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Report No: PAD1096

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$400 MILLION

TO INDIA

FOR A

TAMIL NADU SUSTAINABLE URBAN DEVELOPMENT PROJECT

March 6, 2015

Social, Urban, Rural and Resilience (SURR) Global Practice
India Country Management Unit
South Asia Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective January 27, 2015)

Currency Unit = Indian Rupee (INR)
INR1 = US$0.0163
US$1 = INR61.48

FISCAL YEAR
April 1 - March 31

ABBREVIATIONS AND ACRONYMS

CCTP	Chennai City Traffic Police
CoC	Corporation of Chennai
CPS	Country Partnership Strategy
C&AG	Comptroller and Auditor General
CEF	Credit Enhancement Fund
CMA	Chennai Metropolitan Area
DLI	Disbursement Linked Indicator
DMA	Directorate of Municipal Administration
DMAWS	Department of Municipal Administration and Water Supply
EEP	Eligible Expenditure Program
EIA	Environment Impact Assessment
ESMF	Environmental and Social Management Framework
EMP	Environment Management Plan
ENPV	Economic Net Present Value
EOCC	Economic Opportunity Cost of Capital
ERR	Economic Rate of Return
ESF	Environmental and Social Framework
GIS	Geographic Information System
GoTN	Government of Tamil Nadu
GSDP	Gross State Domestic Product
ICR	Implementation Completion Report
ICT	Information and Communications Technology
IDC	Institutional Development Component
IRR	Internal Rate of Return
IUFR	Interim Unaudited Financial Report
JICA	Japan International Cooperation Agency
IUDM	Integrated Urban Development Mission
KfW	Kreditanstalt für Wiederaufbau
LFAD	Local Fund Audit Department
MAWS	Municipal Administration and Water Supply
MDF	Municipal Development Fund
O & M	Operation and Maintenance
P&AO	Pay and Accounts Officer
PDAF	Project Development and Advisory Facility
PDGF	Project Development Grant Fund
PDO	Project Development Objective
PMC	Project Management Consultant
PPF	Project Preparation Facility
PSGF	Project Sustainability Grant Fund
RAP	Resettlement Action Plan
RBI	Reserve Bank of India
R&R	Resettlement and Rehabilitation
SWD	Storm Water Drainage
TN	Tamil Nadu
TNSUDP	Tamil Nadu Sustainable Urban Development Project
TNUDF	Tamil Nadu Urban Development Fund
TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
ULB	Urban Local Body
WSPF	Water and Sanitation Pooled Fund

Regional Vice President:	Annette Dixon
Country Director:	Onno Ruhl
Senior Global Practice Director:	Ede Jorge Ijjasz-Vasquez
Global Practice Director	Marisela Montoliu Munoz
Practice Manager:	Ming Zhang
Task Team Leader:	Raghu Kesavan / Zhiyu Jerry Chen

INDIA

Tamil Nadu Sustainable Urban Development Project

TABLE OF CONTENTS

Page

Annexes

PAD DATA SHEET

India

Tamil Nadu Sustainable Urban Development Project (P150395)

PROJECT APPRAISAL DOCUMENT

SOUTH ASIA

0000009081

Report No.: PAD1096

Project ID P150395	EA Category A - Full Assessment	Team Leader(s) Raghu Kesavan, Zhiyu Chen
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ]	
	Financial Intermediaries [ ]	
	Series of Projects [ ]	
Project Implementation Start Date 01-Apr-2015	Project Implementation End Date 31-Mar-2022	
Expected Effectiveness Date 30-Jun-2015	Expected Closing Date 31-Mar-2022	
Joint IFC No		

Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Ming Zhang	Ede Jorge Ijjasz-Vasquez	Onno Ruhl	Annette Dixon

Borrower: Government of India			
Responsible Agency: TNUDF			
Contact:	Mrs. Anita Praveen	Title:	Chairperson and Managing Director
Telephone No.:	914428153114	Email:	cmd@tnuifsl.com

Project Financing Data(in USD Million)

[X]	Loan	[ ]	IDA Grant	[ ]	Guarantee
[ ]	Credit	[ ]	Grant	[ ]	Other

Total Project Cost:	600.00	Total Bank Financing:	400.00
Financing Gap:	0.00		

Financing Source	**Amount**
Borrower	200.00
International Bank for Reconstruction and Development	400.00
Total	600.00

Expected Disbursements (in USD Million)

Fiscal Year	2016	2017	2018	2019	2020	2021	2022			
Annual	20.00	30.00	50.00	70.00	70.00	80.00	80.00			
Cumulative	20.00	50.00	100.00	170.00	240.00	320.00	400.00			

Institutional Data

Practice Area (Lead)

Social, Urban, Rural and Resilience Global Practice

Contributing Practice Areas

Cross Cutting Areas

[ ] Climate Change

[ ] Fragile, Conflict & Violence

[ ] Gender

[ ] Jobs

[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Water, sanitation and flood protection	Wastewater Treatment and Disposal	30	10	10
Public Administration, Law, and Justice	Sub-national government administration	30		
Water, sanitation and flood protection	Water supply	30		
Water, sanitation and flood protection	Solid waste management	10	5	5
Total		100		

☐ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes		
Theme (Maximum 5 and total % must equal 100)		
Major theme	Theme	%
Urban development	Municipal finance	40
Urban development	Municipal governance and institution building	30
Urban development	City-wide Infrastructure and Service Delivery	30
Total		100

Proposed Development Objective(s)

To improve urban services delivery in participating ULBs in a financially sustainable manner and to pilot improved urban management practices in selected cities.

Components

Component Name	Cost (USD Millions)
A. Results Based Grants for Urban Governance Component	61.00
B. Investments in Urban Services Component	504.00
C. Urban Sector TA Component	34.00

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Low
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Moderate
7. Environment and Social	Substantial
8. Stakeholders	Moderate
9. Other	
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]

Have these been approved by Bank management?	Yes [ ] No [X]
Is approval for any policy waiver sought from the Board?	Yes [ ] No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04		**X**
Forests OP/BP 4.36		**X**
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11		**X**
Indigenous Peoples OP/BP 4.10		**X**
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Maintain Institutional Capacity for Urban Governance Component	**X**		CONTINUOUS

Description of Covenant

Tamil Nadu shall maintain a project management unit to carry out Part A of the Project with resources, powers, functions, staffing, and expertise acceptable to the Bank.

Name	**Recurrent**	**Due Date**	**Frequency**
Satisfactorily operate Credit Enhancement sub-component	**X**		CONTINUOUS

Description of Covenant

Tamil Nadu shall ensure that any credit enhancements under Part B.2 of the Project are made in accordance with eligibility criteria and procedures acceptable to the Bank and the provisions of the TNUDF-TNUIFSL Operations Manual.

Conditions

Source Of Fund	**Name**	**Type**

Description of Condition

Team Composition			
Bank Staff			
Name	**Role**	**Title**	**Unit**
Raghu Kesavan	Team Leader (ADM Responsible)	Senior Infrastructure Specialist	GSURR
Zhiyu Chen	Team Leader	Urban Specialist	GSURR
Shanker Lal	Procurement Specialist	Senior Procurement Specialist	GGODR
Mohan Gopalakrishnan	Financial Management Specialist	Sr Financial Management Specialist	GGODR
Abha Joshi-Ghani	Peer Reviewer	Director	LLIKL
Ahmed A. R. Eiweida	Peer Reviewer	Program Leader	ECCU3
Axel E. N. Baeumler	Peer Reviewer	Senior Infrastructure Economist	GSURR
Barjor E. Mehta	Team Member	Lead Urban Specialist	GSURR
Elisa Muzzini	Team Member	Senior Economist	GSURR
Harinath Sesha Appalarajugari	Safeguards Specialist	Senior Environmental Specialist	GENDR
Hyoung Gun Wang	Team Member	Senior Economist	GSURR
I. U. B. Reddy	Safeguards Specialist	Senior Social Development Specialist	GSURR
Jon Kher Kaw	Team Member	E T Consultant	GSURR
Jyoti Sriram	Team Member	Senior Program Assistant	SACIN
Raghava Neti	Team Member	Senior Infrastructure Specialist	GWADR
Rakhi Basu	Team Member	Transport Specialist	GTIDR
Shashank Ojha	Team Member	Senior e-Government Specialist	GTIDR
Tarun Shankar	Team Member	Investment Officer	CNGS5
Vikram Raghavan	Counsel	Lead Counsel	LEGOP
Extended Team			
Name	**Title**	**Office Phone**	**Location**
BKD Raja	Consultant, Environmental Management		
D. Maruthi Mohan	Consultant, Engineer, Water and Sanitation		
Hendrikus Johannes Maria Ogink	Consultant, Storm Water Drainage		
K. Rajivan	Consultant, Urban Finance		
Rajagopal S. Iyer	Consultant, GSURR		

Locations					
Country	**First Administrative Division**	**Location**	**Planned**	**Actual**	**Comments**
India	Tamil Nadu	Chennai	X		

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required ? Consulting services to be determined

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I. STRATEGIC CONTEXT

A. Country Context

1. How India manages urbanization will be central to its efforts in alleviating poverty and promoting shared prosperity, as India's rapid economic growth is being accompanied by an unprecedented urban and spatial transformation. The current level of urbanization of around 31% (377 million persons) as per census 2011 is projected to increase to 50% or more over the next 20 years. For the first time since independence in 1947, India has seen a greater absolute increase in urban population versus rural. The number of towns has increased from 5,161 in 2001 to 7,935 in 2011, with about 53 cities having a population of over 1 million. Urbanization has not only benefited urban residents but also helped alleviate poverty in rural areas through migration and stronger rural-urban economic linkages. One of India's fundamental development challenges going forward is to accommodate an additional 10 million urban dwellers per year, provide them with adequate housing and urban services (such as water supply, sewerage, drainage, solid waste management and urban transportation networks and systems, where there is already a huge backlog), address slums, create opportunities for economic growth, and at the same time, ensure that urbanization is environmentally sustainable.

2. Addressing this unprecedented scale of challenges would require deepening reform and huge investment in urban infrastructure and services. For example, the report on Indian Urban Infrastructure and Services by the High Powered Expert Committee estimated an investment need of US$870 billion over the next twenty years. Policy makers at the national level are now increasingly cognizant of the urbanization challenges and the new government is in the process of formulating and launching a number of urban development programs, including the "100 Smart Cities" program, "National Urban Development Mission (NUDM)", and "Swachh Bharat Program" (Clean India Program). The Bank's recent 'South Asia Urbanization Flagship Report' (to be published) highlights that urbanization has been under-leveraged in the region, and identifies four general policy areas as key to addressing the urban challenges: strategic planning and connectivity; efficient land and housing; effective urban governance and finance; and urban resilience. It highlights that urban governance reform toward more empowered and accountable municipal governments is the most important task for countries to reap the benefits of urbanization.

3. Accommodating the needs of India's growing urban population is now, and will continue to be, a strategic development challenge for many years to come, and has to be faced primarily by state governments, since urban development is entirely a 'state' subject under the Indian Constitution. Among the larger Indian states, Tamil Nadu (TN) ranks first on urbanization and has the second largest state economy in India. From 2004-05 to 2011-12, TN's Gross State Domestic Product (GSDP) grew at an average of 9.3% per annum; this was higher than the national average and was also the highest among the more developed states in India. The state's per capita income increased at a compound annual growth rate of 15.9% during 2004-11, to reach US$1,622 equivalent. Services contributed about 58% of TN's GSDP, followed by industries / manufacturing (about 30%) and the rest by agriculture. This underscores the importance of urban areas in TN, where services and industries / manufacturing are concentrated.

B. Sectoral and Institutional Context

4. Tamil Nadu is the leading urbanizing state in India. Per Census 2011, TN is about 48.5% urbanized. About 35 million people reside in urban areas and account for 9.6% of India's urban population; TN is in the third position after Maharashtra (>50 million) and Uttar Pradesh (> 40 million). Urban growth rate, at 27% from 2001 to 2011, outpaced the rural growth rate of 6% during the same period. Urban growth combines net in-migration into urban areas, expansion of city boundaries to accommodate peri-urban growth, and natural growth of existing urban populations. Urbanization in TN is widely dispersed and encompasses 12 municipal corporations, 124 municipalities, and 528 town panchayats. In addition, 374 "census towns" are identified as areas with urban characteristics, but have not formally been notified as urban.

5. Though TN is a pioneer in many aspects of urban development, there remains a huge unfinished reform and investment agenda. The critical importance of urban development is clearly spelt out in the Government of Tamil Nadu's (GoTN's) latest Twelfth Five-Year Plan and 'Vision Tamil Nadu 2023' that sets out the vision for the sector as to "promote and facilitate the development of inclusive and sustainable cities". They highlight the key challenges, including: (i) Meeting the gap in urban services, e.g., coverage of sewerage and storm water drains is less than 30%, and less than 10% of solid waste is treated sanitarily and disposed; (ii) Deepening urban finance reforms to enable city governments to generate financial resources by more effectively tapping into the economic growth in the cities (TN was among the first states in India to set up a structured system of state finance commissions in the late 1990s for formula-based transfer of funds to Urban Local Bodies - ULBs - that has greatly empowered them); (iii) Improving urban governance and the capacity of cities to take on the challenges under the 74th Constitutional Amendment and ensuring accountability to city residents (TN already has a system of directly elected mayors); and (iv) Ensuring that cities continue to play an important role in fostering economic growth in the state.

6. Some of the specific goals articulated in Vision Tamil Nadu 2023 include: (i) Developing Ten "World Class" Cities; (ii) Improving Urban Environments through achieving: (a) an "Open Defecation Free" State, (b) 100% access to safe sanitation, and (c) a "Garbage Free" State; and (iii) Ensuring continuous water supply in urban areas. Aggregate investment requirements for achieving these and other related urban sector development goals are estimated to be in excess of US$37 billion over the next 20 years. Given the unfinished urban reform agenda in the state and the articulated urban sector goals, the state intends to take actions, with innovations as a cross-cutting theme, across four fronts, viz.: (i) Urban Governance; (ii) Planning; (iii) Funding; and (iv) Capacity Building. TNSUDP directly supports these areas.

7. The Bank has had a long engagement with GoTN in the urban sector, starting with the Tamil Nadu Urban Development Project (TNUDP), which was a 'sites and services' project. Municipal Development Fund (MDF) type urban projects began in TN with the setting up of the Tamil Nadu Urban Development Fund (TNUDF) in the late 1990s under TNUDP II, followed by the recently completed TNUDP III. TNUDF was set-up as a municipal fund in the Public Private Partnership (PPP) format between GoTN and private sector domestic financial institutions. TNUDF is managed by an Asset Management Company - Tamil Urban Infrastructure and Financial Services Limited (TNUIFSL) - that also includes participation by these domestic

financial institutions[1]. TNUDF has played an important role in fostering greater access to financial markets for TN ULBs, while maintaining an outstanding track record of 100% loan repayments from ULBs over the last decade. It has also undertaken many pioneering transactions, including the first pooled finance municipal bond issue, promoting capital contributions from beneficiaries of urban projects as a financing mechanism, and PPPs at the municipal level. TNUDF has become a model for other states in India. It has grown as an institution and has supported over US$1.5 billion in urban investments in the state (leveraging an aggregate Bank support of about US$400 million over this period through TNUDP II & III), combining public and private funds, as well as funds from other donors (JICA, KfW)[2].

8. With the success of TNUDF, GoTN has decided to address the next generation of urban development challenges in the state. As investments by cities shift from simpler interventions (such as city roads) to more complicated interventions, especially on urban environment (such as sewerage), TNUDF needs to upgrade its capacity and focus to provide more effective support to ULBs. Over the longer term, TNUDF needs to mobilize a greater share of funding from capital markets, besides funding from the government or multi-lateral financial institutions. Beyond TNUDF, overall urban governance reform in the state needs to deepen to empower ULBs to undertake resource mobilization and service delivery functions, and to be more accountable to city residents. These are the areas that the proposed Project will support. As in previous urban operations in TN, the proposed TNSUDP interventions are expected to provide useful lessons that will inform the Bank's engagement in urban sector in India in general, as well as in other countries.

C. Higher Level Objectives to which the Project Contributes

9. The proposed TNSUDP is consistent with the Bank Group's India Country Partnership Strategy (CPS) for FY 2013-17, which stated that "accelerating urbanization is central to India's growth, development, and poverty reduction." TNSUDP would contribute to the development goals set out under Engagement Area 2 on 'Spatial Transformation' that seeks to leverage the rural-urban transformation as an opportunity to reduce poverty and increase competitiveness. In helping India and the state of Tamil Nadu manage such spatial transformation and improve the livability of cities, TNSUDP aims to contribute to the following Engagement Area 2 outcomes: (i) Strengthened institutional capacity of urban governments; (ii) Improved urban services; and (iii) Improved environmental protection. Further, through its direct contribution to the Bank Group's India CPS on urbanization as noted above, TNSUDP also aims to contribute to the Bank's higher level twin goals of reducing extreme poverty and boosting shared prosperity.

10. In addition, the proposed TNSUDP is also fully consistent with the urban sector priorities as outlined in India's Twelfth Five Year Plan, that include: (i) Increasing investment in urban infrastructure; (ii) Strengthening urban governance, institutional capacity, and long-term urban planning for sustainable and inclusive urban development; (iii) Raising environmental sustainability; and (iv) Improving financial sustainability of ULBs. TNSUDP would contribute to these objectives by strengthening the financial and administrative capacity of ULBs to plan,

[1] TNUDF / TNUIFSL have been used interchangeably in this PAD

[2] Figures based on TNUDF Annual Reports / Notes

finance and deliver services in a financially sustainable manner. In addition, many of the initiatives proposed under TNSUDP are also consistent with the stated objectives of GoI's new urban development programs, including the 'Smart Cities program', through the emphasis on municipal e-governance (in two of the components as detailed subsequently) as well as the 'Clean Cities program' through the emphasis on environmental sustainability.

II. PROJECT DEVELOPMENT OBJECTIVES (PDO)

A. PDO

11. The Project Development Objective (PDO) is to improve urban services in participating Urban Local Bodies in a financially sustainable manner and to pilot improved urban management practices in selected cities.

