

Evaluation of Japan's ODA Loans to the Infrastructure Development Planning Sector in India

A Partner Country-led Evaluation

March 2024

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Preface

This Partner Country-led Evaluation report, titled Japan's Official Development Assistance (ODA) Loans to the Infrastructure Development Planning Sector in India, was undertaken by individual evaluators Mr Yatin Diwakar, Ms Arshee Rizvi and Ms Farheen Rizvi, entrusted by the Ministry of Foreign Affairs of Japan (MOFA) in Japan's Fiscal Year 2023.

Partner Country-led Evaluation was established for the aim of ensuring accountability of Japan's ODA to the citizens of Japan, providing feedback to the Government of Japan and the government of the partner countries to support their effective and efficient management of ODA, and promoting the capacity development of partner country evaluation.

This evaluation study was conducted with the objectives of reviewing Japan's policies to the sector of development planning in India, drawing on lessons from this review to make recommendations for reference in policy planning on future assistance to India by the Government of Japan and its effective and efficient implementation, and ensuring accountability by making the evaluation results widely available to the public.

Mr Karthikeyan, nodal officer for Tamil Nadu Investment Promotion Program (TNIPP) at Tamil Nadu Infrastructure Development Board (TNIDB), has provided his complete support and expertise and coordinated the field visits in Chennai, Tamil Nadu and various officers from the implementing agencies have shared their experiences on small infrastructure development in Tamil Nadu State of India. All have made enormous contributions to this study. In addition, during this study, we have benefited from the cooperation of the Embassy of Japan in India, MOFA, the Japan International Cooperation Agency (JICA), the local ODA Task Force, donors, and the Chamber of Commerce of different countries in Chennai. We would like to take this opportunity to express our sincere gratitude to all who were involved in this study.

Finally, the Evaluation Team wishes to note that the opinions expressed in this report do not reflect the views or positions of the Government of Japan or the Government of Tamil Nadu.

March 2024

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Executive Summary

Evaluation of Japan's ODA Loans to the Infrastructure Development Planning Sector in India (Partner Country-led Evaluation)

1. Country: India, Tamil Nadu State	 <p>Visit to Sewage Treatment Plant at Sholinganallur, Chennai on 13 March 2024 with the CMWSSB team.</p>
2. Evaluators: Mr Yatin Diwakar, Ms Arshee Rizvi, Ms Farheen Rizvi	
3. Period of the Evaluation Study: December 2023 to March 2024	
4. Evaluation Description:	
(1) Background <p>This is a partner country-led evaluation of Japanese Official Development Assistance commissioned by the Ministry of Foreign Affairs of Japan (MOFA). For Japan's Fiscal Year 2023, a country program of ODA for India is selected and evaluated by evaluators from India. This evaluation is conducted per the “Guidelines for Partner Country-led Evaluation” (the Guidelines) of MOFA. The objectives of the country-led evaluations are:</p> <ul style="list-style-type: none">a. to develop the evaluation capacity of partner countries,b. to improve the management of ODA,c. to ensure accountability of Japan’s ODA to the public, andd. to promote understanding towards Japan’s ODA in the partner country. <p>After primary discussions, the proposal for the evaluation was submitted in November 2023, focusing on the infrastructure development planning sector funding in India; the contract was signed, and the work was initiated in late December.</p>	
(2) Evaluation Purpose <p>This evaluation aims to comprehensively evaluate Japan’s ODA loans towards assistance to promote investments in the south-eastern Indian state of Tamil Nadu that are aimed at regional development and promoting Foreign Direct Investment (FDI) in Chennai Metropolitan and neighboring regions in the state.</p> <p>This partner country-led evaluation is a sectoral evaluation of the Infrastructure Development Planning Sector as Policy Action support, focusing on activities in Tamil Nadu, India. The objectives of the evaluation are:</p> <ul style="list-style-type: none">a. to verify whether the expected outcomes have been achieved through the projects in a timely and sustainable manner;b. to assess the relevance of the infrastructure development planning projects to the development needs of Tamil Nadu, Japan’s ODA policies, and international priorities, including the Sustainable Development Goals (SDGs); andc. to evaluate the effectiveness of results against the planned activities and appropriateness of processes.	

(3) Evaluation Targets

Japan's ODA has provided policy action loans to Tamil Nadu to create policy-level changes and construct infrastructure to attract FDI. This has been done through the Tamil Nadu Investment Promotion Program (TNIPP) Phase 1 (2012-16) and Phase 2 (2017-20). This evaluation targets these two programs and both types of activities conducted under them, viz., policy actions and small infrastructure projects (SIPs). The TNIPP aimed to enhance the investment climate in Tamil Nadu by facilitating the improvement of policies and systems related to private sector investment and industrial growth in the state, as well as promoting the early implementation of the development and improvement of urban infrastructure in the state, especially roads, power, waterworks, sewerage, and other infrastructure facilities, thereby contributing to more FDI into the state.

While Phase 1 had 7 main policy actions, Phase 2 had 4, which were all achieved during the respective phase. These achievements were monitored by a program management committee (PMC), with officials from various government departments, coordinated by the finance department. It also had representation from JICA, investors, etc. Upon achievement of policy actions, based on the recommendations of the PMC, JICA released funds to the finance department, which were utilized as regular government funds for various SIPs by TANTRANSCO, Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB), Tamil Nadu Road Development Company (TNRDC), etc. These works were monitored regularly by Tamil Nadu Infrastructure Development Board (TNIDB) and progress was presented in the PMC meetings. Some works were selected based on recommendations of the PMC.

(4) Evaluation Methodology

This evaluation followed the methodology defined in the Guidelines. This sector evaluation is centered around three criteria provided in the guideline document:

- a. Relevance of Policies
- b. Effectiveness of Results
- c. Appropriateness of Processes

Further, using the OECD/DAC evaluation criteria, the following questions are posed:

- a. **Relevance:** Was the intervention relevant to Tamil Nadu's industrial development needs, Japan's ODA policies, and international priorities?
- b. **Coherence:** Were planned activities coherent with other efforts for infrastructural development and investment promotion in the region?
- c. **Effectiveness:** Were expected outcomes and impacts effectively achieved? Did the policy climate for investments improve? Did infrastructure support businesses?
- d. **Impact:** How did investors feel the impact? Did Foreign Direct Investment increase?
- e. **Appropriateness:** How appropriate were the policy processes and actions towards achieving outcomes? What were their intended and unintended consequences?
- f. **Sustainability:** Are interventions sustainable in terms of longevity and achieving SDGs?
- g. **Equity:** Are benefits equitably experienced by women, differently abled, and marginalized communities?

A qualitative approach using document analysis, interviews, and field observation methods is employed primarily, supported by some analysis of content from social media websites like Quora and a comparison of Google Earth images of different industrial areas in Tamil Nadu. Limited quantitative analysis of available secondary data is also done. Open-ended interviews were done with different stakeholders, including implementing government agencies, investors, and officials related to the project.

5. Evaluation Results:

Overall Summary:

The infrastructure development loans by Japan's ODA have been successful in achieving their intended goals. In TNIPP Phases 1 and 2, all targeted policy actions were achieved and multiple

useful SIPs have been created, which together help in improving the investment climate and attracting FDI.

(1) Relevance of Policies:

The policy actions under TNIPP are relevant to the policies of the Government of India, the industrial development policies of the Government of Tamil Nadu, and the investment policies of the Government of Japan.

(2) Effectiveness of Results:

The planned policy actions have been achieved effectively and in a timely fashion and have effectively improved the investment climate in the state. The state continued the initiative and made further improvements to the policy actions based on their success. The SIPs undertaken through TNIPP linked loan have generally been delayed. As TNIPP is a program loan, the goal was not the completion of the SIPs, but the promotion of project selection and implementation as the policy action. Thus, the delays cannot be linked directly to the TNIPP. All SIPs are useful in the long run, they are effective in improving the urban infrastructure, which is the stated purpose.

(3) Appropriateness of Processes:

All processes carried out in the design of policy matrix for TNIPP, its monitoring through the PMC and sanction of SIPs through the empowered committee (SIPEC) have been appropriate actions towards meeting the stated objectives. Implementing important policy actions and all SIPs through existing systems have ensured their sustainability and longevity.

The activities have promoted equity and link to different sustainable development goals.

6. Recommendations

(1) Feasible goal setting - Plan mutually agreeable, feasible goals with a realistic timeline. While most actions were planned this way in TNIPP Phases 1 and 2, this should be continued to ensure quality actions are carried out without being over ambitious or overcautious.

(2) Focus on equity and sustainability - Most SIPs are implemented in and around Chennai Metropolitan Region. While this area has the most industries, the state must plan for geographically balanced development. As part of the policy actions, actions which promote green technologies and aim at minimizing the carbon footprint of the industries should be taken up.

(3) Improving efficiency in project timeline - Most of the SIPs are delayed, meaning that the population depending on them must settle for below par services for a longer duration. While this is not a direct concern under TNIPP, it is important that future projects have some system to ensure that the funds are used efficiently within pre-decided timelines.

(4) Better data management and project monitoring - TNIDB oversees the monitoring of progress of the projects, and should have systems for better, streamlined data management. Improved monitoring can help in controlling project implementation better and understanding and resolving delays.

Note: The opinions expressed in this summary are based on the research by the Evaluators and do not reflect the views or positions of the Government of India, the Government of Tamil Nadu, or the Government of Japan.

1 Description of Evaluation

This first section describes the evaluation study, including its purpose and methodology and the evaluation team. The next section describes the target of the evaluation, i.e., the program being evaluated and is followed by the results of the study. The last section is the recommendations, followed by the annexures.

1.1 Purpose of the evaluation

Considering the significance of Japan's Official Development Assistance (ODA) to India, particularly Policy Action support in the Infrastructure Development Planning Sector, the Evaluation Team will conduct a comprehensive evaluation of Japan's ODA loans towards assistance to promote investments in the south-eastern Indian state of Tamil Nadu, India that aimed at overall regional development and promoting Foreign Direct Investment (FDI) in Chennai Metropolitan region and neighboring regions in Tamil Nadu. In this evaluation, a sector evaluation framework will be used, which has the criteria "Relevance of Policies", "Effectiveness of Results", and "Appropriateness of Processes".

1.1.1 Objectives of the evaluation

This is a partner country-led evaluation conducted as per the "Guidelines for Partner Country-led Evaluation" (the Guidelines) provided by the Ministry of Foreign Affairs of Japan (MOFA). The objectives of the partner country-led evaluations are:

- a. to develop the evaluation capacity of partner countries,
- b. to improve the management of ODA,
- c. to ensure accountability of Japan's ODA to the public, and
- d. to promote understanding towards Japan's ODA in the partner country.

This evaluation of Infrastructure Development Planning Sector as Policy Action support in Tamil Nadu, India aims:

- a) to verify whether the expected outcomes have been achieved through the projects in a timely and sustainable manner;
- b) to assess the relevance of the infrastructure development planning projects to the development needs of Tamil Nadu, Japan's ODA policies, and international priorities, including the Sustainable Development Goals (SDGs); and
- c) to evaluate the effectiveness of results against the planned activities and appropriateness of processes.

1.1.2 Target of the evaluation

Japan's Official Development Assistance (ODA) in the Infrastructure Development Planning Sector through ODA loans for policy action in Tamil Nadu state of India from FY 2013 to FY 2020,

primarily through the Development Planning Support Program, namely Tamil Nadu Investment Promotion Program (TNIPP) Phase 1 and Phase 2.

