities through the integration of urban and industrial clusters, and to connect its manufacturing base with regional value chains and global production networks.⁷ Many states in India are adopting ECD to bolster the manufacturing sector as a means to promote inclusive and sustainable growth.⁸

6. The Government of Tamil Nadu has also adopted ECD as a policy instrument to spur manufacturing growth through the development of the CKIC.⁹ The CKIC aligns with Vision Tamil Nadu, 2023, with an initial focus on the state's lagging southern districts (footnote 2). At the national level, the CKIC envisions port-led development under the Sagarmala project to link the state's manufacturing sector with national supply chains and global value chains in East Asia and Southeast Asia.¹⁰ The CKIC will provide further impetus to India's Act East Policy and promote regional integration with neighboring Asian economies.

7. ADB has conducted the first phase of the analytical study on the CKIC, which led to the preparation of a comprehensive development plan (CDP).¹¹ The CDP identified industries that will drive growth in the CKIC and the nodes in which they will be strategically located; crafted an initial infrastructure development strategy; and evaluated other critical elements, including institutional frameworks, policies, and regulations that can create a favorable investment climate and improve the ease of doing business for domestic and foreign investors. However, the CDP only broadly covered the priority growth sectors and identified the target nodes as a first step. Therefore, the Government of Tamil Nadu has requested ADB to support a master plan study that will include the detailed, node-specific analysis needed to initiate the implementation of the CKIC.

8. The master plan, which is the final phase of the analytical study of the CKIC, will build on the CDP findings submitted to the Government of Tamil Nadu in June 2017. It will provide a comprehensive review and evaluation of the CDP findings, with detailed recommendations for targeted industries and subindustries, development phasing and costing of infrastructure at the corridor and node levels, and an institutional framework for the management of the corridor. The master plan will identify comprehensive market potential and critical gaps of industries and infrastructure in the region; analyze the financial and economic aspects of the CKIC; and identify a regulatory and implementation framework for an enabling environment that promotes local industries, creates world-class infrastructure, and attracts global investments.

⁷ Building infrastructure alone is not sufficient. To reinforce the Make in India initiative, the Government of India launched the Skill India program in March 2015 to establish an international-equivalent skills development framework, create workforce mobility, and enhance youth employability. In 2014, the government adopted major initiatives in line with improving the business climate by simplifying and rationalizing business-related regulations and broadening the use of information technology to make governance more efficient and effective. Digital India, launched in July 2015, integrates government departments to promote effective governance and the accessibility of services.

⁸ Economic corridors being pursued in India include the Delhi–Mumbai Industrial Corridor, Amritsar–Kolkata Industrial Corridor, Bengaluru–Mumbai Economic Corridor, Chennai–Bengaluru Industrial Corridor, and the ADB-supported East Coast Economic Corridor (ECEC).

⁹ ADB is India's lead partner in developing the ECEC, the first coastal corridor in India. The ECEC is being implemented in three phases: Phase 1 is the Vizag–Chennai Industrial Corridor, which mainly covers Andhra Pradesh; Phase 2 comprises the CKIC in Tamil Nadu; and Phase 3 is the corridor running through Odisha and West Bengal.

¹⁰ The Sagarmala project envisions the concept of port-led development. It has four essential pillars: (i) reducing the cost of transporting domestic cargo by optimizing the modal mix, (ii) lowering logistics costs for bulk commodities by locating future industrial capacities near the coast, (iii) improving export competitiveness by developing ports near manufacturing clusters, and (iv) optimizing the time and cost of export–import container movement.

¹¹ The CDP identified 63 early-bird investment projects worth ₹550 billion. ADB is processing three detailed projectreport-ready priority projects related to roads, power transmission, and the urban sector.

9. As agreed with the Government of Tamil Nadu, inputs will be sought from potential anchor investors on the CKIC master planning process to tailor infrastructure investments and reforms better to the requirements. Industry analysis will focus on individual sectors and their potential for linkages with global value chains, and will identify and actively reach out to anchor investors during the initiation of master planning. The infrastructure plan¹² will also rebalance supply- and demand-side interventions, equip sites with infrastructure based on the specific requirements of anchor investors, emphasize critical urban issues such as water and flood management, highlight connectivity to major gateways, and support renewable energy and plug-and-play factories¹³ for certain industries. Strategic interventions regarding financing, governance, social impact, and resettlement will involve proactive investment promotion strategies, including ADB support for the Government of Tamil Nadu in designing and implementing investment promotion programs.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