B. Project Beneficiaries

12. The main project beneficiaries are expected to be over two million urban residents of participating ULBs (at least 40% of whom would be women) through improved urban services across a range of urban sub-sectors, including water, waste-water, storm water drainage (and reduced flooding), city roads, etc. In addition, institutions and ULBs will benefit from some of the institutional development activities and the urban governance component. The Urban Governance Component also incorporates mechanisms for beneficiary / citizen feedback as part of municipal e-governance initiatives supported under the project.

C. PDO Level Results Indicators

13. Achievement of the PDO(s) will be measured by the following indicators, each of which seeks to measure a specific part of the PDO: (i) Increase in Own Source Revenues (OSR) of 'Model Cities' in INR crores over the previous year with the implementation of OSR improvement plans, to measure the results of piloting improved management practices; (ii) Number of direct project beneficiaries of improved urban services, of which female (%) (Core Sector Indicator) to measure the results of urban services improvements through sector-related indicators (such as number of new sewerage connections); and (iii) Additional financial resources mobilized from non-budgetary sources, to measure contribution to financial sustainability.

III. PROJECT DESCRIPTION

A. Project Components

14. The proposed TNSUDP will have three components: (i) Results Based Grants for Urban Governance; (ii) Investments in Urban Services (comprising three sub-components); and (ii) Urban Sector Technical Assistance. These components are summarized below; Annex 2 contains a detailed project description, while Annexes 5 and 6 respectively provide more details on Component A, Results Based Grants for Urban Governance and Sub-component B2, Credit Enhancement Facility.

15. **Component A: Results Based Grants for Urban Governance (Cost: US$61 million, Bank Loan: $55 million.)** This component will provide results-based grants to eligible Urban Local Bodies (ULBs) to implement new urban-management models that strengthen governance and financial sustainability. It will also provide technical assistance and project management assistance to administer and carry out the results-based grants. It will support three ULBs ('Model Cities'), namely, Vellore and Erode Municipal Corporations, and Hosur Municipality, in improving urban management in four areas: (i) ULB Empowerment and Organizational Capacity; (ii) Spatial / Development Planning; (iii) Sustainable Finances; and (iv) E-Governance and Public Disclosure. The selected cities will be provided an annual grant based on satisfactory performance in these urban governance / management areas. Annual grant disbursements will be based on achievement of pre-specified annual targets - a set of Disbursement Linked Indicators (DLIs) in these four areas - against a set of "Eligible Expenditure Programs" (EEPs) that would mainly comprise Operation and Maintenance (O&M), including personnel, expenditures in these cities. In addition, this component will also include technical assistance support to the office of DMA for project management and consultant services.

16. **Component B: Investments in Urban Services (Cost: US$504 million, Bank loan: US$323 million)** will comprise three sub-components:

a) <u>Sub-component B1: Urban Investments (Cost: US$464 million, Bank loan: US$292 million).</u> This sub-component will provide Sub loans to Sub Borrowers by TNUDF and Sub Grants to Sub Recipients by Project Sustainability Grant Fund (PSGF) to implement Sub Projects. These sub-loans / sub-grants to participating ULBs will support improvements in a range of urban services, including water, sewerage, municipal solid waste, urban transportation, septage management, and storm water drainage, as well as support project management and supervision. They will be based on demand from ULBs, with an emphasis on 'sustainability' and improvement of the urban environment (not less than 40% by value). The selection of participating ULBs will be based on the existing TNUDF framework and criteria which assesses, *inter alia*, financial sustainability of interventions in ULBs mainly through the following criteria: ULB maintaining an operating surplus and aggregate debt service <30% of revenues throughout the period of projections after loading the costs / revenues of the proposed sub-project; or the proposed sub-project having stand-alone financial viability. Retroactive financing of up to US$40 million may be provided for eligible expenditures incurred within one year prior to the expected Loan signing date.

   While all of the participating ULBs are not known at this point, the first sub-project, viz. Greater Chennai Storm Water Drainage (SWD) sub-project, has been appraised and will account for about 30% of the overall TNSUDP cost. With an estimated cost of about US$180 million, this sub-project will construct and restore about 329 km of storm water drains in the peri-urban areas that were recently added to the Corporation of Chennai (CoC), which hitherto did not have a comprehensive drainage network. The areas mainly include parts of Valasavakam, Ambattur and Alandur administrative zones of CoC. This sub-project is expected to benefit over 0.8 million city residents in the sub-project area through reduced incidence of flooding and consequent reduction in damages / disruptions.

b) Sub-component B2: Credit Enhancement (Cost: US$20 million, Bank loan: US$18 million). This sub-component will create a reserve fund in PSGF (managed by TNUIFSL) to provide credit enhancements for municipal bonds and other market-based Loan instruments issued by Urban Local Bodies and Water and Sanitation Pooled Fund (WSPF). It will seek to further enhance TN's pioneering efforts in mobilizing resources for urban infrastructure from financial markets through a capitalized facility held under a separate account within TNUDF. It will be used as cash collateral and debt service reserve fund to provide credit enhancement to municipal bonds and other market based financing instruments that ULBs in TN would use for mobilizing additional resources beyond budgetary sources. This too would be a 'demand-driven' facility open to all ULBs in the state and would seek to leverage its TNSUDP allocation by least about four times, i.e., to US$80 million equivalent. A more detailed overview is presented in Annex 6.

c) Sub-component B3: Project Development and TNUDF Technical Assistance (TA) (Cost: US$20 million, Bank loan: US$13 million). This sub-component would be housed within Project Development Grant Fund (PDGF), managed by TNUIFSL and provide technical assistance to: (i) ULBs to prepare and implement sub-projects, including environmental and social mitigation actions, and Public Private Partnership (PPP) arrangements; (ii) ULBs to implement credit enhancement measures; (iii) CoC, for urban flood risk mitigation; and (iv) TNUDF, for institutional development

17. **Component C: Urban Sector Technical Assistance (Cost: US$34 million, Bank loan: US$21 million)** is aimed at strengthening TN's capacity to carry out urban finance and municipal governance reforms in: (i) Developing next generation municipal e-governance and GIS systems for Urban Local Bodies; (ii) Institutional Development and Capacity Building, including training, sector studies, operations and maintenance, and strengthening public financial management at ULBs; and (iii) Project management and DMA's incremental operating costs.

B. Project Financing

18. Table below summarizes project costs by component and extent of Bank financing; more details are provided in Annex 2).

	Components	**Cost**	**Bank Financing**	
		US$ Mln.	US$ Mln.	%
A	Results Based Grants for Urban Governance Component	61	55	13.8
B	Investments in Urban Services Component	504	323	80.8
C	Urban Sector TA Component	34	21	5.3
	Sub Total	599	399	99.8
	Front End Fee	1	1	0.2
	Total Project Cost	**600**	**400**	**100**

C. Lessons Learned and Reflected in the Project Design

19. A number of key lessons gained from the Bank's sustained urban engagement in TN have been incorporated in the design of TNSUDP: (i) 'Municipal Fund' via a state level urban

development agency is an effective mechanism for reaching out to ULBs and scaling up urban reforms and innovations; (ii) Readiness for 'framework' projects should be improved by appraising sub-projects equivalent to 30% of project cost and having bid documents ready at Board approval; and (iii) Linking site readiness and availability for civil works to contract award, in order to minimize time and cost overruns during implementation. Experience in earlier municipal bonds issued by TNUDF, as well as experience in the United States on municipal bonds / bond banks, helped design the credit enhancement sub-component. The DLI mechanism of the Urban Governance Component has benefited from other Bank projects, e.g., the Pakistan Punjab Cities Governance Improvement Project.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

20. Almost all interventions (except for a few related to Institutional Development / Capacity Building) will be implemented at the ULB / Statutory Board / Authority / Public Undertaking level, under the supervision and monitoring of state level agencies. The Municipal Administration and Water Supply (MAWS) Department of GoTN will be responsible for the overall implementation of TNSUDP and TNUDF will be the nodal agency for TNSUDP under MAWS Department. Components A and C, i.e., Urban Governance and Urban Sector TA, will be overseen and managed by the office of the Directorate of Municipal Administration (DMA). Component B (Urban Investments) will be implemented by the respective ULBs. TNUDF would be the main agency for channeling funds to ULBs.

21. All of these main implementing agencies were involved in earlier Bank-financed projects and are familiar with Bank policies / procedures. They fall under the MAWS department, which helps in effective coordination. This project further leverages the lead role played by DMA in institutional capacity building and by TNUDF in technical support and innovation promotion, as well as joint monitoring of sub-projects by DMA and TNUDF.

22. Corporation of Chennai (CoC) will implement the Storm Water Drainage sub-project in the extended areas of Chennai. CoC will hire a Project Management Consultant (PMC) to provide procurement management and implementation support, as well as support for the implementation of the environmental management plan (EMP) and the resettlement action plan (RAP). CoC will be responsible for operating and maintaining the completed works as part of its regular O&M operations. Anna University will support CoC in the modeling of urban flood risks from Adyar and Cooum rivers and for advance flood warning in Chennai city and sub-project areas.

B. Results Monitoring and Evaluation

23. The primary source of information for performance / results indicators will be the participating ULBs. The main agencies responsible for collating and coordinating information collection/monitoring would be TNUDF; DMA would be responsible for these tasks for Components A and C. TNUDF will send a Quarterly Progress Report (QPR) to the Bank. In addition, independent assessments will be carried out by external consultants at key milestones (such as mid-term and project closing). The Urban Governance Component will have third-party

verification protocols for assessing achievement of DLIs. CoC would have the primary responsibility for collating the information required for reporting on the Chennai SWD sub-project.

C. Sustainability

24. Both GoI and GoTN have demonstrated strong commitment to urban sector reforms and support continued Bank engagement in this sector. Sub-projects supported by the project are based on demand from ULBs, and will be implemented and subsequently operated and maintained by them. The TNUDF appraisal process will ensure financial sustainability of interventions and their 'right-sizing'. In addition, the project provides TA support to ULBs to prepare, implement and supervise sub-projects.

25. TNUDF has been a financially viable institution over the 15 years of its existence. The Project will provide additional capacity building support to TNUDF to enable it to offer a larger selection of products, including credit enhancement products, as well as knowledge exchange programs with international 'municipal funds'. In addition, GoTN will need to evolve a consistent approach to urban financing in the state between different national level urban development programs that are likely to be announced in the near term.

26. Sustainability of the Urban Governance Component will be enhanced by organizational capacity building activities, emphasis on own source revenues and improved transparency and accountability. Many of the measures supported through DLIs are expected to result in sustainable reforms at the ULB level, and have the potential to be rolled out state-wide based on experience in the pilot cities.

27. Environmental sustainability will be significantly enhanced with stronger focus on urban environment improvements under the Investment in Urban Services Component, with a commitment of at least 40% of the component devoted to sub-projects supporting urban environment improvement. Moreover, project design has incorporated climate change considerations. For example, the Chennai storm water drainage sub-project considered extreme flooding levels that take into consideration potential climate change.

V. KEY RISKS AND MITIGATION MEASURES

28. The overall implementation risk of the project is assessed at "Substantial", with the following risk categories rated substantial risks: sector strategies and policies; technical design of the project; fiduciary; and environmental and social. The main risks and the corresponding risk management measures are discussed below:

- **Sector Strategies and Policies**: These include risks posed by likely easy availability of capital grants under future national urban development programs (such as the "100 Smart Cities" program, "National Urban Development Mission", and "Swachh Bharat Abhiyan".) that can result in a reduction in appetite among ULBs to borrow. Developing a healthy pipeline of well-prepared sub-projects can mitigate this risk by helping ULBs to absorb funds under future national urban development programs as well as TNSUDP, as investment requirements for the urban sector in TN are vast. As noted, the first sub-project has been appraised and a pipeline of sub-projects has been identified. In addition, where possible, co-financing or leveraging future national urban programs will be explored (as has already been done successfully for a Bank- supported urban project in Karnataka).

- **Technical Design of the Project.** These risks arise from TNSUDP being a large project dealing with the inherently complex urban sector contracts (which contribute to the substantial risk rating for fiduciary) as well as the Results Based Grants for Urban Governance ('Model-City') Component and the Credit Enhancement Sub-component, which are new activities in the India urban program. These may prove challenging during implementation due to the political economy risks of increasing own source revenues and devolution of powers to ULBs. In order to mitigate these risks, the proposed innovative activities have been fleshed out in detail during project preparation. Three ULBs have been identified for participation in the Results Based Grants for Urban Governance Component. The operating framework for this component as well as the credit enhancement sub-component has been agreed. TA to support implementation is a part of project design.

- **Fiduciary.** Fiduciary risks relate to potential non-compliance with Bank procurement policies and inadequate financial controls. TNUDF already has a system of third party technical audits of ULB sub-projects and this will continue. The office of DMA is putting in place web-based monitoring of work execution at ULB sites and this will be further strengthened. A complaint handling mechanism is in place. In addition, e-procurement is being introduced for TNSUDP implementation. The extent of competition for TNSUDP contracts will be monitored during implementation. TNUDF has adequate staff for procurement and financial management.

- **Environmental and Social.** The main risk relates to the lack of familiarity with the new "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013" that will be implemented in TNSUDP and whose provisions are yet to be field tested. In addition, environmentally sensitive interventions such as wastewater can potentially cause adverse environmental impacts. In order to mitigate these risks, provisions of the new law have been reflected as part of the revised TNSUDP Environment and Social Management Framework (ESMF). Site readiness and land availability for works will be linked to the award of contracts by way of certification of payment of compensation and R&R assistance to all affected people prior to the taking over of their land. In other cases confirmation of land availability free of encumbrances will be ascertained prior to contract award. An annual ESA will be undertaken to review compliance and propose remedial measures as appropriate. TNUIFSL has gained experience in managing safeguard risks under TNUDP III and will oversee the monitoring and support to implementing agencies in safeguards management. The Project Management Consultant (PMC) will also provide additional safeguards management capacity support to ULBs.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analyses

29. **Economic Analysis**. The Urban Governance component is expected to deliver significant economic benefits in the model cities, including: improved efficiency in the allocation of resources; increased Economic Rates of Return (ERR) and sustainability of investments; and through demonstration effects, pave the way for scaling up best practices to a larger number of cities in TN and other Indian states.

30. A framework approach has been developed for the economic analysis of municipal sub-projects under Component B, which will be prepared and appraised during project implementation. A Cost-Benefit Analysis has been conducted for the Greater Chennai SWD sub-project. The expected benefits of this sub-project are: (i) tangible (direct and indirect) socio-economic benefits associated with reduction in flood damage; and (ii) intangible (non-market) benefits associated with improvements in the environment and in overall living conditions. Tangible benefits were computed based on avoided flood damage. The ERR is estimated at 15.5%. Intangible benefits were not quantified; hence the ERR represents a lower-bound estimate. Sensitivity analysis was also carried out under different scenarios and the ERR ranges from 13.48% to 15.3% under various (adverse) scenarios.

31. Public sector intervention is justified given the high externalities of flooding and water logging in the project area. The Bank's involvement is expected to add value through enhanced technical support for implementing non-structural measures to improve the capacity of institutions to reduce risks related to floods, and thus enhance the long-term sustainability of the capital program.

32. By improving e-governance and public financial management, technical assistance under Component C is expected to support governance reforms under Component A and make investments under Component B more sustainable. See Annex 7 for more details on the economic analysis.

33. **Financial Analysis**. TNUDF's existing system of financial appraisal of sub-projects will continue under TNSUDP, and is focused on two aspects:

- *Sub-project level viability*. This would apply to green-field revenue generating sub-projects (for water, waste-water, and solid waste) based on sub-project level Net Present Value (NPV) or Internal Rate of Return (IRR). Most urban sub-projects are not expected to be financially viable on a stand-alone basis (i.e., based on sub-project revenues alone). TNUDF would seek to improve cost-recovery levels to the extent possible for such sub-projects.

- *ULB level financial sustainability*. This assessment seeks to determine whether the sub-projects being undertaken are financially sustainable for the ULB as a whole, taking into account all ULB revenues and expenditure drivers. As part of project preparation, an aggregate assessment was carried out for all ULBs in TN by projecting their overall revenue and expenditure position under reasonable assumptions. The extent of sustainable investment capacity was computed under the following conditions: (i) ULB has no cash deficit in any year, after taking into account additional operating costs, ULB counterpart funding and debt servicing obligations; and (ii) not more than 50% of the annual revenue surplus is deployed for debt service. This assessment indicated that the overall borrowing capacity of all ULBs in TN is over US$600 million over the next five years. Hence, on an aggregate basis, ULBs would easily be in a position to absorb TNSUDP sub-loans of about US$150 million. Sub-projects proposed for implementation under TNSUDP would be assessed under the above criteria, and only those sub-projects that comply with them would qualify for support.

- *Chennai Storm Water Drainage Sub-Project.* Financial assessment of CoC was carried out and the proposed sub-loan found to be sustainable based on the TNUDF financial criteria noted earlier.

B. Technical

34. The Bank's long engagement in the urban sector in TN facilitated the testing and scaling up of new models / innovations. The proposed TNSUDP will continue this process by: addressing complex urban environmental issues, where the Bank can add value by bringing in international knowledge and experience; and piloting new interventions to demonstrate new urban management models, such as under the Urban Governance (Model City) component.

35. The project takes a three pronged approach to: (i) promote service/urban environment sustainability; (ii) demonstrate a new model of urban management in selected cities/towns; and (iii) enhance ULB capacity to raise funds from the market. The project includes adequate TA to support these efforts. ULBs would be provided TA support through external consultants for sub-project preparation and engineering designs for investments in urban services. These consultants would help in the preparation of Detailed Project Reports (DPRs), technical specifications, detailed engineering designs, costing, etc. Similar work was done for the Chennai SWD sub-project, which also included flood and hydraulic modelling.

36. The design of the Urban Governance component, including DLIs, results framework and action plans is expected to demonstrate a new approach to build and promote ULB capacities, based on greater devolution of autonomy and authority to ULBs. Detailed baseline assessments of the 'Model Cities' were carried out to ascertain the current situation, identify gaps and areas of improvement required. The Credit Enhancement sub-component builds on lessons learnt from past experience of TNUDF as well as drew on international experience and assessment of the domestic municipal borrowing market.