1.2 Methodology of the evaluation

The Guidelines provide a Sector Evaluation Framework. The methodology of the current evaluation study is based on these guidelines and frameworks.

1.2.1 Evaluation framework

Table 1-1 provides the framework for sector evaluation for Japan's ODA to Infrastructure development planning in Tamil Nadu, India, where the period of the evaluation study is from FY 2013 to FY 2020. This sector evaluation is centered around three criteria provided in the guideline document, which are:

- a. Relevance of Policies
- b. Effectiveness of Results
- c. Appropriateness of Processes

Table 1-1: Framework of Sector Evaluation for Japan's ODA to Infrastructure Development Planning in Tamil Nadu, India

Evaluation Criteria		Points to Analyze	Information Source	
			Documents	Organizations
Relevance of Policies	Consistency with Japan's high-level ODA policies	1. Consistency with Japan's Development Cooperation Charter and Country Assistance Policy for India	Japan's Development Cooperation Charter, Country Assistance Policy for India.	MOFA
	Consistency with development needs of Tamil Nadu, India	1. Consistency with India's development plans 2. Consistency with Tamil Nadu, India's development plans in industrial development sector	Development plans of Tamil Nadu, India, Development Plans of India of industrial development sector, Interviews, etc.	Government of Tamil Nadu, Government of India
	Consistency with international priorities	1. Consistency with the SDGs 2. Consistency with the international policies and issues	Related Documents of SDGs, International Policies, and Issues, etc.	UNDP, International Organizations, etc.
	Relativity with other donors	1. Consistency with other donors' assistance 2. Japan's advantage (areas,	Country Assistance Policies to India of other donors and Achievements,	Other donors, people related with Japan's ODA

		methods, aid modalities, etc.)	Interviews with other donors and other people related with Japan's ODA	
Effectiveness of Results	Degree of contribution of Japan's ODA	1. Achievements of Japan's ODA to industrial development sector 2. Impact of Japan's ODA to the industrial development sector	Documents of MOFA, related organizations, interviews, and surveys of relevant parties	MOFA, JICA, Government of India, other donors, etc.
	Relativity with other cooperation	1. Achievements of Japan's ODA to industrial development sector through cooperation 2. Impact of Japan's ODA through cooperation	Documents of MOFA, related organizations, interviews, and surveys of relevant parties	MOFA, JICA, Government of India, other donors, etc.
Appropriateness of Processes	Appropriateness of the policy-making processes	1. Clarity of development needs of policy-making processes 2. Systems and processes of policy-making 3. Cooperation between relevant parties of Japan's ODA 4. Ownership of relevant parties, including the parties of Tamil Nadu, India	Documents of MOFA, related organizations, interviews, and surveys of relevant parties	MOFA, JICA, Government of India, other donors, etc.
	Appropriateness of the policy implementing processes	1. Appropriateness of policy implementing system s.a. government body and ODA task force in India 2. Program implementation stage 3. Information sharing and cooperation with other donors 4. Periodic monitoring and follow-up of policy implementation stage 5. Publicity of Japan's ODA	Documents of MOFA, related organizations, interviews, and surveys of relevant parties	MOFA, JICA, Government of India, other donors, etc.

This framework has been previously used in the ex-ante and ex-post evaluations of the projects being evaluated under the development planning sector, and thus, instead of duplicating the previous efforts, the current study focuses on aspects not studied previously, while presenting a summary of previous evaluations wherever appropriate.

1.2.2 Evaluation questions

For further specific inquiry, these 3 criteria were expanded upon using the OECD/DAC evaluation criteria and the following seven evaluation questions were prepared. As this project deals with the skill development of youth, women and the differently abled, an additional question on equity was added, while the question on efficiency is dropped as this is a policy action support loan, with SIPs projects undertaken from the untied funds, which make it difficult to estimate efficiency.

1. **Relevance:** Was the intervention relevant to Tamil Nadu's industrial development needs, Japan's ODA policies, and international priorities?
2. **Coherence:** Were planned activities coherent with other efforts for infrastructural development and investment promotion in the region?
3. **Appropriateness:** How appropriate were the policy processes and actions towards achieving outcomes?
4. **Effectiveness:** Were expected outcomes and impacts effectively achieved? Did the policy climate for investments improve? Did infrastructure support businesses?
5. **Impact:** Did Foreign Direct Investment increase? How did investors feel the impact? What were their intended and unintended consequences?
6. **Sustainability:** Are interventions sustainable in terms of longevity and achieving SDGs?
7. **Equity:** Are benefits equitably experienced by women, differently abled, and marginalized communities?

1.2.3 Methods

This study focuses on qualitative data analysis through content analysis of existing reports and documents and through analysis of responses during interviews by the stakeholders and field observations to answer the evaluation questions. Limited quantitative data analysis based on secondary data is also carried out.

Due to the limited amount of data that was available and the delay in on-field visits and interviews, an approach utilizing big data and satellite imagery was applied to understand how industrialization has spread in Tamil Nadu and what is the public perception about the same. Posts on social media related to FDI, investment climate, industrialization, etc., in Tamil Nadu, were reviewed and important points from them were listed. This gives an idea of the public perception of the situation in Tamil Nadu on these topics. The Google Earth images of industrial areas neighboring Chennai and the Chennai Bengaluru Industrial corridor were compared over the last decade to visualize the planned growth of the industries. These have been reported in the appropriate subsections in Section 3.

1.2.4 Stakeholders

Multiple stakeholders, including JICA India Office, the Embassy of Japan in India, government departments, project consultants, evaluators, and the Chamber of Commerce from different countries, were interviewed in this study to understand their perspectives on the impact of TNIPP phases 1 and 2 in improving the investment climate in Tamil Nadu and creating small infrastructures. The

stakeholders with whom interactions were carried out are a subset of the list of stakeholders provided in section 2.4.

1.2.5 Restrictions

The quality of this evaluation is limited by the availability of data related to TNIPP phases, small infrastructure projects (SIPs), fund release process, and policy actions. Most importantly, a lot of officials within the government departments and in the partner organizations, have changed in the past few years, and thus, the interactions could only provide a limited understanding of the initiation of phase 1 of TNIPP and important activities. The best attempt is made to integrate all available information to answer each evaluation question briefly.

1.3 Evaluation team

The evaluation was conducted by independent evaluators, namely Mr Yatin Diwakar (team lead, evaluator) and Ms Arshee Rizvi (evaluator, data scientist). The work was supported by Ms Farheen Rizvi for data analysis, spatial analysis, and visualization and by Ms Rajasi Diwakar for transcription of surveys.

Mr Yatin is in the final stages of his PhD research on the institutionalization of evaluation in India. Ms Arshee is a data science officer at the Indian Institute of Technology Madras' online BS degree program. Between the two of them, they have performed evaluations of a diverse array of development programs; their previous clients involve donor agencies, companies (under corporate social responsibility spending) and non-government organizations.

This evaluation aims to provide insights into the effectiveness and relevance of Japan's ODA in infrastructure development in Tamil Nadu, India. By addressing the outlined criteria and questions, it seeks to offer recommendations for future improvements and sustainability of such projects.

2 Outline of Evaluation Target

This section briefly overviews the projects being evaluated and the local context of industrial development in Tamil Nadu.

2.1 Infrastructure development planning in Tamil Nadu, India

The TNIPP Phase 1 (2012) and Phase 2 (2017) were Development Policy Support Japanese ODA loan projects aimed at promoting investments through policy improvement and infrastructural development in Tamil Nadu. This was envisaged under the Chennai Bengaluru Industrial Corridor (CBIC) Plan published in 2015. These were supported by other programs aimed at improving the infrastructure in the Chennai Metropolitan region, including but not limited to the following:

- a. Tamil Nadu Urban Infrastructure Project (2007)
- b. Tamil Nadu Transmission System Improvement Project (2012)
- c. Tamil Nadu Urban Health Care Project (2015)
- d. Chennai Metro Project (2016)
- e. Project for Construction of Chennai Seawater Desalination Plant (2018)
- f. Project for Installation of Chennai Metropolitan Area Intelligent Transport Systems (2018)
- g. Project for the Construction of Chennai Peripheral Ring Road (2019)

The TNIPP was implemented to enhance the investment climate in Tamil Nadu by facilitating the improvement of policies and systems related to private sector investment and industrial growth in the state, as well as promoting the early implementation of the development and improvement of urban infrastructure in the state, especially roads, power, waterworks, sewerage, and other infrastructure facilities, thereby contributing to more FDI into the state. The program is consistent with India's development policies, financial and development needs, and with Japan's ODA policy. It was initiated based on the JICA survey for CBIC, focusing on the region's overall development through the above-listed projects and the TNIPP.

2.2 Objective of TNIPP

The TNIPP Phases 1 and 2 are program loans, which assist recipient countries seeking to improve policies and implement general system reforms. Loan agreements are signed, and funds are provided based on confirmation that reform items have been achieved by the partner country's government, as opposed to a regular project-type loan, which is tied to specific projects. In recent years, the most common type of these loans is one in which proceeds are incorporated into the target partner country budget.

The TNIPP Phases 1 and 2, have the core objective of increasing FDI in the state by improving the investment climate through agreed-upon policy actions and small infrastructure development projects to improve urban infrastructure to attract investors. The objective tree below links the project goals with its activities.

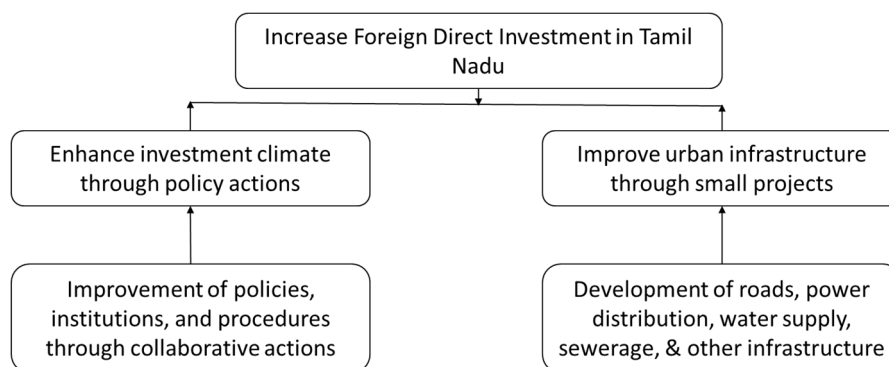


Figure 2-1: Objectives Tree of the Infrastructure Development Planning Sector Evaluation

2.3 Policy actions under TNIPP

The following table shows the policy matrix with policy actions proposed in the TNIPP phases 1 and 2 documents, against which further fund release for infrastructural projects was planned.

Table 2-1: Targeted policies, their goals and the major policy actions achieved through TNIPP Phases 1 and 2

Policy	Goal	Major Policy Action
Phase 1		
Infrastructure Project Coordination and Prioritization	Tamil Nadu Infrastructure Development Board (TNIDB), in which the Secretaries of the related regulatory departments are participating, will undertake prioritization of the projects and coordination between the departments, thus accelerating the project implementation.	Tamil Nadu Infrastructure Development Act is established.
	A Small Infrastructure Project Empowered Committee (SIPEC) will be established. The Committee will allocate the budget properly to the priority projects selected by the Committee. The Committee will appropriately monitor and facilitate the priority projects.	Priority SIPs are facilitated in accordance with the established Monitoring Matrix.
Investment Application Process	The investment application process, related regulations, and its operational system will be improved comprehensively, according to an overall Business Process Re-engineering (BPR) study.	Action plan for the implementation of the BPR recommendation is established.
System Integration for Investors	Tracking systems for investors will bring more transparency to the investment application process, and investor confidence would improve.	System specification of the Tracking System is prepared through consultations with relevant departments.
Promotion of Business Environment for	The function of Directorate of Industries and Commerce will be enhanced as single windows for MSMEs according to the	Overall study for the issues for MSME investments is executed.