10. The TA is aligned with the following impact: competitiveness of the manufacturing sector improved.¹⁴ The TA will have the following outcome: a master plan used to develop the CKIC.¹⁵

B. Outputs, Methods, and Activities

11. **Output 1: Strategic framework and policies for establishing two industrial nodes in the Chennai–Kanyakumari Industrial Corridor proposed.** The master plan will assess the comprehensive market potential of the Thoothukudi-Tirunelveli and Madurai-Virudhunagar-Dindigul-Theni nodes,¹⁶ including economic profile, industry scenario, and potential growth. It will also include plans for the development of climate-resilient external and internal infrastructure for the nodes in terms of transport and logistics (roads, rail, networks, and airports); energy; water; and sewerage. The master plan will also include a financing plan for the identified projects to give government stakeholders information on their financing needs and to prepare a strategy for addressing the financing gaps. To ensure coordinated development and management of the two nodes, the master plan will propose institutional structures that consider the various layers of

¹² The infrastructure plan is a subcomponent of the master plan and reflects urban, industrial, and connectivity infrastructure requirements for the proposed development of the land parcels in and around the nodes.

¹³ Plug-and-play (or plug-and-produce) factory technology borrows from the popular computing concept where a user literally only needs to 'plug' in an additional device and it will start working. Similarly, the plug-and-play factories operate on a set parameter of communication standards and the machines are networked so that all activity is monitored in real time and can be managed remotely. In this way, an additional equipment or add-on process may be easily inserted in the production process as needed to improve manufacturing quality or output, unlike the traditional factory which has more rigid production processes that require costly expertise to adjust even the smallest parameter.

¹⁴ Make in India. <u>http://www.makeinindia.com/home;</u> Government of Tamil Nadu. *Vision Tamil Nadu, 2023: Strategic Plan for Infrastructure Development in Tamil Nadu.* Chennai. <u>http://www.tnidb.tn.gov.in/forms/TN Vision 2023(PHASE%201).pdf;</u> Department of Industrial Policy and Promotion. 2011. National Manufacturing Policy. Delhi. <u>http://dipp.nic.in/policies-rules-and-acts/policies/national-manufacturing-policy</u>.

¹⁵ The design and monitoring framework is in Appendix 1.

¹⁶ A node is an agglomeration of existing and planned special economic zones and industrial parks. Based on the findings of the CDP study of the CKIC, six nodes were identified: (i) Petroleum, Chemicals, and Petrochemicals Investment Region at Cuddalore and Nagapattinam; (ii) Ariyalur and Perambalur; (iii) Trichy–Pudukottai–Sivaganga; (iv) Madurai–Virudhunagar–Dindigul–Theni; (v) Ramanathapuram; and (vi) Thoothukudi–Tirunelveli. GoTN has prioritized Thoothukudi-Tirunelveli and Madurai-Virudhunagar-Dindigul-Theni nodes for master planning. (see footnote 1) The CDP has likewise shortlisted seven industries to promote a manufacturing-led economic transformation: machinery (including special purpose), automobile and automobile components, textiles, food processing, chemicals and petrochemicals, electrical machinery, and electronics.

governance from the national to the state level. These activities will produce the necessary framework and supporting policies to establish the two industrial nodes.

12. Output 2: Investor awareness of the Chennai–Kanyakumari Industrial Corridor nodes increased. The TA will support demand-side interventions with a focus on an investor needs assessment. It will pursue continuous consultations with potential investors to identify their concerns and expectations. The TA will identify potential anchor investors for the nodes early on and will assess the investors' land and infrastructure requirements. The TA will delineate and create a master plan for start-up areas in consideration of the requirements of key tenants.¹⁷ This will help identify key industries and the factors that will influence investments in the two priority nodes. The TA will conduct investment promotion activities such as workshops, conferences, and forums that target the business community and potential investors from countries in East Asia and Southeast Asia to disseminate the results of the master plan.¹⁸

C. Cost and Financing

13. The TA is estimated to cost \$1.68 million, of which \$1.6 million will be financed on a grant basis by the Republic of Korea e-Asia and Knowledge Partnership Fund and administered by ADB. The key expenditure items are listed in Appendix 2.

14. The Government of Tamil Nadu will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions.

D. Implementation Arrangements

ADB will administer the TA through the South Asia Department's Regional Cooperation 15. and Operations Coordination Division (SARC).¹⁹ ADB will work closely with the Government of Tamil Nadu, the Department of Industrial Policy and Promotion, and other central and state government agencies in implementing the TA activities. SARC will select, supervise, and evaluate consultants. The implementation arrangements are summarized in the table.