37. **Technical Standards**. Sub-projects will be designed primarily on the basis of Indian Standards, in line with the respective technical guidelines issued by the line ministries/agencies, and will comply with Central and State Pollution Control Board norms. European or American standards will be adopted, particularly for advanced technologies, wherever Indian standards are not available. International experience on urban management, particularly in the adoption of information and communication technologies, storm water modeling and urban flood risk management, will be promoted to improve current practices through the adoption of enhanced standards.

C. Financial Management

38. Financial Management (FM) arrangements of the project comply with OP/BP 10.00 and are considered adequate to account for and report on expenditures under the project.

39. FM arrangements are based on TNUDP III (the predecessor project), except for the DLI component. Project funds will flow through the GoTN budget to Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) and Directorate of Municipal Administration (DMA), which will be responsible for the implementation of identified components. GoTN will on-lend loan funds to TNUDF under a subsidiary loan agreement / transfer grant funds to PSGF. TNUDF will, based on appraisal of individual sub-projects, provide loans/grants to ULBs in tranches for which it will enter into on-lending agreement. For the Urban Sector TA Component and Results Based Grants for Urban Governance Component, funds will flow to DMA. ULBs and other executing agencies will be responsible for payments against contracts, maintaining sub-project books of account and submitting quarterly sub-project financial reports to TNUIFSL, which will consolidate such sub-project financial reports, and prepare and submit quarterly IUFRs to the Bank.

40. Project components managed by TNUIFSL will be audited by a firm of chartered accountants (supported by individual sub-projects audits from LFAD) as per terms of reference acceptable to the Bank. Expenditures incurred by DMA will be audited by the C&AG as per standard terms of reference agreed with the C&AG, while EEPs in the three model ULBs will be audited by firms of chartered accountants. The audit reports will be shared with the Bank within nine months from the close of the financial year. The details of financial management arrangements are provided in Annex 3.

41. **Results Based Grants for Urban Governance Component.** A fiduciary assessment of the three selected ULBs indicates that a standard budget and uniform account code structure is followed by the ULBs, which will enable identification of Eligible Expenditure Programs (EEPs). However, controls over personnel costs vary across ULBs; controls over repairs & maintenance are weak relative to control over capital projects, especially on quality & completeness of works executed. There are significant internal control weaknesses, including delays in bank reconciliation, absence of formal budgetary controls, and multiple stand-alone accounting systems within a ULB. The absence of a system of periodic in-year consolidation of accounts impacts the timely preparation of entity financial statements and consequently audit (there is a backlog of two to three years in the audit of entity financial statements). These are primarily attributed to inadequate finance & accounts staff in the ULBs.

42. The overall financial management assessment identified the following principal risks: (i) a large number of executing agencies for sub-projects, which could delay funds flow and expenditure reporting on a regular basis, thereby impacting disbursements; and (ii) weak financial management systems and lack of adequate capacity in the three ULBs selected for the Results Based Grants for Urban Governance component. These risks will be addressed by capacity building support and close monitoring by TNUDF over sub-projects and to the ULBs, and through EEP-specific audits and capacity building, as well as linking FM strengthening actions as a DLI target.

D. Procurement

43. The main procurement agencies for the project will be CoC, ULBs, DMA, and TNUDF. Procurement of goods, non-consulting services and works will follow the "Guidelines for Procurement under IBRD Loans and IDA Credits" of 2011, updated July 2014. Similarly, consultants will be selected and employed according to the "Guidelines for Selection and Employment of Consultants by World Bank Borrowers" of 2011, and updated in July 2014.

44. Based on the assessment of implementing agencies, the main procurement risks were identified as limited capacity and inefficiencies resulting in delays in procurement and non-compliance with agreed procurement arrangements. Agreed mitigation measures are: use of skilled procurement staff; monitoring through the procurement plan and quarterly reports; TNUDF's review of procurement handled by ULBs; strengthening of MIS for procurement and contract management; training and on-going support provided by TNUDF (to ULBs) and the Bank (to all IAs); prior and post reviews by TNUDF and the Bank; and strengthening of the complaint management process.

45. A Procurement Plan for the first 18 months of project implementation, including contracts to be procured under advance contracting, has been agreed with the Bank. Details of procurement arrangements are provided in Annex 3.

E. Social (including Safeguards)

46. The proposed project will have positive social impacts owing to benefits such as improved water supply, sanitation, solid water management, safe disposal of rain water, improved waste collection and disposal practices, improved pedestrian facilities and other infrastructure improvements in participating cities. The project will also benefit the poor through the improvement of water and sanitation in slums and other vulnerable areas. The project will have a mechanism to monitor and evaluate benefits to women and girls as a result of the sub-projects. The project may have some adverse social impacts, including land acquisition and displacement of people, especially non-title holders, and use of private land. Since this project involves several sub-projects, an Environmental and Social Management Framework (ESMF) will be used to guide sub-project preparation, appraisal and implementation from the safeguards perspective.

47. Safeguard policy arrangements for the project are in continuation of the Environmental and Social Framework (ESF) that was used for TNUDP III, which has been updated taking into account changes in national and local policy provisions, especially the recently enacted "Right to Fair Compensation and Transference in Land Acquisition and Rehabilitation and Resettlement Act" (RTFCTLARR Act, 2013) and lessons learned from the previous project. The Bank's Operational Policy 4.12 (Involuntary Resettlement) has been triggered; however, OP 4.10 Indigenous Peoples Policy is not triggered, because the tribal population in urban areas does not exhibit characteristics that trigger the policy (such as living as a distinct group, speaking a separate language distinct from that of the dominant population and having separate institutions).

48. The project specific ESMF has strengthened the processes for screening, appraisal, consultations, disclosure, supervision and reporting on the implementation of sub-projects. TNUIFSL will be responsible for appraisal and supervision of safeguards in the sub-projects. The final ESMF consistent with Bank operational polices has been approved by GoTN and has been re-disclosed by TNUDF and DMA on March 06, 2015 and at the Bank's Info Shop on March 09, 2015. ESMF provisions will be applicable to the Urban Governance Component and for green-field sub-projects under the Credit Enhancement sub-component.

49. **Social Impacts of the Chennai SWD Sub-project**. A social impact assessment carried out for the Chennai SWD sub-project noted that sub-project activities will be restricted to the already available right of way. The assessment however identified that about 330 families (mostly squatters belonging to poor and vulnerable sections, including 110 female headed families) will be displaced and will require resettlement; some shopkeepers will also be affected. A Resettlement Action Plan (RAP), acceptable to the Bank, has been prepared and approved by CoC and has been disclosed on February 07, 2015 by CoC, TNUIFSL on March 06, 2015 and at the Bank's Info Shop on March 09, 2015. A Project Management Consultant (PMC) will assist CoC in the implementation of the RAP. Anna University will carry out overall storm flood modeling of Adyar and Cooum rivers for the sub-project area and the Chennai core city area, where such downstream impacts are likely. Based on the findings of this modeling study, appropriate mitigation measures will be taken by CoC during project implementation, including arrangements for advance flood warning systems.

50. **Grievance Redress Service**. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

F. Environment (including Safeguards)

51. Project investments are expected to contribute to positive environmental enhancements in the participating ULBs, particularly with the new focus on urban environment improvements under Component B. However, some negative environmental impacts typical of urban infrastructure projects are expected, especially during construction and to a limited extent during operation. As indicated above, the ESMF has been updated and disclosed. Key improvements to the ESMF used for TNUDP III include: updating safeguard categories for sub-projects to incorporate the experiences of earlier projects and the new initiatives envisaged under TNSUDP; updating sub-project review and appraisal process; incorporating the need for dedicated safeguard teams with the respective implementing agencies / cities; updating the latest regulatory changes, and

strengthening the terms of reference for safeguard studies and environmental management plans. The ESMF was disclosed locally on November 10, 2014 and at the Bank's InfoShop on November 11, 2014.

52. TNUIFSL will be responsible for ESMF implementation and the respective implementing agencies will be responsible for the preparation and implementation of safeguard management plans. TNUIFSL will appraise the safeguard management plans of each sub-project based on the revised ESMF; the appraised safeguard documents of all sub-projects categorized as having major environmental impacts will be shared with the Bank for review and approval.

53. To help with the implementation of ESMF and safeguard management plans, TNUIFSL will deploy dedicated environmental and social specialists. Each implementing agency will also have dedicated safeguard specialists to ensure the implementation of safeguard management plans. TNUIFSL will also carry out regular training, orientation and experience sharing programs to enhance the knowledge and capacity of various implementation partners. Budgetary provisions for safeguard activities are included in the project.

54. An Environment Assessment (EA) for the Greater Chennai SWD sub-project has been carried out consistent with the ESMF. The assessment identified the need for: (i) disposal of silt material from drains; and (ii) safety and construction site management. An environmental management plan has been developed to manage these issues and will be integrated in the bid documents to ensure implementation by the contractor. The draft EA for the Chennai SWD sub-project was disclosed locally on November 26, 2014 and at the Bank's InfoShop on November 27, 2014. The final ESMF has been re-disclosed locally on February 07, 2015 by CoC, TNUIFSL on March 06, 2015 and at the Bank's InfoShop on March 09, 2015.

Annex 1: Results Framework and Monitoring

India: Tamil Nadu Sustainable Urban Development Program (P150395)	
Results Framework	
Project Development Objectives	
PDO Statement	
To improve urban services delivery in participating ULBs in a financially sustainable manner and to pilot improved urban management practices in selected cities.	
These results are at	Project Level
Project Development Objective Indicators	

Indicator Name	Baseline	Cumulative Target Value						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Direct project beneficiaries (Number) - (Core).	0.00	0.00	0.00	0.00	500000.00	1000000.00	1500000.00	2000000.00
Female beneficiaries (Percentage - Sub-Type: Supplemental) - (Core).	0.00	0.00	0.00	0.00	40.00	40.00	40.00	40.00
Increase in Own Source Revenues (OSR) of 'Model Cities' in INR Crores over previous year with implementation of OSR improvement plans (Text).	INR 72 crores (FY 13)	ULBs have prepared a revenue improvement plan and an action plan to improve its OSR.	ULBs have adopted the revenue improvement plan and an action plan to improve OSR.	15.00	15.00	22.50	22.50	22.50
Additional financial resource mobilization from non-budgetary sources through credit enhancement and other means under the project (Amount in INR crores).	0.00	0.00	0.00	60.00	125.00	245.00	370.00	492.00

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Length of Storm Water Drains constructed / rehabilitated and made operational under the project for Greater Chennai (Kilometers).	0.00	0.00	50.00	100.00	150.00	200.00	260.00	290.00
No. of participating ULBs with new e-governance systems operational.	0.00	0.00	0.00	0.00	10.00	30.00	60.00	90.00
Proportion of new / rehabilitated water / sewer connections achieved against aggregate target amongst participating sub-projects in these sub-sectors (Percentage).	0	0	0	0	40%	50%	60%	70%
Repayment rates on sub-loans by TNUDF to ULBs (Percentage).	100.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
Number of participating ULBs with updated GIS maps	0.00	0.00	0.00	0.00	30.00	50.00	70.00	90.00
Percentage of participating ULBs seeking investment support reporting delivery of improved urban services in their cities.	0.00	0.00	0.00	0.00	30.00	50.00	70.00	80.00
Average Increase on MoUD Service Level Benchmarks (SLB) Index for the ‘Model Cities’ related to solid waste household collection coverage (Percentage).	65%	65%	65%	70%	75%	80%	85%	90%

Improved ULB empowerment in the ‘Model Cities’	Authority to approve capital works is low in terms of Administrative Sanction (AS) powers.	A government order (G.O.) has been issued to raise Administrative sanction to Rs. 2 crores for Vellore and Erode, and Rs. 80 lakhs for Hosur.	Each ULB has appointed a high quality Technical Expert Cell.		Each ULB has disclosed its audited financial statements for FY 2017-18 no later than September 30, 2018, pursuant to applicable laws, statutes, and rules.		.	Each ULB has adopted a sustainability plan for the technical expert cell’s functions and responsibilities after the Project’s closing date.
Improved ULB citizen engagement in the ‘Model Cities’	Grievances are received offline. Use of online grievance application is limited because of low levels of awareness, technical glitches and poor visibility of the website.		Each ULB has implemented all the e-governance modules as identified by DMA.			Each ULB has met grievance redressal response time requirement under its citizen charter in 80% of cases.		Each ULB has established an online platform to exchange information with citizens regarding key service delivery parameters.

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Direct project beneficiaries	Direct beneficiaries are city residents / businesses within ULBs participating in the project who directly derive benefits (e.g., families that have a new piped sewer connection).	Annual	ULB customer records / Sample surveys / Independent studies, etc.	ULBs under the coordination of DMA / TNUDF.
Female beneficiaries.	Percentage of beneficiaries estimated to be female.	Annual	ULB customer records / Sample surveys / Independent studies, etc.	ULBs under the coordination of DMA / TNUDF.
Increase in Own Source Revenues (OSR) of 'Model Cities' in INR Crores over previous year with implementation of OSR improvement plans.	Refers to own source revenue share of Model Cities (comprising property taxes, tariffs, local taxes, etc.) excluding devolution from GoTN.	Annual	ULB financial statements.	ULBs under the coordination of DMA / TNUDF.
Additional financial resource mobilization from non-budgetary sources through credit enhancement and other means under the project.	Measures non-budgetary financial resources mobilized under the project, including municipal bonds, capital contributions from beneficiaries, PPPs, etc.	Annual	Status reports from TNUDF.	TNUDF

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Length of Storm Water Drains constructed / rehabilitated under the project for Greater Chennai.	KM of storm water drains that have been constructed under the project and put to use within the defined geographical area of Greater Chennai.	Semi-Annual	Status / progress reports from Corporation of Chennai.	Corporation of Chennai under the coordination of TNUDF.

No. of participating ULBs with new e-governance systems operational.	Number of participating ULBs that have successfully implemented and made operational new municipal e-governance systems under the Institutional Development component of the project.	Annual	Status reports from ULBs, disclosure of ULB financial statements in the public domain, independent assessments, etc.	ULBs under the coordination of DMA / TNUDF.
Proportion of new / rehabilitated water / sewer connections achieved by participating sub-projects in these sub-sectors (Percentage).	Measured as the cumulative number of new / rehabilitated sewer or water connections provided under the project against the aggregate targets of participating ULBs with water supply or sewerage sub-projects.	Semi-Annual	Status reports from ULBs, independent assessments, etc.	ULBs under the coordination of DMA / TNUDF.
Repayment rates on sub-loans by TNUDF to ULBs.	Repayment rates on sub-loans made by TNUDF to participating ULBs under the project.	Annual	TNUDF Financial statements	TNUDF
Number of participating ULBs with updated GIS maps.	Number of participating ULBs that have successfully updated GIS systems.	Annual	Status reports from ULBs, independent assessments etc.	ULBs under the coordination of DMA / TNUDF.
Percentage of participating ULBs seeking investment support reporting delivery of improved urban services in their cities.	Those participating ULBs that have successfully commissioned sub-projects and have started delivering an improved urban service to their city residents.	Annual	Status reports from ULBs, independent assessments, sample surveys, etc.	ULBs under the coordination of DMA / TNUDF.
Average Increase on MoUD Service Level Benchmarks (SLB) Index for the Model Cities related to solid waste household collection coverage (Percentage).	Refers to primary collection of municipal solid waste in Model Cities.	Annual	Status reports from ULBs, independent assessments, sample surveys, etc.	ULBs under the coordination of DMA / TNUDF.
Improved ULB empowerment in the 'Model-Cities'.	Captures outcomes related to DLIs.	Year 1, 2, 4, and end of project	Status reports from 'Model Cities' and as per verification protocol.	ULBs under the coordination of DMA / Third Party Assessments.
Improved ULB citizen engagement in the "Model-	Captures outcomes related to DLIs.	Year 2, 5, and end of project	Status reports from 'Model Cities and as per verification	ULBs under the coordination of DMA / Third Party

Cities”			protocol.	Assessments.

Annex 2: Detailed Project Description

India: Tamil Nadu Sustainable Urban Development Program (P150395)

1. The proposed TNSUDP will have three components: (i) Results Based Grants for Urban Governance; (ii) Urban Investment; and (iii) Urban Sector Technical Assistance. Table 2-1 below summarizes project costs by component/sub-component and Bank financing for each.

Table 2-1: Costs by Component/Sub-component

	Component	Cost	Bank Financing	
		US$M	US$M	% of Total
A	**Results Based Grants for Urban Governance Component**			
	Disbursements against DLIs	60	54	13.5%
	Project Management, Incremental Operating Costs	1	1	0.3%
	Sub-Total A	**61**	**55**	13.8%
B	**Investments in Urban Services Component**			
B1*	Sub-loans to ULBs / ULB Contribution / Other Sources	272	146	36.5%
	Sub-grants to ULBs	192	146	36.5%
B2	Credit Enhancement (including CoC with not less than US$10 million for other ULBs)	20	18	4.5%
B3	TA for Project Development / Credit enhancement / TNUDF TA / CoC TA (including CoC with not less than US$10 million for other ULBs)	20	13	3.3%
	Sub Total B	**504**	**323**	80.8%
C	**Urban Sector TA Component**			
	Municipal E-governance / PFM and GIS	21.5	11.5	2.9%
	Knowledge and Institutional Strengthening	7	6	1.5%
	PPF	2	0	0.0%
	Project Management, Incremental Operating Costs	3.5	3.5	0.9%
	Sub Total C	**34**	**21**	5.3%
	Total A + B + C	599	399	99.8%
	Front End Fee	1	1	0.25%
	Total Project Cost	**600**	**400**	100.0%

* includes land acquisition and R&R costs

Component A: Results Based Grants for Urban Governance

2. The main objective of this component is to demonstrate new models on urban management in three selected ULBs (Model Cities), viz. Vellore and Erode Municipal Corporations and Hosur Municipality. These Model Cities will be empowered and incentivized to improve governance and service delivery performance such that they become role models for other ULBs across Tamil Nadu. This component would provide grants linked to performance / DLIs in specific reform areas. A detailed description of this Component is presented in Annex 5.

Component B: Investments in Urban Services

3. **Sub-component B1: Sub-loans for Urban Investments.** Under this sub-component, TNUDF will continue to provide Sub-loans to Sub Borrowers to improve urban services such as water supply, waste water collection, solid waste management, storm water drains, and urban transport / city roads. Within this gamut of interventions in urban infrastructure / services, there will be an emphasis on environmental sustainability and/or improvement in urban environment by way of focus on interventions related to waste-water collection and treatment / water reuse, storm water drains and restoration of water bodies in urban areas.