Policy	Goal	Major Policy Action
Micro, Small and Medium Enterprises (MSMEs)	result of a comprehensive study.	
	Preparing web-based single window application systems and Investment Guidebooks for MSMEs to streamline the investment process. Information dissemination & workshops for attracting foreign MSMEs will be conducted.	Investment Guidebook is published on the website.
Human Resource Development	Comprehensive skill development action plan will be undertaken to meet the investors' demand for the labor force.	The Overall long-term action plan for Skill Development in Tamil Nadu is announced.
Land Pooling System	Highway department would be able to acquire land and compensate land owners through land allocation by utilizing the land pooling system. Through this scheme, infrastructure development would be accelerated.	Final approval of the Highway Act amendment is issued.
Master Planning/ Land-Use Conversion	A better master-planning process would reduce the necessary time significantly. By earmarking areas for future industrial development, the time required for land-use conversion will be shorter, thus enhancing the investment activity for industries.	The Master Plan for Phase 1 is finalized and officially announced in the Gazette.
Phase 2		
Acceleration of Infrastructure Development	Develop Tamil Nadu Infrastructure Fund (TNIF) through Tamil Nadu Infrastructure Fund Management Corporation Ltd. (TNIFMC), with public and private financing for various large-scale and social infrastructure projects. Fund critical large-scale and social infrastructure projects of high priority under TNIF and TNIFMC scheme. The SIPEC will select priority projects and allocate budget. Administrative departments and implementing agencies will appropriately monitor and facilitate the priority projects.	At least one project is selected and facilitated by the Government of Tamil Nadu and TNIFMC, with which the new funding model for social infrastructure development shall be applied. The priority SIPs are selected and their implementation is facilitated in accordance with the established Project Monitoring Matrix.
Skill Development for Employment	Improve employment rate of fresh graduates from polytechnic, engineering colleges and industrial training institutes by providing short-term and industry-oriented training courses. Enhance the quality of training institutions in the whole state, by creation of an Apex	Tamil Nadu Skill Development Corporation develops training models (two-tier model at districts & state) for skilling professionals as needed by industry with its participation. Skill registry database under Skill

Policy	Goal	Major Policy Action
	level training institution which would act as a training institution for trainers.	Development Interactive Portal is strengthened by making it available online as a one-stop repository of skilled workforce in the state. Action plan to improve placement for trainees into Multinational Companies and MSMEs is implemented.
Strengthening of Guidance Bureau	Investment application process is streamlined by development of a fully-functional Online Single Window Clearance System with the empowered responsible agency. More foreign investments are invited by the new Industrial Policy and incentives.	The fully-functional Single Window System is launched with all relevant departments and agencies, by hosting digitalized application procedures and materials. The action plan of upgrading the Guidance Bureau is developed and budgeted in terms of its staffing, office space, PR materials, etc. New Industrial Policy is drafted and finalized to deal with introduction of the Goods and Service Tax.
Strengthening of Single Window for MSME	The Single Window Portal and comprehensive investment guidebook and/or website for improving access to investment information and simplifying application procedures are developed. Investment application procedures are streamlined to achieve a shorter period toward the statutory clearances.	The Single Window Portal for MSMEs is launched. Comprehensive investment guide for MSME investors is developed and launched. District Industrial Committees (DIC) information aggregation system is developed.

2.4 Stakeholders

The infrastructure development planning program in Tamil Nadu has multiple stakeholders. The important stakeholders have been listed below from the available evaluation reports of TNIPP. These are divided into four broad categories depending on their involvement in the projects.

Table 2-2: Stakeholders of TNIPP in four categories

Implementing agencies	Involved govt agencies	Investors	Others
JICA India	Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India	JETRO Chennai	Political leadership in Tamil Nadu
The Embassy of Japan in India	Tamil Nadu Infrastructure Fund Management Company	Japanese Chamber of Commerce and Industry, Chennai (JCCIC)	Project evaluators

Nomura Research Institute	Tamil Nadu Skill Development Corporation	Japanese investors and companies	Female workers
Program Monitoring Committee	Small-scale Infrastructure Project Empowered Committee	Chamber of Commerce and representatives of investors and companies from other countries	Differently abled workers
Industries Department Tamil Nadu	Housing and Urban Development Department Tamil Nadu	Local investors, companies	Transporters (highways/ trucks and ports/ ships)
Program Implementation Unit, Finance Department, Tamil Nadu	Highways and Minor Ports Department Tamil Nadu		General public
Guidance Tamil Nadu (TN Industrial Guidance & Export Promotion Bureau)	Chennai Metropolitan Development Authority		
Tamil Nadu Investment Development Board	Tamil Nadu Road Development Corporation Limited		
Micro, Small, and Medium Enterprises Department, Single Window Web Portal			

The primary purpose of the interactions with stakeholders was to identify the processes in this program, how various stakeholders interacted, how decision making happened, what are the expected and unexpected impacts, etc.

2.5 Small infrastructure projects under TNIPP Phases 1 and 2

The list of the SIPs taken up under TNIPP Phases 1 and 2 is provided below. These projects are sanctioned by the Small Infrastructure Project Execution Committee (SIPEC). Most of the works are completed as of December 2023, based on information provided by TNIDB, which monitors the progress of these projects.

Table 2-3: List of small infrastructure projects taken through funds of TNIPP

Sr	Agency	Name of Project	Initial estimate	Status in Dec 2023
	Phase 1			
1	TANTRANSCO	Establishment of a new 110/33-11 KV substation at OMEGA Industrial Estate near Mahabalipuram.		Completed Oct-13
2		Establishment of 230/110 KV substation at OMEGA Industrial Estate near Mahabalipuram with associated 230 KV transmission lines.		Completed Jan-16
3		Establishment of a new 110/33-11 KV indoor substation at		Under

		TNSCB Perumbakkam with associated transmission lines.		progress
4		Establishment of 110/33/11 KV Gas Insulated Switchgear substation in Thirumangalam South (Metro zone)		Completed May-17
5		Establishment of 230/110 KV SS at the premises of the existing Thiruverkadu 110/3311 IN substation		Completed Oct-15
6		Upgradation of the existing Mambalam 33/11 KV SS into 230/33 KV Gas Insulated Switchgear substation (Alternate project of Munusamy Salai instead of Mambalam Project.		Started
7	Highways & Minor ports/ TNRDC	Improvement of Thiruvottiur - Ponneri - Panchetti (TPP) Road		Completed as of Mar-19
8		New construction of Napalayam Bridge at TPP road		Completed as of Mar-19
9		Strengthening and Widening of NCTPS road		Completed as of Mar-19
10		Construction of Rail over Bridge at Athipattu Between Ennore-Athipattu stretch in Railway portion		Completed as of Mar-19
11		Construction of Pulicat Bridge including approaches		Completed as of Mar-19
12		Upgradation of Ennore port road excluding Buckingham Canal Bridge and Utility Bridge		Completed as of Mar-19
13		New construction of Buckingham Canal Bridge and Utility Bridge at Ennore port		Completed as of Mar-19
		Improving the road from the gate of M/s Toshiba's plant in Andarkuppam to the Junction of TPP road		Completed as of Mar-19
14		Sojitz Motherson Industrial Park (SMIP) road connectivity Project at Singadivakkam, Walajabad Union, Kancheepuram District	Oct-19	Completed Aug-23
15		Truck Terminal at SIPCOT Industrial Park, Vallam Vadagal		Completed 2017
16	CMWSSB	Construction of TTRO Plant at Koyambedu and Conveying Pipeline to SIPCOT industrial areas	2019	Completed
17		Construction of Sewage Treatment Plant at Sholinganallur	2019	Under progress

18		Transmission of water by pumping from Thervoykandigai Reservoir to KP Canal @ LS 3850 m near Uthukottai for further transmission to Poondi Reservoir	2019	Under progress
19	Finance-TNIDB	Global Investors Meet (GIM)		Completed
	Phase 2			
1	TANTRANSCO	Upgradation of existing Avadi 110 KV SS to 230/110 KV SS with associated lines - Thiruvallur district	Dec-19	Under progress
2		Establishment of 230/110 KV SS at BHEL Thuvakudi - Trichy district	Mar-20	Completed Oct-21
3		Erection of 230 KV & 110 KV transmission lines associated with BHEL Thuvakudi - Trichy district	Mar-20	Under progress
4		Establishment of Sojitz Motherson 110 KV SS with associated 110 KV lines - Kancheepuram district	Dec-18	Completed Jun-20
5		Establishment of Mahindra World City II 110 KV SS with associated 110 KV lines - Kancheepuram district	Dec-18	Completed Apr-19
6		Establishment of Thirumani 110/11 KV SS with associated 110 KV lines - Kancheepuram district	Mar-19	Completed Oct-20
7		Upgradation of existing Maduravoyal 33/11 KV SS into 110/33/11 KV SS with associated 110 KV Lines - Thiruvallur district	Dec-19	Under progress
8		Upgradation of existing Denkanikottai 33/11 KV SS into 110/33/11 KV SS with associated 110 KV Lines - Krishnagiri district	Sep-18	Under progress
9		Establishment of Papparambakkam 110 /33-11 KV SS with associated 110 KV lines - Thiruvallur District	Jun-19	Completed Aug-22
10		Establishment of Kunjallam 110 / 33-11 KV SS with associated 110 KV lines - Thiruvallur District	Apr-19	Completed Jun-23
11		Establishment of Mangadu indoor 110/11 KV SS with associated 110 KV lines - Kancheepuram District	Jun-18	Under progress
12		Upgradation of the existing Pulianthope 33/11 KV SS into 110/33/11 KV GIS SS with associated 110 KV lines - Chennai district	Feb-19	Under progress
13		Establishment of 110/33-11 KV indoor SS at Pallikaranai with associated 110 KV lines - Kancheepuram district	Dec-18	Completed Nov-20
14		Establishment of 230/33 KV GIS SS at Thiruvanniyur with associated lines - Chennai district	Oct-19	Under progress
15		Establishment of 230 KV Substation in Durainallur for Mahindra Industrial Park Chennai Ltd.	Dec-19	Under progress

16	CMWSSB	Rehabilitation improvement work (including biogas generation) for the existing Zone - I & II (each 80 MLD) capacity Sewage Treatment Plant at Kodungaiyur	Mar-20	Under progress
17		Upgradation work for the existing 110 MLD capacity Sewage Treatment Plant at Kodungaiyur	Mar-20	Under progress
18		Rehabilitation improvement work (including biogas generation) for the existing 34 MLD capacity Sewage Treatment Plant at Koyambedu	Mar-20	Under progress
19		Upgradation work for the existing 120 & 60 MLD capacity Sewage Treatment Plant at Koyambedu	Mar-20	Under progress
20		Rehabilitation improvement work (including biogas generation) for the existing 23 MLD capacity Sewage Treatment Plant at Nesapakkam	Mar-20	Under progress
21		Upgradation work for the existing 54 & 40 MLD capacity Sewage Treatment Plant at Nesapakkam	Mar-20	Under progress
22		Upgradation work for the existing 12, 54 & 60 MLD capacity Sewage Treatment Plant at Perungudi	Mar-20	Under progress
23	WRD	Eco-Restoration Peerankaranai lake Peerankaranai T.P.	Mar-19	Delayed
24	TNRDC & Highways	Improvement of Rajiv Gandhi Salai under Phase II proposed Construction of Bypass at Kelambakkam and Thiruporur	Dec-19	Under progress
25		Phase-II-Widening from Intermediate Lane to Four Lane and Strengthening at Km 2/0-6/2 of Puduvoyal- Pulicat Road (MDR 379), Including Land Acquisition (widening the approach to Mahindra Industrial Park Chennai Ltd.)	Aug-19	Under progress
26	TNSDC	Two-tier Skill Development Centers	Dec-19	Under progress
27	MSME-TANSIDCO	Integrated Technical Textiles Park at Thandarai, Kancheepuram District	Jun-19	Under progress
28		Integrated Textiles/ Apparels Park at Punjaikalakurichi, Karur District	Jun-19	Under progress
29		Integrated Food Park at Eachambadi, Dharmapuri District	Jun-19	Under progress
30		Integrated Sea Foods Park at Sakkarakottai, Ramanathapuram District	Jun-19	Under progress

2.6 Tamil Nadu Industrial Policy 2014

The TNIPP Phase 1 was initiated when Tamil Nadu's 2014 Industrial Policy was being drafted. While a new policy was launched in 2021, we consider the 2014 policy as relevant to the evaluated project. This policy sets a vision 2023 roadmap and has important points as below.