	Implementation Arra	ingements		
Aspects	Arrangements			
Indicative implementation period	December 2017–May 2	December 2017–May 2020		
Executing agency	ADB	ADB		
Implementing agency	ADB			
Consultants	To be selected and eng	aged by ADB		
	Individual (individual	International expertise	\$150,000	
	selection)	(18 person-months)		
	Individual (individual	National expertise	\$180,000	
	selection)	(48 person-months)		

Implementation Arrengemente

¹⁷ The TA will give special attention to projects concerning external connectivity, energy availability, and urban infrastructure to provide a better industrial environment for investors. Proper land use planning will be crucial to drive industrial investment.

¹⁸ Chennai, the capital city of Tamil Nadu, is home to a large community from the Republic of Korea with more than 300 companies and 5,000 people. The CKIC may help these companies partner with Indian businesses to serve the local market and reach out to export customers in neighboring markets.

¹⁹ ADB will establish a project steering committee to provide guidance during TA implementation. It will be headed by the SARC director and comprise project officers from sector divisions of the South Asia Department. SARC will monitor day-to-day TA operations.

	1 consulting firm (QCBS with a 90:10 ratio)	75 person-months (cumulative)	\$1,000,000
Advance contracting	Contract of the consulting	ı firm	
Disbursement	The TA resources will be Assistance Disbursement time).	disbursed following ADB's t Handbook (2010, as ame	

ADB = Asian Development Bank, QCBS = quality- and cost-based selection, TA = technical assistance. Source: ADB.

16. ADB will seek potential partnerships with countries in East and Southeast Asia for investment in research and development and the procurement of cost-effective technologies for modernizing the manufacturing sector. Such partners' experience in developing world-class infrastructure and playing a key role in global production networks—key ECD components—would be highly relevant to the project. The TA is thus expected to seek expertise from specialists with knowledge and ample experience in this regard.

17. **Consulting services.** ADB will hire a consulting firm to prepare the master plan, using advance contracting to expedite preparation. The selected firm will comprise specialists in infrastructure, transportation, urbanization, and energy, among others. The consulting firm will also include a team leader who will have overall responsibility for ensuring the quality of the master plan and the timely submission of reports. ADB will engage a sector specialist to help review the consulting firm's outputs and identify research that could be conducted to improve the development of the CKIC further. ADB will engage a communications specialist to prepare a communications plan for the master plan and an editor to work on the knowledge products to be produced by this TA. ADB will also engage national consultants to support the implementation of various activities.²⁰

18. ADB will engage the consultants following the ADB Procurement Policy for Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions. ADB will engage a consulting firm using quality- and cost-based selection. Firms will use a simplified technical proposal. ADB will engage individual consultants using individual consultant selection and will consider output-based contracts. TA disbursement will follow ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

19. ADB will require the consulting firm to submit progress reports to the project steering committee and will monitor report submissions from the consulting firm and individual consultants.

IV. THE PRESIDENT'S DECISION

20. The President, acting under the authority delegated by the Board, has approved the Asian Development Bank administering technical assistance not exceeding the equivalent of \$1,600,000 to the Government of India to be financed on a grant basis by the Republic of Korea e-Asia and Knowledge Partnership Fund for the Supporting the Preparation of a Comprehensive Master Plan for the Chennai–Kanyakumari Industrial Corridor, and hereby reports this action to the Board.

²⁰ Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).