4. Sub-loans will be made by TNUDF to ULBs, city level public urban utilities and statutory boards for sustainable investments in basic urban infrastructure: water supply; waste water collection; solid waste management; storm water drains; roads and common facilities such as transportation networks; and sanitation facilities. TNUDF has an established framework / criteria for appraisal of sub-projects that are set out in an 'Operations Manual' and have been in use for a number of years.

5. **Sub-grants for Urban Investments.** Under this sub component, PSGF will provide Sub-Grants to Sub-Recipients. Sub-Grant / Capital grants will finance: (i) cost of Resettlement and Rehabilitation (R&R) for sub-projects, social and environmental mitigation plans; (ii) sub-projects that directly benefit urban low income groups (adding up to at least 20% of beneficiaries); (iii) project management support to ULBs for contract supervision and supervision of sub-projects; and (iv) financial viability support for sub-projects with environmental externalities, such as sewerage sub-projects.

Chennai Storm Water Drainage Sub-project

6. The first sub-project, viz. Greater Chennai Storm Water Drainage (SWD) sub-project, accounts for 30% of the TNSUDP loan amount and has been appraised. It will involve constructing and rehabilitating 329 km of storm water drains in newly added (peri-urban) areas of Chennai Corporation and is expected to benefit over 0.8 million city residents through reduced incidence of flooding and consequent damages / disruptions, as well as improvement in sanitation and health of inhabitants.

7. The sub-project area comprises some of the peri-urban areas that were newly added to CoC, which hitherto did not have a comprehensive drainage network. This includes parts of Valasavakam, Ambattur and Alandur administrative zones[3] of CoC (54 sq. km) that are linked to Adyar and Cooum rivers and drain into them. The sub-project will support drainage networks in these areas, which will then be capable of draining the designed peak storm water runoff developed in these basins to natural waterways, canals and to Adyar and Cooum rivers and ultimately to the Bay of Bengal. Table 2.2 below summarizes the costs of this sub-project.

[3] The area of Corporation of Chennai has been increased from 174 sq. km. to 429 sq. km. in the year 2011, consequent to merger of peri-urban areas comprising 9 Municipalities, 8 Town Panchayats and 25 Village Panchayats.

Table 2-2: Costs for Chennai SWD

Sl No	Description	Total Cost (INR Crores)
1	Construction of Arterial Drains	256.84
2	Construction of Feeder Drains	231.27
3	Construction of Collector Drains	293.30
4	Reconstruction of existing Drains	110.91
5	Demolishing of old Drains	1.69
6	Provision for flap gates (where FSL of receiving body is higher)	2.19
7	Construction of culverts	41.13
8	Provision for construction of drains across Roads and Railways through Push Through Technology	18.65
9	Provision for cost of desilting machines	8.40
10	Provision for cost for Environment Management Plan	0.76
11	Provision for providing Ramp to culverts for smooth rides	4.88
12	Provision for providing temporary arrangements for crossing drains during execution	0.40
13	Resettlement of displaced families	31.00
	Sub-Total	**970.43**
14	Contingencies @ 3.50%	33.97
15	Escalation @ 10%	97.04
	Total Project Cost	**1101.43**

8. ***Project Management Consultants (PMC).*** CoC will recruit PMCs whose scope of work will include resurvey and redesign (before commencement of work) using standard software for SWD, assisting in bid evaluation, contract management for time and cost control, quality assurance, safety monitoring, EMP requirements, bill certification etc.

9. ***Urban Flood Modeling.*** Adyar and Cooum rivers flow through the sub-project area and Chennai core city, carrying storm water flows from these areas as well as storm flows from upstream catchments / overflows from Chembarabakkam reservoir. In order to assess flood conditions both in the sub-project area and (potential) down-stream impacts in Chennai city comprehensively and in real-time during project implementation, a storm flood modeling study is being undertaken by Anna University. Based on this flood modeling exercise, suitable mitigation measures such as flood advance warning system would be taken by CoC to deal with floods in downstream areas.

10. ***Institutional Capacity Building of CoC for (a) running flood models, (b) undertaking flood risk mitigation measures, and (c) efficient maintenance of drainage network*** (included as TA under Component C). Phase II of flood modeling by Anna University will be implemented during TNSUDP implementation. Anna University will operate the models for about three years, and hand them over to CoC after building the latter's capacity. The capacity building would entail, at a minimum:

- Real time flood risk prediction models.
- Equipment, systems, and skilled manpower to run the models on an on-going basis.

- Strategies to mitigate flood risks and their impacts, including the definition and operationalization of institutional coordination mechanisms.
- Proper communication strategies to forewarn people and obtain their feedback on a regular basis.
- Provision of on-going funds to maintain and run the systems, retain staff and enhance their skills.

11. In addition, effective maintenance of the drainage network requires regular upkeep of drains through the reconstruction of damaged drains, desilting of drains and channels, prevention of dumping of solid waste/entry of sewage into drains, and safeguarding right of way. This will be achieved through the following project activities:

- Operational strategies, necessary equipment, manpower and funding.
- Communication with the public to raise awareness.
- Systems to obtain regular feedback from the community.

Other sub-projects

12. A summary of other sub-projects tentatively identified at this stage and their costs is shown in the table below – together with Chennai SWD sub-project, these account for over 50% of TNSUDP Loan. These investments would help in improving the *overall urban living environment*, through: (i) restoration of water bodies (e.g., lakes) through storm water and treated sewage effluents; (ii) improving the surroundings of restored water bodies; (iii) maintaining natural water bodies through safe disposal of treated sewage; (iv) conservation of water resources through recycling of treated sewage for industrial use; and (v) improving pedestrian/traffic movement through integrated provision of pedestrian facilities, traffic management and parking facilities, international standard roads and commercial areas. Along with investments, the project will also promote *urban service delivery and management* through: (i) focus on service improvement and performance; (ii) building institutional capacity for asset management, governance and citizen interface; (iii) adoption of advanced technologies, Information and Communication Technologies.

Table 2-3: Tentative pipeline of sub-projects

(Amounts in Rs. Crores)

S/No.	Name of the Sub-project	Project Cost	Sub-Loan from TNUDF		Sub-Grant from TNUDF		ULB Contribution	
			Amount	%	Amount	%	Amount	%
I	**Corporation of Chennai**							
2	Improvements to Roads to international standards	135.00	81.00	60%	40.50	30%	13.50	10%
3	Pedestrianization of T.Nagar	83.00	49.80	60%	24.90	30%	8.30	10%
4	Restoration to Narayanapuram Lake	15.67	9.40	60%	4.70	30%	1.57	10%
II	**Other ULB sub-projects**							
5	Lake restoration in Pallavaram Municipality	22.02	13.21	60%	6.61	30%	2.20	10%
6	Tertiary Waste Water Plant in Kodungaiyur by CMWSSB	255.00	153.00	60%	76.50	30%	25.50	10%

7	Hosur Sewerage	283.94	56.79	20%	198.76	70%	28.39	10%
Total		**794.63**	**363.20**		**351.97**		**79.46**	

13. **Sub-component B2: Credit Enhancement Sub-component.** Tamil Nadu is a pioneer in mobilizing resources from financial markets for urban infrastructure through municipal bonds; to date US$64 million has been mobilized by issue of bonds for financing viable urban projects. This sub-component will seek to further deepen this process by facilitating the enhancement of the credit rating of sub-projects / ULBs / WSPF to approach capital markets for investments. A more detailed description is presented in Annex 6.

14. **Sub-component B3: Project Development Advisory Facility (PDAF) / TA for CoC and TNUDF.** This sub-component would provide technical assistance through PGDF for the following purposes: (i) to ULBs for preparing and implementing sub-projects at ULBs (excluding Chennai) including environmental and social mitigation actions, detailed project reports, contract supervision, urban Public Private Partnerships (PPPs); (ii) Training and Institutional strengthening of TNUDF, including knowledge exchange programs, "twinning" arrangements with other similar 'municipal funds' globally; and (iii) to ULBs for preparing and executing market financing transactions, such as municipal bonds / commercial bank loans, hiring rating agencies, and transaction advisors. In addition, this sub-component would include TA support to CoC for: (i) building CoC institutional capacity in urban flood risk mitigation; (ii) preparation and implementation of urban investment sub-projects; and (iii) TA for general urban management, as well as accessing market based financing.

<u>Component C: Urban Sector Technical Assistance</u>

15. This component is aimed at strengthening the capacity of ULBs and urban sector officials in specific areas, as well as supporting reforms in urban finance and sector policies through: (i) Support for the next generation of municipal e-governance system and GIS systems covering a majority of ULBs in TN; (ii) Institutional Development and Capacity Building, including training, sector studies, O&M and financial strengthening of ULBs; and (iii) Project management, incremental operating costs, etc. at DMA. A more detailed overview of some of the activities is presented below.

16. **E-Governance and Public Financial Management.** The project will build on reform initiatives under TNUDP III on e-governance and public financial management. The project will support the following activities:

- Support roll out of the centralized Web-enabled Application for e-Governance, including financial management modules in all ULBs.
- Scale up of GIS Systems in the remaining 118 ULBs.
- Roll out of Mobile based applications, including training and support to cover staff in all ULBs.
- Central Citizen Portal as a common gateway for accessing application software on an integrated web-based platform.

- Citizen Service Centers in ULBs to support easier and efficient service delivery to citizens.
- Strengthening the ICT Infrastructure by upgrading ICT assets and infrastructure, including desk tops.

17. **Public Financial Management strengthening in ULBs.** Key activities to be supported under the project include:

a) **Establishment of a dedicated Public Financial Management Reform Cell (PFM Reforms Cell) within the office of DMA to help implement and sustain PFM reforms.** The PFM reform cell/consultants would: (i) work with the systems integrator to ensure proper development, testing & roll out of the FAS with a focus on the pilot ULBs; (ii) develop migration strategy for and assess migration readiness of ULBs; (iii) focus on change management, including training & capacity building for existing accounts staff, staff of the new municipal accounts cadre and LFAD; (iv) monitor the roll out and scale up, and where necessary oversee field level support firms; (v) support implementation of the audit of ULBs as per the new audit manual; and (vi) maintain the updated dashboard on municipal finance performance. DMA/GoTN will also create some permanent posts and depute officers to the reform cell.

b) **Field level support consultants.** The scope of work of the Consultants will vary, based on the status of accounting / financial management records in individual ULBs, but will include assessment of readiness for migration and support data cleaning for migration, including (i) updating the backlog in accounts, (ii) bank reconciliation, and (iii) reconciliation of property tax Demand Collection Book (DCB) with financial accounts (i.e., receivables data).

c) **Developing Tamil Nadu Institute of Urban Studies (TNIUS) as a Centre of excellence for capacity building & training.** Activities will include (i) updating & developing training modules, including certification courses, in collaboration with TNIUS for accounts and finance staff of ULBs, Municipal Commissioners & Engineering Staff (Finance for Non – Finance Managers) and courses on accounting and finance for municipal accounts staff.

d) **LFA Capacity Building** on financial attest audit of ULBs.

18. Activities to be financed will include consultancies (firms and individuals, salaries of staff deputed to the PFM reform cell, goods, including office equipment for the cell, training (including development and printing of training material and delivery of training, cost of trainers, etc.,) and operating costs.

19. **Municipal Accounts Cadre**: Capacity building / training support would be provided to municipal accounts cadre staff, who are being recruited by GoTN.

Annex 3: Implementation Arrangements

India: Tamil Nadu Sustainable Urban Development Program (P150395)

Project Institutional and Implementation Arrangements

1. **Executing Agencies.** The Department of Municipal Administration and Water Supply (DMAWS) will have overall responsibility for project coordination and urban sector reforms under TNSUDP.

2. **Component A: Results Based Grants for Urban Governance**. DMA would implement this component in the three participating ULBs. DMA would engage suitable independent verification consultants to assess performance on DLIs.

3. **Component B: Investments in Urban Services.** Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) will be responsible for implementing the urban investment component, managing the Tamil Nadu Urban Development Fund (TNUDF), making loans to ULBs, and administering PSGF for providing capital grants to ULBs. TNUDF is run as an autonomous Fund with full management autonomy.

4. TNUIFSL will also manage the PDGF through which the Project Development and Advisory Facility (PDAF) for the preparation and supervision of sub-projects, PPPs and Credit Enhancement related TA, besides other TA for TNUDF and CoC would be provided. A committee will be created for overseeing urban flood modeling and CoC's capacity building for it, consisting of CoC, TNUIFSL, Anna University and external experts. The Directorate of Municipal Administration (DMA) will also help ULBs prepare sub-projects and provide Technical and Administrative Sanctions. ULBs will be responsible for implementation, which would be jointly reviewed by TNUIFSL and DMA.

5. Institutions wishing to borrow for infrastructure investments under Sub-Component B1 (predominantly ULBs, but Statutory Boards and city utilities will also be eligible) will submit applications for sub-project financing to TNUDF, and inform DMA. Preparation would be reviewed jointly by DMA and TNUIFSL through a committee, consisting of DMA, TNUIFSL, ULB and experts. Based on this concurrent review of sub-project preparation, DMA will provide Administrative and Technical Sanctions and TNUIFSL will undertake and complete a detailed appraisal of the proposed sub-project, including review of technical, financial, economic, social, environmental and legal aspects. For sub-projects to be reviewed by the Bank, intermediate reports would be sent to the Bank for comments. In practice, sub-project preparation will be undertaken by consultants in accordance with the Operations Manual, including the Environmental and Social Management Framework (ESMF), and financed from the PPF for standard engineering designs or routine projects or from PDAF. Efforts would be made to complete the Administrative and Technical Sanctioning process at DMA and TNUIFSL appraisal almost at the same time to avoid delays in loan approval. After satisfactory appraisal, financing of the sub-project would be approved by TNUIFSL. TNUIFSL, along with DMA, will monitor the implementation of sub-projects (for which the sub-borrowers will be

required to submit regular progress reports) and will undertake post-implementation evaluations. The ‘Operations Manual’ outlines the requirements.

6. At the ULB level, municipal engineers will be responsible for implementation supervision of sub-projects. They would be assisted by consulting engineers. Where there is no external consultancy support, DMA will ensure that there is adequate institutional support to the ULBs in implementation monitoring through an active role of its regional RDMA offices, and through capacity building of ULB engineers.

7. **Component C: Urban Sector TA**. The existing ‘TNUDP cell’ within DMA to oversee capacity building / TA activities will be further strengthened with adequate staff to carry out the expanded responsibilities. A Financial Advisor will be responsible for accounting, reporting and audit of this component. DMA will prepare an annual rolling training plan for implementation. Almost all of the training programs will be outsourced.

Financial Management, Disbursements and Procurement

Financial Management

8. Financial management arrangements for the project are in compliance with OP/BP 10.00 and are considered adequate to account for and report on expenditures under the project.

9. **Budget.** Funding requirements for the project, including counterpart funds, will be budgeted within the demand for grants of MAWS with a separate budget line for TNUDF and DMA. This will be further detailed with separate heads for loans, grants and credit enhancement and TA components. Both TNUIFSL and DMA have sent requests to GoTN for budget provision, which will be reflected in the first supplementary budget of FY 2015-16.

10. **Fund Flow.** Funds flow arrangements will be as follows:

a) GOTN will credit funds to TNUDF's account in the Public Account of the state for on- lending /granting to ULBs. TNUIFSL, on behalf of TNUDF, will be allowed to draw funds into a commercial bank account on a quarterly basis in accordance with annual work plans (i.e., loan/grant requirements against sub-projects) and for the TA component of both TNUDF and CoC. TNUDF will release funds (loans/grants) to ULBs to finance sub-projects in tranches, based on approved sub-project plans and financial & physical progress.

b) DMA will withdraw funds from the GoTN Treasury on a quarterly basis for the technical assistance component and deposit them into a commercial bank account from where project expenditures will be incurred. Transfers to the model ULBs on achievement of DLIs will be made by the Pay & Accounts office (PAO), based on bills presented by the financial advisor in DMA.

11. **Accounting Policies (other than for the Results Based Grants for Urban Governance Component). TNUDF** follows accrual based accounting in accordance with statutory

guidelines applicable to limited companies in India. The company has an operations manual and financial accounting is fully computerized. It has well defined policies & procedures relating to project appraisal (assessment of sub-projects), loan & grant documentation, loan accounting, disbursement, classification of loans and loss provisioning. Financial monitoring of end use of funds (loan/grant) against sub-projects by ULBs is done off-line (in excel sheets) and subsequent tranche releases are based on utilization of earlier tranches.

12. **ULBs** are required to deposit sub-project funds in a separate bank account wherein the ULB share is also deposited. Payments to contractors / suppliers are made from this account. ULBs follow accrual accounting policies, although in practice accrual entries are normally passed only at year end. For specific sub-projects implemented through TWAD/CMWSSB (complex sewerage and water supply schemes) ULBs will release loan/capital grants received from TNUDF/PSGF to the implementing agency for payments to contractors. Both TWAD/CMWSSB have IT based accounting systems, which enable sub-project accounting & reporting. ULB entity audit reports are delayed by 2-3 years, primarily due to lack of adequate & trained accounts / finance staff in ULBs, merger of smaller municipalities and town and village panchayats in 2008-10 (which has impacted the financial accounting in certain larger ULBs) and to an extent audit practices followed by the Local Fund Auditor (LFA).

13. **DMA** will maintain project accounts on cash basis for the capacity building components that it will implement. Accounts are maintained using a commercial off the shelf accounting software, which permits reporting by sub-component and activities.

14. **Internal Control.** The internal control framework and practices in TNUDF are robust, supported by a standardized framework and effective compliance. Internal audit is carried out by a firm of chartered accountants. The framework for internal controls in ULBs (as documented in the new municipal accounting manual) is sound, but the level of compliance varies across ULBs primarily due to lack of adequate finance and accounts staff. In large corporations, Local Fund Audit (LFA) carries out concurrent audit of transactions. Weaknesses in internal control will be mitigated by having a separate bank account for project funds and audit of sub-projects by LFA based on a specific TOR. Internal control weakness is relatively higher in the DMA, as it operates through a project specific bank account. This however is mitigated by the C&AG external audit.