2.6.1 Policy targets

1. Position Tamil Nadu as the most preferred state for manufacturing.
2. Achieve an annual average growth rate of 14% in the manufacturing sector.
3. Raise investment in infrastructure gradually to 10% of GSDP by 2015 and further to 11.5% from 2019.
4. Make Tamil Nadu the innovation hub and knowledge capital of India.
5. Enhance the position in high technology industries, including aerospace, nanotechnology, etc.
6. Achieve rapid industrialization of the Southern districts of Tamil Nadu.
7. Achieve inclusive and sustainable industrial development.
8. Create gainful employment opportunities for an additional 2.0 million persons before 2016.
9. Double exports from Tamil Nadu by 2016.

The policy adopts a multi-pronged approach by emphasizing the following objectives: providing world-class infrastructure, prioritizing sectors like automobiles, biotechnology, electronic hardware, and aerospace, improving the quality of human resources and offering attractive incentives to investors.

2.6.2 Focus sectors

1. Automobile and auto components sector
2. Renewable energy equipment manufacturing industries
3. Aerospace industry
4. Biotechnology and pharmaceuticals sector

2.6.3 Geographic focus

To administer the fiscal incentives, the districts of the state are classified as follows:

- A. Chennai, Tiruvallur and Kancheepuram (3 districts)
- B. Other than A & C (rest 20 districts)
- C. Southern Districts (9 districts)

"Southern Districts" for this purpose means the Districts of Madurai, Theni, Dindigul, Sivagangai, Ramanathapuram, Virudhunagar, Tirunelveli, Thoothukudi and Kanyakumari. An overall balanced approach is taken for the spread of industrial growth in the state, although the focus on existing hubs in the three northern districts is also continued.

It is important to note that TNIPP is recognized as an essential step in achieving the state's vision 2023 through this industrial policy.

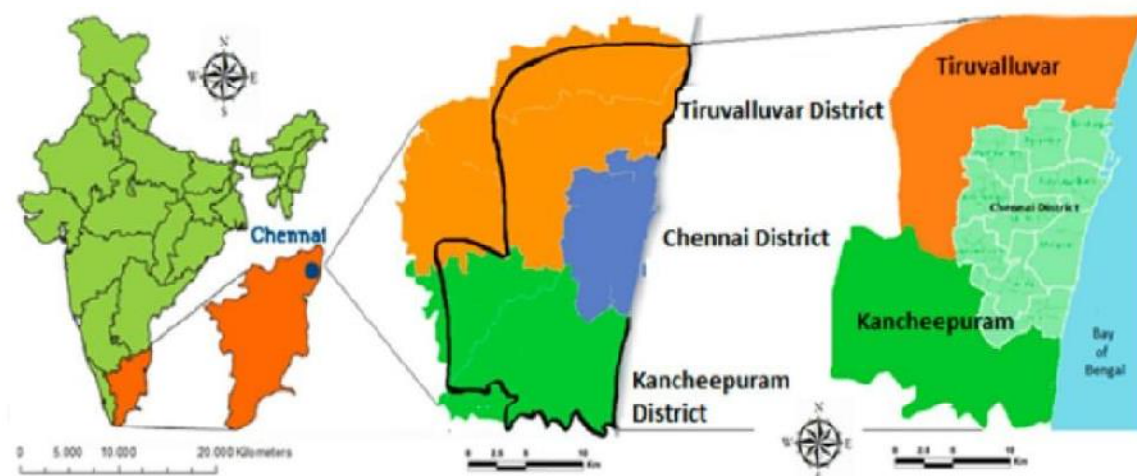


Fig 2-2: Location of Tamil Nadu in India and three category A districts

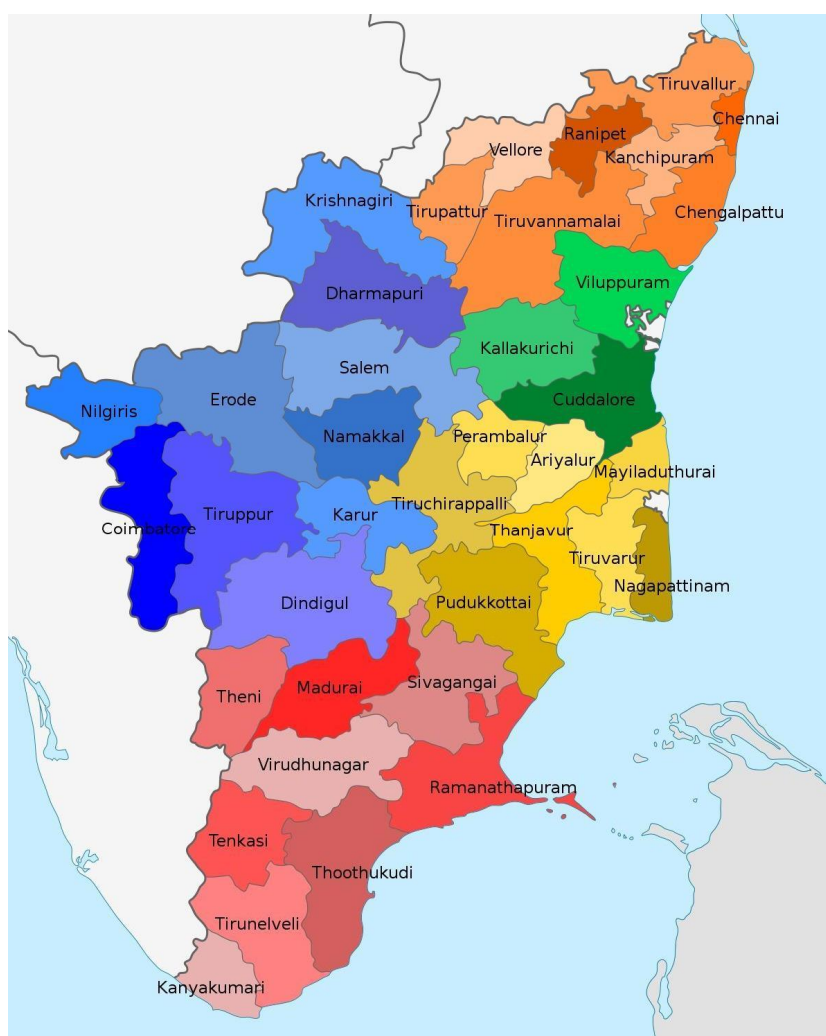


Fig 2-3: Districts of Tamil Nadu¹

¹ <https://www.tn.gov.in/DistrictMap>

3 Evaluation Results

The evaluation results are grouped by the evaluation questions described previously. Thus, this chapter has 7 sections, one for each evaluation question. Within each question, the analysis is divided into two parts, to focus on the two main activity groups under the projects, namely the policy actions and the SIPs.

3.1 Relevance

The main evaluation question framed to understand the relevance of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development was:

Was the intervention relevant to the Government of India's focus, Tamil Nadu's industrial development needs, and Japan's ODA policies, and international priorities?

This section summarizes the findings which answer this question.

3.1.1 Relevance to the Government of India's policies:

1. The project aligns with India's national development policies such as "Make in India" and "Skill India", which aim to promote manufacturing and vocational training, respectively. These policies are crucial for India's economic growth and job creation.
2. The program addresses the need for funding to bridge Tamil Nadu's revenue-expenditure gap, which is in line with broader Indian government objectives of fostering economic development and addressing regional disparities.

3.1.2 Relevance to Tamil Nadu's industrial development policies:

1. The project is consistent with Tamil Nadu's economic vision and industrial promotion policies, as it aims to enhance the investment climate and attract FDI into the state.
2. It addresses the demands of the private sector in Tamil Nadu by focusing on infrastructure improvement, skilled labor availability, and streamlined regulations, all of which are critical for industrial development.
3. TNIPP is mentioned in the State's 2014 and 2021 Industrial policy as an important component towards attracting FDI in the state.

3.1.3 Relevance to Japan's ODA policies:

1. The project is consistent with Japan's ODA policy for India, which prioritizes regional economic development initiatives.
2. It demonstrates strong internal coherence, building on previous phases and complementing other JICA projects in the region.

The TNIPP is well-aligned with the objectives of both the Indian government and the government of Tamil Nadu, while also being consistent with Japan's ODA policies for India. It addresses

key development priorities, achieves its objectives effectively, and contributes positively to economic growth and industrial development in the region.

3.2 Coherence

The main evaluation question framed to understand the coherence of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development was:

Were planned activities coherent with other efforts for infrastructural development and investment promotion in the region?

This section summarizes the findings which answer this question by looking at the external and internal coherence of TNIPP.

3.2.1 External coherence with efforts from other donor agencies

External coherence is ensured through strategic coordination with other international organizations like the World Bank (WB), ADB, and JETRO, supporting industrial development and investment promotion in Tamil Nadu.

The Chennai City Partnership - Phase I (CCP-1) and Phase 2 (CCP-2) is a special model of development cooperation with the WB. The WB and the Asian Infrastructure Investment Bank (AIIB) have contributed \$150 million apiece towards the CCP-1's estimated expenditure of USD 701 million. The CCP-1 is estimated to cost \$572 million, of which US\$ 400 million (or 70% of the loan) would come from external support from International Bank for Reconstruction and Development (IBRD). Investment Project Financing (IPF) is the lending instrument for CCP-2.

The nodal agency acting as the Program Management Unit (PMU) for this program is the Tamil Nadu Infrastructure Development Board (TNIDB), with the CEO of TNIDB acting as the Program Director. TNIDB is also the nodal agency for TNIPP.

Different agencies are involved in execution and meeting the Disbursement Linked Indicators (DLIs) such as the Metropolitan Transport Corporation, Water Resources Department, Greater Chennai Corporation, Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB), Chennai Unified Metropolitan Transport Authority. Many of these agencies are also utilizing TNIPP funds, and during on ground implementation, all works from different programs (CCP, TNIPP, government sponsored) are coordinated and implemented in a similar pattern.

The Asian Development Bank provided USD 484 million loan to improve transport connectivity and facilitate industrial development in the Chennai–Kanyakumari Industrial Corridor (CKIC), which is the other major industrial belt in the state. This complements the efforts in TNIPP along the Chennai Bengaluru Industrial Corridor and contributes to the development of infrastructure in the southern parts of the state.