DESIGN AND MONITORING FRAMEWORK

	DESIGN AND MONITO		
Impact the TA is Alig			
	ne manufacturing sector improved	d (Make in India; Vision Tamil Na	adu, 2023; and
National Manufacturi			•
	Performance Indicators with	Data Sources and	
Results Chain	Targets and Baselines	Reporting Mechanisms	Risks
Outcome	By 2021:		
Master plan used to	a. CKIC-identified projects	a. Websites of the	Political
develop the CKIC	included in the investment	government and DIPP	leadership
	pipeline of the Government of		changes, bringing
	Tamil Nadu (2017 baseline:		a different
	not applicable).	b. Consultants' reports	development agenda.
	b. State-level institutional	b. Consultants reports	ayenua.
	arrangements for the CKIC		
	established (2017 baseline:		
	not applicable).		
Outputs	By 2020:		
1. Strategic	1a. Comprehensive master	1a. Consultants' report	Extended process
framework and	plan for the two nodes		of consensus-
policies for	completed and submitted to		building among
establishing two	the government (2017		stakeholders
industrial nodes in	baseline: not applicable). ^c		delays the
the CKIC proposed ^b			completion of TA
	1b. At least one analytical		outputs.
	report with policy advice	1b. Websites of the	
	and/or policy brief published (2017 baseline: not	government and ADB	
	applicable).		
	By 2020:		
2. Investor	2. Investors from at least two	2. Workshops, conferences,	
awareness of the	countries participate in	and investor forum	
CKIC nodes	promotional activities (2017	summaries	
increased	baseline: not applicable).		
Key Activities with I			
	work and policies for establishi		
	governance structure for the man		odes in coordination
	and the government (Q2 2018–Q2		
	Itation workshops with various sta		interparts to discuss
	on activities in the master plan (Q ter plan for the two industrial node		
	nation workshops on the master p		(022010 01
	nation workshops on the master p	nam for the two moustrial modes	(422013-41

2020)1.5 Publish the master plan for the two industrial nodes and upload it to the SARD and government websites (Q2 2019)

1.6 Prepare an analytical report on industrial corridor development with policy advice and/or a policy brief (Q2 2019–Q1 2020)

2. Investor awareness of the CKIC nodes increased

- 2.1 Assess the enabling environment for investments in the corridor (Q2 2018-Q2 2019)
- 2.2 Design strategies to improve investment opportunities (Q3 2018–Q1 2019)

2.3 Develop a communications plan to promote the master plan to the business community and potential investors (Q2 2018–Q1 2020)

 Organize workshops and conferences to present investment opportunities in the corridor (Q3 2018– Q2 2019)

2.5 Prepare materials on an investment plan for the corridor (Q3 2018-Q1 2020)

TA Management Activities

Establish a steering committee (Q2 2018)

Engage consultants (Q1 2018–Q4 2019)

Inputs

Republic of Korea e-Asia and Knowledge Partnership Fund: \$1.6 million

Note: The Government of Tamil Nadu will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions.

Assumptions for Partner Financing

Not applicable

ADB = Asian Development Bank, CKIC = Chennai–Kanyakumari Industrial Corridor, DIPP = Department of Industrial Policy and Promotion, NICDIT = National Industrial Corridor Development and Implementation Trust, Q = quarter, SARD = South Asia Department, TA = technical assistance.

^a Make in India. <u>http://www.makeinindia.com/home;</u> Government of Tamil Nadu. *Vision Tamil Nadu, 2023: Strategic Plan for Infrastructure Development in Tamil Nadu.* Chennai. <u>http://www.tnidb.tn.gov.in/forms/TN Vision 2023(PHASE%201).pdf;</u> Department of Industrial Policy and Promotion. 2011. *National Manufacturing Policy*. Delhi. <u>http://dipp.nic.in/policies-rules-and-acts/policies/national-manufacturing-policy</u>.

^b The two priority nodes for the CKIC master plan are (i) Thoothukudi–Tirunelveli and (ii) Madurai–Virudhunagar– Dindigul–Theni.

^c The master plan will include an analysis of industries and infrastructure, a financing plan for identified projects, and an institutional structure of corridor management.

Source: ADB.

COST ESTIMATES AND FINANCING PLAN

(\$'000)

Item	Amount
Republic of Korea e-Asia and Knowledge Partnership Fund ^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	1,150.0
ii. National consultants	180.0
 Out-of-pocket expenditures 	
i. International and local travel	20.0
ii. Reports and communications	10.0
2. Training, seminars, workshops, and conferences	
 Facilitators and resource persons 	20.0
b. Venue rental	50.0
c. Participants	75.0
d. Representation ^b	5.0
3. Miscellaneous administration and support costs ^c	10.0
4. Contingencies	80.0
Total	1,600.0

Note: The technical assistance is estimated to cost \$1.68 million, of which contributions from the Republic of Korea e-Asia and Knowledge Partnership Fund are presented in the table above. The Government of Tamil Nadu will provide counterpart support in the form of counterpart staff, office accommodation, office supplies, secretarial assistance, domestic transportation, and other in-kind contributions. The value of government contribution is estimated to account for 5% of the total technical assistance cost.

^a Administered by the Asian Development Bank.

^b Includes entertainment expenses such as alcoholic beverages and other expenses relevant to holding meetings.

^c Includes printing of publications and reports.

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS http://www.adb.org/Documents/LinkedDocs/?id=51323-001-TAReport

1. Terms of Reference for Consultants