15. **Urban Governance Component.** Eligible Expenditure Programs (EEPs) identified in the three Model Cities include: (i) personnel costs; (ii) pension and retirement benefits; (iii) repairs & maintenance; and (d) operating and administrative costs incurred by the ULBs across the General Revenue & Capital Fund, Water Supply Fund, and Education Fund.

16. The fiduciary assessment of the Model Cities indicates that: (i) a standard budget and account code structure is followed by all ULBs, which will enable clear identification of the EEPs; (ii) controls over salary payments vary; (iii) controls over repairs & maintenance are weak, relative to control over capital projects, especially on quality & completeness of works executed; (iv) there are significant internal control weaknesses, i.e., delays in bank reconciliation, absence of periodic in-year consolidation of financial information from decentralized payment & accounting systems within ULBs, delays in advance settlement and

reconciliation of control accounts, and significant delays in the preparation of entity financial statements and consequently audit (primarily due to inadequate finance & accounts staff in the ULBs); and (v) consequent backlog of two to three years in the audit of entity financial statements.

17. Model Cities will submit an annual financial report to the DMA within four months of the close of the financial year, showing the unaudited EEPs incurred by them. Disbursement against DLIs will be limited to the amount of reported EEPs, if the reported EEP value is less than the DLI value. Model Cities will be incentivized to implement PFM reforms (i.e., migration to the centralized web based financial accounting system and improvement in entity audit timelines) through a separate DLI. Accordingly the entity audit backlog is not being made an eligibility criterion. The PFM DLI, coupled with alternate assurance arrangements for EEPs to be financed by the Bank loan, provides adequate comfort.

18. **Credit Enhancement Sub Component.** The US$20 million under this sub-component will be used to set up a Credit Enhancement Fund (CEF) and it will be a capitalized facility. CEF will be set up as a separate account that is a dedicated, non-lapsable funded (cash) corpus created within PSGF and operated by TNUIFSL. Funds will be transferred to the dedicated account, based on structuring & final agreement of individual proposals, and on fulfillment of conditions. PSGF will maintain separate books of account for CEF and prepare annual accounts and conduct an annual audit of the CEF. Direct expenditure on rating agency fees etc., will be met under the TA component, while management fees to TNUIFSL will not be claimed from the Bank.

Table 3-1: Expenditure Eligibility, Financial Reporting & Disbursement:

Component	Expenditure Eligibility	Reporting entity	Frequency	Timeframe
Component B1/ B3 (Urban Investments & PDAF)	Expenditures reported by ULBs against sub-projects financed by TNUDF (loans/grants).	TNUDF, based on financial reports from ULBs.	Quarterly	Within 45 days of end of the quarter.
Component A (Model City)	Grants released by DMA against DLIs achieved, supported by reported EEPs.	DMA, based on verified DLIs and supported by reported EEPs.	Annual	-
Component B2-Credit enhancement.	Fund Transfer to designated CEF bank account as per terms of specific fund raising structure.	TNUDF	Quarterly	Quarterly
Component C (Inst'l Bldg and TA).	Expenditures incurred & reported by DMA.	DMA	Quarterly	Within 45 days of end of the quarter

19. **Financial Reporting.** TNUDF will prepare and submit quarterly IUFRs for component B within 45 days of the end of the quarter, while IUFRs for component C will be submitted by DMA on the same basis.

20. **External Audit.** Audit reports to be provided to the Bank within nine months of the close of the financial year are listed in Table 3.2.

Table 3.2: Audit Reports

Implementing Agency	Audit	Auditors
DMA	Project Audit Report- for Component C.	Comptroller & Auditor General of India.
TNUDF	Project Audit Report (Component B1, B2 & B3) including sub-project audit reports from sub-implementing agencies (CoC, ULBs TWAD / CMWSSB).	Firm of Chartered Accountants acceptable to the Bank for TNUDF and sub-projects executed by TWAD & CMWSSB. LFA in case of sub-projects executed by ULBs.
DMA	Project Audit report covering EEPs in the three model ULBs supported by CAG audit on the transfers to the three model ULBs.	C&AG for the DLI transfers and firm of Chartered Accountants acceptable to the Bank for audit of EEPs reported by model ULBs.

21. **Retroactive Expenditures.** This will include eligible expenditures related to advance activities carried out during the preparation phase of TNSUDP as well as spill-over expenditures from TNUDP III. Retroactive financing of up to US$40 million may be provided for such eligible expenditures incurred within one year prior to the expected Loan signing date.

Procurement

22. The main procurement agencies will be Chennai Corporation, ULBs, DMA and TNUDF. Procurement for the project will be carried out in accordance with the Bank's "Guidelines: Procurement of goods, works and non-consulting services under IBRD loans and IDA credits & grants by Bank borrowers" dated January 2011 as updated in July 2014 ("Procurement Guidelines") and "Guidelines: Selection and employment of consultants under IBRD loans and IDA credits & grants by The Bank borrowers" dated January 2011 as updated in July 2014 "(Consultant Guidelines)", as well as the additional provisions mentioned in legal agreement.

23. **Procurement arrangements**. In the Corporation of Chennai (CoC), the TNSUDP PMU (which has two procurement staff) will handle procurement. Bids will be invited by CoC and the contract award will be approved by a high level committee chaired by the Commissioner. Other ULBs will also have similar arrangements, though procurement capacity may vary. E-procurement will be introduced in phases to increase efficiency and transparency of procurement. The cost of the PMUs forms a part of sub-project costs.

24. **Internal Review Mechanism**. For the procurement conducted under the ULB Infrastructure Investments sub-component, TNUDF will prior review all procurement, irrespective of the value of the package.

25. **Procurement Planning**. For each contract to be financed by the Loan, the different procurement methods or consultant selection methods, the need for pre-qualification, estimated costs, prior review requirements, and time frame will be reflected in the Procurement Plan to be

agreed between the Borrower and the Bank project team. Since sub-loans to ULBs are demand driven, the value and number of packages cannot be specified in advance. The procurement plan will be updated annually (or at any other time as required) and will reflect changes, if any, to prior review thresholds as well as changes in thresholds for procurement methods. Contracts (mainly for civil works) worth about US$180 million are in the process of being bid under Component B related to the Chennai SWD sub-project under advance contracting.

26. **EEP for DLIs**. Even though EEP expenditures include mainly salaries and operating expenses, some small value maintenance contracts (less than US$100,000 equivalent) are also issued by municipalities. These fall within the current shopping threshold of the Bank. ULBs apply Tamil Nadu Transparency in Tenders Act for procurement of these contracts, which includes transparency measures (such as open competition and online public bid opening), which are more stringent than Bank requirements for shopping. ULBs will use NIC e-Procurement System, which has been approved by the Bank, for these contracts. As the risk involved in this approach is limited, it is proposed to rely on the statutory auditors of ULBs to audit these contracts. Bank will however review the audit reports and will intervene if any major irregularity is noted in procurement contracts.

27. **Procurement risk assessment**. The table below describes major procurement-related risks and the mitigation plan. The risk ratings have been decided based on both the probability of occurrence of various events as well as their likely impact. Based on the risk factors and mitigation measures, the overall residual procurement risk rating for the project is determined as **"**Substantial**".** The residual rating on procurement will be reviewed and updated periodically.

Table 3.3: Assessed Procurement Risks and Mitigation Measures

Risk Factor	*Initial Risk*	*Mitigation Measure*	*Completion Date*	*Residual Risk*
Limited capacity and inefficiencies resulting in delays in procurement processes.	High	• Use of skilled procurement staff for handling procurement of services. • Monitoring through procurement plan and quarterly reports. • TNUDF's review of procurement handled by ULBs. • Strengthening of MIS for procurement and contract management.	Continuous from Year 1	Substantial
Non-compliance with agreed procurement arrangements.	High	• Training and guidance provided by TNUDF (to ULBs) and the Bank (to all IAs). • Prior and post reviews by TNUDF and the Bank. • Strengthening of complaint management process.	Continuous from Year 1	Substantial
Overall Risk	**Substantial**			**Substantial**

28. **Procurement Methods.** The table below describes the various procurement methods to be used for activities financed by the proposed loan. These, along with the agreed thresholds, are

included in the Procurement Plan. The thresholds indicated below table apply to the initial 18 month implementation period; these thresholds will be modified as required. Domestic preference will be applicable for procurement of goods under International Competitive Bidding (ICB) as per Appendix 2 of the Procurement Guidelines.

Table 3.4: Procurement Methods

Category	***Method of Procurement***	***Threshold (US$ Equivalent)***
Works	International Competitive Bidding (ICB)	> 40,000,000
	National Competitive Bidding (NCB)	Up to 40,000,000 (with NCB conditions)
	Shopping	Up to 100,000
	Direct Contracting (DC)	As per paragraph 3.7 of Guidelines
	Public-Private Partnership (PPP) for Works	As per paragraph 3.14 of Guidelines
	Force Account	As per paragraph 3.9 of Guidelines
	Framework Agreement (FA)	As per paragraph 3.6 of Guidelines
Goods and non-consultant services	International Competitive Bidding (ICB)	> 3,000,000
	Limited International Bidding (LIB)	wherever agreed by Bank
	National Competitive Bidding (NCB)	Up to 3,000,000 (with NCB conditions)
	Shopping	Up to 100,000
	Direct Contracting (DC)	As per paragraph 3.7 of Guidelines
	Public-Private Partnership (PPP) Services	As per paragraph 3.14 of Guidelines
	Force Account (only for NCS)	As per paragraph 3.9 of Guidelines
	Framework Agreement (FA)[4]	As per paragraph 3.6 of Guidelines
	Procurement from United Nations (UN) Agencies	As per paragraph 3.10 of Guidelines
Consultants' Services	Selection Based on Consultants' Qualifications (CQS)/Least-Cost Selection (LCS)	Up to 300,000
	Single-Source Selection (SSS)	As per paragraphs 3.9-3.11 of Guidelines
	Individuals	As per Section V of Guidelines
	Particular Types of Consultants	As per paragraphs 3.15-3.21 of Guidelines
	Quality- and Cost-Based Selection (QCBS)/ Quality-Based Selection (QBS)/ Selection under a Fixed Budget (FBS)	for all other cases
	(i) International shortlist (ii) Shortlist may comprise national consultants only	> 800,000 Up to 800,000

[4] DGS&D rate contracts may be used as framework agreement (FA) provided:

- Use of DGS&D rate contracts as FA must be reflected on the procurement plan agreed by the Bank for particular goods.
- Before issuing the purchasing order, the implementing agency will carry out a price analysis on the specific good that is intended to be purchased. If after this due diligence the implementing agency concludes (and Bank agrees) that the DGS&D rate contracts are more advantageous, DGS&D rate contracts may be used as FA.
- To meet the Bank's requirements for right to audit and F&C, these clauses may be included in the Purchase Orders (in case the purchasers are directly placing the purchase orders to DGS&D rate contract holders). On the other hand, if indent is placed through DGS&D, the Purchaser has the option to sign a separate undertaking with DGS&D rate contract holder, where Bank's right to audit and F&C clauses could be mentioned.

29. **World Bank review of procurement.** The Bank will prior review the following contracts:

a) Works: All contracts more than US$10 million equivalent.
b) Goods: All contracts more than US$1 million equivalent.
c) Services (other than consultancies) and IT systems: All contracts more than US$1 million equivalent.
d) Consultancy services: > US$500,000 equivalent for firms and > US$200,000 equivalent for individuals.

30. In addition, the justifications for all contracts to be issued on the basis of LIB, single-source or direct contracting (except for contracts less than US$50,000 in value) will be subject to prior review.

31. **Use of government institutions and enterprises**. Government-owned enterprises or institutions in India may be hired for activities of a unique and exceptional nature, if their participation is considered critical to achievement of project objectives. In such cases, the conditions provided in clause 1.13 of the Consultant Guidelines will be satisfied.

Environmental and Social (including Safeguards)

32. **Environmental Safeguard Risks.** The key environmental safeguard risks associated with the project include (i) inadequate implementation of environmental management plans recommended as part of the sub-project environmental assessments; (ii) safety and construction site management issues during the implementation of sub-projects; (iii) lack of environmental safeguard management capacity in the implementing agencies. To address these issues, the project incorporates: (i) appointment of dedicated environmental specialists with the implementing agencies; (ii) incorporation of environmental management plans in bid documents; (iii) training and capacity building activities for implementing agencies; and (iv) regular supervision by the experienced safeguards team of TNUIFSL and reporting on the implementation of environmental safeguards.

33. **Social Safeguard Risks.** The likely risks on social safeguards include, but not limited to: delays in payment of compensation and R&R assistance, as the State Government does not support these expenses to ULBs and expenditures above a certain level require government approvals; (ii) selection of suitable sites for the proposed facilities, with appropriate consultations with people living close to the sites and thus avoid changing sites during implementation; (iii) inadequate safeguards capacity at the sub-borrower level; (iv) safeguards readiness and coordination with procurement and civil works time table ; and (v) complex urban challenges in dealing with the squatters and encroachers and multiple claims and pressures to include additional people for project benefits and entitlements. To deal with the above risks, procurement clearances will be linked to safeguard readiness, appropriate grievance mechanisms will be put in place, and safeguards implementation support and capacity at the sub-borrower level will be strengthened.

34. **Environment and Social Management Framework (ESMF)**. A project specific ESMF for TNSUDP has been prepared and approved for TNUIFSL to screen, appraise and supervise sub -

projects. The project is likely to finance some investments which will involve complex safeguard issues, which will come under the Bank's classification of Category A sub-projects. The ESMF has provisions to deal with adverse environmental and social impacts, as well as the selection of sites for new facilities for sub-projects and also a provision for an independent annual Environment and Social Audit. There is a provision in the ESMF for the establishment of a sub-project level grievance redress committee. These committees will include a representative of the ULB, a person of repute from the local area, and an elected representative. All costs related to land acquisition and R&R assistance paid in cash will be met out of counterpart funding.

35. TNUIFSL will be responsible for appraisal and financing of sub-projects and monitoring compliance with ESMF. The respective implementing agencies, mainly the ULBs, will be responsible for implementation of sub-projects and related safeguards. The ESMF has proposed a role for the Directorate of Municipal Administration (DMA), the concerned line department for ULBs, to have safeguard specialists to complement the supervision of sub-project implementation and also provide support to ULBs in getting approvals and clearness from the Government on LA and R&R matters from the district administration.

36. The ESMF will be applicable to all sub-projects financed under the project and will also be applicable to all TA studies to be financed under the loan. Wherever DPRs and related studies are prepared, corresponding environment and social impact assessments will be undertaken and relevant mitigation plans will be prepared using the process and provisions of ESMF. These will be reviewed by the Bank and approved by competent authorities of GoTN, and will thereafter be disclosed by TNUIFSL and other relevant agencies. However, implementation of such plans will not be subject to Bank's supervision, unless they are financed under the loan.

37. **Grievance Redress Service**. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

38. **LARR Act, 2013**. This new Act replaced the Land Acquisition Act of 1894 and seeks to balance the interests of land owners, project affected people and the acquirers, and links land acquisition and the obligations of resettlement and rehabilitation. This law also provides that no one shall be dispossessed of their land and assets until payments are made and alternative resettlement sites have been prepared. This Act significantly reduces the differences between India's national standards for land acquisition and R&R and the Bank's operational policy requirements in relation to compensation, transitional support, resettlement sites, support to

vulnerable people, grievance mechanisms, consultations, disclosure, etc. The proposed ESMF for the project has incorporated the provisions of the new Act as well as the provisions of the Bank's operational policy on involuntary resettlement.

39. **Technical Assistance (TA).** As part of TA, budgets have been provided for safeguards capacity building in ULBs. TNUIFSL / DMA will manage the capacity building initiatives. The ESMF requires that reports of TA studies involving safeguards will be prepared in line with ESMF provisions and will be reviewed by the Bank and approved and disclosed by the client.

40. **Chennai SWD Resettlement Action Plan (RAP).** The Social Impact Assessment and RAP prepared for this sub-project have confirmed that about 330 families, mostly squatter families belonging to poor and vulnerable sections (including 110 women-headed families) will be displaced and will require resettlement; some shopkeepers will also be affected. However, no private land acquisition is involved since the improvements will be restricted to already available Right of Way (RoW). The Resettlement Action Plan (RAP) describing baseline socio-economic characteristics of displaced families, alternative resettlement measures, institutional and implementation arrangements including grievance mechanisms and monitoring and evaluation, timetable and budget, has been prepared and approved by CoC and disclosed on Februaury 07, 2015 by CoC, TNUIFSL on March 06, 2015 and at the Bank's Info Shop on March 09, 2015. The four contracts with resettlement impacts in this sub-project will be awarded only after all displaced families are fully resettled to the new locations. A sub-project level grievance committee will be constituted and those who are not satisfied with the outcome may appeal to the Commissioner, CoC, who will act as an appellate authority.

41. **Borrower's Capacity Assessment.** As part of the implementation of TNUDP III, TNUIFSL and some of the ULBs were exposed to the Bank's safeguard policies and are familiar with Bank safeguards procedures and requirements. Two Safeguard Specialists (Environment and Social) are part of TNUIFSL and have been associated with TNUDP III for more than five years. Safeguards capacity of key participating local bodies and other implementing agencies will be strengthened by TNUIFSL. TNUIFSL / DMA will put in place a Training Plan for enhancing the safeguards capacity of ULBs and other implementing agencies, which will be implemented through the institutional development component of the project.

42. CoC, the implementing agency for the Chennai SWD sub-project has limited capacity and exposure to Bank safeguard policies. It is proposed to strengthen the Storm Water Drainage Department of CoC with two safeguard specialists (Environment and social) through a combination of in-house staff, Project Management Consultants (PMC) with experienced safeguard specialists and additional social workers. Safeguards capacity of other participating local bodies and other implementing agencies will be strengthened as required.

Monitoring & Evaluation

43. TNUDF will have overall responsibility for monitoring and collating all information under TNSUDP and reporting to the Bank. This would include monitoring progress of various project components, procurement / contract progress, financial management, safeguards, and progress

on achievement of results indicators. However, it is the primary responsibility of CoC and DMA to provide necessary information for reporting to the Bank Quarterly field visits to sub-projects and reports would be part of such monitoring. DMA would be directly monitoring the progress of Urban Governance and Urban Sector TA Components. TNUDF will have two full time safeguards specialists to provide monitoring support and guidance to ULBs on safeguard matters. TNUDF will undertake annual E&S audits to review compliance with safeguards policies and take appropriate remedial measures. In addition, MAWS Department would undertake periodic, high level reviews of overall project progress and seek to ensure that high level GoTN approvals are obtained in a timely manner and facilitate inter-departmental coordination where necessary.