3.2.2 Internal coherence with efforts from the Government of Tamil Nadu

The TNIPP policy actions are internally coherent with the efforts of the State Government of Tamil Nadu, which also brought about the Tamil Nadu Infrastructure Development Act in 2012. The purpose of this Act was to create a supportive and encouraging environment for infrastructure projects that are financed, designed, built, maintained, and operated with the involvement of the private sector, as well as an institutional framework for identifying, ranking, and carrying out such projects and related activities. The processes for determining state support and managing monies established under the Tamil Nadu Infrastructure Development Act are outlined in the Tamil Nadu Infrastructure Development Rules of 2012.

The central agency for infrastructure development in the state is the TNIDB, which was established by the Tamil Nadu Infrastructure Development Act, 2012. The Board is primarily responsible for coordinating the state's infrastructure development efforts and facilitating projects carried out by government institutions through both public-private partnerships (PPP) and the public sector.

The Tamil Nadu Infrastructure Development Fund (TNIDF) was established in accordance with the TNID Act, 2012, to offer financial assistance to support the planning, execution, operation, administration, and management of projects. The goal of the Project Preparation Fund is to offer financial assistance for carrying out research, employing experts and consultants, creating feasibility studies, comprehensive project studies, developing capacity, and other related activities.

The internal coherence can also be looked at from the infrastructure development perspective. We see that the SIPs taken up through TNIPP funds are part of larger, multi-year plans of the state to improve urban and transportation infrastructure. For example, the work on the bypass on the Rajiv Gandhi Salai or the OMR taken up through TNIPP Phase 1 funds are part of the larger plan to improve mobility on OMR by adding lanes to it. Many of the sub stations constructed are part of larger plans to improve electricity supply and its stability in peri-urban areas, which also support some industrial areas along with majorly residential supply.

Thus, both the policy actions and the SIPs are coherent with the efforts of different funding agencies and the efforts of Tamil Nadu Government.

Also, it should be noted that in recent years, the Government of India has also established single window portals for FDI and for any business to be set up in India. These are the Foreign Investment Facilitation Portal² and the National Single Window System³. The FFIP has come into effect since August 2022. Similar portals are also being set up by different states. So, this good practice in Tamil Nadu is being copied extensively.

² <https://fifp.gov.in/>

³ <https://www.nsws.gov.in/>

3.3 Appropriateness

The main evaluation question framed to understand the appropriateness of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development was:

How appropriate were the policy processes and actions towards achieving outcomes?

This section summarizes the findings which answer this question.

The planning of TNIPP involved the development of a policy matrix collaboratively agreed upon by both the Japanese and Tamil Nadu governments. This matrix outlined specific policy items, targets, and actions to be achieved each fiscal year. The drafting of the policy matrix involved consultations with relevant departments, including the Industries Department, Micro, Small and Medium Enterprises Department, Labor & Employment Department, etc. Additionally, input was gathered from JETRO Chennai Office and Japanese companies operating in Tamil Nadu to address their issues and requests regarding investment and business operations in the state.

The final decision on the policy matrix was made by the state government, with input from all concerned departments, including the Finance Department. The matrix was periodically revised based on consultations and discussions between the Japanese and Indian sides.

One specific example of such changes was the deletion of the "housing development projects" component from the policy matrix due to relatively low interest from the Japanese side and its categorization as an environmental category B issue. This demonstrates a responsive approach to aligning policy priorities with the interests of stakeholders and environmental considerations.

Furthermore, the formation of the Project Monitoring Committee enabled the setting of goals related to infrastructure development, emphasizing the importance of budget allocation and project promotion rather than just the completion of projects themselves. This strategic approach ensured efficient utilization of resources and timely implementation of infrastructure projects.

Overall, it may be concluded that the project plan and approach were appropriate, indicating effective collaboration between the Japanese and Indian governments, as well as responsiveness to stakeholder concerns and strategic alignment of goals.

3.4 Effectiveness

The main evaluation questions framed to understand the effectiveness of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development were:

Were expected outcomes and impacts effectively achieved? Did the policy climate for investments improve? Did infrastructure support businesses?

This section summarizes the findings which answer this question. The effectiveness of the project can be gauged against the completion of the policy actions and the SIPs. This can further be checked for timeliness. This section covers all these aspects.

The study of documents of the project management committee meetings throws light on the achievements and effectiveness of TNIPP policy actions as well as the infrastructural projects. The sub-projects under TNIPP Phase 2, sanctioned by SIPEC⁴, related to energy, public works, highways, and minor ports, skill development, and strengthening of the Guidance Bureau were undertaken. List of the same is provided in Table 2-3.

The skill development initiatives, such as preparing training frameworks, skill gap analysis, placement services, vocational training in schools, and the establishment of an Apex training institution in PPP mode have been successful. Five Apex training centers have been established in the state to cater to the specific needs of different sectors.

The strengthening of the Guidance Bureau through the implementation of a fully-functional Online Single Window Clearance System and the development of an industrial policy to address the introduction of the Goods and Service Tax has also been implemented successfully.

The establishment of the TNIF fund, the implementation of priority SIPs, the drafting of an industrial policy to address the introduction of the Goods and Service Tax, the strengthening of the Single Window Portal for MSMEs, the facilitation of infrastructure projects, the establishment of specific country or regional investor desks, and the improvement of the business climate through the enactment of the Business Facilitation Act 2018 and Business Facilitation Rules 2017 have all been done effectively towards the goal of improving investment climate in the state.

The documents studied underscore the importance of efficient project management, private sector engagement, and the need for continuous improvement to achieve the program's objectives. The TNIPP has had a clear positive impact of attracting investments, creating employment opportunities, and fostering collaboration between Japan and Tamil Nadu.

The need for timely completion of projects, private sector engagement, and feedback mechanisms to enhance the success of TNIPP are brought up in the document.



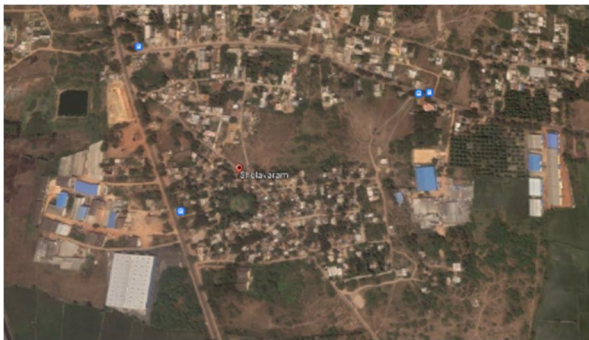

The initiatives undertaken in Tamil Nadu, particularly through TNIPP Phase-2, have demonstrated effective achievement of expected outcomes and impacts. Notably, improvements in the policy climate for investments are evident, facilitated by the establishment of funds, formulation of industrial policies, and bolstering of investment promotion and facilitation mechanisms. Infrastructure development initiatives, exemplified by the Single Window Portal for MSMEs and facilitation of SIPs, underscore the commitment to supporting businesses and fostering economic growth in the region. However, discussions in the PMC meeting highlight the ongoing need to enhance the investment policy environment, bolster infrastructure support for businesses, and ensure timely project completion to further catalyze success and attract investment to Tamil Nadu.

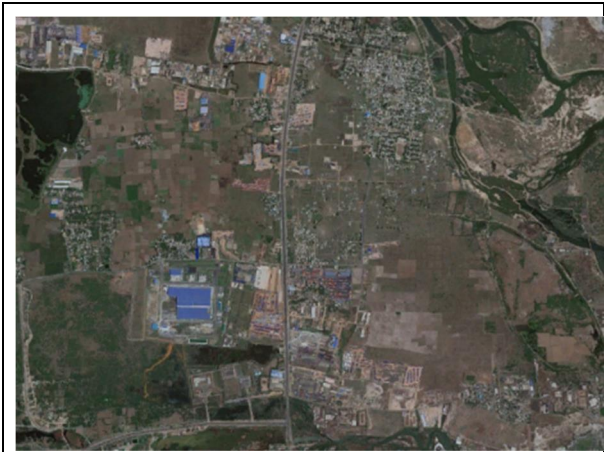
⁴ Small Infrastructure Project Empowered Committee, formed as a policy action under TNIPP Phase 1, refer table 2-1.

3.4.1 Growth in industrial spread and businesses

The change in infrastructure leading to improvement in businesses can be gauged through a cursory comparison of the satellite images of different industrial areas and observing their growth. This was done for areas of North Chennai industrial zones and is presented below. The core industrial areas and major infrastructure facilities such as the port show planned growth and surrounding areas show cropping up of many smaller sheds, of ancillary small units and housing for the laborers.

Figure 3-1: Comparison of satellite images of North Chennai's industrial areas.

Red hills in 2013	Red hills in 2023
	
Cholavaram in 2013	Cholavaram in 2023
	
Manali up in 2013	Manali up in 2023



Manali down in 2013



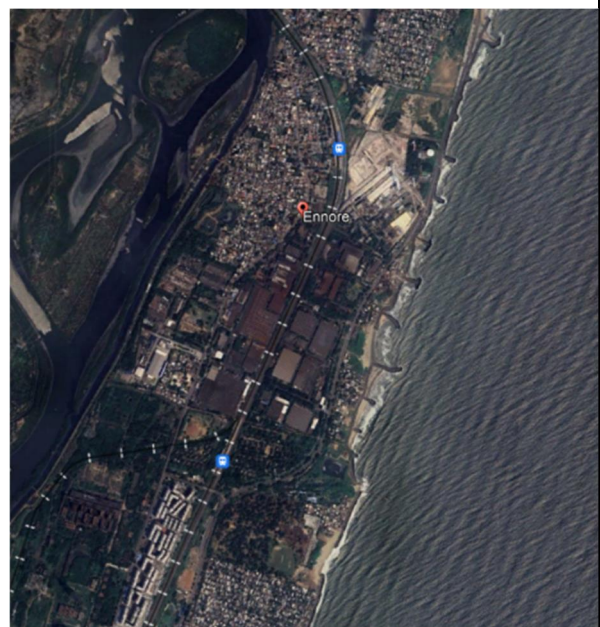
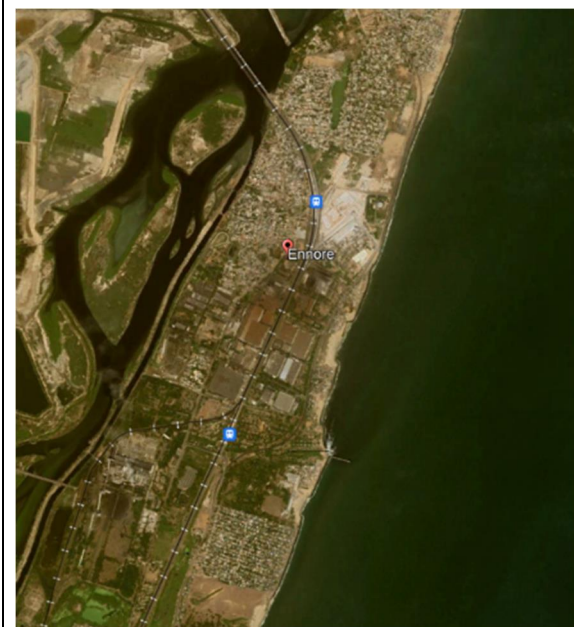
Manali down in 2023



Ennore port in 2013



Ennore port in 2023



Analysis of other industrial zones of Chennai, namely South, South West, and West zone show a similar picture of planned industrial growth.