Annex 4: Implementation Support Plan

India: Tamil Nadu Sustainable Urban Development Program (P150395)

Strategy and Approach for Implementation Support

1. The Implementation Support Plan (ISP) will focus on addressing the key risks identified in the SORT (see DATA SHEET): sector strategies and policies; technical design of the Project; fiduciary aspects; and environmental and social aspects. The Bank will work closely with DMA and TNUIFSL to support overall implementation, in particular to manage risks in these areas, by maintaining a regular dialogue with GoTN teams, undertaking periodic joint reviews with a focus on key issues, undertaking field reviews on a sample basis, offering need-based expert support on issues related to polices, institutional changes, technical aspects and systems development.

Implementation Support Plan

2. The Bank will normally carry out implementation support missions, including review and support on procurement, on a semi-annual basis. Mission frequency will be adjusted based on the performance of the project. In addition to formal missions, the Bank will provide as needed implementation support from the Delhi office through short interim technical missions, discussions on the phone, etc.

3. **First 12 Months.** The Bank will provide intensive implementation support during the crucial first year of project implementation in the following areas to ensure a smooth start to project implementation:

- **Sector Strategies and Policies**. Maintain a dialogue with GoI and GoTN on the impact of national urban policies and programs (including Smart Cities, NUDM, and Swachh Bharat Abhiyan) on the urban agenda in TN, and on TNSUDP in particular.;
- **Technical Design of the Project**. Provide active guidance and support to the start-up of the Urban Governance Component in Vellore, Erode and Hosur, including preparation of activities related to reform measures, meeting DLI requirements, etc. Monitor the timely selection of sub-projects in ULBs under the Urban Investments Sub-Component, consistent with the TNUDF selection criteria. Support the prompt initiation of flood risk mitigation modeling for Chennai. Work with TNUDF in the identification of a pipeline of transactions for the Credit Enhancement sub-component;
- **Fiduciary aspects**. Initiate roll out of e-procurement and financial management systems. Ensure that adequate training on procurement and FM is provided to relevant staff. Ensure that the initial contracts in Chennai are awarded in compliance with Bank Procurement Guidelines.
- **Environmental and Social aspects**. Support continued familiarization and rolling out of the TNSUDP ESMF, in particular for the new sub-projects in ULBs. Closely monitor implementation of the Chennai SWD RAP to minimize social safeguards risk, especially those related to the new LARR Act 2014. Provide guidance on the Bank's new corporate Grievance Redress Service.

4. **During 12-48 Months.** Main support from the Bank during this period will include:

- **Sector Strategies and Policies.** Support MAWS in refining key policy decisions needed to strengthen project implementation.
- **Technical Design of the Project.** Provide guidance to DMA and Vellore/Erode/Hosur ULBs on DLIs, governance reforms, verification and disbursement processes. Work closely with TNUDF and DMA to aim for 100% commitment of investment (works) related funds early on in the project cycle. Monitor implementation of the Credit Enhancement sub-component and provide guidance as required. Undertake field visits on a sample basis to review that progress of work on sub-projects is consistent with the agreed program. Monitor progress of various technical assistance studies, performance of various consultants (in particular PMC) and implementation of the institutional development and capacity building activities.
- **Fiduciary aspects.** Provide procurement and FM training as required. Carry out procurement prior and post reviews as required, through missions and at the Delhi office. Monitor the timely submission and quality of financial reports, including IUFRs, annual financial statements, annual audit reports, etc., and follow-up in a timely manner to address any issues identified. Follow-up on procurement complaints, if any, received and ensure their satisfactory resolution.
- **Environmental and Social aspects.** Review environmental and social safeguard documents (EMPs, RAPs) for sub-projects under Component B1 (Urban Investments) to confirm compliance with Bank policies. Carry out field visits during missions to sensitive sites with significant safeguard risks. Review environment and social audit reports to address safeguard related risks. Promptly follow-up on satisfactory implementation of the project level grievance redress system and on any complaints received under the corporate Grievance Redress Service and advise the implementing.
- **Mid-Term Review**. Provide guidance to TNUDF and DMA on preparing the mid-term report, conduct the Mid-Term Review jointly with GoTN, and reach agreement with GoTN and GoI on any changes required to the project. Complete any necessary restructuring of the project in a timely manner.

5. **After 48 Months**. The Bank will develop an appropriate support plan based on the progress of the project in the first four years:

- If progress is as per plan, the above support activities will be continued on a reduced scale.
- If there are any major issues, support will be provided to restructure the project, as required.
- Specific support will be provided to: (i) design, conduct and review the results of an end-term evaluation; (ii) strategize on scaling up project approaches and lessons across the state; and (iii) support development of appropriate policies and institutional and systems roadmap for such scaling up and sustaining project results.

6. **Skills Needed.** The following skills are needed for providing the above support:

- Urban Management, urban redevelopment, urban service delivery.

- Engineering skills to review and advice on designs, costing and execution – related to water supply and waste water engineering.
- Storm water Drainage.
- Institutional development knowledge and expertise related to ULBs / urban institutions.
- Environmental management expertise.
- Knowledge and expertise on social aspects, including R&R.
- Procurement.
- Financial management, audits.

Specialist Skills needed:

- Municipal finance, including municipal bonds and other financial instruments.
- ICT specialist with urban management application expertise.
- Urban Flood modeling.
- Information and Communication Technologies, including GIS and Remote Sensing, SCADA systems.

What would be the main focus in terms of support to implementation during:

Time	**Focus**	**Skills Needed**	**Resource Estimate (US$)**	**Partner Role**
First twelve months	• Mobilizing teams, setting up systems, kick off activities • Further refinement of model town implementation plan (see details above)	- Procurement, - FM - Environmental - Social - Urban development / urban planning / urban finance - Institutional development - Engineering/ Technical - Storm water and Flood modeling - ICT/GIS	150,000	NA
12-48 months	• Periodic reviews • Risk assessment • Results assessment • Update to policies • Preparing for MTR (see details above)	- Procurement, - FM - Environmental - Social - Urban development / urban planning / urban finance - Institutional development - Engineering/ Technical- Storm water and Flood modeling - ICT/GIS/SCADA systems - M&E Specialist	100,000 x 4 = 400000	NA
After 48 months	• Results evaluation • Adoption of good practices • Scaling up • Policy changes	- Procurement, - FM - Environmental - Social - Urban development / urban planning / urban finance	100,000 x 2 = 200,000	NA

		- Institutional development - Engineering/ Technical - Storm water and Flood modeling - ICT/GIS/SCADA systems - M&E Specialist		
		Total	700,000	

Skills Mix Required

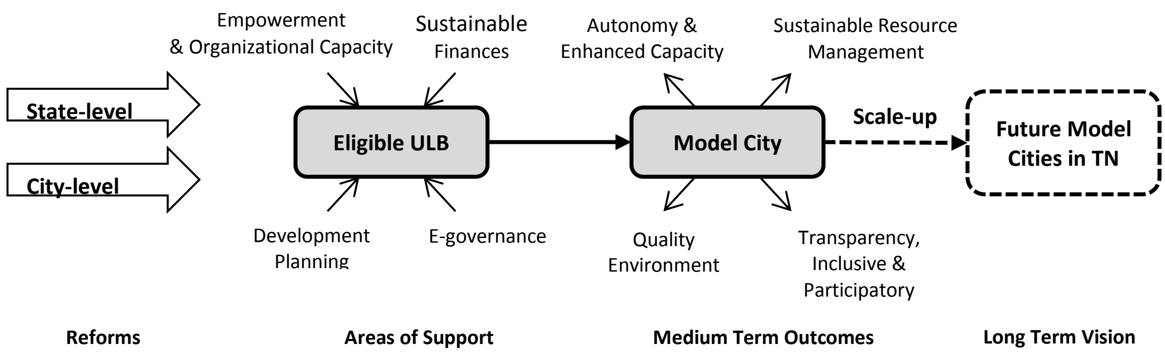
Skills Needed	Number of Staff Weeks (per year)	Number of Trips (per year)	Comments
TTL	15	4	
Procurement	4	3	
Financial Management	4	3	
Environmental	5	4	
Social	5	4	
Urban Development	8	3	
Institutional Development	4	3	
M&E	4	2	
Engineering/Technical	12	4	
Storm Water and Flood Modeling	4	2	
ICT/GIS/SCADA	3	3	

Annex 5: Results Based Grants for Urban Governance Component

India: Tamil Nadu Sustainable Urban Development Program (P150395)

1. A 'Model City' under this component is envisaged to deliver: (i) improved decision making powers and technical and management capacity, supported through the delegation of progressively increased administrative and financial powers; (ii) strategic urban and infrastructure planning linked to ULB resources; (iii) strengthened financial resources and management, and (iv) information disclosure and citizen engagement through e-governance mechanism (refer to Figure 5-1).

Figure 5-1: Reform Areas and Outcomes for a Model City



2. Vellore, Erode, and Hosur (Eligible ULBs) will participate in this component. These cities represent a broad selection of existing and emerging mid-sized cities in TN in terms of population size and population growth rates. Vellore and Erode are the largest mid-sized cities in TN; Hosur represents the lower end of a mid-sized city in TN. Vellore and Hosur recently experienced significant expansion of their administrative boundaries, resulting in a significant increase in their population. Table 5.1 summarizes the population and its growth in these cities.

Table 5.1: Population size and growth in Eligible ULBs

City	Type	Population (2011)	Population Growth (2001 – 2011)
Vellore	Corporation	504,079	184%
Erode	Corporation	498,121	23%
Hosur	Special Grade Municipality	244,518	190%

Areas for Reform

3. Four key areas for reform will be supported through Disbursement Linked Indicators (DLIs):

- **ULB empowerment and organizational capacity.** ULBs will be empowered and technically equipped to prepare, manage and deliver an increased scale and range of projects. This covers the following areas: (i) increase in sanction powers (both Administrative Sanction and Technical Sanction); (ii) staffing; and (iii) improvements in technical and managerial capacity.

- **Development and spatial planning.** ULBs will be supported with increased capacity to prepare quality local area-specific urban designs, including identifying a local area, preparing high quality area-specific detailed designs with inputs from experts and global best practices, and getting the designs approved. These area-specific detailed designs are envisaged to be detailed urban design schemes at a localized level (such as streetscapes, public spaces, public facilities and its surroundings) that complement the broader master plans prepared by the local planning authorities. They will provide better public urban spaces for their cities, and will be accompanied multi-year capital investment plans and linked to annual budgets.

- **Sustainable finances.** ULBs will be supported to achieve improvements in own source revenue through the preparation of Revenue Improvement Plans. These plans will identify potential improvements and targets for major income sources, including Property tax, Profession tax, Building License fee, advertisement charges, and monetization of municipal assets. They will also identify actions required to achieve revenue increases, including policy changes required, administrative capacity improvements, technology interventions necessary, and rate revisions.

- **E-governance and Public Disclosure / Citizen Engagement.** ULBs will be supported to implement municipal e-governance solutions for better service efficiency, transparency and accountability. It will support the migration of IT systems cities to the new e-governance application being developed by DMA and facilitate higher standards of public disclosure in compliance with local municipal laws, citizen-ULB interface, online processes, and strengthening and integrating administration and public financial management.

Disbursement Linked Indicators / Milestones

4. This component will provide an annual grant to the selected model cities based on satisfactory performance in the selected management and governance areas. Disbursements will be based on achievement of annual milestones/targets for a set of Disbursement Linked Indicators (DLIs). Achievement of annual DLI targets will be assessed individually for each city every year by DMA through independent third party/private sector firm(s) contracted by DMA. Table 5.2 lists the DLIs and Table 5.3 indicates the DLIs together with the annual targets.

Table 5.2: Disbursement Linked Indicators

DLI areas	Indicators
DLI 1: ULB Empowerment and Organizational Capacity.	Autonomy and capacity of ULBs with respect to local capital expenditure.
DLI 2: Spatial / Development Planning.	Increased capacity for preparation of local area-specific urban designs in selected areas.
DLI 3: Sustainable Finances.	Increase in Own Source Revenues.
DLI 4: E-Governance and Public Disclosure.	Implementation of municipal e-governance solutions to strengthen public disclosure and financial management.

Table 5.3: Disbursement Linked Indicators and Annual Targets

<table>
<tr><th>DLI Indicators</th><th>Baseline</th><th>Year 0 (4/2014–3/2015)[5]</th><th>Year 1 (4/2015–3/2016)</th><th>Year 2 (4/2016–3/2017)</th><th>Year 3 (4/2017–3/2018)</th><th>Year 4 (4/2018–3/2019)</th><th>Year 5 (4/2019–3/2020)</th><th>Year 6 (4/2020–3/2021)</th></tr>
<tr><td colspan="9">Area 1: ULB Empowerment and Organizational Capacity</td></tr>
<tr><td>Autonomy and capacity of ULBs with respect to local capital expenditure</td><td>The authority for Eligible ULBs to approve capital works is low for Administrative Sanction (AS) and Technical Sanction (TS).
<table>
<tr><th></th><th>Vellore & Erode</th><th>Hosur</th></tr>
<tr><td>AS Limit (Council)</td><td>Rs 1 crore</td><td>Rs 40 lakh</td></tr>
<tr><td>TS Limit (City engineer)</td><td>Erode – Rs.75 lakhs (CE)
Vellore – Rs.25 lakhs (AEE)</td><td>Rs25 lakh</td></tr>
</table>
Vacancies are high in all Eligible ULBs even at existing sanctioned positions
<table>
<tr><th>Grade</th><th>Erode</th><th>Vellore</th><th>Hosur</th></tr>
<tr><td>A</td><td>50%</td><td>0%</td><td>0%</td></tr>
<tr><td>B</td><td>43%</td><td>39%</td><td>0%</td></tr>
<tr><td>C</td><td>43%</td><td>49%</td><td>8%</td></tr>
<tr><td>D</td><td>16%</td><td>36%</td><td>15%</td></tr>
</table></td><td>GoTN has issued a government order(s) (G.O.) raising the Eligible ULBs' administrative sanction powers (up to Rs.2 crore for Vellore, Erode and Rs.80 lakhs for Hosur) and technical sanction powers to an appropriate level.
GoTN has issued GOs approving the constitution of a technical expert cell in each Eligible ULB.
DMA and each of the Eligible ULB have executed a memorandum of agreement with specific commitments and actions to be taken by the ULB.</td><td>In accordance with DMA's terms of reference, the Eligible ULB has selected and appointed a firm or individual consultants for the technical expert cells to augment technical and managerial capacity.</td><td>The ULB has approved a capacity enhancement plan developed by its technical expert cell and reviewed and cleared by DMA.</td><td>DMA and the ULB have taken necessary actions to ensure that ULB vacancies are less than 20% of sanctioned positions for each grade pursuant to GOs issued by GoTN.</td><td>The ULB has disclosed its audited financial statements for FY 2017-18 no later than September 30, 2018, pursuant to applicable laws, statutes, and rules.</td><td></td><td>The ULB has adopted a sustainability plan for the technical expert cell's functions and responsibilities after the Project's Closing Date.</td></tr>
<tr><td colspan="2">EEP Reimbursement (in Million Dollars) Erode and Vellore</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.00</td><td>1.50</td><td></td><td>1.00</td></tr>
<tr><td colspan="2">EEP Reimbursement (in Million Dollars) Hosur</td><td>0.50</td><td>0.50</td><td>0.50</td><td>0.50</td><td>0.75</td><td></td><td>0.50</td></tr>
<tr><td colspan="9">Area 2: Spatial / Development Planning</td></tr>
</table>

[5] Given the implementation schedule of the project, target date for Year 0 DLI achievement is June 30, 2015; EEP will however be considered for ULB financial year 2014-15.

DLI Indicators	Baseline	Year 0 (4/2014–3/2015)[5]	Year 1 (4/2015–3/2016)	Year 2 (4/2016–3/2017)	Year 3 (4/2017–3/2018)	Year 4 (4/2018–3/2019)	Year 5 (4/2019–3/2020)	Year 6 (4/2020–3/2021)
Increased capacity for the preparation of local area-specific urban designs in selected areas.	ULBs do not have adequate capacity to prepare area-specific urban designs.		.	After consultations with stakeholders, the ULB has identified a local area within its jurisdiction for urban design improvements.	The ULB's technical expert cell has prepared a multi-year capital investment plan.	The ULB has prepared and adopted at least one urban design improvement plan for an identified local area within its jurisdiction.	The ULB has adopted a budget to carry out urban design improvements in the identified local area.	
EEP Reimbursement (in Million Dollars) Erode and Vellore				**1.00**	**1.00**	**1.50**	**1.50**	
EEP Reimbursement (in Million Dollars) Hosur				**0.50**	**0.50**	**0.75**	**0.75**	
Area 3: Sustainable Finances								
Increase in Own Source Revenues	Own Source Revenue (OSR) baselines are as follows: Erode: INR. 31.83 crores (FY 12 Final accounts). Vellore: INR 19.4 crore (FY 12 Audited accounts). Hosur: INR. 16.6 crores (FY 12 Audited accounts).		The ULB has prepared a revenue improvement plan and an action plan to improve its own source revenues.	The ULB has adopted the revenue improvement plan and an action plan to improve its own source revenues.	The ULB has increased its own- source revenues in FY 2017-18 over revenues in the previous Fiscal Year. (The reimbursement will match the increase of OSR dollar for dollar up to a cap.)	The ULB has increased its own- source revenues in FY2018-19 over the revenues in the previous Fiscal Year. (The reimbursement will match the increase of OSR dollar for dollar up to a cap.)	The ULB has increased its own- source revenues in FY2019-20 over the revenues in the previous Fiscal Year. (The reimbursement will match the increase of OSR dollar for dollar up to a cap.)	The ULB has increased its own- source revenues in FY2020-21 over the revenues in the previous Fiscal Year. (The reimbursement will match the increase of OSR dollar for dollar up to a cap.)
EEP Reimbursement (in Million Dollars) Erode and Vellore			**1.00**	**1.00**	**1.00**	**1.00**	**1.50**	**1.50**
EEP Reimbursement (in Million Dollars) Hosur			**0.50**	**0.50**	**0.50**	**0.50**	**0.75**	**0.75**
Area 4: E-Governance and & Public Disclosure								
Implementation of municipal e-governance solutions to strengthen public disclosure.	Computerization is through stand-alone modules which are weakly integrated. A web-enabled e-governance application is under development by DMA (i.e., upgraded e-governance system). Grievances are received offline and are currently not tracked in the grievance redress application. Use of online grievance application is limited because		The ULB has implemented ten modules of the e-governance application, as identified by DMA.	The ULB has implemented all e-governance modules as identified by DMA. The ULB has prepared an action plan to support the use of these modules.	The ULB has publicly disclosed its budget for FY2017-18, and its unaudited financial statements for FY2016-17 in accordance with the Municipal Accounts		The ULB has met grievance redressal response time requirement under its citizen charter in 80% of cases.	The ULB has established an online platform to exchange information with citizens regarding key service delivery parameters.

DLI Indicators	Baseline	Year 0 (4/2014–3/2015)[5]	Year 1 (4/2015–3/2016)	Year 2 (4/2016–3/2017)	Year 3 (4/2017–3/2018)	Year 4 (4/2018–3/2019)	Year 5 (4/2019–3/2020)	Year 6 (4/2020–3/2021)
	of low levels of awareness, technical glitches and poor visibility of the website.				Manual.			
EEP Reimbursement (in Million Dollars) Erode and Vellore			**1.00**	**1.00**	**1.00**		**1.00**	**1.50**
EEP Reimbursement (in Million Dollars) Hosur			**0.50**	**0.50**	**0.50**		**0.50**	**0.75**

Note: Detailed verification protocols are included in the Operations Manual of this component.

Eligible Expenditures for DLIs

5. EEPs will be apportioned across cities on the basis of their population in the 2011 Census. Table 5.4 indicates the EEP values by year and DLI for each of the three selected ULBs.

Table 5.4: Apportioning of EEP

ERODE								
	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**TOTAL**
DLI 1	1.00	1.00	1.00	1.00	1.50	-	1.00	6.50
DLI 2	-	-	1.00	1.00	1.50	1.50	-	5.00
DLI 3	-	1.00	1.00	1.00	1.00	1.50	1.50	7.00
DLI 4	-	1.00	1.00	1.00		1.00	1.50	5.50
TOTAL	**1.00**	**3.00**	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**	**24.00**
VELLORE								
	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**TOTAL**
DLI 1	1.00	1.00	1.00	1.00	1.50	-	1.00	6.50
DLI 2	-		1.00	1.00	1.50	1.50		5.00
DLI 3	-	1.00	1.00	1.00	1.00	1.50	1.50	7.00
DLI 4	-	1.00	1.00	1.00	-	1.00	1.50	5.50
TOTAL	**1.00**	**3.00**	**4.00**	**4.00**	**4.00**	**4.00**	**4.00**	**24.00**
HOSUR								
	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**TOTAL**
DLI 1	0.50	0.50	0.50	0.50	0.75	-	0.50	3.25
DLI 2	-	-	0.50	0.50	0.75	0.75	-	2.50
DLI 3	-	0.50	0.50	0.50	0.50	0.75	0.75	3.50
DLI 4	-	0.50	0.50	0.50	-	0.50	0.75	2.75
TOTAL	**0.50**	**1.50**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**12.00**
TOTAL (3 ULBs Aggregate)								
	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**TOTAL**
DLI 1	2.50	2.50	2.50	2.50	3.75	-	2.50	16.25
DLI 2	-	-	2.50	2.50	3.75	3.75	-	12.5
DLI 3	-	2.50	2.50	2.50	2.50	3.75	3.75	17.5
DLI 4	-	2.50	2.50	2.50	-	2.50	3.75	13.75
TOTAL	**2.50**	**7.50**	**10.00**	**10.00**	**10.00**	**10.00**	**10.00**	**60.00**

Disbursement Mechanism

6. The disbursement mechanism is summarized below:

- Each ULB will submit an annual statement to DMA showing the status of achievement of DLIs, along with a financial report showing the unaudited and finalised eligible expenditure incurred, within 4 months of the close of the financial year.
- The reported (unaudited) EEPs should be based on the accounts submitted to the Local Fund Audit Department (LFAD) for audit.
- DMA will appoint independent assessors for the purpose of validating the ULB submissions.

- On validation of DLIs achieved, DMA will release funds to the ULBs and seek reimbursement from the Bank, subject to the EEPs being adequate to cover the value of DLI(s) achieved. Where the reported EEP is less than the aggregate DLI value, disbursement by DMA and reimbursement by the Bank will be limited to the value of the EEP.
- If a ULB does not achieve the DLI targets for a particular year, and/or does not have an adequate EEP, a roll-over period of two years (i.e. rolled over to the subsequent year) will be provided to enable the Eligible ULB to 'make up' and claim the EEPs fully over this two year period.
- The reported EEP will be audited by an independent auditor appointed by DMA as per TOR acceptable to the Bank. A report will be shared with the Bank within nine months of the end of the financial year. In case the audited EEP is less than the reported EEP, the difference would be adjusted against the subsequent DLI, provided the audited EEP amount is less than the disbursed DLI value.

Annex 6: Credit Enhancement Sub-Component

India: Tamil Nadu Sustainable Urban Development Program (P150395)

1. Since 1997, approximately 30 bonds have been issued by 14 ULBs / urban entities mobilizing US$300 million (as compared to capital investment needs in excess of US$1 trillion estimated for urban infrastructure in India). ULBs / entities in TN have been responsible for six – seven bond issues. This low level of borrowing is consistent with international experience, when local governments are in the early stages of embarking on borrowings of their own, without higher government support and guarantees. The primary reasons have been mainly those related to "demand-side" issues, viz. ULB credit worthiness and weak institutional capacities to structure transactions and interact with financial market entities for raising financial resources, rather than those related to "supply-side" issues (i.e., related to financial markets which are already financing infrastructure sectors, e.g., (energy, roads, ports, in India). The Government of India (GoI) wants to encourage the nascent municipal bonds market and has set up the Pooled Finance Development Scheme. GoTN has authorized a Water & Sanitation Pooled Fund (WSPF) being managed by TNUIFSL to act as the State Pooled Finance Entity under this scheme.

Objectives and Design

2. The main objective of the Credit Enhancement sub-component is to pilot credit enhancement interventions to foster market borrowings by ULBs in TN, whether through municipal bonds or through borrowings from commercial banks. Funds under this sub-component will be used to set up a Credit Rating Enhancement Fund (CREF) to be utilized [drawn-down] only in the event timely repayments are not received from ULBs. CREF will be used to support either WSPF for issuing pooled finance bonds by group(s) of ULBs in TN or Stand-alone ULB(s) in TN wanting to issue bonds / borrow from commercial banks; it is proposed to allocate US$ 20 million for credit enhancement (including for CoC with not less than US$10 million for other ULBs). Funds required from CREF for a particular bond issue / credit arrangement will be decided by the Sanctioning Committee constituted by GoTN, based on governing policies, if any, prescribed by the Bank. Technical assistance support will be provided to ULBs (under Sub-component B3) for structuring transactions, hiring advisors, etc.

3. CREF expects to leverage the US$20 million to about US$80 million through three to four transactions during the life of the project. The existing asset portfolio of pooled ULBs available with TNUDF could be a significant beneficiary of this sub-component. The Corporation of Chennai has been identified as the first ULB for participation and a transaction is being structured currently.

Funds Flow and Fiduciary aspects

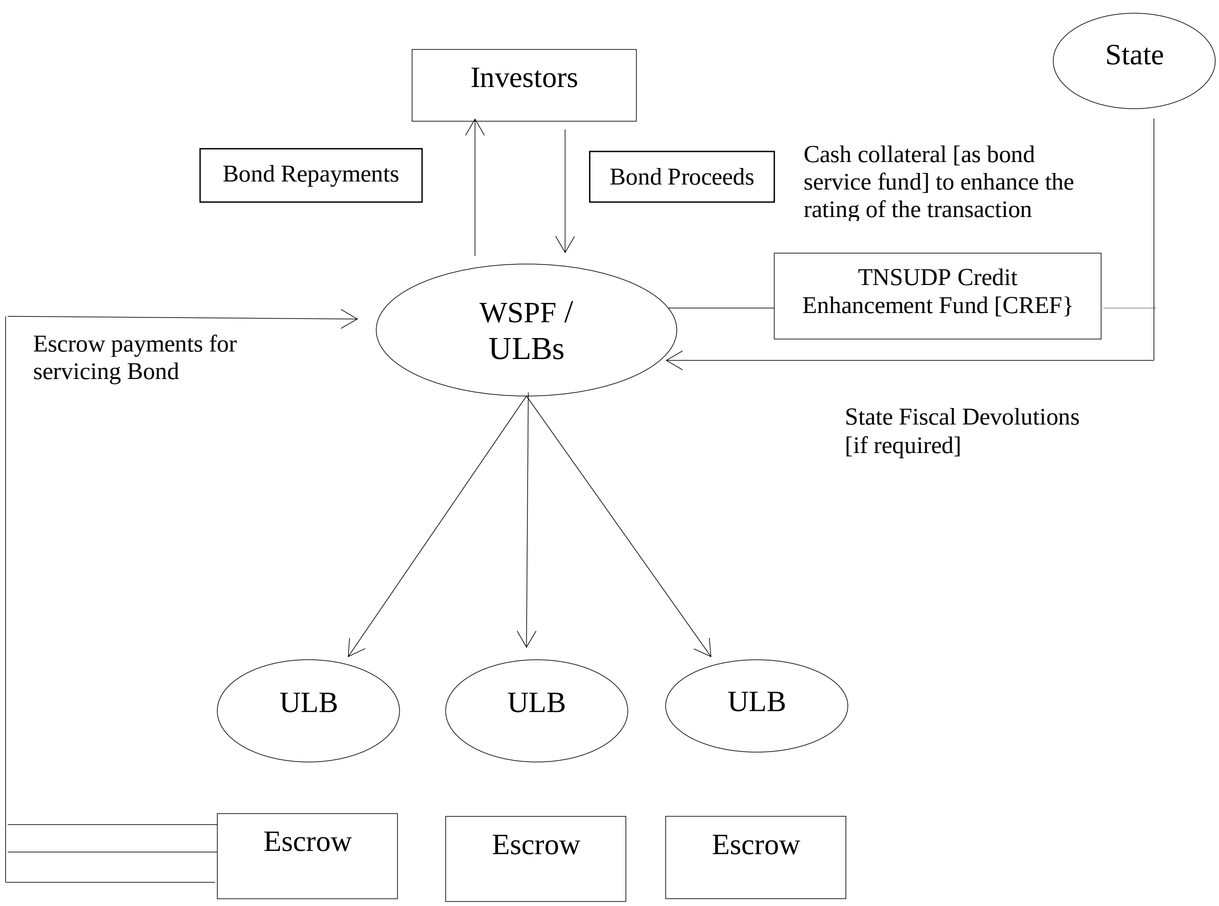
4. CREF will be set up as a separate account that is a dedicated, non-lapsable funded corpus created within PSGF and operated by TNUIFSL (explained further below) and the funds drawn down under the Bank loan will remain with PSGF beyond Loan Closing Date. The amount allocated under the Bank loan will be drawn down as soon as the first bond transaction is ready to be issued, denoting the start of operation of this facility.

5. TNUIFSL will maintain separate books of accounts for CREF. An annual audit of CREF will be conducted by a firm of Chartered Accountants; the Comptroller and Auditor General may also carry out a separate audit. The annual accounts and the audit report will be furnished to the Bank no later than nine months after the end of the financial year.

6. Grants approved for a transaction will be set aside in a separate account to provide the necessary credit enhancement mechanism for the bond or other credit arrangements. A lien on the account would be shared with the Trustees to the Bond issue / lenders as evidence. CREF monies would be invested only in term deposits of Scheduled Commercial Banks and / or AAA rated bonds issued by State Government or Public Sector Undertaking for a tenor not exceeding three years (and renewed for a period not exceeding three years on each occasion). In the event of default, the Trustees to the Bond issue/lenders will call upon the lien on the account, and monies in the escrow account would be utilized.

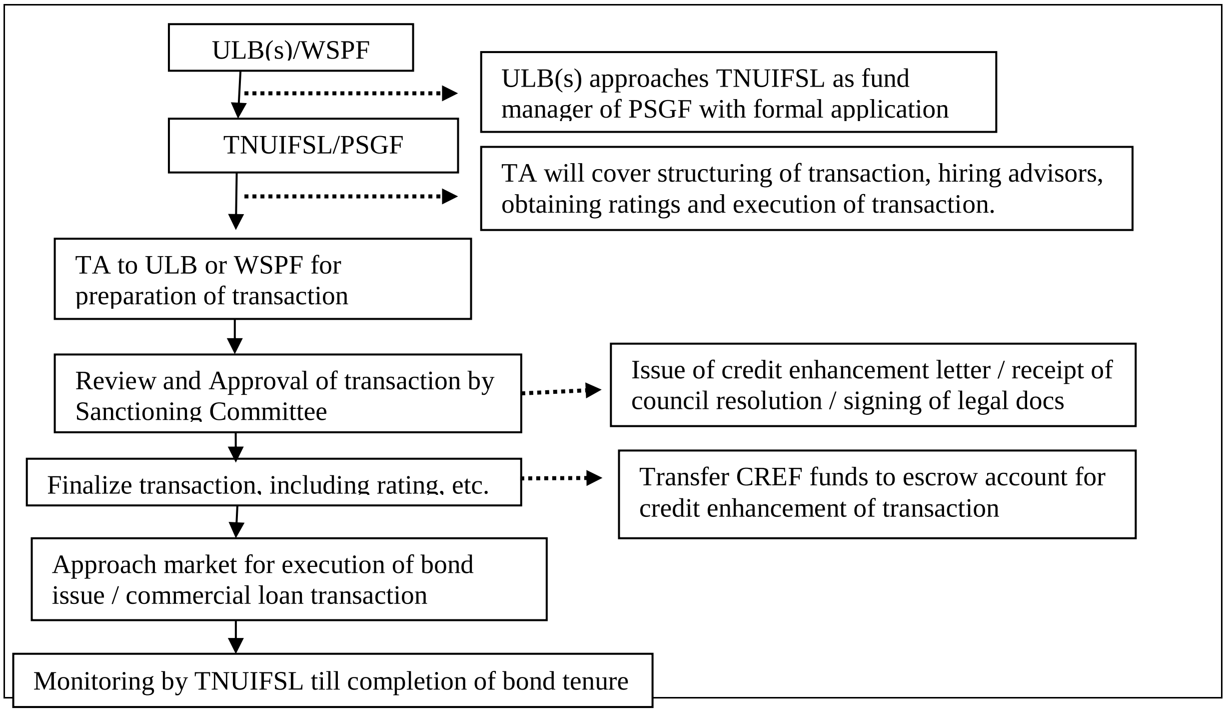
Institutional Design / Operating Framework

7. The mechanism of operation and repayments is depicted in the figure below. Bond proceeds are expected to flow from investors to the projects being implemented by the ULBs through the pooled municipal bond issued by WSPF. Credit enhancement through CREF will be provided for this bond issue to improve credit perception for investors and will be utilized if escrow payments are delayed. CREF will be recapitalized through state fiscal devolutions. In case CREF is utilized, state fiscal devolutions for the ULBs delaying payments will be routed to replenish the CREF.



Operating Framework for participating ULBs

8. The overall process flow chart is depicted below.



9. The following operating framework will apply to participating ULBs:

a) Urban infrastructure projects implemented by ULBs are eligible to participate under this sub-component by submitting a Council Resolution.

b) ULBs will need to meet the existing financial criteria for participation and should have at a minimum:

   a. Ratio of Total Expenditure/Total Revenue (TE/TR) less than one.
   b. Percentage of Debt Service/Total Revenue (DS/TR) not exceeding 30%.
   c. Average Debt Service Coverage Ratio (DSCR) more than 1.25.

c) Sub-project revenues [for revenue generating projects], along with the overall (general) revenues of the ULB, should be sufficient to meet operations and maintenance expenses and debt service until the expiry of the bond tenor.

d) The bond should be rated by a nationally recognized credit rating agency. A minimum rating of "A" shall be obtained for the bond issue. Ratings would be required from two rating agencies in the case of a taxable bond; ratings from one agency would be adequate for a tax-free bond.

e) Bonds may be issued as “Tax-free bond” or “Taxable bond” based on the attractiveness of the financial product. The subscription may be as a public issue, a private placement, or through other institutional arrangements permitted in the capital markets.

f) The bonds / commercial loans should have a minimum maturity of five years. The maximum tenor of the bonds / commercial loan may be structured based on the cash flows of the sub-projects [for revenue generating projects]. The bonds / commercial loan may have a put/call option, subject to a minimum lock in period of 5 years.

g) Proceeds of the bonds / commercial loans will be earmarked for a defined set of sub-projects and can be utilized either for green-field sub-projects or towards refinancing of existing debt obligations of ULBs towards completed sub-projects. The proceeds of the bond / commercial loan should be utilized for the defined set of sub-projects within a period of one year from the date of issue of bonds.

h) The bonds / commercial loans should have a standard security structure, including but not limited to escrow of revenues and first loss reserve funds.

i) Procurement of works and consultants on the sub-projects utilizing the bond / commercial loan proceeds will be based on competitive procedures for ensuring economy and efficiency.

j) Social and Environment safeguards for bonds issued for green-field sub-project(s) will be consistent with the TNSUDP ESMF. For bonds to be issued for refinancing transactions, screening and due diligence will be carried out to confirm there are no outstanding issues *vis-à-vis* the ESF applicable at the time of implementation.

Annex 7: Economic and Financial Analyses

India: Tamil Nadu Sustainable Urban Development Program (P150395)

Financial Analysis[6]

1. **Finances of Urban Local Bodies**. A broad financial assessment of the finances of ULBs in TN was carried out during project preparation with a view to estimate their financial status and borrowing capacity and their ability to absorb the sub-loans proposed under TNSUDP. A detailed report is available in project files.