3.4.2 Timeliness of the policy actions and infrastructure development

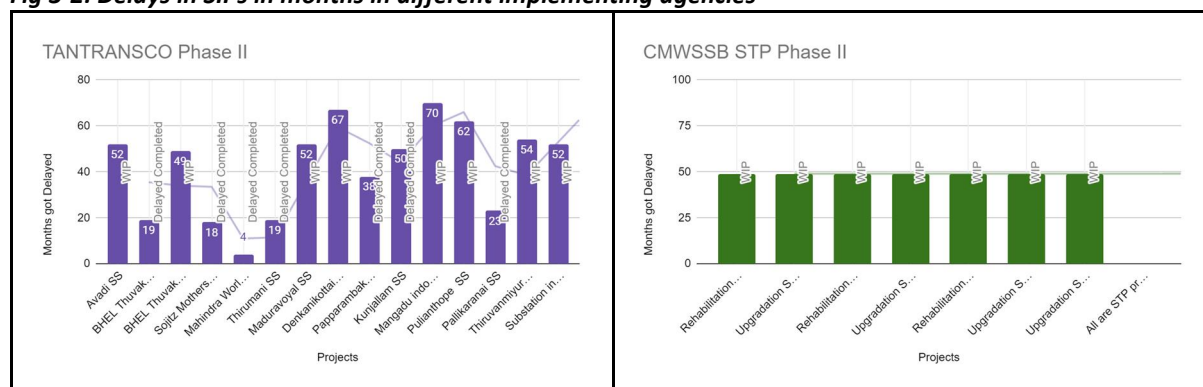
Along with the effectiveness of any action, it is also important to look at the timeliness of the activities. To understand if the policy actions were completed in a timely fashion, the previous project evaluation reports and minutes of 5th and 6th Project Monitoring Committee meetings were perused. Based on these documents, it can be said that all the policy actions were completed in a timely fashion. The launch of the single window portal for general companies happened in November 2017, and for micro, small and medium enterprises it was launched in May 2018 as it needed modifications to be applicable for them, as it had originally been designed for large companies. Similarly, all policy actions were completed within the program duration and even after the completion of TNIPP, further improvements based on local context and evolving needs were continued by the Government of Tamil Nadu, as noted in previous ex-post evaluations of TNIPP Phases 1 and 2.

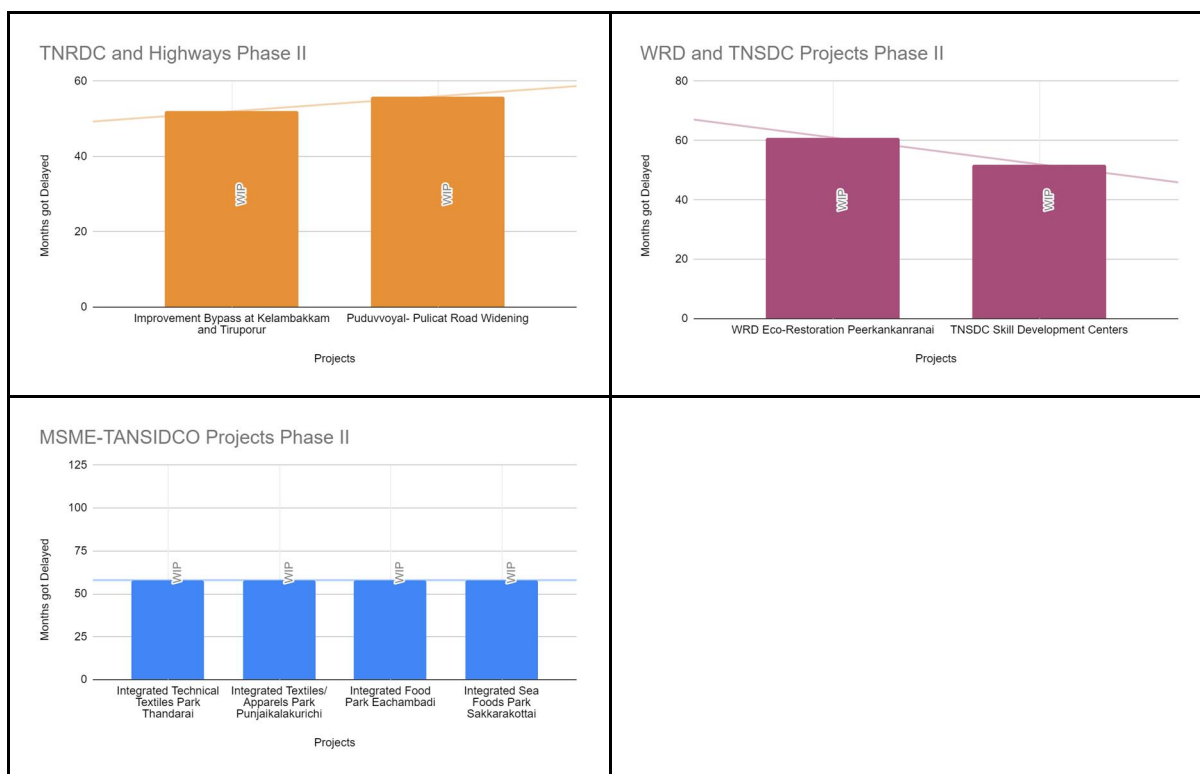
3.4.3 Timeliness of Small Infrastructure Projects

Using the available dates documented in Table 2-3, charts have been prepared to show the delay in the SIPs in the Phase 2. The following charts show the delay in each project for the agencies involved in TNIPP Phase 2. Almost all projects have been delayed beyond the original planned date of completion. What is alarming is that many of these projects are still not complete as of December 2023.

Considering that TNIPP is a program loan, where unlike project-based loans, program loans are provided based on the achievement of policy actions previously agreed upon. Similarly, in this project, the goal was not the completion of SIPs, but the promotion of project selection and implementation as the policy action. Thus, these delays cannot be linked directly to the TNIPP. The PMC minutes also show that regular follow ups of the progress of SIPs was made within the ambit of this project.

Fig 3-2: Delays in SIPs in months in different implementing agencies





3.5 Impact

The main evaluation questions framed to understand the impact of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development were:

Did Foreign Direct Investment increase? How was the impact felt by investors? What were their intended and unintended consequences?

3.5.1 Increase in FDI in Tamil Nadu

Over the ten-year period of 2009-10 to 2019-20, India's FDI increased from \$36 Billion to \$73 Billion, due to the changing policies in the country. Most of this FDI has come in manufacturing, followed by the computer services industry.⁵ In the same years Tamil Nadu's FDI inflow went from \$1.3 billion to \$16.6 billion.⁶ Tamil Nadu has attracted over 10 billion USD FDI between 2019 to 2023.⁷

Tamil Nadu comes up at second place according to the State Investment Potential Index. Tamil Nadu significantly raised its ranking to Second in 2018 based on six metrics. Tamil Nadu is ranked First in terms of these, as well as good political stability, peaceful law and order circumstances, continuous power supply, amicable labor relations, etc.

⁵ <https://ejmcm.com/issue-content/an-analysis-of-foreign-direct-investment-inflows-in-tamil-nadu-11867>

⁶ <https://www.thehindu.com/news/national/tamil-nadu/foreign-direct-investment-inflows-into-tamil-nadu-declined-by-85-in-2019-20/article31702282.ece>

⁷ <https://www.thehindubusinessline.com/economy/with-10-b-in-4-years-tn-ranks-fourth-in-attracting-fdi/article67638704.ece>

Tamil Nadu possesses a six-sigma competitive edge to draw in foreign investors which has been further sharpened by the TNIPP policy actions and SIPs:

1. **Infrastructure:** Tamil Nadu boasts robust infrastructure, including well-connected road networks, ports, airports, and industrial corridors. This infrastructure facilitates smooth business operations and logistics. TNIPP has further helped in easing infrastructural bottlenecks,
2. **Skilled Workforce:** The state has a large pool of skilled professionals across diverse sectors, including IT, manufacturing, healthcare, and engineering. Training programs initiated by TNSDC using the TNIPP fund used to form the Apex institutes and the skilling plans developed as part of policy action of TNIPP Phase 1, have further improved the availability of skilled labor force.
3. **Industrial Clusters:** Tamil Nadu hosts thriving industrial clusters such as the Chennai-Bengaluru Industrial Corridor, automotive hubs, and textile centers. These clusters foster collaboration, innovation, and specialization. Many of the infrastructural works taken under TNIPP are in existing industrial corridors and support the growth of different public and private industrial parks.
4. **Investment-Friendly Policies:** The state government has implemented investor-friendly policies, streamlined approvals, and provided incentives for businesses through TNIPP and other initiatives. This encourages both domestic and foreign investment.
5. **Research and Development:** Tamil Nadu houses prestigious educational institutions and research centers. Collaborations between academia and industry drive innovation and technological advancements.
6. **Sectoral Strengths:** The state excels in sectors like automotive manufacturing, textiles, IT, pharmaceuticals, renewable energy, and healthcare.
7. **Cultural Diversity:** Tamil Nadu's rich cultural heritage and openness to diversity create an inclusive environment, attracting talent and investors alike.

Tamil Nadu's economy shows the fastest growth within India at around 11% and it is the second-largest economy in India, with a GDP share of 8.79% (ranked second) and a per capita income of Rs 120 thousand, 31% higher than the national average.

3.5.2 Impact of Single Window Portal

Tamil Nadu Single Window Portal is a one-stop platform for investors seeking business approvals, licenses, and clearances in the state. It integrates services from 200+ government departments/ agencies with the goal of making the G2B interface faceless, paperless, and contactless. Investors can access services such as layout applications, building plan approvals, reclassification, inspections, and land use information. By October 2023, over 29 thousand applications were received and over 25 thousand were approved, bringing in Rs 1.19 trillion as investment into the state and creating employment for over 400 thousand people. While specific FDI figures directly attributed to the portal are not readily available, it significantly contributes to attracting investments by simplifying

procedures and ensuring transparency. The portal also outlines the fee structure for large industries seeking approvals, enhancing Tamil Nadu's overall investment climate.⁸

3.5.3 Impact of support to skill development activities

Due to the planning done under TNIPP Phase 1, TNSDC developed the skill policy for the state and received substantial grants to implement its programs aimed at skilling the youth and women as per demands of the industries and MSMEs received through district implementation skill plans, integrated into state annual skill plans. For industries with demands for skilled personnel outside the national skill development framework, special projects were initiated. The focus of the programs is on empowering unemployed youth and women for self-employment, especially for members of vulnerable communities.

A skill survey was carried out under TNIPP in 2014 to understand the skill requirements in the manufacturing sector in Tamil Nadu. The Tamil Nadu Skill Development Corporation carried out an extensive skill gap analysis survey in 2019. Using the results of these surveys and the annual district action plans, TNSDC sets skilling targets. Due to TNIPP, a platform was created for TNSDC to get feedback from industries and to understand the stand of the industrial development department in the state. This allowed concerted efforts towards skilling in the state.

Based on the discussions that happened in TNIPP and with JICA's support, the state established Apex training centers. There are 5 Apex centers today, one for construction, Health, Banking, Financial services and Inclusion, Logistics, and automobile. In TNIPP 3, centers for tourism and hospitality, ITES, Animation, and Gaming & video editing are proposed. The logistics Apex has seen over 67,000 trainees, while the healthcare Apex has over 80,000 with over 400 trainings of trainers. The healthcare Apex is self-sufficient and only utilizes the remaining funds provided through TNIPP for purchase of costly equipment. The PPP model created for running these centers has been a success and other states are studying these centers to replicate them.

Tamil Nadu has seen massive improvement in availability of skilled workforce for taking up factory floor jobs in recent years due to different initiatives by the TNSDC, including trainings in colleges. All of this became possible due to the discussions initiated through TNIPP and due to the initial funds pumped in to set up the Apex centers which are now planning new courses based on market demands. This has had an impact of about 2.7 million jobs being added in two years 2021 to 2023 in Tamil Nadu based on Employee's Provident Fund Organization data which tracks how many new accounts have been opened by employers to deposit savings for their employees. As this is the number for the formal sector with regular jobs, there may be hundreds of thousands more people who have also received employment in recent years but not counted as they do not get benefits of provident fund savings.

⁸ <https://tnswp.com/DIGIGOV/swp-tnswp.jsp>

3.5.4 Impact felt by investors

The impact of the TNIPP Phases 1 and 2, along with allied policy actions and infrastructural development, on investors, particularly focusing on whether FDI increased, can be summarized based on the insights gleaned from discussions with the Indo-German Chamber of Commerce (IGCC), especially Mr Mallikarjuna Shrivasharangpani, Regional Director at IGCC, and Ms BS Ramya, who is responsible for Tamil Nadu, Andhra Pradesh, Telangana, and Pondicherry and with officials from Japanese Chamber of Commerce and Industries, Chennai (JCCIC) and JETRO Chennai, namely Mr SM Nair, Deputy Director General and Mr Junki Yamashita.

Overall Positive Impact on Investors: German and Japanese companies have expressed satisfaction with the ease of doing business in Tamil Nadu. Over the past few years, there have been significant improvements in business facilitation, which have contributed to a positive atmosphere for investors. The state's advanced infrastructure, favorable location with access to ports facilitating exports, and supportive government policies have made Tamil Nadu a preferred destination for investment.

Single Window Clearance: Implementation of the single window clearance system has streamlined processes for industries, making it easier and more efficient for investors to navigate regulatory requirements and set up operations. This has been particularly beneficial for new entrants.

Challenges with Land Acquisition: While there have been improvements in various aspects, challenges related to land acquisition persist. Delays in land acquisition processes remain a concern for investors, highlighting the need for expedited procedures in this area to meet the high expectations of German companies.

Industry-Specific Challenges: While the general business environment has improved, some challenges are specific to certain industries. For example, issues related to obtaining approvals for chemical treatment plants have been cited. However, these challenges are being addressed in due course, albeit with some delays.

Investment Trends and Growth: The discussion indicates a positive trend in investment, with existing companies expanding their operations and new entrants attracted by the "China plus one" strategy in manufacturing. This reflects confidence in Tamil Nadu's industrial ecosystem and its potential for both local consumption and exports.

Infrastructure and Human Resources: Tamil Nadu's infrastructure, skilled workforce, and supportive ecosystem of vendors, suppliers, and logistics providers have been highlighted as key advantages for investors. Additionally, the availability of trained manpower, including technicians, diploma holders, and management staff, further enhances the state's attractiveness for investment.

Sustainability and Compliance: German companies prioritize sustainability and environmental friendliness in their operations, which aligns well with Tamil Nadu's focus on compliance with norms and long-term sustainability. This ensures that investments are made with due diligence, considering environmental factors and regulatory requirements.

Government Support and Responsiveness: The Tamil Nadu government's proactive approach and responsiveness to investors' concerns have been commended. The state's guidance team, comprising professionals with industrial experience, plays a crucial role in facilitating investments and addressing issues promptly. The Chief Minister M.K. Stalin's vision to elevate Tamil Nadu's GDP and establish an economic advisory committee reflect the government's commitment to sustained growth and development. Agreements for key projects and initiatives like the state-owned payments bank demonstrate proactive measures to bolster economic resilience and inclusivity.

Collaboration with Chambers of Commerce: The Indo-German and Japanese chambers of commerce serve as a bridge between investors from the respective countries and the government, advocating for the interests of its members and facilitating dialogue with officials. Regular meetings with government representatives, including Consul Generals, help address specific issues and expedite resolutions.

FDI Trends and Data: Data shared by the guidance team indicates a positive trajectory in FDI inflows, with significant investments recorded in Tamil Nadu. Regular updates on FDI figures reflect the growing confidence of foreign investors in the state's business environment.

The discussions with IGCC and JETRO representatives paint a picture of Tamil Nadu as a responsive and supportive destination for investors, with improvements in ease of doing business, infrastructure, and government facilitation contributing to an overall positive investment climate. While challenges persist, particularly in areas such as land acquisition and industry-specific approvals, ongoing efforts to address these issues indicate a commitment to fostering a conducive environment for investment and economic growth in the state. This shows a clear positive impact of the implementation of TNIPP in achieving its main aim of attracting FDI in the state.

Overall, the TNIPP has created an improved investment climate in the state through improved policy and institutional framework, by strengthening Guidance and other government agencies, by improving urban infrastructure, and by addressing both the expectations of investors and the needs of the Government agencies.

3.6 Sustainability

The main evaluation question framed to understand the sustainability of the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development was:

Are interventions sustainable regarding longevity and achieving SDGs?

This section summarizes the findings which answer this question along three lines of enquiry - the sustainability of the policy changes promoted under TNIPP, longevity of the institutional mechanisms and SIPs, and the support towards achievement of SDGs.

3.6.1 Sustainability of policy actions

There has been a continuity in the Government of India and the Government of Tamil Nadu policies regarding investment, promoting FDI, improving ease of doing business ranking, expanding skill development initiatives, and focusing on industrial development. Looking at the current trend, with the Make in India and Skill India initiatives, this push is going to continue. Tamil Nadu's State Industrial Policy of 2021, MSME Policy of 2021, and other important policies also align well with the existing policy actions taken in TNIPP. The single window system is being adopted by other states and the Central government, so these changes are here to stay. Also, previous political changes have not affected the direction in which the state is moving to attract more FDI. So, this is expected to sustain.

3.6.2 Sustainability of institutional arrangements

The internal structural changes done by the state government in various organizations such as the setting up of TNIDB and TNIFMC for investment management, the strengthening of Guidance and TNSDC to better coordinate investment and skilling efforts in the state, the setting up of new Apex Skill Development centers which are already self-reliant, and the streamlining of the investment process through the single-window portal are long-lasting and will show long term benefits. The necessary institutional mechanisms have also been put in place. The Apex training centers are in public-private partnership and are revenue generating centers, so they will grow over time. Similarly, the professionalization of guidance bureau and TNIDB with lateral hiring have made these efficient institutions responsive to the needs of the investors. All these changes point at the longevity of the institutional mechanisms.

The SIPs are not stand-alone interventions under TNIPP. They are linked to the routine activity of each agency and for implementation and later operation and maintenance purposes, they are identical to any other work done by the line departments. Thus, these works are not dependent on the continuity of TNIPP for upkeep. This makes these projects sustainable and long-lasting.

3.6.3 Linkage with Sustainable Development Goals

The TNIPP aligns with several of the Sustainable Development Goals (SDGs). The Government of Tamil Nadu is committed to achieving the SDGs and has devised and rolled out action plans to achieve the targets set. The TNIPP, with its aspiration of positioning Tamil Nadu as the most favored investment destination in South Asia, contributes to the economic dimension of sustainable development. It aims to strengthen the state's economy and create employment opportunities, thereby contributing to SDG 8 (Decent Work and Economic Growth).

The Environment, Climate Change & Forests Department has allocated Rs. 1 billion to establish the Tamil Nadu Green Climate Fund (TNGCF), which would be overseen by TNIFMC and have a target of Rs. 20 billion, to increase investments in green infrastructure in the state. Several development finance organizations have indicated that they would like to contribute to this Fund.

At the same time, this increased job availability has also led to reduction in the poverty ratio of the state, contributing to the SDG 1 (No poverty). The strengthening of the different institutions through TNIPP links to SDG 16 (peace, justice, and strong institutions).

The SIPs have multi-dimensional benefits. The improvement in the transport infrastructure will reduce the congestion on highways and improve transportation efficiencies. The sewage treatment plants improve the quality of water bodies. Improved electricity supply and water treatment also make the cities more livable. Thus, the SIPs directly link to the SDG 6 (Clean water and sanitation), SDG 7 (affordable and clean energy), SDG 9 (Industry, innovation, and infrastructure), SDG 11 (sustainable cities and communities).

The program has been designed as a partnership between the funders, the local government, and the investors towards a better Tamil Nadu. This is the 17th SDG of promoting partnerships for the goals.

3.7 Equity

The main evaluation question framed to understand the equity in the TNIPP Phases 1 and 2 and allied policy actions and infrastructural development was:

Are benefits equitably experienced by women, differently abled, and marginalized communities?

Any industrial development activity creates jobs and similarly, the investments enabled by TNIPP have also created many jobs in Tamil Nadu. As noted previously, just through the projects enabled through the single-window portal, over 400 thousand employment opportunities have been generated. At the same time, the question that arises is how are the marginal communities in the state benefitting from these increased investments?

According to the Annual Survey of Industries in 2019-20, a staggering 43% of the 1.58 million women working in industries across India are in Tamil Nadu. This state's women's workforce participation rate surpasses the national average, as highlighted by the Periodic Labor Force Survey for July 2022–June 2023. The female labor force participation rates (FLFPRs) in TN are substantially higher than the average recorded for India, for both rural and urban areas. Periodic Labor Force Survey (PLFS) 2018-19 finds that rural FLFPR within the state is 35.1 percent, which is 15.4 percentage points higher than the national figure. Urban FLFPR in TN is 23.6 percent, 7.5 percentage points higher than urban FLFPR recorded for all of India.

Tamil Nadu's Industrial and social policies are designed to promote social equity and inclusive growth of marginalized communities.⁹ Tamil Nadu today has only about 4.8 % poverty ratio as per a 2021 report¹⁰, showing that its industrial development has had equitable benefits for all sections of the society. The average per capita income in the state is around Rs 275 thousand in 2023, from Rs 93

⁹ <https://www.institute.global/insights/politics-and-governance/inclusive-growth-tamil-nadu-role-political-leadership-and-governance>

¹⁰ <https://timesofindia.indiatimes.com/city/puducherry/tamil-nadu-4th-lowest-in-poverty-ratio-puducherry-lowest-among-uts/articleshow/87994889.cms>

thousand in 2012 at current prices with base year 2011-12 calculated based on the state's domestic product. Tamil Nadu has a GINI index of 0.378 (0.446 for India) and has low consumption inequality.¹¹ Thus the benefits have also been substantial and well distributed.

At the same time, if we look at inter-district variation, it is observed that while Tamil Nadu leads in most socio-economic indicators compared to other states, development is confined to certain pockets¹². If we look at the industrial development, the same pattern is seen with concentration of development in the three districts in Chennai Metropolitan Region, despite the industrial policy focusing specifically on other areas by dividing the state into three zones to ensure balanced growth. Unfortunately, TNIPP Small Infrastructure interventions also focus primarily on Chennai while improving urban infrastructure. Many works are carried out by CMWSSB and most works of TANTRANSCO are also in the Chennai area. Even the road improvement works are focused on improving connectivity around Chennai. This focused development in the capital region comes at a cost of development in the rest of the state, which now has an even steeper climb to meet the capital in terms of facilities to attract investments. This problem is being partially addressed through fundings from other agencies, such as Asian Development Bank's loan to improve transport connectivity and facilitate industrial development in the Chennai–Kanyakumari Industrial Corridor (CKIC).

Overall, Tamil Nadu's progressive politics, industrial policies and responsive administration have ensured equitable growth for all social classes, but at the same time faltered in ensuring regional balance in development. In its absence, Tamil Nadu's urban centers, especially Chennai, will face immense migration pressures and lead to destabilized growth.