2. There are primarily four sources of capital (investment) related flows to the urban sector in TN: (i) State urban development schemes; (ii) Central urban programs (as noted earlier); (iii) Multilateral / bilateral funded programs; and (iv) Investment by ULBs from surpluses generated. The break-up of such capital financial flows during the period 2009-10 to 2012-13 is shown in Table 7.1. Since its recent introduction by GoTN, the Integrated Urban Development Mission (IUDM) has been the most significant source of capital financing for ULBs in TN, followed by GoI and multilateral funded urban development programs. Overall, capital expenditure in the urban sector has ramped up at a compound annual growth rate of 20%. Nevertheless, capital financing in the urban sector in TN, which is in the region of US$500-US$700 million per annum, remains a small fraction of the investment needs and needs to be scaled up. The aggregate revenue surplus of ULBs in TN was more than INR500 crores during the last two years. There is substantial capacity to access the market for infrastructure investments by leveraging the revenue surplus. As per the debt position and performance analysis of ULBs in the Tamil Nadu 2012[7] Report, the outstanding debt of the 10 municipal corporations and 125 municipalities is INR945 crore. Based on existing norms and based on financial projections, TN ULBs can absorb loans estimated at INR8,968 crores in the next ten years (MCs borrowing capacity is estimated at INR5,802 crores[8], and that of municipalities is estimated at INR3,166 crores) if they deploy about 50% of the revenue surplus year on year.

Table 7.1: Overall financial scenarios of ULBs in Tamil Nadu

10 MCs and Municipalities (*Rupees in Crore*)					
Description	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**CAGR**
Opening balance		333	1,400	2,032	
Revenue Income	2,648	3,207	3,712	4,370	18%
Revenue Expenditure	2,306	2,924	2,910	3,806	18%
Revenue surplus	343	282	802	563	
Capital Income	1,510	2,650	1,481	2,137	12%
Capital Expenditure	1,520	1,400	2,032	2710	21%
Closing balance	**333**	**1,400**	**2,032**	**2,023**	

Source: CRISIL analysis

[6] All figures / findings based on 'Urban Finance Assessment Report, 2014' by CRISIL
[7] Source: The report of Debt Position and Performance Analysis of the ULBs in Tamil Nadu 2012 by NCR Consultants Limited, (31st March, 2012)
[8] The higher borrowing capacity in case of MCs is due to substantial borrowing space availability with CoC.

3. **TNUDF Financial Performance**. TNUDF's operations have been consistently profitable over the past decade, with 100% loan recovery each year. TNUDF has been able to maintain high rates of loan recovery due to its rigorous appraisal skills, lending to creditworthy ULBs, requiring cost recovery in projects and in the case of certain loans, having access to intercepts of state devolutions to ULBs. TNUDF has been making loan loss provisions on a voluntary basis as per Reserve Bank India guidelines on Asset Classification and Provisioning norms applicable to Indian Financial Institutions. The main sources of income are interest on long term loan assets and also interest income from cash and liquid investments held by TNUDF in various financial instruments. On the expenditure side, besides interest on borrowings, the main operating expenses are management fees paid to TNUIFSL, the Asset Management Company (AMC) for managing funds. Going forward, the critical issues for the future sustainability of TNUDF would continue to be ensuring high rates of repayment from ULBs, flexible costing of its funds and wide range of financial products to ULBs, and continued diversification of its resource base and offerings. Summary financial statements of TNUDF are as presented below.

Table 7.2: TNUDF Financial Indicators and Statement (INR Lakhs)

S. No	Key Indicators	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14
1	Yearly Disbursements	8863	15146	18535	8536	23768	56619
2	Loan Asset Outstanding	39588	53080	61015	66692	81249	127333
3	Net Worth	20226	20534	20843	21567	22294	22687
4	Loan Recovery Rate (% of demand recovered during the year)	100%	100%	100%	100%	100%	100%

Balance Sheet (INR Lakhs)						
	2008-09	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Liabilities						
Units	19960	19960	19960	19960	19960	19960
Reserves & Surplus	266	574	883	1608	2334	2727
Borrowings	36320	67243	71450	92302	102453	122267
Current Liabilities & Provisions	12213	12364	11578	13415	12945	15450
Total Liabilities	**68759**	**100140**	**103871**	**127284**	**137692**	**160405**
Assets						
Loans Outstanding	39588	52867	60771	66426	80924	126823
Investments	2159	1763	849	316	82	61
Current Assets	27013	45510	42251	60542	56685	33519
Total Assets	**68759**	**100140**	**103871**	**127284**	**137692**	**160405**

Income & Expenditure (INR Lacs)						
Income	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Income from Loans	2804	3882	4749	5383	5832	8205
Income from investments	129	118	72	37	14	8
Income from cash balances / deposits	2173	1933	1905	2992	4096	2599
Total Income	**5116**	**5933**	**6726**	**8411**	**9942**	**10813**

Expenditure						
Interest paid on borrowings / Financial Cost	2796	5015	5832	6866	8188	9123
Operating expenses	525	468	457	497	679	998
Total Expenditure	**3320**	**5483**	**6289**	**7363**	**8867**	**1012**
Surplus before tax	1796	450	436	1048	1075	690
Provision for contingencies	617	0	0	0	0	0
Provision for Income Tax	0	143	127	324	349	297
Surplus available for distribution	1179	0		0	0	0
Net income /surplus after tax transferred to Capital Fund	**0**	**308**	**309**	**724**	**726**	**393**

Economic Analysis

Urban Governance Component

4. The objective of this component is to demonstrate new models of urban management with a focus on building strong governance and financial sustainability at the ULB level in the areas of: ULB empowerment and organizational capacity; spatial/development planning; sustainable finance and e-governance and public disclosure.

5. **ULB empowerment and organizational capacity**. Improved autonomy and organizational capacity are expected to deliver significant economic benefits in the model cities. These include: improved efficiency in allocation of scarce resources; reduced project complexity and decreased lags between planning and implementation due to improved clarity and accountability; lower implementation costs and improved efficiency through streamlined and timely implementation processes; possible longer-term and better sources for investment through improved procurement; and increased economic rates of return of investments from improved efficiency of overall implementation.

6. **Spatial/development planning**. Economic benefits of improved spatial/development planning capacity include: increased ERRs of the investments through better designed investments and better targeting of needs; more informed and cost-effective decision-making as a result of participatory planning; increased efficiency translating into lower investment costs; more efficient use of government funds and higher quality projects; improved sustainability in terms of longer life of assets through funding allocations; and possible expansion and access to better sources of funding for investment in the longer-term.

7. **Sustainable finance**. Demonstrating new models for sustainable municipal finance is expected to lead to significant economic benefits in the pilot cities. These include: increased municipal own-source revenues to free up resources for Operations & Maintenance; heightened municipal responsiveness to urgent local needs; increased sustainability of investments beyond the life of the project; and increased borrowing capacity as well as increased space for investment.

8. **E-governance and public disclosure**. Improved e-governance and public disclosure procedures will lower implementation costs and improved efficiency of urban management through streamlined and timely implementation processes and increased transparency and accountability borne out of systematic reporting, as well as more effective investment supervision through improved procurement and governance.

9. Significant economic benefits are expected through demonstration effects as the project will pave the way for scaling up best practice solutions and new models for city management to a large number of cities in TN as well as other states in India.

10. There is a strong rationale for public sector intervention to improve city management, given the rapid pace of urbanization and the significant socio-economic costs of inefficient urban management in the Indian context. The Bank's involvement adds significant value by providing global knowledge and technical support to the pilot cities for implementing policy changes and demonstrating a new model for city management in the Indian context.

Urban Investment Component

11. A framework approach has been developed for the economic analysis of municipal sub-projects which will be prepared and appraised during TNSUDP implementation. Cost-Benefit analysis has been conducted for the Greater Chennai SWD sub-project.

12. **Framework Approach**. Economic analysis will be used as a screening device in the selection of investments in the participating ULBs. Cost Effectiveness Analysis (CEA) will be the most appropriate economic valuation technique for: (a) relatively small municipal investments where the focus is on achieving or maintaining minimum service standards; and/or (b) investments where benefits cannot be monetized. Investments subject to CEA will only proceed if they are demonstrated to be the most cost effective available option. A Cost-Benefit Analysis (CBA) will be required for large-scale investments with quantifiable benefits. An investment subject to CBA will have to achieve a hurdle Economic Rate of Return (ERR) of 10%. The table below summarizes the approach and criteria to be followed to guide the selection of sub-projects.

Table 7.3: CEA versus CBA

	Economic Valuation Methodology	**When to apply it**	**Criteria**	**Requirements**
Cost Effectiveness Analysis	Selecting the least-cost alternative for a given level of output among a number of technically feasible project options.	Cost effectiveness analysis is the minimum requirement for any sub-project. Cost-effectiveness is particularly useful in situations where it is not possible/ advisable to perform a full	Cost effectiveness analysis is required for all sub-projects.	Investments subject to CEA need to demonstrate to be the most cost effective available option.

		economic cost-benefit analysis, e.g., (i) project size is small, (ii) project benefits are not easily measurable in monetary terms, and (iii) when the project aims to meet basic infrastructure needs.		
Cost-benefit Analysis	This analysis is done for the preferred alternative (which may be identified using cost-effectiveness, technical feasibility, and/or other criteria).	Cost-benefit analysis is carried out only when project benefits are quantifiable and measurable in monetary terms. It is essential for large municipal projects, and for projects aiming to build capacity beyond minimum requirements (provided that benefits are quantifiable).	Required for all sub-projects in water, roads, drainage, and solid waste management that have quantifiable benefits and require investments above US$1 million and/or beyond.	Minimum ERR of 10 percent.

Economic Analysis for the Chennai Storm Water Drainage Sub-project

13. An economic analysis was conducted for the proposed drainage management investment program in the project area, located in selected newly added areas of the CoC. These investments aim to reduce the cost of recurrent flooding and water logging in the project area.

14. Public sector intervention is justified given the high externalities of flooding and water logging. Recurrent flooding of low-lying areas causes damage to properties, temporary displacement of people and associated relief expenditure, economic losses due to loss of man-hours in industries and businesses, and damage to infrastructure. Inadequate drainage has high health costs as mosquitoes find their breeding ground in the accumulated storm water runoff. The investments in flood control and drainage management would therefore lead to a reduction in health costs of epidemics like dysentery, typhoid cholera, dengue fever and malaria as well as a reduction in public health expenditure such as malaria eradication costs. The flood control program is also expected to deliver environmental benefits associated with the improvements in retention areas, including improvement of ground water table level. The Bank's involvement is expected to add value through enhanced technical support for implementing non-structural measures aiming at improving the capacity of institutions to reduce risks related to floods, such as flood risk modeling and asset management, and thus enhance the long-term sustainability of

the capital program. The occurrence of flood damage is expected to increase over time given the significant potential for urban and economic development in the project area.

15. **Benefits Estimation**. The benefits associated with the flood control and drainage management program are broadly classified into two categories: tangible (direct and indirect) socio-economic benefits; and intangible (non-market) benefits. The CBA quantifies tangible benefits, through the avoided damage cost method. These are measured as the cost of flood damage, which the project would cause to avoid. The tangible socio-economic benefits that could be quantified comprise avoided damage to properties; avoided economic losses and avoided damage to infrastructure. Other important socio-economic benefits include potential increase in tourism (which is one of the major economic activities in the Chennai city area), reduced loss of school days, reduced health costs of severe diseases like malaria, dengue, during the inundation period. These benefits could not be quantified because of absence of reliable data and have not been included in the benefit assessment. The economic analysis also excludes non-market benefits associated with the improvements in retention areas. These benefits are mostly of environmental nature, encompassing improvement of ground water table level[9], as well as avoidance or reduction in water logging.

16. Flood damage in the project is estimated based on 2005 flood event data in the Chennai region and flood damages recorded[10] by the Meteorological Centre, GoTN. The cost of severe flood damage (with flood intensity of more than 0.5 m depth) is quantified and valuated at 2014 prices, and the findings are shown in Table 7.4. The estimated unit flood damage cost is INR40.65 million (US$0.68 million) per sq. km.

Table-7.4: Estimated Unit flood damage cost (2014 prices)

Damage Type	**Estimated unit damage cost (INR Million/sq.km)**	**As a percentage of total estimated damage costs (%)**
Physical damages to residential and commercial properties	1.35	*3.3%*
Damages to infrastructure	37.95	*93.4%*
Loss of economic activities	1.35	*3.3%*
Health cost (mosquito control measures)[11]	0.02	*0.1%*
Total	**40.67**	***100.0%***

17. The estimated unit damage cost was used to predict flood damage costs for different return periods in the "without project" scenario based on estimated flood damage areas. The inundation area for a two-year return period flood was estimated at approximately 32.27 sq.km based on the flood inundation map. Based on the estimated flood damage area and flood

[9] In Chennai, the rainfall generally occurs in short spells with high intensity. Because of the short duration, most of the rainwater is wasted in runoff leaving a small quantity for recharging the ground water aquifer.

[10] Flood damage is estimated based on data provided by Corporation of Chennai, the Irrigation Department, GoTN, and discussions with officials involved in the 2005 flood relief activities.

[11] After completion of the project, the water logging affected areas in the project area will reduce significantly. However, as per discussions with CoC officials, health and SWD department will continue the mosquito control measures (fogging) in the project area although it will be limited to only smaller area. Hence, the cost of mosquito fogging will reduce considerably to about 50% of the present cost.

damage unit rate, the flood damage cost for a two year return period was estimated at INR1, 259 million. Considering the non-availability of inundation maps for flood return periods other than two years, inundation areas for different return periods were estimated by technical experts based on studies conducted in cities with similar geographical and topographical conditions. The Anna University, Chennai is in the process of carrying out flood return period analysis for the project area. Once the data is available, the flood damage curve and the CBA analysis will be updated.

18. In the “with project” scenario, the cost of flood damage will be completely avoided up to a two-year return period (as investments are designed for a two-year return period) and partially avoided for floods of higher return period (assumed to be between 90% and 60%, depending on the return period) as a result of non-structural interventions aimed at improving the capacity of institutions to reduce risks related to floods.[12] The benefits of the program equivalent to the “avoided cost” corresponds to the difference between flood damage associated with the two scenarios, namely “without” and “with” the implementation of the project (See Table 7.5).

Table 7.5: Flood Damage Estimate for Different Return Periods

Return Period	Estimated Flood Damage INR Million		Net Benefits INR Million	
	Without the Project	With the Project	INR	USD
2	1,259	-	1,259	20.98
5	1,606	161	1,446	24.10
10	2,311	462	1,849	30.82
25	3,413	1,024	2,389	39.81
50	4,994	1,998	2,996	49.94

19. **Cost Estimation**. Costs include both structural and non-structural measures. Structural measures consist of storm water drainage investments for collector, feeder, arterial, major, minor and micro canals, as well as flood defense measures, pumping stations and reconstruction of existing drains. Costs include mitigation measures in an area of around 4.2 Ha at the Adyar river mouth. Non-structural measures include interventions aimed at improving the capacity of institutions to reduce risks related to floods, such as training to Storm Water Drainage (SWD) of CoC staff on design, procurement, project flood risk monitoring, and asset maintenance management.

20. The economic costs of capital works and annual O&M are calculated from the financial cost estimates on the following basis:

- Price contingencies are excluded; physical contingencies are included as they represent real consumption of resources.
- Import duties and taxes are excluded because they represent transfer payments. For this the shadow exchange rate factor (SERF) of 1.03 was applied.

[12] As part of non-structural interventions through the development of watershed areas of Adayar River by GoTN, as part of flood management schemes.

- The existence of unemployment and under-employment for unskilled workers within the Indian economy means that the opportunity cost of unskilled labor can be considered to be lower than its wage rate – a conversion factor (Shadow Wage Rate Factor – SWRF)[13] of 0.78 of the market wage rate for agriculture casual labor was used to estimate the shadow wage rate.
- All costs are valued using the domestic price numeraire, to enable an easier comparison with benefits.

21. **Results and Sensitivity Analysis**. The EIRR for the flood control and drainage management program is estimated at 15.5%, and the NPV amounts to US$132 million at a 10 percent Discount Factor. Sensitivity analysis shows that the estimated EIRR is robust to a number of scenarios, e.g., a 10 percent cost escalation and a 10 percent reduction of benefits, and the worst scenario of their combined effect and a one year delay in construction. The sensitivity analysis was also estimated "with climate change effect"[14]. Table 7.6 summarizes the results of the economic analysis.

Table 7.6: Economic Analysis Results and Sensitivity Analysis

S.No.	Details	EIRR
1	Base Case	15.48%
2	10% increase in Capital Cost Scenario	14.54%
3	10% increase in O&M Cost Scenario	15.38%
4	10% decrease in Project Benefits Scenario	14.35%
5	One Year delay in implementation	15.42%
6	Climate change effect	15.31%
7	Combined effect (Worst Scenario)	13.28%

Urban Sector Technical Assistance Component

22. The objective of the urban sector technical assistance component is to strengthen the capacity of ULBs and urban sector officials in the state in specific areas, as well as support reforms in the area of urban finance and sector policies. This technical assistance is expected to make municipal investments more sustainable by improving governance and public financial management, thus enhancing the sustainability of governance reforms under Component A and improving the ERR of investments under Component B. For instance, the roll out of the centralized Web-enabled Application for all ULBs and scaling up of GIS systems is expected to improve public financial management and accountability, and indirectly increase economic

[13] Standard Wage Rate Factor (SWRF)

Details	Tamil Nadu
Unskilled labor cost (INR per day)* (L)	150
Minimum Wages w.e.f April 1, 2014 (INR per day)** (M)	193
Shadow Wage-rate Factor (Y); Y = L/M	0.78

*- Minimum Urban Labor wage in practice based on the discussion
** Gazette of India, No: 336, February 13, 2014, Govt. of India, New Delhi

[14] The climate change effect factor is not available for Chennai. Hence, for this analysis, climate change factor derived for a city (Colombo, Sri Lanka) having a similar geographic and locational condition that of Chennai has been considered based on the analysis done for the World Bank-funded Metro Colombo Urban Development Project.

benefits of investments by improving efficiency and decreasing lags between planning and implementation. The certification programs are expected to increase the management capacity of ULBs. The roll out of mobile-based applications and associated training for staff in all ULBs, along with the development of a central citizen portal to access all software on an integrated platform, are expected to improve efficiency by streamlining implementation processes.