¹¹ <https://www.ideasforindia.in/topics/poverty-inequality/spatial-disparities-in-household-earnings-in-india.html>

¹² <https://www.thehindu.com/data/data-uneven-progress-stark-inter-district-disparities-in-tamil-nadu/article67019663.ece>

4 Recommendations/ Lessons Learned

The TNIPP Phases 1 and 2 have been successful in achieving their stated objective of improving investment climate in the state and improving urban infrastructure to increase FDI in the state. The program was effective and hence a similar program for industrial and infrastructure development planning has been launched in Gujarat. Many policy actions initiated in this program are also in line with what other states and the central government is already pursuing. The overall objective of boosting FDI in Tamil Nadu is also being achieved. This section is divided into two sections: the lessons learned, to highlight important aspects from the evaluation, and recommendations to put forth some points to be considered in similar future programs.

4.1 Lessons Learned

- 1 Successful model – The Japan's ODA policy action loans to the infrastructure development planning sector in Tamil Nadu have successfully achieved their purpose of improving the investment climate in the state and creating SIPs which promote industrial growth. This model is being adopted in Gujarat and can be similarly adopted in different states and countries.
- 2 Improved collaboration - The TNIPP has had a clear positive impact of attracting investments, creating employment opportunities, and fostering collaboration between Japan and Tamil Nadu; and the documents studied underscore the importance of efficient project management, private sector engagement, and the need for continuous improvement to achieve the program's objectives. Further collaboration and taking together investors from other countries and India will allow accelerated development in the state.
- 3 Innovative projects - The funding provided for the establishment of Apex Skill Development Centers has resulted in a vibrant ecosystem being created, which will have its own multiplying effects. It is important to invest in such projects which can set off a new chain of development and establish new models through experiments, which the government or other funders may be reluctant to fund.
- 4 Learning and improving - It was found that many recommendations made in previous evaluation and final project reports have been implemented. This learning from previous work should continue. While officials in all key agencies will get transferred, documentation and internal notes will allow for an institutional memory to be created and handed over. It is important to keep all documents at one location and make them readily available to the next set of officials.

4.2 Recommendations

At the same time, there are a few aspects that need to be kept in mind while further continuing this project into phase 3 and replicating it in other locations.

1. Feasible goal setting - It is paramount in policy implementation to set appropriate goals. Certain policy actions within the TNIPP were mutually canceled due to their perceived difficulty, notably in the realm of housing. This underscores the necessity for measured and realistic goal setting rather than adopting overly ambitious targets at the program's outset. Conversely, setting low goals to ensure easy accomplishments must also be steered clear of. Striking a balance between ambition and achievability is imperative for successful policy execution.
2. Focus on equity and sustainability - Most of the SIPs have been implemented in and around Chennai Metropolitan Region. While the surrounding area has the most industries, including many Japanese industries, and the choice is made based on the demands, the state must plan for equitable development in all geographic areas. As the industrial development also supports many MSMEs, it is pertinent that the ones spread across the different districts of the state are supported on a priority basis. As part of the policy actions, actions which promote green technologies and aim at minimizing the carbon footprint of the industries should be taken up.
3. Improving efficiency in project timelines - It is important concerning the delays observed in several SIPs. Despite being integral to existing infrastructure enhancement plans and being funded through TNIPP, many projects suffer from incomplete preparations prior to commencement, resulting in significant delays. This situation is particularly concerning as it directly impacts urban amenities like sewage treatment and electric substations, leaving affected populations with subpar services for extended periods. While this issue may not be a direct concern in TNIPP, as outlined in section 3.4.3., it is imperative that future projects incorporate mechanisms to ensure efficient fund utilization within predetermined timelines. To address this issue constructively, we recommend implementing proactive planning strategies and robust oversight mechanisms to mitigate delays and optimize the impact of infrastructure development efforts. By doing so, we can uphold commitment to delivering timely and effective services to communities across the region.
4. Better data management and project monitoring - During the evaluation process, the evaluation team encountered challenges in accessing certain data requested from TNIDB promptly. Strengthening data management practices and streamlining processes for monitoring could significantly contribute to more effective project implementation and timely resolution of any delays.

5 Annexures

5.1.1 Interviews and field visits

Following stakeholders were interviewed during this project:

Sr No	Name of Stakeholder	Date
1	JICA team	21 December 2023
2	Nomura Research Institute	2 January 2024
3	Industrial representatives present at Tamil Nadu Global Investors Meet 2024	7-8 January 2024
4	Managing Director and Project Director, Tamil Nadu Skill Development Corporation	9 January 2024
5	Regional Director, Indo-German Chamber of Commerce	23 January 2024
6	Deputy Director General, JETRO and Japanese Chamber of Commerce and Industries, Chennai	8 March 2024
7	Executive Engineer, Tamil Nadu Transmission Corporation with Substation field visit	12 March 2024
8	Project Head Tamil Nadu Skill Development Corporation, with Tamil Nadu Apex Skill Development Centre for Healthcare at Guindy, Chennai field visit	12 March 2024
9	Director, Highways Department	13 March 2024
10	Executive Engineer, Chennai Metropolitan Water Supply and Sewerage Board with Sewage Treatment Plant at Sholingnallur field visit	13 March 2024
11	Highways Engineer, Tamil Nadu Road Development Corporation	14 March 2024
12	Tamil Nadu Small Industries Development Corporation	14 March 2024

5.1.2 Bibliography

The important documents referred to for this evaluation report are listed below:

1. Ex-ante Evaluation Report of TNIPP Phase 1, 2013
2. Ex-post Evaluation Report o TNIPP Phase 1, 2016
3. Ex-ante Evaluation Report of TNIPP Phase 1, 2017
4. Final Report of TNIPP Phase 2, 2020
5. Ex-post Evaluation Report o TNIPP Phase 1, 2021

6. Project Management Committee meeting reports - 5th and 6th PMC, 2019
7. Monthly Statement of Progress of SIPs, Dec 2023
8. other reports cited in the text

6 Photographs

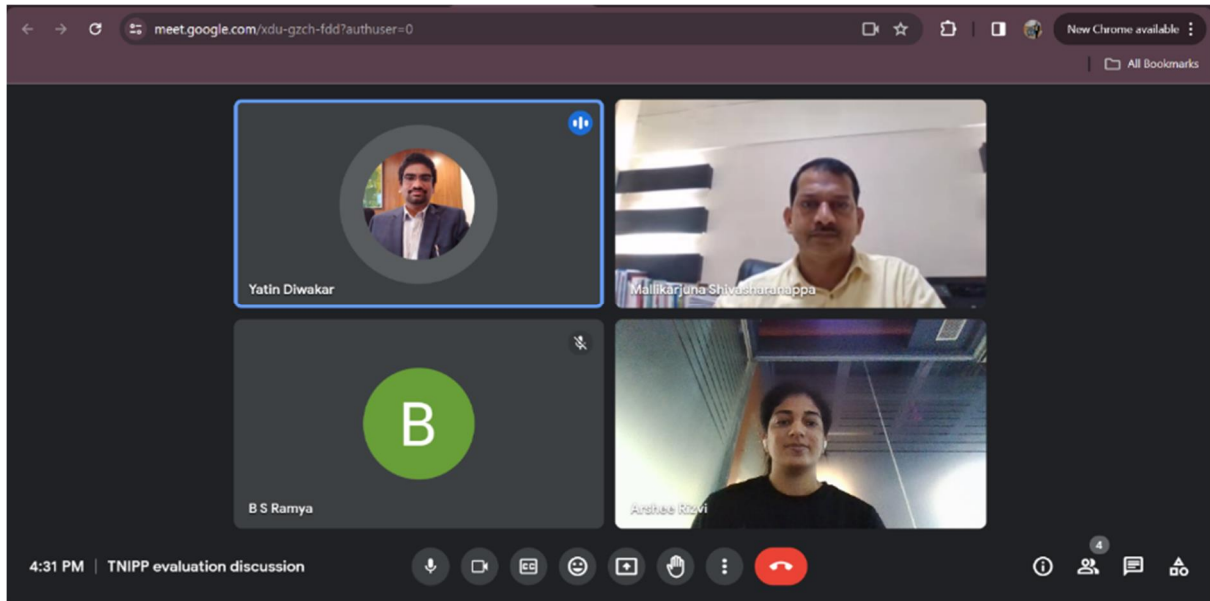


Photo: Meeting with IGCC



Photo: Visit to Pallikaranai Sub Station of TANTRANSCO



Photo: Visit to Tamil Nadu ASDC for Healthcare



Photo: Visit to Sholinganallur Sewage Treatment Plant



Photo: Visit to Sholinganallur Sewage Treatment Plant



Photo: Meeting with Project Head, TNSDC



Photo: Visit to ASDC Healthcare

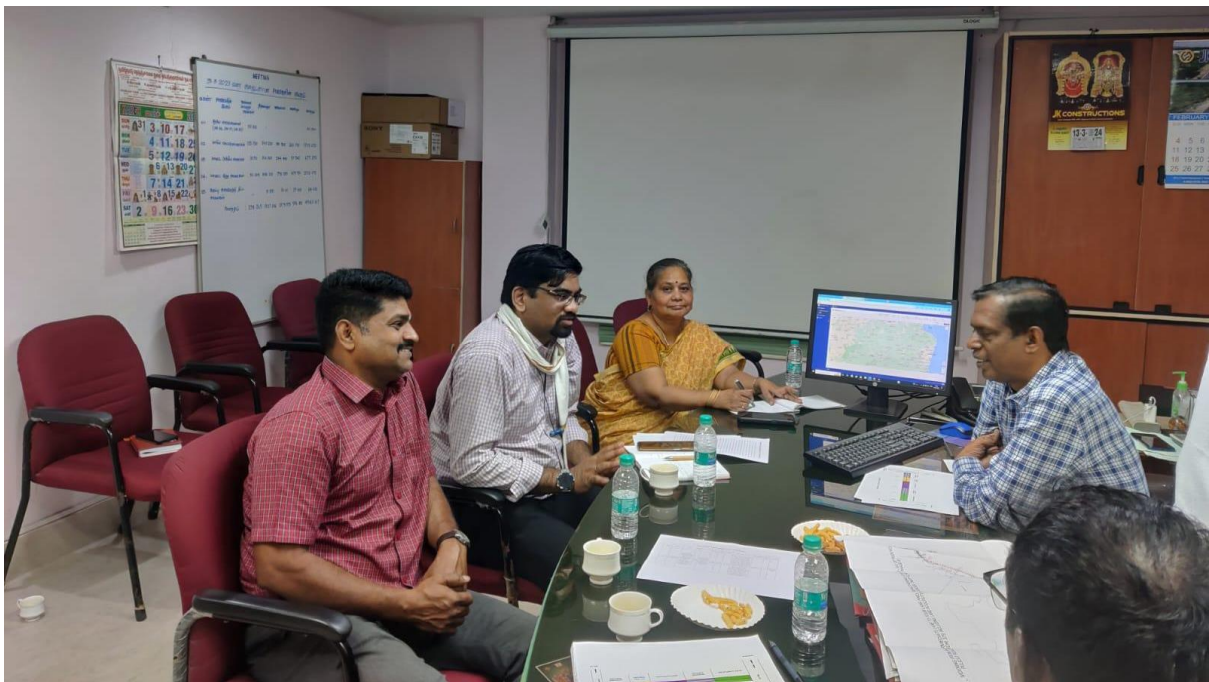


Photo: Meeting with Highways department



Photo: Visit to Pallikaranai Sub Station of TANTRANSO